

Product Catalog 2018 - 2019

Intelligent Systems and Platforms

Transforming the Industrial Cloud Era

- Industrial I/O
- Intelligent Video Solutions
- Intelligent Transportation Platforms
- Intelligent Inspection Systems
- Modular IPCs
- Slot SBC & Passive Backplanes
- Industrial Motherboards
- Industrial Chassis
- Industrial Server Motherboards
- Industrial Server Chassis
- Industrial Storages
- GPU Servers
- CompactPCI Platforms
- Industrial Computer Peripherals
- Industrial Ethernet Solutions

ADVANTECH

Enabling an Intelligent Planet

www.advantech.com

Table of Contents

Overview
About Advantech 0-2
Intelligent Systems and Platforms 0-4
Star Products 0-5

Vertical Solutions
Intelligent Transportation 0-8
Intelligent Video Solution 0-9
Machine Automation 0-10
Industrial Server and Storage Solutions 0-11

Global Services
Advantech iPlanet Care 0-12
One-Stop Global Services 0-13
System Design to Order Services 0-14

Industrial I/O 1-2

Intelligent Video Solution 2-2

Intelligent Transportation Platforms 3-2

Intelligent Inspection Systems 4-2

Modular IPCs 5-2

Slot SBC & Passive Backplanes
PICMG 1.3 System Host Boards 6-12
PICMG 1.0 System Host Boards 6-24
Half-Sized System Host Boards 6-28
Passive Backplanes 6-44

Industrial Motherboards 7-2

Industrial Chassis
Wallmount 8-6
1U Rackmount Chassis 8-30
2U Rackmount Chassis 8-32
4U Rackmount Chassis 8-40
6U Rackmount Chassis 8-62

Industrial Server Motherboards 9-2

Industrial Server Chassis 10-2

Industrial Storage 11-2

GPU Servers 12-2

CompactPCI Platforms

3U/4U Chassis	13-5
3U CPU Cards	13-12

Industrial Computer Peripherals 14-2

Industrial Ethernet Solutions

EN50155 Switches	15-2
PoE Switches	15-6
Industrial Protocol Managed Ethernet Switches	15-10
Managed Switches	15-13
Unmanaged Ethernet Switches	15-16
Serial Device Servers	15-19
Modbus Gateways	15-21
Wireless Serial Device Servers/Modbus Gateways	15-22
Industrial Protocol Gateways	15-23
Cellular Routers/Gateways	15-26
LoRa Gateways/Nodes	15-30
IoT and Network Edge Platfrom	15-32
Wireless Access Points/CPE	15-36

About Advantech

Advantech: Partnering for Smart City & IoT Solutions

Founded in 1983, Advantech is a leader in providing trusted innovative embedded and automation products and solutions. Advantech offers comprehensive system integration, hardware, software, customer-centric design services, and global logistics support; all backed by industry-leading front and back office e-business solutions. Advantech has always been an innovator in the development and manufacture of high-quality, high-performance computing platforms. We cooperate closely with our partners to help provide complete solutions for a wide array of applications across a diverse range of industries. To realize our corporate vision of Enabling an Intelligent Planet, Advantech will continue collaborating and partnering for smart city and IoT solutions.

Advantech's Good-to-Great 3-Circle Principle

The Advantech 3-Circle Principle is based on the book "Good to Great," by Jim Collins. According to the book, a company looking for long-term success should clearly address these three fundamental principles, and commit to their continuing, solid execution. Advantech is fully committed to this approach and has defined the Advantech "Good to Great 3-Circle Principle" as a means of adhering to it.



World-Class Recognition

Advantech is an authorized alliance partner of both Intel® and Microsoft®. Our customers find the technologies we use inside our products to be widely compatible with other products in the global marketplace. Interbrand, the world renowned brand consulting firm, recognized Advantech as one of the Top 20 Taiwanese Global Brands for many years. Advantech appreciates this recognition of our efforts to build a trusted, global brand; it also symbolizes a promise we give to our business partners, which is to keep building a trustworthy brand that is recognized everywhere and improves the lives of all.

Quality and Environmental Compliance

As a member of the global village, Advantech understands the importance of preserving the environment. Our environmental programs focus on reducing, reusing, and recycling materials used in our manufacturing operations. Advantech's quality and environmental compliance efforts include the following:



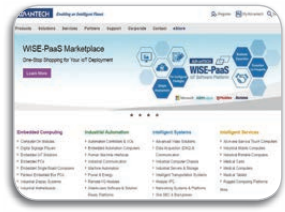
- SO 9001 Certification
- ISO 14001 Certification
- ISO 13485 Certification
- OHSAS 18001 Certification
- TL9000 Certification
- ISO 17025 Certification
- RoHS Directive Compliance
- WEEE Directive Compliance
- Authorized Sony Green Partner
- REACH SVHC Directive Compliance
- EICC Conflict Minerals Declaration

Timely Support at Your Convenience

Advantech has over 20 regional hotlines and offices throughout 92 cities, in 21 countries, with over 7,300 employees to provide efficient, professional services for customer care, product selection, technical support, and order handling. Through our call centers and online stores, customers worldwide enjoy the convenience of Advantech's multi-service channels to reduce business turnaround time. Together with the four customer service centers in Taiwan, China, Europe and the United States, our global service network offers an extensive spectrum of services that includes warehousing, logistics, peripheral certification, sourcing & purchasing, and RMA & value-added services, and technical support & training.

Advantech.com Website

Through www.advantech.com, we not only offer comprehensive products, but also real-time updated information to our customers. In addition to product information, you also can find case studies of proven applications from diverse sectors. Furthermore, registered MyAdvantech members, can access the RMA service center, updated price lists, and various promotion programs.



Online Store



Buy.Advantech.com

To extend Advantech's services, we launched the Buy.Advantech online store which offers one-stop shopping for Human Machine Interfaces, Industrial Ethernet networking, Controller & I/O products, plus computing platforms. This eStore offers comprehensive product information to build systems easily, with live expert support to solve problems, online configuration providing easy system customization options, instant quotations, an extensive library of FAQs and all the latest up-to-date downloads and firmware.

Online Support

Providing superior self-support mechanisms is one of the most essential parts of being a top-tier automation company, and we take pride in the outstanding level of service that we offer. To best support our customers, we've created a suite of useful interactive online tools, including:



- Technical Documents: Manuals, datasheets, updated drivers and utilities-all available for download through the support portal.
- 3D Product Models: Simulated products in 3D format to provide detailed visualizations for evaluation.
- Online Training: Self-training documents and videos to provide trainees with integrated information.
- Online Catalog: A comprehensive online catalog with extensive product information.

24/7 Online Service



To effectively respond to customers' questions, our regional call centers support inquiries about: purchasing, shipping, technical, RMA issues and more. Contact your regional call center to get the support you need today.

Global Hotlines

US /Canada	1-888-576-9668	China	800-810-0345/8389	Russia	8-800-555-01-50 (Moscow) 8-800-555-81-20 (St. Petersburg)
Mexico	52-01-800-467-2415	Taiwan	0800-777-111	India	1-800-425-5070/71
Colombia	57-1381-2858	Japan	0800-500-1055	Thailand	66-2-248-3140
Brazil	0800-770-5355	Korea	080-363-9494/9495	Indonesia	62-21-7511939
Europe	00800-2426-8080/8081	Singapore	65-6442-1000	Malaysia (KL)	60-3-7725-4188
		Australia/ New Zealand	1300-308-531	Malaysia (Penang)	60-4-537-9188

Intelligent Systems and Platforms

Transforming the Industrial Cloud Era

With innovative technologies from cloud computing (industrial server, video server), edge computing (fanless, slim & portable devices), to high performance embedded systems. Advantech transforms embedded systems into intelligent systems with smart, secure, energy-saving features, built with Industrial Cloud Services and professional System Design-To-Order Services (System DTOS). Advantech's intelligent systems are designed to target vertical markets in intelligent transportation, factory automation/machine automation, cloud infrastructure, intelligent video application.

Intelligent Systems

Pursuing IoT Evolution with I-Cloud and Intelligent Systems


Intelligent Video


Industrial Cloud


Equipment Builder


Intelligent Transportation


Industrial Server & Storage



Industrial Cloud


Intelligent Vision Systems


Intelligent Video Systems

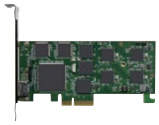

Intelligent Systems


Data Acquisition Modules


Intelligent Transportation Systems

Star Products

Intelligent Video Solution



DVP-7011UHE
1-ch H.264 4K HDMI 2.0 PCIe Video Capture Card with SDK
- 1-channel 4K HDMI 2.0 video input with H.264 software compression
- 60/50 fps (NSTC/PAL) at up to 4096 x 2160p resolution for recording and display
- PCIe x 4 host interface



DVP-7011MHE
1-ch Full HD H.264 M.2 Video Capture Card with SDK
- 1 channel HDMI/DVI-D/DVI-A/YPbPr channel video inputs with H.264 software compression
- 30/25 fps (NSTC/PAL) at up to full HD resolution for recording and display
- PCIe M.2 (B/M) host interface



DVP-7017HE
1-ch Full HD H.264 Mini PCIe Video Capture Card with SDK
- 1 channel SDI channel video inputs with H.264 software compression
- 30/25 fps (NSTC/PAL) at up to full HD resolution for recording and display
- Mini PCIe x1 (Gen2) host interface
- Windows/Linux OS supported



DVP-5311D
Video (DVI-DVI), Control and Data Transmission Extender
- Supports High Resolution 1920x1200 @ 60Hz WUXGA
- Zero pixel loss with TMDS signal correction
- DVI loop-through for supporting local display and monitoring

Intelligent Transportation Systems



ITA-5831
Intel® 6th Generation Core™ i Processor Fanless System; EN 50155 certified for Railway Applications
- Fanless computer for railway vehicle applications, fully compliant with EN 50155
- Satisfies temp. standard: EN 50155 TX (-40 ~ 70 °C) and IEC 61373 body mount class B
- Supports 2 ITA-EM modules for storage, battery and I/O expansion



ITA-5231
Intel® 6th Generation Core™ i Processor 2U Fanless System; EN 50155 certified for Railway Applications
- Fanless computer for railway vehicle applications, fully compliant with EN 50155
- Satisfies temp. standard: EN 50155 TX (-40 ~ 70 °C) and IEC 61373 body mount class B
- Supports 4 ITA-EM modules for storage, battery and I/O expansion



ITA-2231
Intel® 6th Generation Core™ i Processor 2U Fanless System; EN 50121-4 Compliant for Railway Applications
- Built-in Intel® Core™ i7-6822EQ quad-core processor, 2.0GHz
- 16GB of DDR4 memory onboard
- 2U fanless rackmount system
- Supports 3 ITA-EM modules for I/O expansion



ITA-1711
Intel® Celeron™J1900 Fanless Compact System with Multiple COM Ports and Dual Displays
- Built-in Intel® Celeron™ J1900 quad-core processor, 2.0 GHz
- Fanless, compact system design
- 4 GB of DDR3 memory onboard with optional NVRAM
- 2 x LAN, 6 x USB, 14 x COM, and 1 x USB 3.0 ports

Intelligent Inspection Systems



AIIS-1200P/U
Fanless Machine System, Braswell CPU, 2-CH GigE PoE or 2-CH USB 3.0 Camera Interface
- Intel® Braswell N3160/N3710 SoC CPU
- 2-CH GbE(Power over Ethernet), IEEE 802.3af compliant for GigE Camera/2-CH dedicated controller for USB 3.0 Camera
- Compact size and volumn less than 0.9 Lite



AIIS-3400P/U
Machine Vision System, Intel® 6th/7th Gen Core i CPU, 4-CH GigE PoE or 4-CH USB 3.0 Camera Interface
- Intel® 6th/7th generation Core i CPU (LGA1151)
- 4-CH GbE PoE (Power over Ethernet), IEEE 802.3af compliant for GigE Camera/4-CH USB 3.0 with dedicated controller for USB 3.0 Camera
- Isolated 8-CH Digital I/O



AIIS-3410P/U
Compact Vision System, Intel® 6th/7th Gen Core i CPU, 4-CH Camera Interface for GigE PoE/ USB 3.0, PCIe expansion slot
- Intel® 6th/7th generation Core i CPU (LGA1151)
- 4-CH GbE PoE (Power over Ethernet), IEEE 802.3af compliant for GigE Camera/4-CH USB 3.0 with dedicated controller for USB 3.0 Camera
- Isolated Digital I/O
- PCIe or PCI extension compatibility



AIIS-5410P
Fanless Vision System, Intel® Core™ i7/i5/i3, 4-CH GigE PoE Camera Interface, One PCI or PCIe Expansion Slot
- Intel® 6th Core™ Skylake i7/5/i3 CPU (BGA1440)
- 4-CH GbE PoE (Power over Ethernet)
- Powered device auto detection and classification

Modular IPCs



MIC-7900
Intel® Xeon Processor Broadwell-DE SoC Compact Fanless System
- Intel® Xeon Processor Broadwell-DE D-1539/D-1559 SoC CPU
- 4 x GigaLAN
- Supports Advantech i-module, isolation COM and 32-bit GPIO module



MIC-7700
Intel® 6th/7th Generation Core i Socket CPU Compact Fanless System
- Intel® 6th/7th Generation Core i Socket CPU (LGA1151) with Q170/H110 chipset
- 2 x GigaLAN and 8 x USB 3.0
- Supports Advantech i-module, isolation COM and 32-bit GPIO module



MIC-7500
Intel® 6th Generation Core i Processor Compact Fanless System
- Intel® 6th Generation Core i7/i5/i3 BGA type CPU with QM170 chipset
- 2 x GigaLAN and 8 x USB 3.0
- Supports Advantech i-module, isolation COM and 32-bit GPIO module



MIC-7300
Intel® Celeron N3350/Atom x7 E3950 Processor Compact Fanless System
- Intel Celeron N3350/Atom x7 E3950 Processor
- Remote power on/off control and 8-bit GPIO
- Supports Advantech i-module, isolation COM and 32-bit GPIO module

Star Products

Industrial Rackmount Enclosures



ACP-2020
2U Rackmount Short Depth Chassis for ATX/MicroATX Motherboards

- 398mm Short-depth chassis
- 350W single or 500W redundant power supply
- 2 internal 2.5" and 2 internal or hot-swap drive bays
- Intelligent System Module for smart fan, self-diagnosis and remote manageability



ACP-4020
Compact 4U Rackmount Chassis for Half-size SBC or ATX/ MicroATX Motherboard

- 348mm short depth chassis
- Shock-resistant disk drive bay holds one internal 2.5", and two front-accessible 3.5" drives, plus one slim optical disk drive
- Intelligent System Module for smart fan, self-diagnosis and remote manageability



IPC-631
4U Front I/O Short Depth Rackmount Chassis for ATX/ MicroATX Motherboards

- 350mm Short-depth chassis
- Supporting MB CPU TDP up to 120W
- 500W single or redundant power supply
- PWM-controlled smart fan for minimal noise



ACP-4D00
Dual-Node 350mm Depth 4U Chassis for Half-Sized Slot SBC

- Dual nodes, 350mm depth design for easy maintenance and space saving
- Supports PICMG 1.3 or PCI half-sized slot SBC with Core i7 CPU
- Supports 6-slot backplane, 3 available slots per node

Industrial Wallmount Enclosures



IPC-3012
Compact Chassis for PICMG 1.3 Half Size SHB

- Compact chassis with two front expansion slots
- Shockproof drive bay for two 2.5" HDDs
- Equipped 80 plus FLEX 250W power supply



IPC-6025
5-Slot Desktop/Wallmount Chassis with Scalability as 5U Quad-System Solution

- Front handle for easy withdraw in rackmount carrier
- Lockable front door prevent unauthorized access
- Shockproof drive bay for two 3.5" HDDs



IPC-7130
Desktop/Wallmount Chassis for ATX/MicroATX Motherboard with Dual Hot-Swap 3.5" Drive Bays

- Shockproof drive bays - One 5.25", one internal 3.5", and two hot-swap 3.5" trays
- Lockable front door prevent unauthorized access



IPC-7120
Desktop/Wallmount Chassis with front I/O Interfaces for ATX/mATX Motherboard

- With front I/O interface and four to seven expansion slots
- Shockproof drive bay for one 5.25" ODD and two 3.5" HDDs
- LED indicators for power status and HDD activity

Industrial Server Chassis



HPC-7120
1U Short Depth Server Chassis for MicroATX/ATX/EATX Server board with 2 x 2.5" Hot-swap Drive Bays and 1 full-height/ half-length PCIe x16 Expansion Slot

- 1U short depth server chassis supports MicroATX/ATX/EATX motherboard
- Two hot swap 2.5" SATA/SSD drive bays
- Anti-vibration FAN design



HPC-7242
2U Rackmount Chassis for ATX Motherboard with 4 Hot-Swap SAS/SATA HDD Trays and RPS

- Supports ATX motherboard with dual processors
- Four shock-resistant hot-swap disk trays supporting 3.5" or 2.5" SAS/SATA drives for RAID 5/10 application, one slim ODD, and two 2.5" internal drives
- Dual front USB 3.0 ports



HPC-5000
Small Tower Chassis for microATX/Mini-ITX Motherboard

- Supports microATX / Mini-ITX motherboard
- Supports up to internal two 3.5" or one 3.5" + one 2.5" HDD
- Two USB 2.0 and two USB 3.0 ports in the front side



HPC-7000
Server Tower Chassis for EATX/ ATX/MicroATX Motherboard

- Supports EATX/ATX/MicroATX motherboard with dual processors
- Three internal 3.5" HDD bays and one slim ODD drive bay
- Dual front USB 3.0 ports
- System fan easy maintainance design

Industrial Storages



ASR-3100
1U Rackmount Dual Intel® Xeon® E5-2600 v3/v4 Storage Server with 16 x 2.5" NVMe SSDs and 2 x PCIe Gen III x8 Slots

- Dual LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 processors
- 16 DDR4-2133 RDIMMs for a maximum of 512 GB
- Up to 16 x hot-swappable 2.5" NVMe/ SAS/SATA drives



HPC-8212
2U Storage Chassis for ATX/EATX Serverboard with 12 Hot-swap Drive Bays

- 2U rackmount chassis supports EATX/ATX/ uATX motherboard
- 12-bay hot-swappable 3.5"/2.5" SAS 12Gb/s drives or SATA 6Gb/s drives
- 4 x NVMe drives supported via an optional riser card
- Default 7x slots (low profile) rear panel, 3x slots (full height) optional



HPC-8316
3U Storage Chassis for ATX/EATX Serverboard with 16 Hot-swap Drive Bays

- 3U rackmount chassis supports EATX/ATX/ uATX motherboard
- 16-bay hot-swappable 3.5"/2.5" SAS 12Gb/s drives or SATA 6Gb/s drives
- Supports 2 hot-swappable 2.5" drive bays at the rear for SAS SKUs
- Eliminates the need for an additional HBA card for SATA SKUs



HPC-8424
4U Storage Chassis for ATX/EATX Serverboard with 24 Hot-swap Drive Bays

- 4U rackmount chassis supports EATX/ ATX/uATX motherboard
- 24-bay hot-swappable 3.5"/2.5" SAS 12Gb/s drives or SATA 6Gb/s drives
- 4 x NVMe drives supported via an optional riser card
- Supports 2 hot-swappable 2.5" drive bays at the rear

Star Products

Indusrial Motherboards



AIMB-705

LGA1151 6th/7th Generation Intel® Core™ i7/i5/i3/Pentium ATX with DVI/VGA,DDR4, SATA III, USB 3.0 & 6 COMs

- Intel® 6th/7th generation Core i7/i5/i3/ pentium processor
- Dual channel (Non-ECC) DDR4 1866/2133 up to 32GB
- Supports VGA and DVI display



AIMB-785

LGA1151 6th/7th Generation Intel® Core™ i7/i5/i3/Celeron/ Pentium ATX with Triple Display, DDR4, SATA III

- Supports Intel® Core™ i7/i5/i3/Celeron/ Pentium processor with Q170 chipset
- Four DIMM sockets support up to 64 GB DDR4 1866/2133
- Supports triple display VGA/2 DVI-D and dual GbE LAN

GPU Servers



AGS-923

2U Rackmount Intel® Xeon® E5-2600 v4/v3 GPU Server, Supporting 4 x PCIe x16 Double-depth Cards and 1 x PCIe x8 Single-depth FH/HL Card

- Processor: Dual Intel® Xeon® E5-2600 v4/ v3 series
- Memory: DDR4 1600/1866/2133 MHz ECC-REG type up to 256GB
- Remote Management: IPMI function support



AGS-913

1U Rackmount Intel® Xeon® E5-2600 v3/v4 GPU Server, Supporting 3 x PCIe x16 Double-depth Cards and 1 x PCIe x8 Single-depth FH/HL Card

- Processor: Dual Intel® Xeon® E5-2600 v3/v4 series, up to 20 cores /40 threads
- Memory: DDR4 1600/1866/2133 MHz ECC-REG type up to 256GB
- Remote Management: IPMI function support

Slot Single Board Computer



PCE-3029

LGA 1151 6th and 7th Gen Intel® Core™ i7/i5/i3 Half-size SHB with PCIe 3.0/ Dual Independent Display/Dual GbE LAN/SATA III/m-SATA/USB 3.0

- Complies with PICMG 1.3
- Supports Intel® Core™ i7/i5/i3/Celeron®/ Pentium® processor with H110 chipset
- Dual Channel (Non-ECC) DDR4 1866/2133 up to 32 GB



PCE-5029

LGA1151 6th and 7th Generation Intel® Core™ i7/i5/ i3/Pentium/Celeron System Host Board with DDR4, SATA 3.0, USB 3.0, Dual GbE, and Dual Displays

- Intel® Core™ i7/i5/i3 LGA1151 processor with H110 chipset
- Up to 32 GB of dual-channel (non-ECC) DDR4 1866/2133 MHz
- PCIe 3.0, USB 3.0, and SATA 3.0 slots



PCE-5129

LGA1151 6th and 7th Generation Intel® Core™ i7/i5/ i3/Pentium/Celeron System Host Board with DDR4, SATA 3.0, USB 3.0, M.2, Dual GbE, and Triple Displays

- Intel® Core™ i7/i5/i3 LGA1151 processor with Q170 chipset
- Up to 32 GB of dual-channel (non-ECC) DDR4 1866/2133 MHz
- PCIe 3.0, M.2, USB 3.0, SATA 3.0, and SW Raid 0, 1, 5, 10



PCE-9228

Dual LGA 2011-R3 Intel Xeon® E5-2600v3 SHB Server Board with C612, DDR4/SATA3.0/ USB3.0/Dual GbE

- Supports Dual Intel Xeon E5-2600v3 series processors with C612
- Supports DDR4 2133MHz RDIMM up to 256GB
- Supports PCIe3.0,USB3.0,SW raid 0, 1, 5, 10

Industrial Server Motherboards



ASMB-815

LGA 3647-P0 Intel® Xeon® Scalable ATX Server Board with 6 DDR4, 5 PCIe x8 or 2 PCIe x16 and 1 PCIe x8, 8 SATA3, 6 USB 3.0, Dual 10GbE, IPMI

- ATX Server Board with Xeon® Scalable processors
- DDR4 2666 MHz RDIMM up to 192 GB (6 DIMMs)
- 8 SATA, 1 M.2 (SATA/PCIe Compatible)



ASMB-825

Dual LGA 3647-P0 Intel® Xeon® Scalable ATX Server Board with 6 DDR4, 4 PCIe x16 + 2 PCIe x8, 8 SATA3, 6 USB 3.0, Dual 10GbE, IPMI

- ATX Server Board with dual Xeon® Scalable processors
- DDR4 2666 MHz RDIMM up to 192 GB (6 DIMMs)
- 8 SATA, 1 M.2 (SATA/PCIe Compatible)



ASMB-925

Dual LGA3647-P0 Intel® Xeon® Scalable EATX Server Board with 12 DDR4, 5 PCIe x16 + 1 PCIe x8 + 1 PCI, 8 SATA3, 6 USB 3.0, Dual 10GbE, IPMI

- EATX Server Board with dual Xeon® Scalable processors
- DDR4 2666 MHz RDIMM up to 384 GB (12 DIMMs)
- Five PCIe x16, one PCIe x8, and one PCI slots



ASMB-975

Dual LGA 3647-P0 Intel® Xeon® Scalable Proprietary Server Board with 12 DDR4, 4 PCIe x16 + 1 PCIe x8 + 4 PCIe x4, 14 SATA3, 8 USB 3.0, Dual 10GbE, IPMI

- Proprietary Server Board with dual Xeon® Scalable processors
- DDR4 2666 MHz RDIMM up to 384 GB (12 DIMMs)
- 14 SATA3 connectors (including 2 SATA M.2)

Data Acquisition Modules



MIC-1810

12-bit Data Acquisition Platform with Intel® Core™ i3/Celeron® Processer

- 16 x analog inputs, up to 500 KS/s, 12-bit resolution
- 2 x analog outputs, up to 500 KS/s, 12-bit resolution
- Intel® Celeron® 1047UE/Core™ i3-3217UE processer, 1.4 GHz
- 2 x 10/100/1000 Base-T RJ45 LAN ports
- 2 x USB 2.0 and 2 x USB 3.0 ports



MIC-1816

16-bit Data Acquisition Platform with Intel® Core™ i3/Celeron® Processer

- 16 x analog inputs, up to 1 MS/s, 16-bit resolution
- 2 x analog outputs, up to 3 MS/s, 16-bit resolution
- Intel® Celeron® 1047UE/Core™ i3-3217UE processer, 1.6 GHz
- 2 x 10/100/1000 Base-T RJ45 LAN ports
- 2 x USB 2.0 and 2 x USB 3.0 ports



PCIE-1812

16-Bit, 8-Ch Simultaneous Sampling Multi-Function PCI Express Card

- 8 x differential simultaneous sampling analog inputs, up to 250 kS/s, 16-bit resolution
- 2 analog outputs, up to 3 MS/s, 16-bit resolution
- Four 32-bit programmable counters/ timers/ encoders
- 32 x programmable DI/O with interrupt function



PCIE-1813

38.4 kS/s, 26-bit, 4-ch, Simultaneous Sampling, Universal Bridge Input, Multi-function PCI Express Card

- 4 x simultaneous sampling analog inputs, up to 38.4 kS/s, 26-bit resolution
- Full, half, and quarter-bridge sensor input with built-in anti-aliasing filter
- 2 analog outputs, up to 3 MS/s, 16-bit resolution
- Four 32-bit programmable counters/ timers/ encoders
- 32 x programmable DI/O with interrupt function

Intelligent Transportation

Comprehensive Solutions for Modernizing Infrastructure

Advantech collaborates with partners to provide reliable platform solutions that facilitate intelligent transportation in cities worldwide. Leveraging over a decade of experience, Advantech has invested resources into designing and developing innovative product offerings aimed specifically at the transportation industry. These products include automatic fare collection systems, wayside control equipment, rolling stock management solutions, and traffic surveillance systems. By enabling intelligent transportation systems, Advantech hopes to achieve its vision of realizing smart city technologies.



Automatic Fare Collection



Automatic fare collection systems are designed to perform ticket vending/checking, fare calculation/collection, and access management tasks using communication networks and automatic control technology. Such systems can improve transportation by streamlining operations and reducing resource costs.

Wayside Control



Advantech provides industrial-grade, fanless systems with EN50121-4 certification for diverse wayside control operations, including interlocking, signaling, and train control tasks. Designed for quick installation and flexible use, these systems feature multiple I/O and reliable fail-safe technology.

Rolling Stock Management



Advantech's rolling stock management systems include cameras, switches, driver interfaces, onboard displays, and controllers, as well as M12 connectors for superior shock and vibration tolerance. Designed to support various railway transportation applications, these systems are certified to EN50155 and EN50121-3-2 railway standards.

Traffic Surveillance/ETC



As the number of vehicles on roads continues to rise, demand for enhanced surveillance and traffic flow management is increasing. Advantech's rugged traffic surveillance solutions feature intelligent video analytics technology that enables license plate recognition, and its electronic toll collection systems streamline traffic flows for improved road safety.

Product Offerings



ITA-1711
Compact Intel® Celeron® J1900 System with Dual GigaLANs, 10 x COM Ports, and Dual Displays



ITA-2231
Intel® Core™ i7 Fanless 2U Rackmount System with 3 x ITAM Modules



ITA-5831
6th Gen Intel® Core™ i Fanless System with EN50155 Certification for Railway Applications



EKI-9516P/9512P
EN50155 M12 Managed Ethernet PoE Switch



EKI-7712G-4FI
8G+4SFP Port Gigabit Managed Redundant Industrial Switch



ITA-3630
Compact 3rd Gen Intel® Core™ i Fanless System

Intelligent Video Solution

Innovative Video Platform with Intelligent Video Analytics

Advantech offers an extensive range of video products, including video capture cards (PCIe, mini PCIe, and M.2) and industrial-grade video processing systems, to meet various market needs. From lecture recording, to medical imaging, event broadcasting, live video streaming, and 24-hour surveillance, Advantech's intelligent video platforms are capable of supporting diverse video-related applications. These integrated hardware and software solutions are also pre-installed with intelligent video analysis software and equipped with a powerful software development kit that enables developers to more efficiently implement unique application software, thereby shortening overall development time.



Medical Imaging



Advantech's video capture cards are designed to deliver precise imaging for medical applications. The inclusion of a powerful software development kit and support for various programming languages allows system integrators to easily develop unique applications.

Video Recording/Streaming



Advantech's video capture cards also support video streaming, specifically multi-stream channel recording and file exporting/merging. This allows hospitals to record and stream video in various formats for medical education and training.

Multi-Platform Broadcasting



Equipped with transcoding and multi-streaming protocols, Advantech's video card solutions can be used to broadcast multimedia content to a wide variety of client devices and facilitate multi-platform streaming operations.

Video Surveillance



Advantech provides a full range of capture card solutions for the video surveillance market. These high-performance cards support diverse video output interfaces to enable flexible support for diverse applications.

Product Offerings



DVP-7021HE
2-Channel HDMI/DVI/ VGA/ YPbPr/CVBS/S-Video Software Compression PCIe Video Capture Card



DVP-7011UHE
Single-Channel 4K HDMI 2.0 Software Compression PCIe Video Capture Card



DVP-7033HE
4-Channel Full HD SDI Software Compression PCIe Video Capture Card



DVP-7012MHE
Single-Channel HDMI/DVI/VGA Software Compression M.2 Video Capture Card



DVP-7635HE
4-Channel TVI/CVI/AHD/CVBS Hardware Compression PCIe Video Capture Card

Machine Automation

Intelligent Motion Control and Machine Vision

Advantech offers a wide range of Ethernet-based solutions integrated with motion control and machine vision capabilities for machine automation applications. These solutions include embedded PC-based motion controllers, centralized motion control systems, multi-axis motion control cards, and DIN-rail terminal boards that are compatible with ARM/DSP/FPGA processors. By integrating various platforms with motion control and machine vision modules, Advantech provides solution-ready packages (SRPs) that satisfy diverse industry demands, establishing itself as a leading PC-based machine automation solutions provider.



Production Automation



Advantech's intelligent control systems enable diverse production operations, equipment, machinery, processes, and applications to be automated. This not only reduces labor, time, and resources, but also improves accuracy and overall production quality.

Automated Inspection



Aimed at the manufacturing industry, Advantech's machine vision solutions enable automated inspection and analysis for quality control applications. Integrated with industrial-grade image processing software, these solutions optimize the inspection process to increase efficiency and productivity.

Process Control



Advantech offers high-performance computing systems with scalable architectures and information processing and networking capabilities to enable real-time monitoring and process control. The collection and subsequent analysis of production data facilitates production scheduling and process optimization.

Packaging Automation



Advantech's automated packaging systems comprise human machine interfaces (HMIs), sensors and motion-control devices, and programmable logic controllers (PLCs) to facilitate the control and monitoring of packaging production lines for increased efficiency.

Product Offerings



EtherCAT Solutions

Includes the PCI-1203 EtherCAT Master Control Card, AMAX-3285 Motion Slaves, and ADAM-5000/ECAT and AMAX-4800 Series I/O Modules



Machine Vision Solutions

Intelligent PCI Express GigE Vision Frame Grabbers and 0.3 ~ 15MP Power over Ethernet Industrial Cameras



MIC-7500

Compact Fanless System with 6th Gen Intel® Core™ i CPU, Intel® QM170 chipset, and 4 x Expansion Slots



MIC-7900

Compact Fanless Modularized System with Intel® Xeon® D-1539/D-1559 SoC, 4 x GigaLAN, and 4 x USB 3.0



AIIS-1440

Machine Vision System with Intel® Core™ i7/i5/i3 CPU and 4-Channel USB 3.0 Controller



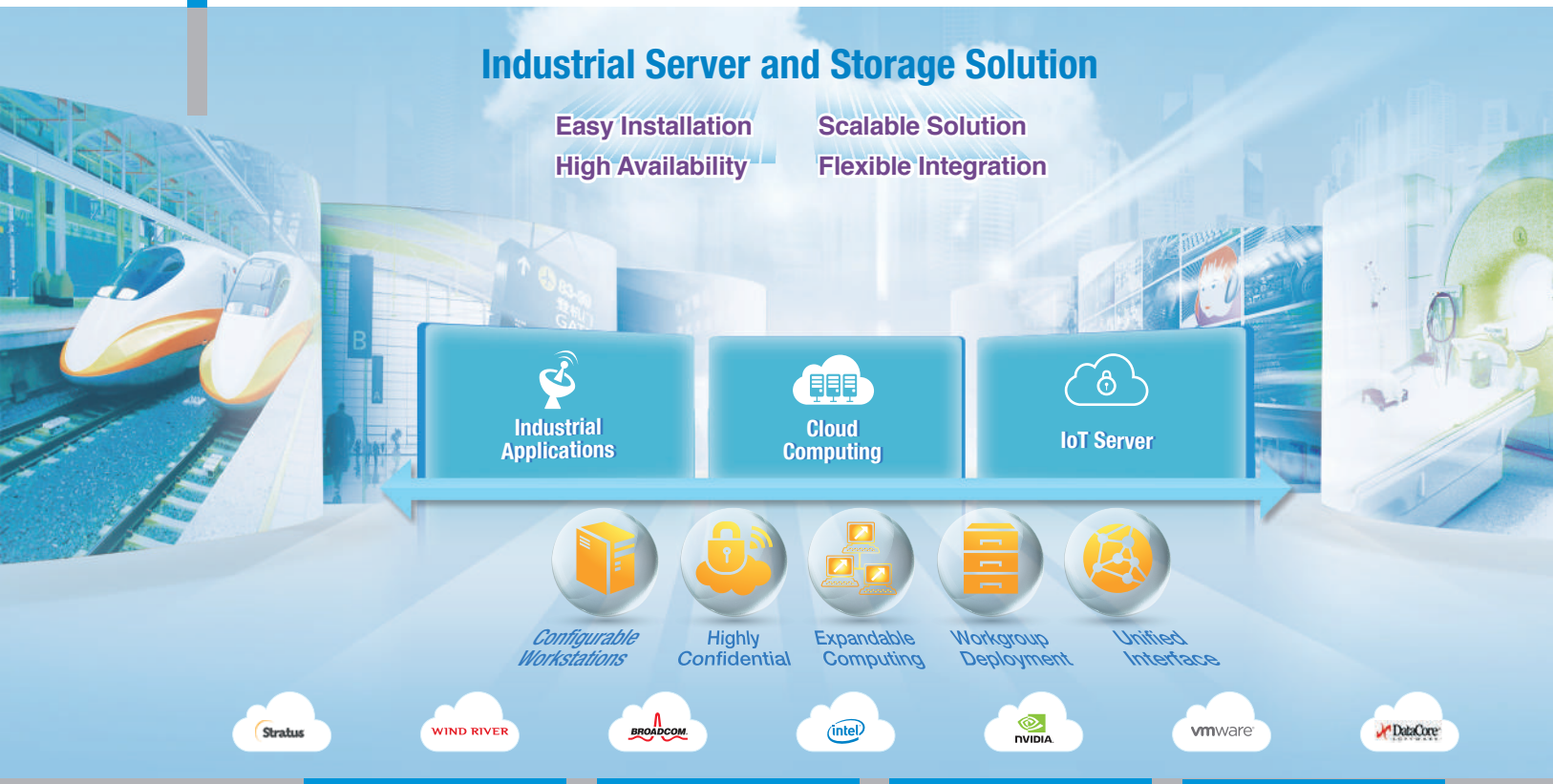
AIIS-1200

Palm-Sized Vision System with Intel® Celeron® N3160/N3710 SoC and 2-Channel Camera Interface for GigE PoE or USB 3.0

Industrial Server and Storage Solutions

Flexible, High-Performance Products with a Long Lifecycle

With the arrival of Industry 4.0, and the resulting trend for increased automation and data communication in manufacturing, technology solutions that can centralize management and streamline machine control have become essential. Advantech's industrial server and storage solutions include server motherboards, server chassis, pre-configured server systems, GPU servers, workstations, JBOD and RAID arrays, and external disk drives. These solutions are designed to facilitate data and application synchronization, storage optimization, equipment monitoring and management, and centralized deployment to support even the most demanding industrial applications.



Equipment Monitoring



Advantech's industrial server and storage solutions are designed to facilitate automatic detection on production lines. By enabling real-time equipment monitoring, overall production efficiency, yield rate, and output quality can be controlled and optimized for increased productivity.

Medical Imaging



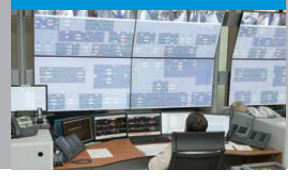
To ensure efficient testing and diagnosis, hospitals require high-performance medical imaging capabilities. Advantech's GPU servers accelerate image processing by streamlining transcoding and content assembly operations, optimizing the video output quality.

Content Broadcasting



The provision of Intelligent Platform Management Interface technology facilitates remote cloud-based management operations, including out-of-band and cross-platform management, remote troubleshooting, and KVM-over-IP switching.

Video Surveillance



Advantech offers total surveillance solutions that include front-end IP-cameras, networking capabilities, host servers, and back-end storage to ensure easy deployment and integration. The provision of high bandwidth ensures high availability and flexible expansion for diverse applications.

Product Offerings



SKY-2000
Optimized design for IoT server



SKY-4000
High density storage capacity server



SKY-5000
Multi-node design computing server



SKY-6000
Multi-GPU server

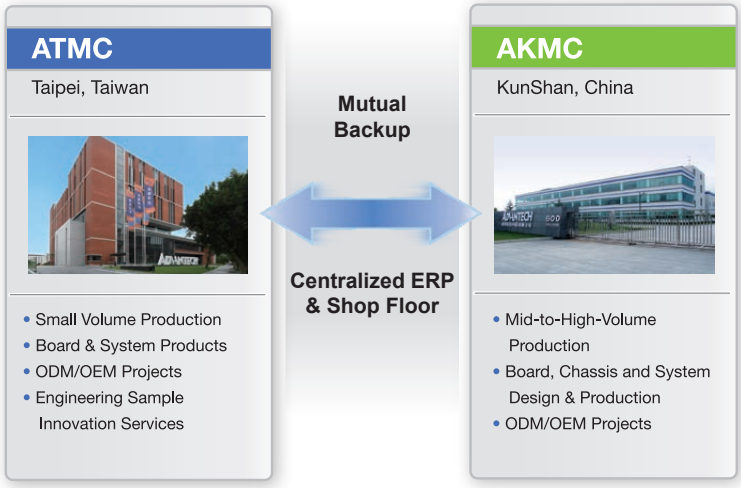


ASMB-975
Dual LGA 3647-P0 Intel® Xeon® Scalable Proprietary Server Board with 12 DDR4, 4 PCIe x16 + 1 PCIe x8+4 PCIe x4, 14 SATA3, 8 USB3.0, Dual 10GbE, IPMI

Advantech iPlanet Care

Manufacturing

Our dual, world-class manufacturing centers in Taiwan and China maintain precise quality control, and offer a full range of production in a timely and cost-effective manner. To maximize the efficiency of operational procedures, we have implemented a cluster manufacturing system within our segmented manufacturing service units. This unique approach enables a direct, simplified, and highly streamlined design-to-manufacturing process.



- In-house board, chassis, and system production
- Dual world-class manufacturing centers minimize business risks
- Advanced production capabilities and customizable processes
- Rigid quality assurance system
- Most complete ISO standard coverage

Configure To Order Services

Advantech's Configure To Order Services (CTOS) makes industrial computing solutions more accessible by offering web-based configuration tools, comprehensive, complex assembly services with high-mix, low-volume box build and customized assembly, modification, system integration and functional testing services.

- Online intelligent configuration
- Comprehensive approach to complex configuration solutions
- Local customized configuration services
- 2 year global warranty covering system & peripherals integrated

ADVANTECH CTOS
Configure To Order Services

Certified Quality Assurance System

Advantech has been designing and manufacturing industrial PCs according to our 3C Quality Statement:

- Always strive for overall customer satisfaction
- Continuous improvement
- Apply closed-loop mechanisms to resolve problems

At Advantech, quality is our main priority. A complete line of safety, EMC and reliability measures such as ESD, vibration, drop testing, temperature, humidity and HALT chambers are available to ensure our products meet the strictest standards. All facilities are at least ISO 9001 and 14001 certified while others hold additional certifications such as ISO 13485, 17025, TL9000 and OHSAS18001. An environmental program that focuses on reducing, reusing and recycling of materials throughout the manufacturing process is also applied at Advantech. All our products are 100% RoHS compliant and hazardous substance management system are applied to meet worldwide environmental requests. Advantech's efforts towards environmental protection have been recognized by Sony since 2004 (Sony Green Partner).

- Complete ISO coverage
- Green policies
- Constant quality and reliability monitoring
- Ease of access to quality contacts

One-Stop Global Services



Advantech iPlanet Care combines exceptional business expertise, powerful design capacities, and a thorough global service network to provide one-stop global services and total solutions. Our broad range of global support packages adds maximum flexibility and efficiency to your projects.

Global Logistics Services

With strong integrated ERP and SAP supply chain solutions, our worldwide logistics network offers a wide range of options for different delivery models including local and global solutions that meet your unique needs and budget requirements. Advantech's Logistics Service gives you the flexibility to simplify your logistical networks, bring your products to market on time, and enjoy a timely return on your investment.

- Optimized and flexible shipping solutions
- Integrated ERP and SAP supply chain solution with global distribution network
- Centralized plants with local delivery

Global Peripheral Procurement Services

Advantech global peripheral procurement network consists of local teams that leverage strong, worldwide supplier relationships and strict vendor and product management to offer quality-guaranteed, compatible peripherals with short lead times and competitive prices.

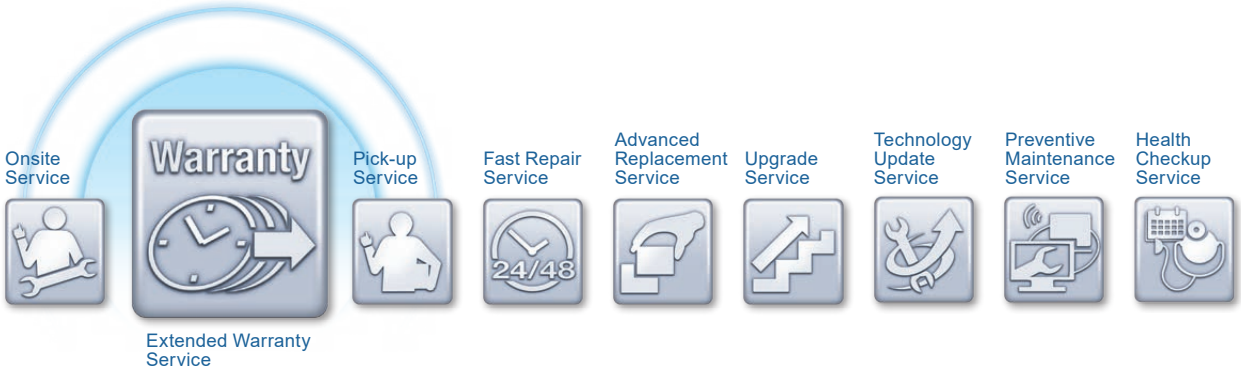
- Localized procurement with worldwide network support
- Global standardization management; 100% compatible peripherals
- Trusted quality with revision control
- Short lead time and competitive price

Global Customer Support Services

Our global presence provides localized reliable customer support services. We can create an optimized maintenance and support plan, leveraging the full power of our service portfolio to help reduce costs and proactively mitigate business risks to best meet your needs. In addition to our complete technical and repair support, we provide a variety of customizable after-sales services, including extended warranty, advance replacement, upgrade, fast repair, etc. With our knowledgeable local support groups, we enable a consistent support experience around the world and help keep your investment at peak performance and within your budget.

- 24/7 technical support: hotline AE & online chat support
- Global deployment with local full-line repair capability
- Easy-to-use web-based repair and tracking system (eRMA)
- Various value-added, after-sales service packages





System Design to Order Service

Build Your Dream System in 30 Days

With an increasingly diverse market and multiple vertical applications, the needs of customized systems for specific applications are in high growth. Advantech is the dream system provider, supplying quality assurance and integrated services to worldwide customers. With customization, integration, validation, and certification, we are committed to providing a one-stop solution to customers who require a trusted partner to maximize their applications.



System Engineering Expert Group

System design should always start from the customer's perspective. To build up a system that precisely matches a customer's application, the Advantech professional engineering team always puts the customer first, from system working environment, ergonomics, to maintenance. The professional engeering team and rich experience from over 100 successful cases make Advantech the dream system builder for your business.

Worldwide Orders, Local Services

Our global presence provides reliable, localized customer support service, with customizable after-sales services, including extended warranty, advance replacement, and upgrade. We provide an optimized, within-budget, maintenance and support plan around the world to keep your investment at peak performance.

- 24/7 hotline AE
- Global RMA System

Certified Quality Assurance Systems

At Advantech, quality is our main priority. A complete line of safety, EMC, and reliability test equipment, such as hi-pot, ESD, vibration, drop test, temperature, humidity and HALT chambers are available to ensure our products meets the strictest standards. Also Advantech has an applied environmental program that focuses on reducing, reusing and recycling of materials throughout the manufacturing process. All our products are 100% RoHS compliant and Environmental Management Systems such as QC080000 are applied to meet worldwide environmental requirements.

World-class Manufacturing Center

Our dual, world-class manufactring centers in Taiwan and China both maintain precise quality control, and offer a full range of production in a timely and cost-effective manner. To maximize efficiency of operational procedures, we have implemented a cluster manufacturing system within our segmented manufacturing service units. This unique approach enables a direct, simplified, and highly streamlined design-to-manufacturing process.

ATMC

Taipei, Taiwan Area 17,488 m²



- Small Volume Production
- Board & System Products
- ODM/OEM Projects
- Engineering Samples & Innovation Services

Mutual Backup

Centralized ERP & Shop Floor

AKMC

KunShan, China Area 18,000 m²



- Mid-to-high Volume Production
- Board, Chassis and System Design & Production
- ODM/OEM Projects

1

Industrial I/O

Data Acquisition and Control Hardware/Software Tutorial		*1-2*
DAQNavi Introduction		*1-3*
DataLogger	Configurable Data Logging Software	*1-5*
SignalMeter	Signal Analyzing Software	*1-6*
Analog I/O and Multifunctional Card Selection Guide		*1-7*
Digital I/O and Counter Card Selection Guide		*1-11*
PCI Express DAQ Cards		
PCIE-1730 **PCIE-1730H**	32-ch TTL and 32-ch Isolated Digital I/O PCIe Card 32-ch TTL and 32-ch Isolated Digital I/O PCIe card with digital filter and interrupt function	*1-18*
PCIE-1751 **PCIE-1753**	48-ch Digital I/O and 3-ch Counter PCI Express Card 96-ch Digital I/O PCI Express Card	*1-19*
PCIE-1752 **PCIE-1754**	64-ch Isolated Digital Output PCI Express Card 64-ch Isolated Digital Input PCI Express Card	*1-20*
PCIE-1756 **PCIE-1756H**	64-ch Isolated Digital I/O PCIe Card 64-ch Isolated Digital I/O PCIe card with digital filter and interrupt function	*1-21*
PCIE-1760	8-ch Relay and 8-ch Isolated Digital Input PCI Express Card	*1-22*
PCIE-1810	500 kS/s, 12-bit, 16-ch PCI Express Multifunction DAQ Car	*1-23*
PCIE-1816 **PCIE-1816H**	500 kS/s, 16-bit, 16-ch PCI Express Multifunction DAQ Card 1 MS/s, 16-bit, 16-ch PCI Express Multifunction DAQ Card	*1-24*
PCIE-1802 **PCIE-1802L**	8-ch, 24-bit, 216 kS/s Dynamic Signal Acquisition PCI Express Card 4-ch, 24-Bit, 216 kS/s Dynamic Signal Acquisition PCI Express Card	*1-25*
PCIE-1812	250 kS/s, 16-bit, 8-ch, Simultaneous Sampling Multi-function PCI Express DAQ Card	*1-26*
PCIE-1813	38.4 kS/s, 26-bit, 4-ch, Simultaneous Sampling, Universal Bridge Input, Multi-function PCI Express Card	*1-27*
PCIE-1840 **PCIE-1840L**	4-ch 16Bit 125 MS/s Digitizer 4-ch 16Bit 80 MS/s Digitizer	*1-28*
Terminal Board Selection Guide		*1-29*
ADAM-3000 Series	Isolated Signal Conditioning Modules	*1-32*
ADAM-3011 **ADAM-3013** **ADAM-3014**	Isolated Thermocouple Input Module Isolated RTD Input Module Isolated DC Input/Output Module	*1-33*
ADAM-3016 **ADAM-3017**	Isolated Strain Gauge Input Module External Powered IEPE Signal Conditioner	*1-34*
ADAM-3112 **ADAM-3114**	Isolated AC Voltage Input Module Isolated AC Current Input Module	*1-35*
USB-4620 **USB-4622** **USB-4630**	5-port Full-speed Isolated USB 2.0 Hub 5-port High-speed USB 2.0 Hub 4-Port Isolated USB 3.0 SuperSpeed Hub	*1-36*
USB-4702 **USB-4704**	10 kS/s, 12-bit, 8-ch Multifunction DAQ USB Module 48 kS/s, 14-bit, 8-ch Multifunction DAQ USB Module	*1-37*
USB-4711A	150 kS/s, 12-bit, 16-ch Multifunction DAQ USB Module	*1-38*
USB-4716	200 kS/s, 16-bit, 16-ch Multifunction DAQ USB Module	*1-39*
USB-4718	8-ch Thermocouple Input USB Module with 8-ch Isolated Digital Input	*1-40*
USB-4750 **USB-4761**	32-ch Isolated Digital I/O USB Module 8-ch Relay and 8-ch Isolated Digital Input USB Module	*1-41*
USB-4751 **USB-4751L**	48-ch Digital I/O USB Module 24-ch Digital I/O USB Module	*1-42*
Serial Communication Card Selection Guide		*1-43*
PCIE-1602 **PCIE-1604** **PCIE-1610** **PCIE-1612**	2-port RS-232/422/485 PCI Express Communication Card 2-port RS-232 PCI Express Communication Card 4-port RS-232 PCI Express Communication Card 4-port RS-232/422/485 PCI Express Communication Card	*1-45*
PCIE-1620 **PCIE-1622**	8-port RS-232 PCI Express Communication Card 8-port RS-232/422/485 PCI Express Communication Card	*1-46*
PCIE-1680 **PCI-1680**	2-Port CAN-Bus PCIE card with Isolation Protection 2-port CAN-bus Universal PCI Card with Isolation Protection	*1-47*
PCI-1602UP **PCI-1604L**	2-port RS-232/422/485 Low-Profile Universal PCI Communication Card with Isolation Protection 2-port RS-232 PCI Communication Card	*1-48*
MIC-1810	12-bit, 500 KS/s, 12-ch DAQ platform with Core™ i3/ Celeron® processer	*1-49*
MIC-1816	16-bit, 1MS/s, 16-ch DAQ platform with Core™ i3/ Celeron® processer	*1-50*



To view all of Advantech's Data Acquisition Boards, please visit www.advantech.com/products.

Data Acquisition and Control Hardware/Software Tutorial

PC-Based Data Acquisition (DAQ) System Overview

Because industrial PC I/O interface products have become increasingly reliable, accurate, and affordable over the last few years, PC-based data acquisition and control systems are now widely used in industrial and laboratory applications such as monitoring, control, data acquisition and automated testing.

Knowledge of electrical and computer engineering is necessary for selecting and building a data acquisition (DAQ) and control system that functions as intended. This tutorial provides a brief explanation of the function and operation of DAQ and control systems, and their configuration. The content covered is as follows:

- Transducers and Actuators
- Signal Conditioning
- Data Acquisition and Control Hardware
- Getting Started

Transducers and Actuators

A transducer converts temperature, pressure, level, length, and position data into voltage, current, frequency, pulses, and/or other signals.

Thermocouples, thermistors, and resistance temperature detectors (RTDs) are common transducers for temperature measurements. Other types of transducers include flow sensors, pressure sensors, strain gauges, load cells, and LVDTs, which measure flow rate, pressure variances, force, or displacement.

Actuators are devices that activate process control equipment using pneumatic, hydraulic, or electrical power. Valve actuators, for example, can be used to open/close valves to control fluid rates.

Signal Conditioning

Signal conditioning circuits improve the quality of signals generated by transducers before conversion into digital signals by PC-based data-acquisition hardware. Examples of signal conditioning include signal scaling, amplification, linearization, cold-junction compensation, filtering, attenuation, excitation, and common-mode rejection.

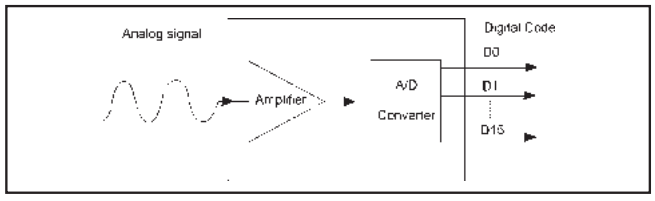
One of the most common signal conditioning functions is amplification. For maximum resolution, the input signal voltage range should be approximately equal to the maximum input range of the A/D converter. Amplification expands the range of transducer signals to match the input range of the A/D converter. For example, an X10 amplifier maps transducer signals ranging from 0 to 1 V into a range of 0 to 10 V before transmission to the A/D converter.

Data Acquisition and Control Hardware

Data acquisition and control hardware is typically employed for one or more of the following functions: analog input, analog output, digital input, digital output, and counter/timer functions. This section provides an explanation of each function and a list of important considerations when selecting a data acquisition and control system.

Analog Inputs (A/D)

Analog-to-digital (A/D) conversion transforms analog current or signals into digital signals. This conversion is necessary for enabling the signals to be processed and stored on a computer.

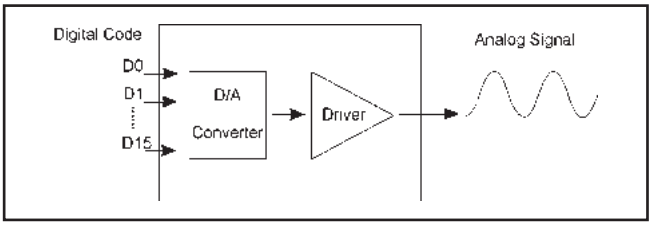


The most significant criteria for selecting A/D hardware are

1. Number of input channels
2. Single-ended or differential input signals
3. Sampling rate (in samples per second)
4. Resolution (usually measured in bits of resolution)
5. Input range (specified in full-scale volts)
6. Noise and nonlinearity

Analog Outputs (D/A)

The opposite of A/D conversion is digital-to-analog (D/A) conversion, which involves converting a digital signal into an analog signal or current. D/A devices allow a computer to be used to control real-world events.



Analog output signals can be used to directly control process equipment. The process can provide feedback in the form of analog input signals. This is referred to as a closed loop control system with proportional-integral-derivative (PID) control. Analog outputs can also be used to generate waveforms. In this case, the device behaves as a function generator.

Digital Inputs and Outputs

Digital input/output functions are useful for applications such as contact closure and switch status monitoring, industrial on/off control, and digital communications.

Counters/Timers

Counters/timers can be used for event counting, flow meter monitoring, frequency counting, pulse width measuring, and time period measuring.

Getting Started

Advantech Offers Ideal Hardware/Software Solutions

Advantech manufactures data acquisition hardware and software specifically designed for measurement, monitoring, and control applications. The following guide is provided to ensure customers select the ideal components for DAQ systems.

Step 1: Identify Fundamental Requirements

Determine whether the DAQ system will be used primarily for measurement, monitoring, control, or analysis. Identify the data requirements of applications and the number of data collection points supported by the system. Determine the required data collection speed, sampling rate, measurement type, generated voltage or current, desired accuracy, and output resolution for each data collection point. Finally, assess the system event timing and whether any special environmental conditions exist.

Step 2: Select Appropriate Hardware

Select the necessary hardware to achieve your fundamental requirements. Advantech offers plug-in boards for diverse A/D, D/A, and digital I/O needs, as well as both ISA and PCI bus products. The selection of hardware should be based on the following five main criteria:

1. Number and types of channels
2. Differential or single-ended inputs
3. Resolution
4. Speed
5. Software compatibility with hardware

Step 3: Select Necessary Accessories

Most applications require additional accessories that are available as separate items. Such accessories include

1. Expansion peripherals for adding system channels
2. Cables, signal conditioners, and external boxes, such as screw terminals or BNC accessories

Step 4: Select Suitable Software

Software, more than any other factor, determines the system start-up time, ease of modification, effectiveness, and suitability for the specific application. The three main criteria for selecting software are as follows:

1. Operating system installed
2. User programming expertise
3. Software compatibility with hardware

DAQNavi Introduction

What is DAQNavi?

DAQNavi is an Advantech next-generation driver package that enables programmers to develop application programs using Advantech DAQ boards and devices. This integrated driver package includes device drivers, an SDK, tutorial, and utility. The user-friendly design allows even beginners to quickly understand how to utilize DAQ hardware and write programs via the intuitive "Advantech Navigator" utility environment. Additionally, the provision of numerous example codes for various development environments dramatically reduces programming time and effort.

For more information about Advantech DAQNavi, visit www.advantech.com/DAQNavi.

Multiple Operating Systems

DAQNavi supports most of the popular operating systems (OS) employed for automation applications. Because API functions are the same for different OS, users only need to install the driver without modifying the program when migrating between two OS. DAQNavi supports Microsoft's Windows 10/7 and Windows CE OS (both 32 and 64 bit). For an alternative to Windows, the DAQNavi software package also supports Linux OS including the Ubuntu, Fedora, Debian, and SUSE distributions. For other distributions, please contact your local Advantech branch or customer sales representative.

LabVIEW and MATLAB Support

LabVIEW is popular graphical development environment for measurement and automation applications. For LabVIEW users, DAQNavi offers two options for programming: Express VI and Polymorphic VIs. Express VI enables user to program quickly without additional wiring. To perform configurations, simply drag the Express VI icon to the LabVIEW block diagram and the DAQNavi Wizard pop-up window will appear. DAQNavi Wizard is similar to the .NET Component DAQ Wizard used in the Microsoft Visual Studio environment and also streamlines programming. With Polymorphic VI, users can build more complex programs using several VIs and wiring. In addition to LabVIEW, DAQNavi also supports MATLAB programming.

.NET Support

DAQNavi offers a series of .NET component objects with the latest .NET technology that allow users to benefit from platform-unified features. To begin programming, simply drag and drop .NET components into a .NET programming environment, such as Microsoft Visual C# or VB .NET. The DAQNavi Wizard pop-up window will appear to guide users through performing configurations in sequence. This is also known as "Configure & Run programming". Programmers can also write code manually using .NET components for mroe object calling flexibility. Using Advantech CSCL technology, engineers can perform similar programming in a native environment such as Visual C++.

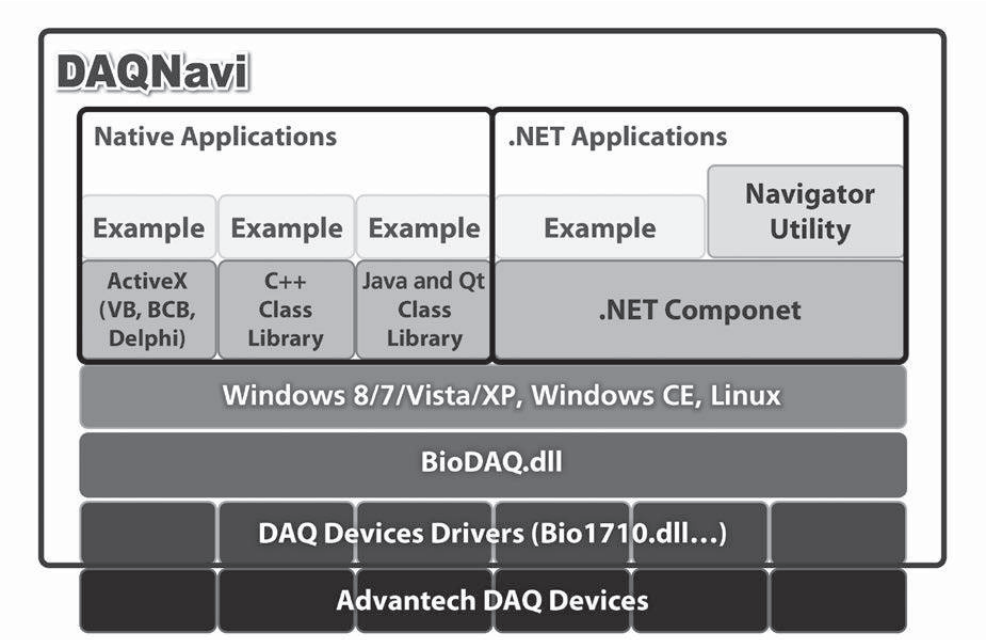
C++, Delphi, VB, BCB, Java, and Qt Support

DAQNavi provides a C++ class library (for VC++ and Borland C++ Builder) and ActiveX (for Visual Basic, Delphi, and BCB) for native programming environments with the same calling interface as the .NET Framework Class Library. With the DAQNavi Java class library and Qt class library, users can develop Java and Qt programs that support migration between various OS (including Windows and Linux).

Additional Modules

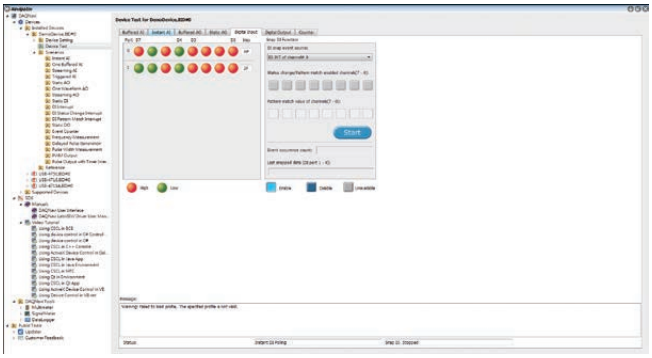
DAQNavi supports all PCI Express, PCI, PC/104, and PCI-104 cards, as well as all USB DAQ devices.

DAQNavi Driver Package Architecture



The DAQNavi SDK and individual DAQNavi drivers for specific hardware are available on the Advantech DAQNavi website (www.advantech.com/DAQNavi). These offerings need to be installed to use the hardware.

Advantech Navigator – A Powerful Intuitive Utility



Devices

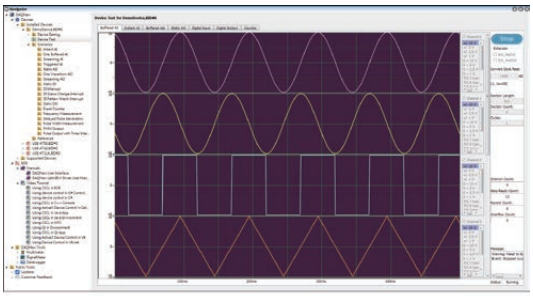
All installed Advantech DAQ devices are listed here, including a virtual DAQ device named “Demo Device”. This allows programmers to run examples and test operations within DAQNavi without installing hardware. For every device listed, there are four selectable options.

1. Device Setting

This option allows uses to configure the hardware of the selected device.

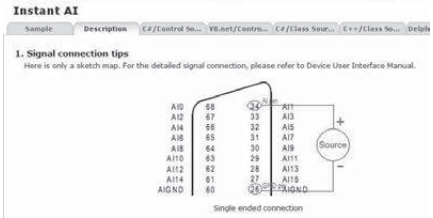
2. Device Test

This option allows users to test the hardware functionality without programming.



3. Scenarios

Advantech has defined common measurement and automation applications as “scenarios” for user reference. For each scenario, one example program is embedded in Advantech Navigator for direct execution. The corresponding source code for each scenario is provided and written in various languages (C#, VB .NET, C++, Delphi , Qt, VB6, and Java). A wiring diagram is also included for each scenario.



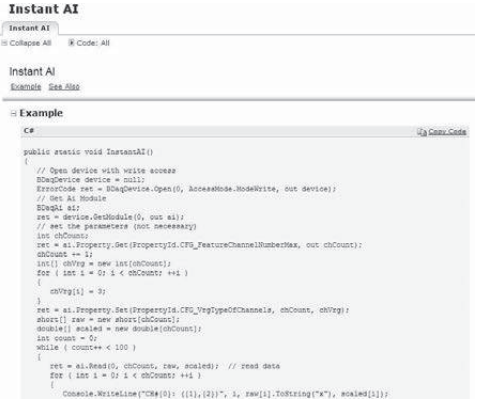
4. Reference

This option allows users to reference the user manual of the selected device.

SDKs

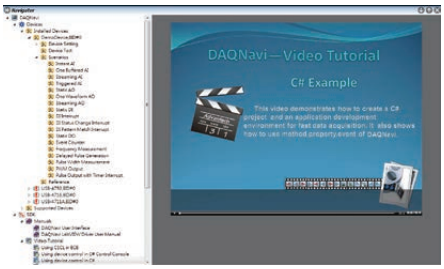
1. DAQ User Interface Manual

To reduce development time, Advantech offers a wealth of tutorial and reference documentation for both Class Library and Device Control programming methods. The programming instructions not only explain how to create an application project, but also how to write a program using a programming chart and example code.



2.Tutorial Video

Advantech also offers a tutorial video for reference when creating a project.

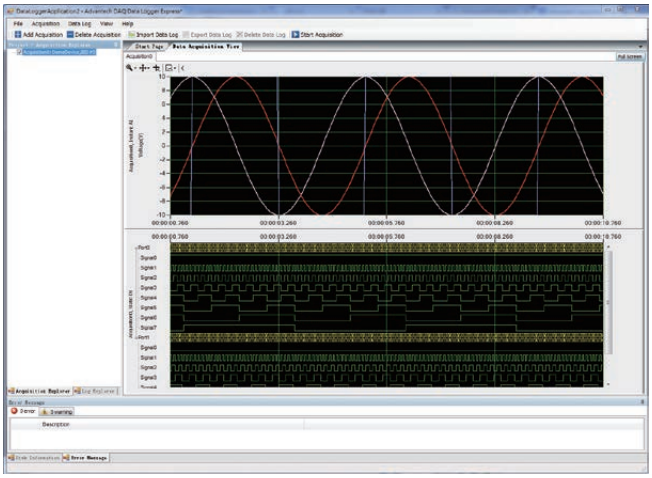


Common Scenarios for Measurement and Automation Applications

Category	Scenario	Description
Analog Input	Instant AI	Read single AI value once
	Asynchronous One Buffered AI	Read a buffer of AI values once (Don't need to wait the acquisition is done to run other program)
	Synchronous One Buffered AI	Read a buffer of AI values once (Need to wait the acquisition is done to run other program)
	Streaming AI	Continuously read a buffer of AI values
Analog Output	Static AO	Change AO values once
	Asynchronous One Waveform AO	Change AO value based on a pre-defined waveform once (Don't need to wait the generation is done to run other program)
	Synchronous One Waveform AO	Change AO value based on a pre-defined waveform once (Need to wait the generation is done to run other program)
	Streaming AO	Continuously change AO value based on a pre-defined waveform
Digital Input	Static DI	Read the selected DI port value once
	DI Interrupt	When DI bit meets a pre-defined edge change (rising or falling), an interupt is generated
	DI Pattern Match Interrupt	When selected DI port meets pre-defined pattern, an interupt is generated
	DI Status Change Interrupt	When the status of certain selected channel of DI port changes, an interupt is generated
Digital Output	Static DO	Change DO values once
Timer/ Counter	Delayed Pulse Generation	When a trigger from coutner gate is met, a pulse is generated after a specific period
	Pulse Output with Timer Interrupt	Continuously generate a periodic pulse train (using counter internal clock), and an event will be sent out at the same time.
	Event Counter	Continously count the pulse number of signal from counter input
	Frequency Measurement	Meaure frequency of singal from counter input
	Pulse Width Measurement	Meaure pulse width of signal from counter input
	PWM Output	Generate PWM (Pulse Width Modulation) signal

DataLogger

Configurable Data Logging Software



Features

- Data logging, display, and recording without programming
- Instant AI, buffered AI, and static DI data logging
- Intuitive wizard for hardware channel configuration
- Supports device simulation operations
- Configurations can be saved into a project file for future use
- Real-time display with zoom and pan capabilities
- Supports data recording and storage to local disk
- Playback function enables viewing of historical data
- Supports both analog graph and digital graph displays

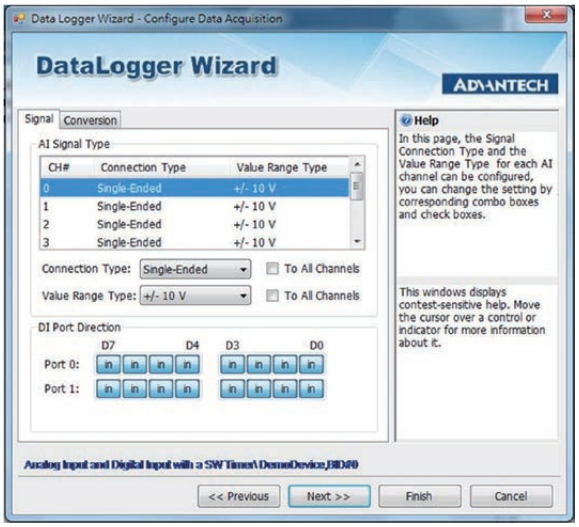
Introduction

Advantech DataLogger is a ready-to-use application software with a user-friendly interface that engineers can leverage to perform data logging, display, and recording. This software enables engineers to flexibly collect and store data from various Advantech data acquisition devices for relevant data logging tasks without time-consuming programming.

Feature Details

Data Acquisition Device Configuration

Before data logging measurement, engineers can configure all necessary analog and digital input channels using the built-in DAQNavi Wizard. A pop-up window displays step-by-step instructions to ensure settings can be easily configured. Besides DAQ devices, DataLogger also supports device simulation, enabling engineers to perform operations without hardware installation.



Configuration Management via Project Files

Engineers can create and edit projects to include one or more data logging tasks. A single project can display data acquired from one or multiple DAQ devices. The input channel configurations and logging settings can be saved as specific project files. Engineers can then open these project files to load all saved configurations and perform data logging tasks immediately.

Real-Time Data Logging, Display, and Recording

After DAQ configuration, data collection can be immediately initiated, with the collected data displayed on a real-time graph. Engineers can zoom in, zoom out, or dynamically pan across the graph during data logging, and can decide whether to record the collected data (save data into a pre-defined file).

Historical Data Playback

Previously recorded data can be loaded into the DataLogger software and viewed using the Playback function. Zoom in, zoom out, and pan operations are also possible for historical data displays.

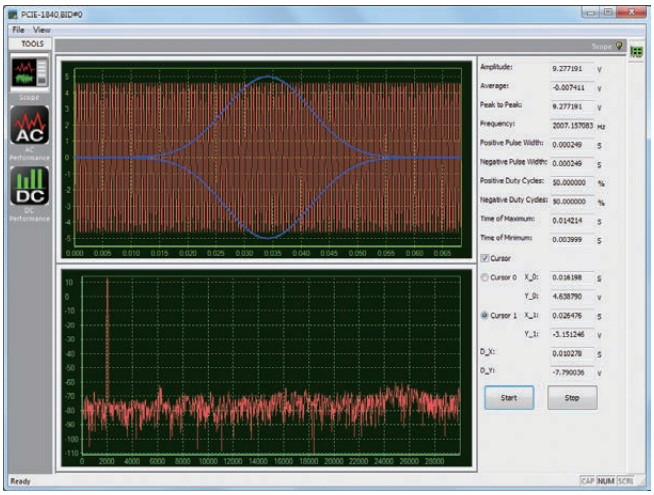
Specifications

Supported Hardware

- PCI Express multifunction, analog input, and digital input cards
- PCI multifunction, analog input, and digital input cards
- USB multifunction, analog input, and digital input modules
- PC/104 and PCI-104 multifunction, analog input, and digital input cards

SignalMeter

Signal Analysis Software



Features

- Easy to use, no programming required
- Provides DC and AC performance measurements
- Provides cursor measurements for signal analysis
- Enables Windows function for AC signals
- Real-time frequency displays based on zoom and pan operations in the time domain
- Automatic amplitude, average, peak-to-peak, and frequency measurements
- Cost-free tool

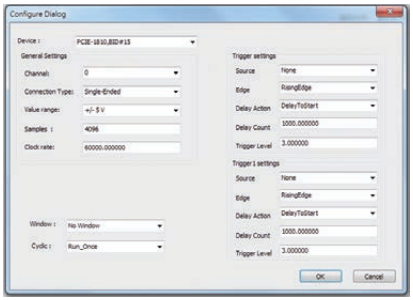
Introduction

SignalMeter is ready-to-use application software designed for Advantech's DAQ devices that enables scope, AC performance, and DC performance functions to facilitate signal analysis. Using the simple, user-friendly interface, engineers can control the settings for the three functions with a single configuration.

Feature Details

Data Acquisition Device Configuration

Before using SignalMeter, the necessary data acquisition parameters can set via the configuration dialog interface. The configuration interface includes device selection, general settings, trigger settings, and start mode settings. Engineers can set the three function modes to follow the same configuration settings.



Scope Mode

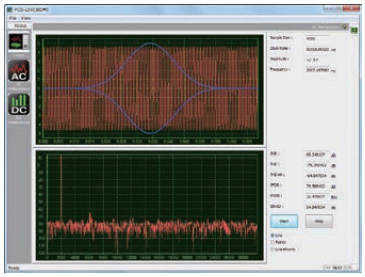
The Scope mode offers the following simple oscilloscope features:

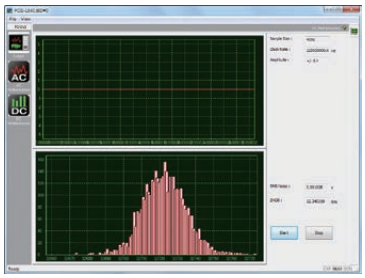
- Amplitude: Returns the difference between the signal highs and lows
- Average: The mean vertical level of the entire captured waveform
- Peak-to-Peak: Returns the difference between the extreme maximum and minimum values
- Frequency: Frequency is the inverse of period, where period is the average completion time for a cycle using the entire waveform in the capture window.

The Scope mode function not only supports simultaneous displays of the time and frequency domains, but also synchronous zoom.

AC and DC Performance Mode

The AC Performance function enables automatic calculation of the SNR, THD, and SIMAD— important information for data acquisition. For DC signals, the DC Performance function can be used to display RMS noise and plot a histogram. Overall, the interface is simple and easy to navigate.





Specifications

Supported Hardware

- PCI Express multifunction, analog input, and digital input cards
- PCI multifunction, analog input, and digital input cards
- USB multifunction, analog input, and digital input modules
- PC/104 and PCI-104 multifunction, analog input, and digital input cards

Analog I/O and Multifunction Card Selection Guide



Category			Multifunction						
Bus			PCI						
Part Number			PCI-1710U/ 1710UL	PCI-1710HGU	PCI-1711U/ 1711UL	PCI-1712/ 1712L	PCI-1716/ 1716L	PCI-1706U	PCI-1718HDU
Analog Input	Resolution		12 bits	12 bits	12 bits	12 bits	16 bits	16 bits	12 bits
	Channels		16 SE/8 diff.	16 SE/8 diff.	16 SE	16 SE/8 diff.	16 SE/8 diff.	8 diff.	16 SE/8 diff.
	Onboard FIFO		4,096 samples	4,096 samples	1,024 samples	1,024 samples	1,024 samples	8,192 samples	1,024 samples
	Sampling Rate		100 kS/s	100 kS/s	100 kS/s	1 MS/s	250 kS/s	250 kS/s	100 kS/s
	Input Ranges	Unipolar Inputs (V)	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	0 ~ 10, 0 ~ 1, 0 ~ 0.1, 0 ~ 0.01	-	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	-	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25
		Bipolar Inputs (V)	±10, 5, 2.5, 1.25, 0.625	±10, 5, 1, 0.5, 0.1, 0.05, 0.01, 0.005	±10, 5, 2.5, 1.25, 0.625	±10, 5, 2.5, 1.25, 0.625	±10, 5, 2.5, 1.25, 0.625	±10, 5, 2.5, 1.25	±10, 5, 2.5, 1.25, 0.625
		Configurable Per Channel	✓	✓	✓	✓	✓	✓	✓
	Trigger Modes	Pacer/Software/ External Pulse	✓	✓	✓	✓	✓	✓	✓
		Analog Slope	-	-	-	✓	-	✓	-
		Advanced Trigger	-	-	-	✓	-	✓	-
	Data Transfer Modes	Software	✓	✓	✓	✓	✓	✓	✓
		DMA	-	-	-	Bus mastering	Bus mastering	✓	-
Analog Output	Resolution		12 bits	12 bits	12 bits	12 bits	16 bits	12 bits	12 bits
	Channels		2 (PCI-1710U only)	2	2 (PCI-1711U only)	2 (PCI-1712 only)	2 (PCI-1716 only)	2	1
	Onboard FIFO		-	-	-	32,768 samples	-	-	-
	Output Range (V)		0 ~ 5, 0 ~ 10	0 ~ 5, 0 ~ 10	0 ~ 5, 0 ~ 10	0 ~ 5, 0 ~ 10, ±5, ±10	0 ~ 5, 0 ~ 10, ±5, ±10	0 ~ 5, 0 ~ 10, ±5, ±10, 0 ~ 20 mA, 0 ~ 24 mA, 4 ~ 20 mA	0 ~ 5, 0 ~ 10
	Output Rate		Static update	Static update	Static update	1 MS/s	Static update	Static update	Static update
	DMA Transfer		-	-	-	✓	-	-	-
Digital I/O	Input Channels		16	16	16	16 (shared)	16	16 (shared)	16
	Output Channels		16	16	16		16		16
Timer/ Counter	Channels		1	1	1	3	1	2	1
	Resolution		16 bits	16 bits	16 bits	16 bits	16 bits	32 bits	16 bits
	Max. Input Frequency		10 MHz	10 MHz	10 MHz	10 MHz	10 MHz	10 MHz	10 MHz
Isolation Voltage			-	-	-	-	-	-	-
Auto Calibration			-	-	-	✓	✓	✓	-
Board ID Switch			✓	✓	✓	-	✓	✓	✓
Dimensions (L x H)			175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")
Connector			68-pin SCSI	68-pin SCSI	68-pin SCSI	68-pin SCSI	68-pin SCSI	68-pin SCSI	DB37
Legacy Driver	Windows XP/2000		✓	✓	✓	✓	✓	✓	✓
	WinCE		✓	-	-	-	-	-	-
	Linux		✓	✓	✓	✓	✓	✓	✓
DAQNavi Driver	Windows 8/7/Vista/XP/2000		✓	✓	✓	✓	✓	✓	✓
	WinCE		✓	-	-	-	-	-	-
	Linux		-	-	✓	-	-	-	-
LabVIEW Driver			✓	✓	✓	✓	✓	✓	✓
Page			online	online	online	online	online	online	online

* All channels should be set to the same range.
** SS: Single DMA channel, single A/D channel scan; SM: Single DMA channel, multiple A/D channel scan.

Analog I/O and Multifunction Card Selection Guide



Category			Multifunction						
Bus			PCI		ISA				
Part Number			PCI-1741U	PCI-1742U	PCL-711B	PCL-812PG	PCL-818L	PCL-818HD	PCL-818HG
Analog Input	Resolution		16 bits	16 bits	12 bits	12 bits	12 bits	12 bits	12 bits
	Channels		16 SE/8 diff.	16 SE/8 diff.	8 SE	16 SE	16 SE/8 diff.	16 SE/8 diff.	16 SE/8 diff.
	Onboard FIFO		1,024 samples	1,024 samples	-	-	-	1,024 samples	1,024 samples
	Sampling Rate		200 kS/s	1 MS/s	40 kS/s	30 kS/s	40 kS/s	100 kS/s	100 kS/s
	Input Ranges	Unipolar Inputs (V)	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25*	0 ~ 10, 0 ~ 5 0 ~ 2.5, 0 ~ 1.25	-	-	-	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	0 ~ 10, 0 ~ 1, 0 ~ 0.1, 0 ~ 0.01
		Bipolar Inputs (V)	±10, 5, 2.5, 1.25, 0.625*	±10, 5, 2.5, 1.25,0.625	±5, 2.5, 1.25, 0.625, 0.3125	±10, 5, 2.5, 1.25, 0.625, 0.3125	±10, 5, 2.5, 1.25, 0.625	±10, 5, 2.5, 1.25, 0.625	±10, 5, 1, 0.5, 0.1, 0.05, 0.01, 0.005
		Configurable Per Channel	-	✓	✓	✓	✓	✓	✓
	Trigger Modes	Pacer/Software/ External Pulse	✓	✓	✓	✓	✓	✓	✓
		Analog Slope	-	-	-	-	-	-	-
		Advanced Trigger	-	-	-	-	-	-	-
	Data Transfer Modes	Software	✓	✓	✓	✓	✓	✓	✓
		DMA	-	Bus mastering	-	SS**	SM**	SM**	SM**
Analog Output	Resolution		16 bits	16 bits	12 bits	12 bits	12 bits	12 bits	12 bits
	Channels		1	2	1	2	1	1	1
	Onboard FIFO		-	-	-	-	-	-	-
	Output Range (V)		±5, ±10	0 ~ 5, 0 ~ 10, ±5, ±10	0 ~ 5, 0 ~ 10	0 ~ 5, 0 ~ 10	0 ~ 5, 0 ~ 10	0 ~ 5, 0 ~ 10, ±10	0 ~ 5, 0 ~ 10, ±10
	Output Rate		Static update	Static update	Static update	Static update	Static update	Static update	Static update
	DMA Transfer		-	-	-	-	-	-	-
Digital I/O	Input Channels		16	16	16	16	16	16	16
	Output Channels		16	16	16	16	16	16	16
Timer/ Counter	Channels		1	1	-	1	1	1	1
	Resolution		16 bits	16 bits	-	16 bits	16 bits	16 bits	16 bits
	Max. Input Frequency		10 MHz	10 MHz	-	2 MHz	10 MHz	10 MHz	10 MHz
Isolation Voltage			-	-	-	-	-	-	-
Auto Calibration			✓	✓	-	-	-	-	-
Board ID Switch			✓	✓	-	-	-	-	-
Dimensions (L x H)			175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	185 x 100 mm (7.3" x 3.9")	155 x 100 mm (6.1" x 3.9")	185 x 100 mm (7.3" x 3.9")	185 x 100 mm (7.3" x 3.9")
Connector			68-pin SCSI	68-pin SCSI	3 x 20-pin	5 x 20-pin	DB37	DB37	DB37
Legacy Driver	Windows XP/2000		✓	✓	✓	✓	✓	✓	✓
	WinCE		-	-	-	-	-	-	-
	Linux		✓	✓	-	-	-	-	-
DAQNavi Driver	Windows 8/7/Vista/XP/2000		✓	✓	-	-	✓	✓	✓
	WinCE		-	-	-	-	-	-	-
	Linux		✓	-	-	-	-	-	-
LabVIEW Driver			✓	✓	✓	✓	✓	✓	✓
Page			online	online	online	online	online	online	online

* All channels should be set to the same range.
** SS: Single DMA channel, single A/D channel scan; SM: Single DMA channel, multiple A/D channel scan.








NEW NEW NEW

Category			Multifunction					
Bus			PCI-104	PCIE				
Part Number			PCM-3810I	PCIE-1810	PCIE-1816/H	PCIE-1812	PCIE-1802/L	PCIE-1840/L
Analog Input	Resolution		12 bits	12 bits	16 bits	16 bits	24 bits	16 bits
	Channels		16 SE/8 diff.	16 SE/8 diff.	16 SE/8 diff.	8 diff. (simultaneous)	8 diff./ 4 diff.	4 SE
	Onboard FIFO		4,096 samples	4,096 samples	4,096 samples	4,096 samples	4,096 samples	1 G samples
	Sampling Rate		250 kS/s	500 kS/s	500 KSPS/ 1MSPS	250 kS/s	216 kS/s	125 MSPS/ 80MSPS
	Input Ranges	Unipolar Inputs (V)	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	-	-
		Bipolar Inputs (V)	±10, 5, 2.5, 1.25, 0.625	±10, ±5, 2.5, 1.25, 0.625	±10, ±5, 2.5, 1.25, 0.625	±10, ±5, 2.5, 1.25, 0.625	±0.2, ±0.5, ±1, ±2, ±5, ±10 V	0.2 / 0.4 / 1 / 2 / 4 / 10 / 20 Vpp
		Configurable Per Channel	✓	✓	✓	✓	✓	✓
	Trigger Modes	Pacer/ Software/ External Pulse	✓	✓	✓	✓	✓	✓
		Analog Slope	-	✓	✓	✓	✓	✓
		Advanced Trigger	✓	Start/Stop/Delayed Start/Delayed Stop	Start/Stop/Delayed Start/Delayed Stop	Start/Stop/Delayed Start/Delayed Stop	Start/Stop/Delayed Start/Delayed Stop	Start/Stop/Delayed Start/Delayed Stop
	Data Transfer Modes	Software	✓	✓	✓	✓	✓	✓
		DMA	-	Bus mastering	Bus mastering	Bus mastering	Bus mastering	Bus mastering
Analog Output	Resolution		12 bits	12 bits	16 bits	16 bits	-	-
	Channels		2	2 (waveform output)	2 (waveform output)	2 (waveform output)	-	-
	Onboard FIFO		-	4,096 samples	4,096 samples	4,096 samples	-	-
	Output Range (V)		0 ~ 5, 0 ~ 10, ±5, ±10	0 ~ 5, 0 ~ 10, ±5, ±10	0 ~ 5, 0 ~ 10, ±5, ±10	0 ~ 5, 0 ~ 10, ±5, ±10	-	-
	Output Rate		250 kS/s	500 kS/s/s	3 MS/s	3 MS/s	-	-
	DMA Transfer		-	Bus mastering	Bus mastering	Bus mastering	-	-
Digital I/O	Input Channels		16 (shared)	24 (shared)	24 (shared)	32 (shared)	1	-
	Output Channels						2	
Timer/ Counter	Channels		3	2	2	4 (encoder included)	-	-
	Resolution		16 bits	32 bits	32 bits	32 bits	-	-
	Max. Input Frequency		10 MHz	10 MHz	10 MHz	10 MHz	-	-
Isolation Voltage			-	-	-	-	-	-
Auto Calibration			✓	✓	✓	✓	✓	✓
Board ID Switch			-	✓	✓	✓	✓	✓
Dimensions (L x H)			96 x 90 mm (3.8" x 3.5")	167 x 100 mm (6.6" x 3.9")	167 x 100 mm (6.6" x 3.9")	167 x 100 mm (6.6" x 3.9")	168 x 99 mm (6.6" x 3.9")	175 x 100 mm (6.9" x 3.9")
Connector			50-pin/26-pin box header	68-pin SCSI	68-pin SCSI	100-pin SCSI (female)	1 x 19-pin MINI SCSI (for AI) 1 x HDMI (for Ext. clock and trigger)	4 x BNC (for AI) 1 x HDMI (for Ext. clock and trigger)
Legacy Driver	Windows XP/2000		✓	-	-	-	-	-
	WinCE		-	-	-	-	-	-
	Linux		-	-	-	-	-	-
DAQNavi Driver	Windows 8/7/Vista/ XP/2000		✓	✓	✓	✓	-	-
	WinCE		-	-	-	-	-	-
	Linux		✓	-	-	-	-	-
LabVIEW Driver			✓	✓	✓	✓	-	-
Page			online	1-23	1-24	1-26	1-25	1-28

* 80 kHz on Pentium® 4-based (or higher) systems.
** SS: Single DMA channel, single A/D channel scan.

Analog I/O and Multifunction Card Selection Guide



Category			Analog Input				Multifunction		Analog Output	
Bus			PCI				PC/104		PCI	
Part Number			PCI-1713U	PCI-1714U/ 1714UL	PCI-1715U	PCI-1747U	PCM-3718HG	PCM-3718H/ HO	PCI-1720U	PCI-1721
Analog Input	Resolution		12 bits	12 bits	12 bits	16 bits	12 bits	12 bits	-	-
	Channels		32 SE/16 diff.	4 SE	32 SE/16 diff.	64 SE/32 diff.	16 SE/8 diff.	16 SE/8 diff.	-	-
	Onboard FIFO		4,096 samples	32,768/8,192 samples	1,024 samples	1,024 samples	-	1,024 samples (3718HO only)	-	-
	Sampling Rate		100 kS/s	30/10 MS/s	500 kS/s	250 kS/s	100 kS/s	100 kS/s*	-	-
	Input Ranges	Unipolar Inputs (V)	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	-	0 ~10, 0 ~ 5 0 ~ 2.5, 0 ~1.25	0 ~ 10, 0 ~ 5, 0 ~ 2.5, 0 ~ 1.25	0 ~ 10, 0 ~ 1 0 ~ 0.1, 0 ~ 0.01	0 ~ 10, 0 ~ 5 0 ~ 2.5, 0 ~ 1.25	-	-
		Bipolar Inputs (V)	±10, 5, 2.5, 1.25, 0.625	±5, 2.5, 1, 0.5	±10, 5, 2.5, 1.25, 0.625	±10, 5, 2.5, 1.25, 0.625	±10, 5, 1, 0.5, 0.1, 0.05, 0.01, 0.005	±10, 5, 2.5, 1.25, 0.625	-	-
		Configurable Per Channel	✓	✓	✓	✓	✓	✓	-	-
	Trigger Modes	Pacer/ Software/ External Pulse	✓	✓	✓	Pacer/software	✓	✓	-	-
		Analog Slope	-	✓	-	-	-	-	-	-
		Advanced Trigger	-	✓	-	-	-	-	-	-
	Data Transfer Modes	Software	✓	✓	✓	✓	✓	✓	-	-
		DMA	-	Bus mastering	Bus mastering	Bus mastering	SS**	SS**	-	-
Analog Output	Resolution		-	-	-	-	-	12 bits	12 bits	12 bits
	Channels		-	-	-	-	-	1 (3718H only)	4	4 (waveform output)
	Onboard FIFO		-	-	-	-	-	-	-	1,024 samples
	Output Range (V)		-	-	-	-	-	0 ~ 5, 0 ~ 10	0 ~ 5, 0 ~ 10, ±5, ±10, 0 ~ 20 mA, 4 ~ 20 mA	0 ~ 5, 0 ~ 10, ±5, ±10, 0 ~ 20 mA, 4 ~ 20 mA
	Output Rate		-	-	-	-	-	Static update	Static update	10 MS/s
	DMA Transfer		-	-	-	-	-	-	-	Bus mastering
Digital I/O	Input Channels		-	-	-	-	16 (shared)	16 (shared)	-	16 (shared)
	Output Channels		-	-	-	-	-		-	
Timer/ Counter	Channels		-	-	-	-	1	1	-	1
	Resolution		-	-	-	-	16 bits	16 bits	-	16 bits
	Max. Input Frequency		-	-	-	-	10 MHz	10 MHz	-	10 MHz
Isolation Voltage			2,500 VDC	-	2,500 VDC	-	-	-	2,500 VDC	-
Auto Calibration			-	✓	-	✓	-	-	-	✓
Board ID Switch			-	✓	✓	✓	-	-	✓	✓
Dimensions (L x H)			175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	96 x 90 mm (3.8" x 3.5")	96 x 90 mm (3.8" x 3.5")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")
Connector			DB37	4 x BNC	DB37	68-pin SCSI	2 x 20-pin	2 x 20-pin	DB37	68-pin SCSI
Legacy Driver	Windows XP/2000		✓	✓	✓	✓	✓	✓	✓	✓
	WinCE		✓	-	-	✓	✓	✓	✓	-
	Linux		✓	✓	-	✓	✓	✓	✓	✓
DAQNavi Driver	Windows 8/7/Vista/ XP/2000		✓	✓	✓	✓	✓	✓	✓	✓
	WinCE		-	-	-	-	-	-	✓	-
	Linux		-	✓	✓	✓	-	-	-	✓
LabVIEW Driver			✓	✓	✓	✓	✓	✓	✓	✓
Page			online	online	online	online	online	online	online	online

* 80 kHz on Pentium® 4-based (or higher) systems.
** SS: Single DMA channel, single A/D channel scan.

Digital I/O and Counter Card Selection Guide



Category			Analog Output					
Bus			PCI			ISA		
Part Number			PCI-1723	PCI-1724U	PCI-1727U	PCL-726	PCL-727	PCL-728
Analog Input	General Spec.	Resolution	-	-	-	-	-	-
		Channels	-	-	-	-	-	-
		Onboard FIFO	-	-	-	-	-	-
		Sampling Rate	-	-	-	-	-	-
	Input Ranges	Unipolar Inputs (V)	-	-	-	-	-	-
		Bipolar Inputs (V)	-	-	-	-	-	-
		Configurable Per Channel	-	-	-	-	-	-
	Trigger Modes	Pacer/Software/ External Pulse	-	-	-	-	-	-
		Analog Slope	-	-	-	-	-	-
		Advanced Trigger	-	-	-	-	-	-
	Data Transfer Modes	Software	-		-	-	-	-
		DMA	-	-	-	-	-	-
Analog Output	Resolution		16 bits	14 bits	14 bits	12 bits	12 bits	12 bits
	Channels		8	32	12	6	12	2
	Onboard FIFO		-	-	-	-	-	-
	Output Range (V)		±10, 0 ~ 20 mA, 4 ~ 20 mA	±10, 0 ~ 20 mA	±10, 0~20 mA	0 ~ 5, 0 ~ 10, ±5, ±10, 4 ~ 20 mA	0 ~ 5, 0 ~ 10, ±5, 4 ~ 20 mA	0 ~ 5, 0 ~ 10, ±5, ±10, 0 ~ 20 mA, 4 ~ 20 mA
	Output Rate		Static update	Static update	Static update	Static update	Static update	Static update
	DMA Transfer		-	-	-	-	-	-
Digital I/O	Input Channels		16 (shared)	-	16	16	16	-
	Output Channels			-	16	16	16	-
Timer/ Counter	Channels		-	-	-	-	-	-
	Resolution		-	-	-	-	-	-
	Max. Input Frequency		-	-	-	-	-	-
Isolation Voltage			-	1,500 V_{DC}	-	-	-	2,500 V_{DC}
Auto Calibration			✓	-	-	-	-	-
Board ID Switch			✓	✓	✓	-	-	-
Dimensions (L x H)			175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	340 x 100 mm (13.4" x 3.9")	340 x 100 mm (13.4" x 3.9")	184 x 119 mm (7.25" x 4.7")
Connector			68-pin SCSI	DB62	2 x 2-pin DB37	4 x 20-pin	2 x 2-pin DB37	2 x DB9
Legacy Driver	Windows XP/2000		✓	✓	✓	✓	✓	✓
	WinCE		-	✓	-	-	-	-
	Linux		✓	✓	✓	-	-	-
DAQNavi Driver	Windows 8/7/Vista/XP/2000		✓	✓	✓	-	-	-
	WinCE		-	-	-	-	-	-
	Linux		-	✓	✓	-	-	-
LabVIEW Driver			✓	✓	✓	✓	✓	✓
Page			online	online	online	online	online	online

Digital I/O and Counter Card Selection Guide



Category			Non-Isolated Digital I/O						
Bus			PCI						
Part Number			PCI-1735U	PCI-1737U	PCI-1739U	PCI-1751	PCI-1753	PCI-1755	PCI-1757UP
TTL DI/O	Input Channels		32	24 (shared)	48 (shared)	48 (shared)	96 (shared)	32 (shared)	24 (shared)
	Output Channels		32						
	Output Channel	Sink Current	24 mA @ 0.5 V	24 mA @ 0.4 V	24 mA @ 0.4 V	24 mA @ 0.4 V	24 mA @ 0.44 V	24 mA @ 0.5 V	24 mA @ 0.5 V
		Source Current	15 mA @ 2.0 V	15 mA @ 2.4 V	15 mA @ 2.4 V	15 mA @ 2.4 V	24 mA @ 3.76 V	15 mA @ 2.0 V	24 mA @ 3.7 V
Isolated DI/O	Input	Channels	-	-	-	-	-	-	-
		Isolation Voltage	-	-	-	-	-	-	-
		Input Range	-	-	-	-	-	-	-
	Output	Channels	-	-	-	-	-	-	-
		Isolation Voltage	-	-	-	-	-	-	-
		Output Range	-	-	-	-	-	-	-
		Max. Sink Current	-	-	-	-	-	-	-
Timer/ Counter	Channels		3	-	-	3	-	3	-
	Resolution		16 bits	-	-	16 bits	-	16 bits	-
	Max. Input Frequency		10 MHz	-	-	10 MHz	-	10 MHz	-
Advanced Function	Pattern Match		-	-	-	-	✓	✓	-
	Change of State		-	-	-	-	✓	✓	-
	Board ID Switch		✓	✓	✓	✓	✓	✓	✓
	Channel-Freeze Function		-	-	-	-	-	✓	-
	Output Status Read Back		✓	✓	✓	✓	✓	-	✓
	Dry/Wet Contact*		-	✓	✓	✓	✓	-	✓
Dimensions (L x H)			175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	120 x 65 mm (4.7" x 2.5")
Connector			5 x 20-pin	1 x 50-pin	2 x 50-pin	68-pin SCSI	100-pin SCSI	100-pin SCSI-II	1 x DB25
Legacy Driver	Windows XP/2000		✓	✓	✓	✓	✓	✓	✓
	WinCE		-	-	-	-	-	-	-
	Linux		✓	✓	✓	✓	✓	-	✓
DAQNavi Driver	Windows 8/7/Vista/ XP/2000		✓	✓	✓	✓	✓	-	✓
	WinCE		-	-	-	-	-	-	-
	Linux		-	-	-	✓	-	-	-
LabVIEW Driver			✓	✓	✓	✓	✓	✓	✓
Page			online	online	online	online	online	online	online

* Simultaneous dry/wet contact within a group is acceptable.



Category			Non-Isolated Digital I/O					
Bus			ISA				PC/104	PCI-104
Part Number			PCL-720+	PCL-722	PCL-724	PCL-731	PCM-3724	PCM-3753I
TTL DI/O	Input Channels		32	144 (shared)	24 (shared)	48 (shared)	48 (shared)	96 (shared)
	Output Channels		32					
	Output Channel	Sink Current	24 mA @ 0.5 V	24 mA @ 0.4 V	24 mA @ 0.4 V	24 mA @ 0.4 V	24 mA @ 0.5 V	24 mA @ 0.4 V
		Source Current	15 mA @ 2.0 V	-15 mA @ 2.4 V	15 mA @ 2.4 V	15 mA @ 2.4 V	15 mA @ 2.0 V	15 mA @ 2.4 V
Isolated DI/O	Input	Channels	-	-	-	-	-	-
		Isolation Voltage	-	-	-	-	-	-
		Input Range	-	-	-	-	-	-
	Output	Channels	-	-	-	-	-	-
		Isolation Voltage	-	-	-	-	-	-
		Output Range	-	-	-	-	-	-
		Max. Sink Current	-	-	-	-	-	-
Timer/ Counter	Channels		3	-	-	-	-	-
	Resolution		16 bits	-	-	-	-	-
	Max. Input Frequency		1 MHz	-	-	-	-	-
Advanced Function	Pattern Match		-	-	-	-	-	✓
	Change of State		-	-	-	-	-	✓
	Board ID Switch		-	-	-	-	-	-
	Channel-Freeze Function		-	-	-	-	-	-
	Output Status Read Back		-	✓	✓	✓	✓	✓
	Dry/Wet Contact*		-	-	-	-	-	-
Dimensions (L x H)			185 x 100 mm (7.3" x 4")	334 x 100 mm (13.2" x 3.9")	125 x 100 mm (4.9" x 3.9")	185 x 100 mm (7.3" x 4")	96 x 90 mm (3.8" x 3.5")	96 x 90 mm (3.8" x 3.5")
Connector			5 x 20-pin	6 x 50-pin	1 x 50-pin	2 x 50-pin	2 x 50-pin	4 x 50-pin
Legacy Driver	Windows XP/2000		✓	✓	✓	✓	✓	✓
	WinCE		-	-	-	-	✓	✓
	Linux		-	-	-	-	✓	✓
DAQNavi Driver	Windows 8/7/Vista/XP/2000		-	-	-	-	✓	✓
	WinCE		-	-	-	-	-	-
	Linux		-	-	-	-	-	-
LabVIEW Driver			✓	✓	✓	✓	✓	✓
Page			online	online	online	online	online	online

* Simultaneous dry/wet contact within a group is acceptable.

Digital I/O and Counter Card Selection Guide

NEW NEW



Category			Isolated Digital I/O					Non-Isolated Digital I/O	
Bus			PCI Express						
Part Number			PCIE-1730/ 1730H	PCIE-1752	PCIE-1754	PCIE-1756/ 1756H	PCIE-1760	PCIE-1751	PCIE-1753
TTL DI/O	Input Channels		16	-	-	-	-	48 (shared)	96 (shared)
	Output Channels		16	-	-	-	-		
	Output Channel	Sink Current	24 mA @ 0.5 V	-	-	-	-	15 mA @ 0.8 V	15 mA @ 0.8 V
		Source Current	15 mA @ 2.4 V	-	-	-	-	15 mA @ 2.0 V	15 mA @ 2.0 V
Isolated DI/O	Input	Channels	16	-	64	32	8	-	-
		Isolation Voltage	2,500 V_{DC}	-	2,500 V_{DC}	2,500 V_{DC}	2,500 V_{DC}	-	-
		Input Range	10 ~ 30 V_{DC}	-	10 ~ 30 V_{DC}	10 ~ 30 V_{DC}	4.5 ~ 12 V_{DC}	-	-
	Output	Channels	16 (sink)	64 (sink)	-	32 (sink)	6 x Form A 2 x Form C	-	-
		Isolation Voltage	2,500 V_{DC}	2,500 V_{DC}	-	2,500 V_{DC}	2,500 V_{DC}	-	-
		Output Range	5 ~ 40 V_{DC}	5 ~ 40 V_{DC}	-	5 ~ 40 V_{DC}	1 A @ 125 V_{AC} 2 A @ 30 V_{AC}	-	-
		Max. Sink Current	500 mA	500 mA	-	500 mA		-	-
Timer/ Counter	Channels		-	-	-	-	8 x UP CTR 2 x PWM	3	-
	Resolution		-	-	-	-	16 bits	32 bits	-
	Max. Input Frequency		-	-	-	-	500 Hz	10 MHz	-
Advanced Function	Pattern Match		-	-	-	-	✓	✓	✓
	Change of State		-	-	-	-	✓	✓	✓
	Board ID Switch		✓	✓	✓	✓	✓	✓	✓
	Channel-Freeze Function		✓	✓	-	✓	-	-	-
	Output Status Read Back		✓	✓	-	✓	✓	✓	✓
	Dry/Wet Contact*		✓	-	-	-	-	✓	✓
Dimensions (L x H)			168 x 100 mm (6.6" x 3.9")	168 x 100 mm (6.6" x 3.9")	168 x 100 mm (6.6" x 3.9")	168 x 100 mm (6.6" x 3.9")	168 x 100 mm (6.6" x 3.9")	168 x 100 mm (6.6" x 3.9")	168 x 100 mm (6.6" x 3.9")
Connector			1 x DB37 4 x 20-pin	100-pin SCSI	100-pin SCSI	100-pin SCSI	1 x DB37	68-pin SCSI	68-pin SCSI
Legacy Driver	Windows XP/2000		-	-	-	-	-	-	-
	WinCE		-	-	-	-	-	-	-
	Linux		-	-	-	-	-	-	-
DAQNavi Driver	Windows 8/7/Vista/XP/2000		✓	✓	✓	✓	✓	✓	✓
	WinCE		-	-	-	-	-	-	-
	Linux		-	-	-	-	✓	-	-
LabVIEW Driver			✓	✓	✓	✓	✓	✓	✓
Page			1-18	1-20	1-20	1-21	1-22	1-19	1-19

* Simultaneous dry/wet contact within a group is acceptable.



Category			Isolated Digital I/O					
Bus			PCI					
Part Number			PCI-1730U	PCI-1733	PCI-1734	PCI-1750/ 1750SO	PCI-1752U/ 1752USO	PCI-1754
TTL DI/O	Input Channels		16	-	-	-	-	-
	Output Channels		16	-	-	-	-	-
	Output Channel	Sink Current	24 mA @ 0.5 V	-	-	-	-	-
		Source Current	15 mA @ 2.4 V	-	-	-	-	-
Isolated DI/O	Input	Channels	16	32	-	16	-	64
		Isolation Voltage	2,500 V_{DC}	2,500 V_{DC}	-	2,500 V_{DC}	-	2,500 V_{DC}
		Input Range	5 ~ 30 V_{DC}	5 ~ 30 V_{DC}	-	5 ~ 50 V_{DC}	-	10 ~ 50 V_{DC}
	Output	Channels	16 (sink)	-	32 (sink)	16 (sink/source)	64 (sink/source)	-
		Isolation Voltage	2,500 V_{DC}	-	2,500 V_{DC}	2,500 V_{DC}	2,500 V_{DC}	-
		Output Range	5 ~ 40 V_{DC}	-	5 ~ 40 V_{DC}	5 ~ 40 V_{DC}	5 ~ 40 V_{DC}	-
		Max. Current	300 mA	-	200 mA	200 mA	200 mA	-
Timer/ Counter	Channels		-	-	-	1	-	-
	Resolution		-	-	-	16 bits	-	-
	Max. Input Frequency		-	-	-	1 MHz	-	-
Advanced Function	Pattern Match		-	-	-	-	-	-
	Change of State		-	-	-	-	-	-
	Board ID Switch		✓	✓	✓	-	✓	✓
	Channel-Freeze Function		✓	-	-	-	✓	-
	Output Status Read Back		✓	-	✓	-	✓	-
	Dry/Wet Contact*		✓	✓	-	✓	-	-
Dimensions (L x H)			175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")
Connector			1 x DB37 4 x 20-pin	1 x DB37	1 x DB37	1 x DB37	100-pin SCSI	100-pin SCSI
Legacy Driver	Windows XP/2000		✓	✓	✓	✓	✓	✓
	WinCE		✓	-	✓	✓	✓	✓
	Linux		✓	✓	✓	✓	✓	✓
DAQNavi Driver	Windows 8/7/Vista/XP/2000		✓	✓	✓	✓	✓	✓
	WinCE		-	-	-	-	-	-
	Linux		✓	-	-	✓	✓	-
LabVIEW Driver			✓	✓	✓	✓	✓	✓
Page			online	online	online	online	online	online

* Simultaneous dry/wet contact within a group is acceptable.

Digital I/O and Counter Card Selection Guide



Category			Isolated Digital I/O						
Bus			PCI						
Part Number			PCI-1756	PCI-1758UDI	PCI-1758UDO	PCI-1758UDIO	PCI-1760U	PCI-1761	PCI-1762
TTL DI/O	Input Channels		-	-	-	-	-	-	-
	Output Channels		-	-	-	-	-	-	-
	Output Channel	Sink Current	-	-	-	-	-	-	-
		Source Current	-	-	-	-	-	-	-
Isolated DI/O	Input	Channels	32	128	-	64	8	8	16
		Isolation Voltage	2,500 V_{DC}	2,500 V_{RMS}	-	2,500 V_{DC}	2,500 V_{DC}	3,750 V_{DC}	2,500 V_{DC}
		Input Range	10 ~ 50 V_{DC}	5 ~ 25 V_{DC}	-	5 ~ 25 V_{DC}	4.5 ~ 12 V_{DC}	5 ~ 50 V_{DC}	10 ~ 50 V_{DC}
	Output	Channels	32 (Sink)	-	128	64	6 x Form A 2 x Form C	4 x Form A 4 x Form C	16**
		Isolation Voltage	2,500 V_{DC}	-	2,500 V_{RMS}	2,500 V_{DC}	2,500 V_{DC}	2,500 V_{DC}	2,500 V_{DC}
		Output Range	5 ~ 40 V_{DC}	-	5 ~ 40 V_{DC}	5 ~ 40 V_{DC}	1 A @ 125 V_{AC} 2 A @ 30 V_{DC}	8 A @ 250 V_{AC} 2 A @ 30 V_{DC}	0.25 A @ 250 V_{AC} 2 A @ 30 V_{DC}
		Max. Sink Current	200 mA	-	90 mA	90 mA			
Timer/Counter	Channels		-	-	-	-	8 x CTR 2 x PWM	-	-
	Resolution		-	-	-	-	16 bits (2,500 isolation)	-	-
	Max. Input Frequency		-	-	-	-	500 Hz for CTR	-	-
Advanced Function	Pattern Match		-	-	-	-	✓	-	-
	Change of State		-	-	-	-	✓	-	-
	Board ID Switch		✓	✓	✓	✓	✓	✓	✓
	Channel-Freeze Function		✓	-	-	-	-	-	✓
	Output Status Read Back		✓	-	✓	✓	✓	✓	✓
	Dry/Wet Contact*		-	-	-	-	-	-	-
Dimensions (L x H)			175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")	175 x 100 mm (6.9" x 3.9")
Connector			100-pin SCSI	Dual 100-pin mini SCSI	Dual 100-pin mini SCSI	Dual 100-pin mini SCSI	1 x DB37	1 x DB37	1 x DB62
Legacy Driver	Windows XP/2000		-	✓	✓	✓	-	✓	✓
	WinCE		✓	✓	✓	✓	✓	✓	✓
	Linux		-	✓	✓	v	-	✓	✓
DAQNavi Driver	Windows 8/7/Vista/XP/2000		✓	✓	✓	✓	✓	✓	✓
	WinCE		-	-	-	-	-	-	-
	Linux		-	✓	✓	✓	-	✓	✓
LabVIEW Driver			✓	✓	✓	✓	✓	✓	✓
Page			online	online	online	online	online	online	online

* Simultaneous dry/wet contact within a group is acceptable.



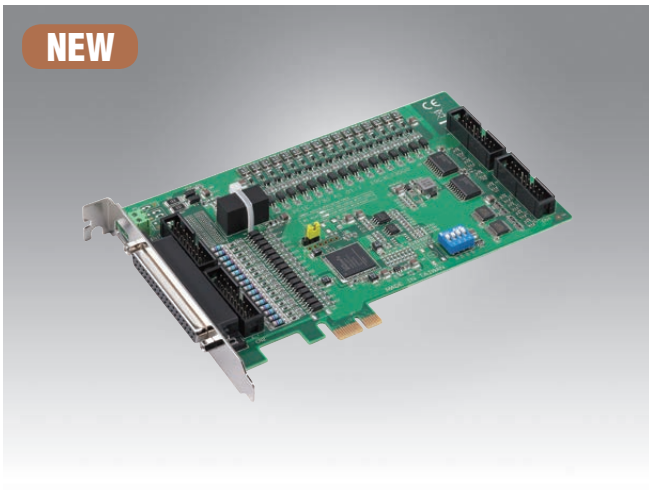
Category			Isolated Digital I/O						Counter		
Bus			ISA		PC/104		PCI-104		PCI	ISA	PC/104
Part Number			PCL-725	PCL-735	PCM-3725	PCM-3730	PCM-3730I	PCM-3761I	PCI-1780U	PCL-836	PCM-3780
TTL DI/O	Input Channels		-	-	8	16	-	-	8	16	24 (shared)
	Output Channels		-	-	8	16	-	-	8	16	
	Output Channel	Sink Current	-	-	-	0.5 V @ 8 mA	-	-	24 mA @ 0.5 V	8 mA @ 0.5 V	24 mA @ 0.5 V
		Source Current	-	-	-	0.4 mA @ 2.4 V	-	-	15 mA @ 2.4 V	0.4 mA @ 2.4 V	15 mA @ 2.0 V
Isolated DI/O	Input	Channels	8	-	8	8	16	8	-	-	-
		Isolation Voltage	1,500 V_{DC}	-	2,500 V_{DC}	2,500 V_{DC}	2,500 V_{DC}	2,500 V_{DC}	-	-	-
		Input Range	5 ~ 24 V_{DC}	-	10 ~ 50 V_{DC}	5 ~ 24 V_{DC}	5 ~ 30 V_{DC}	5 ~ 30 V_{DC}	-	-	-
	Output	Channels	4 x Form A 4 x Form C	12 x Form C	8 x Form C	8	16	8 x Form C	-	-	-
		Isolation Voltage	1,000 V_{DC}	1,000 V_{DC}	2,000 V_{DC}	2,500 V_{DC}	2,500 V_{DC}	2,000 V_{DC}	-	-	-
		Output Range	0.5A @ 120 V_{AC} 1A @ 30 V_{DC}	1A @ 125 V_{AC} 2A @ 30 V_{DC}	0.25A @ 240 V_{DC} 1A @ 30 V_{DC}	5 ~ 40 V_{DC}	5 ~ 30 V_{DC}	0.25 A @ 250 V_{AC} 2 A @ 30 V_{DC}	-	-	-
		Max. Sink Current				200 mA	300 mA		-	-	-
Timer/ Counter	Channels		-	-	-	-	-	-	8 x CTR	6 x CTR 3 x PWM	2
	Resolution		-	-	-	-	-	-	16 bits	16 bits	16 bits
	Max. Input Frequency		-	-	-	-	-	-	20 MHz	10 MHz	20 MHz
Advanced Function	Pattern Match		-	-	-	-	-	-	-	-	-
	Change of State		-	-	-	-	-	-	-	-	-
	Board ID Switch		-	-	-	-	-	✓	✓	-	-
	Channel-Freeze Function		-	-	-	-	-	-	-	-	-
	Output Status Read Back		-	-	-	-	-	✓	-	-	-
	Dry/Wet Contact*		-	-	-	-	-	-	-	-	-
Dimensions (L x H)			147 x 95 mm (5.75" x 3.9")	155 x 100 mm (6.1" x 3.9")	96 x 90 mm (3.8" x 3.5")	96 x 90 mm (3.8" x 3.5")	96 x 90 mm (3.8" x 3.5")	96 x 90 mm (3.8" x 3.5")	175 x 100 mm (6.9" x 3.9")	185 x 100 mm (7.3" x 3.9")	96 x 90 mm (3.8" x 3.5")
Connector			1 x DB37	1 x DB37	1 x 20-pin 1 x 50-pin	3 x 20-pin	2 x 20-pin	1 x 20-pin 1 x 50-pin	68-pin SCSI	1 x DB37 2 x 20-pin	1 x 50-pin 1 x 20-pin
Legacy Driver	Windows XP/2000		✓	✓	✓	✓	✓	✓	✓	✓	✓
	WinCE		-	-	✓	✓	✓	✓	-	-	✓
	Linux		-	-	✓	✓	✓	✓	✓	-	-
DAQNavi Driver	Windows 8/7/Vista/ XP/2000		-	-	✓	✓	✓	✓	✓	-	✓
	WinCE		-	-	-	-	-	-	-	-	-
	Linux		-	-	-	-	-	✓	-	-	-
LabVIEW I/O Driver			✓	✓	✓	✓	✓	✓	✓	✓	✓
Page			online	online	online	online	online	online	online	online	online

* Simultaneous dry/wet contact within a group is acceptable.
** Jumper-selectable Form A/B-type relay output.

PCIE-1730
PCIE-1730H

32-Ch TTL, 32-Ch Isolated Digital I/O PCIe Card

32-Ch TTL, 32-Ch Isolated Digital I/O PCIe Card with Digital Filter and Interrupt Function



Features

- 32-ch isolated DI/O (16-ch digital input, 16-ch digital output)
- 32-ch TTL DI/O (16-ch digital input, 16-ch digital output)
- High output driving capacity
- Interrupt handling capability
- Selectable digital filter time
- D-type connector for isolated input and output channels
- High-voltage isolation on output channels (2,500 V_{DC})

Introduction

PCIe-1730/1730H feature 32 TTL digital I/O channels and 32 digital I/O channels with up to 2,500 V_{DC} isolation protection, making them ideal for industrial applications that require high-voltage isolation. For PCIE-1730H, all signals can be used as interrupt request signals and to disable/enable the interrupt function for every channel, as well as to support the input signal edge, which generates interrupts. All PCIE-1730 digital input channels have a digital filter to prevent inaccurate recognition of input signals that contain noise or chattering.

Specifications

Digital Input

- **Channels** 16
- **Compatibility** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
  Logic 1: 2.0 V min.
- **Interruptible Channels** PCIE-1730: 2 (IDI0, IDI8)
  PCIE-1730H: 16

Isolated Digital Input

- **Channels** 16
- **Input Voltage** Logic 0: 3 V max.
  Logic 1: 10 V min. (30 V max.)
- **Interruptible Channels** PCIE-1730: 2 (IDI0, IDI8)
  PCIE-1730H: 16
- **Isolation Protection** 2,500 V_{DC}
- **Opto-Isolator Response** 50 µs
- **Input Resistance** 2.7 kΩ @ 1 W
- **Digital Filter Time (PCIE-1730H only)**

Setting Data (n)	Digital Filter Time	Setting Data (n)	Digital Filter Time	Setting Data (n)	Digital Filter Time
0 (00h)	The filter function is not used.	7 (07h)	16µsec	14 (0Eh)	2.048msec
1 (01h)	0.25µsec	8 (08h)	32µsec	15 (0Fh)	4.096msec
2 (02h)	0.5µsec	9 (09h)	64µsec	16 (10h)	8.192msec
3 (03h)	1µsec	10 (0Ah)	128µsec	17 (11h)	16.384msec
4 (04h)	2µsec	11 (0Bh)	256µsec	18 (12h)	32.768msec
5 (05h)	4µsec	12 (0Ch)	512µsec	19 (13h)	65.536msec
6 (06h)	8µsec	13 (0Dh)	1.024msec	20 (14h)	131.072msec

Digital Output

- **Channels** 16
- **Compatibility** 5 V/TTL
- **Output Voltage** Logic 0: 0.5V max.
  Logic 1: 2.4V min.
- **Output Capability** Sink: 24mA @ 0.5V
  Source: 15mA @ 2.4V

Isolated Digital Output

- **Channels** 16
- **Output Type** Sink type (NPN)
- **Isolation Protection** 2,500 V_{DC}
- **Output Voltage** 5 ~ 40 V_{DC}
- **Sink Current** 500 mA max./channel
- **Opto-Isolator Response** 50 µs

General

- **Bus Type** PCI Express V1.0
- **I/O Connectors** 1 x DB37, female
  4 x 20-pin box header
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical:3.3 V @ 280 mA, 12 V @ 330 mA
  Max.: 3.3 V @ 420 mA, 12 V @ 400 mA
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -25 ~ 85 °C (-13 ~ 185 °F)
- **Storage Humidity** 5 ~ 95% RH, non-condensing

Ordering Information

- **PCIE-1730-AE** 32-ch TTL and 32-ch isolated digital I/O PCIe card
- **PCIE-1730H-AE** 32-ch TTL and 32-ch isolated digital I/O PCIe card with digital filter and interrupt function

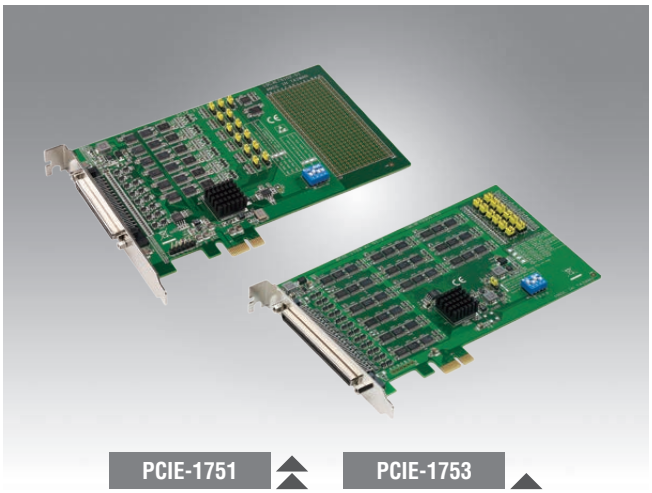
Accessories

- **PCL-10120-1E** 20-pin flat cable, 1 m
- **PCL-10120-2E** 20-pin flat cable, 2 m
- **ADAM-3920-AE** 20-pin DIN rail flat cable wiring board
- **PCLD-782-BE** 16-ch isolated DI board w/1 m, 20-pin flat cable
- **PCLD-885-AE** 16-ch power relay board w/20-pin and 50-pin flat cables
- **PCLD-785-BE** 16-ch relay board w/1 m, 20-pin flat cable
- **ADAM-3937-BE** DB37 DIN rail wiring board
- **PCL-10137-1E** DB37 cable, 1 m
- **PCL-10137-2E** DB37 cable, 2 m
- **PCL-10137-3E** DB37 cable, 3 m

PCIE-1751
PCIE-1753

48-Ch Digital I/O, 3-Ch Counter PCI Express Card

96-Ch Digital I/O PCI Express Card



Features

- Emulates Mode 0 of the Intel® 8255 PPI chip (every port with nibbles)
- Buffered circuits for a higher driving capacity compared to the Intel® 8255 PPI chip
- Interrupt handling capability
- Timer/counter interrupt capability
- Supports both dry and wet contact
- Retains I/O port settings and DO configuration after system reset
- Board ID switch
- Pattern match interrupt function for DI
- Change-of-state interrupt function for DI
- Programmable digital filter function for DI
- Output status read back

Introduction

PCIE-1751 is a 48-channel digital I/O card for the PCI Express bus. The channels are divided into six 8-bit I/O ports. Users can configure 4 channels per port (nibbles) to serve as input or output channels via software. PCIE-1751 also provides three 32-bit counters. PCIE-1753 is a 96-channel digital I/O card that emulates Mode 0 of the Intel® 8255 PPI chip. However, the buffered circuits offer a higher driving capability than that of the 8255 PPI chip. The 96 I/O channels are divided into twelve 8-bit I/O ports: A0, B0, C0, A1, B1, C1, A2, B2, C2, A3, B3 and C3. Users can configure every port to serve as input or output ports via software.

Specifications

Digital Input

- **Channels** PCIE-1751: 48 (shared with output)
  PCIE-1753: 96 (shared with output)
- **Compatibility** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
  Logic 1: 2 V min.
- **Interruptible Channels** PCIE-1751: 6
  PCIE-1753: 12

Digital Output

- **Channels** PCIE-1751: 48 (shared with input)
  PCIE-1753: 96 (shared with input)
- **Compatibility** 5 V/TTL
- **Output Voltage** Logic 0: 0.4 V max.
  Logic 1: 2.4 V min.
- **Output Capability** Sink: 24mA @ 0.4 V
  Source: 15mA @ 2.4 V

Counter/Timer (PCIE-1751 only)

- **Channels** 3
- **Resolution** 3 x 32-bit counter
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 10 MHz
- **Reference Clock** Internal: 20K / 200K / 2M / 20MHz
  External Clock Frequency: 10 MHz
  External Voltage Range: 5 V/TTL

General

- **Bus Type** Universal PCI Express
- **I/O Connectors** PCIE-1751: 1 x 68-pin SCSI, female
  PCIE-1753: 1 x 100-pin SCSI, female
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical: PCIE-1751: 5 V @ 400 mA
  PCIE-1753: 3.3 V @ 850 mA
  Max.: PCIE-1751: 5 V @ 2.63 A
  PCIE-1753: 3.3V @ 2.7 A

Note: Maximum power consumption includes the consumption for a +5 V output.

- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH, non-condensing

Ordering Information

- **PCIE-1751-AE** 48-ch digital I/O and 3-ch counter PCI Express card
- **PCIE-1753-AE** 96-ch digital I/O PCI card

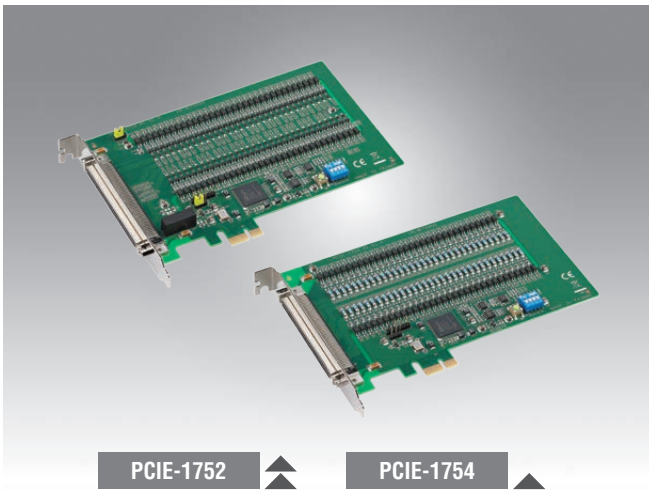
Accessories

- **PCL-10168-1E** 68-pin SCSI shielded cable, 1 m
- **PCL-10168-2E** 68-pin SCSI shielded cable, 2 m
- **PCL-10268-1E** 100-pin to 2 x 68-pin SCSI cables, 1 m
- **PCL-10168-2E** 100-pin to 2 x 68-pin SCSI cables, 2 m
- **ADAM-3968-AE** 68-pin DIN rail SCSI wiring board
- **ADAM-3968/20-AE** 68-pin SCSI to 3 x 20-pin box header board
- **ADAM-3968/50-AE** 68-pin SCSI to 2 x 50-pin box header board
- **PCLD-8751-AE** 48-ch isolated digital input board
- **PCLD-8761-AE** 24-ch replay/ isolated digital input board
- **PCLD-8762-AE** 48-ch relay board

PCIE-1752
PCIE-1754

64-Ch Isolated Digital Output PCI Express Card

64-Ch Isolated Digital Input PCI Express Card



Features

PCIE-1752

- Wide output range (5 ~ 40 V_{DC})
- High sink current on isolated output channels (500mA max./ch)
- 2,000 V_{DC} ESD protection
- High-voltage isolation (2,500 V_{DC})
- Interrupt handling capability

PCIE-1754

- Wide input range (10 ~ 30 V_{DC})
- Either +/- voltage input for DI by group
- High overvoltage protection (70 V_{DC})
- High-voltage isolation (2,500 V_{DC})
- Output status read back
- Retains the output settings and values after system hot reset
- Channel-freeze function

Introduction

PCIE-1752 and PCIE-1754 are isolated DI/O cards that offer 64 isolated digital input/output channels with up to 2,500 V_{DC} isolation protection. Featuring a wide input (10 ~ 30 V_{DC})/ output (5 ~ 40 V_{DC}) range and high sink current (500mA max./channel), PCIE-1752 and PCIE-1754 are ideal for use in industrial automation control systems. With Advantech's DAQNavi driver package, users can adjust the configuration settings easily and efficiently.

Specifications

Isolated Digital Input

Channels	PCIE-1754: 64
Input Voltage	Logic 0: 3 V max. Logic 1: 10 V min. (30 V_{DC} max.)
Input Current	10 V_{DC} @ 2.97 mA 20 V_{DC} @ 6.35 mA 30 V_{DC} @ 9.73 mA
Interruptible Channels	PCIE-1754: 4
Isolation Protection	2,500 V_{DC}
Overvoltage Protection	70 V_{DC}
ESD Protection	2,000 V_{DC}
Opto-Isolator Response	50 µs

Isolated Digital Output

Channels	PCIE-1752: 64
Output Type	Sink (NPN)
Isolation Protection	2,500 V_{DC}
Output Voltage	5 ~ 40 V_{DC}
Sink Current	500 mA max./channel
Opto-isolator Response	50 µs

General

Bus Type	PCI Express V1.0
I/O Connectors	1 x 100-pin SCSI, female
Dimensions (L x H)	168 x 100 mm (6.6" x 3.9")
Power Consumption	**PCIE-1752** Typical: 3.3 V @ 485 mA Max.: 3.3 V @ 530 mA; 12V @ 90 mA **PCIE-1754** Typical: 3.3 V @ 285 mA Max.: 3.3 V @ 330 mA
Operating Temperature	0 ~ 60 °C (32 ~ 140 °F)
Storage Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
Storage Humidity	5 ~ 95% RH, non-condensing

Ordering Information

PCIE-1752-AE	64-ch isolated digital output PCI Express card
PCIE-1754-AE	64-ch isolated digital input PCI Express card

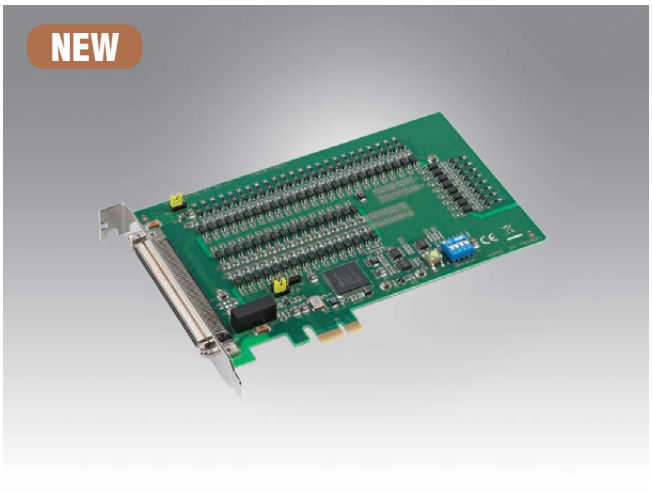
Accessories

PCL-10250-1E	100-pin SCSI to 2 x 50-pin SCSI cable, 1 m
PCL-10250-2E	100-pin SCSI to 2 x 50-pin SCSI cable, 2 m
ADAM-3951-BE	50-pin DIN rail wiring board w/LED indicators
PCL-101100M-3E	100-pin SCSI to 100-pin SCSI cable, 3 m
ADAM-39100-BE	100-pin DIN rail wiring board

PCIE-1756
PCIE-1756H

64-Ch Isolated Digital I/O PCIe Card

64-Ch Isolated Digital I/O PCIe Card with Digital Filter and Interrupt Function



Features

- 32-ch isolated digital input
- 32-ch isolated digital output with wide output range (5 ~ 40 V_{DC})
- Interrupt handling capability
- Software-selectable digital filter time for all DI channels (PCIE-1756H only)
- Output status read back
- Retains the output settings and values after system hot reset

Introduction

PCIE-1756 and PCIE-1756H are isolated DI/O cards that offer 64 isolated digital input/output channels with up to 2,500 V_{DC} isolation protection. Featuring a wide input (10 ~ 30 V_{DC})/ output (5 ~ 40 V_{DC}) range and high sink current (500mA max./channel), PCIE-1756 and PCIE-1756H are ideal for use in industrial automation control systems. For PCIE-1756, all signals can be used as interrupt request signals and to disable/enable the interrupt function for every channel, as well as to support the input signal edge, which generates interrupts. All PCIE-1756H digital input channels have a digital filter to prevent inaccurate recognition of input signals that contain noise or chattering.

Specifications

Isolated Digital Input

- **Channels** 32
- **Input Voltage** Logic 0: 3 V max.
Logic 1: 10 V min. (30 V_{DC} max.)
- **Input Current** 10 V_{DC} @ 2.97 mA
20 V_{DC} @ 6.35 mA
30 V_{DC} @ 9.73 mA
- **Interruptible Channels** PCIE-1756: 2 (IDI0, IDI16)
PCIE-1756H: 32
- **Isolation Protection** 2,500 V_{DC}
- **Overvoltage Protection** 70 V_{DC}
- **ESD Protection** 2,000 V_{DC}
- **Opto-Isolator Response** 50 µs
- **Digital Filter Time (PCIE-1756H only)**

Setting Data (n)	Digital Filter Time	Setting Data (n)	Digital Filter Time	Setting Data (n)	Digital Filter Time
0 (00h)	The filter function is not used.	7 (07h)	16µsec	14 (0Eh)	2.048msec
1 (01h)	0.25µsec	8 (08h)	32µsec	15 (0Fh)	4.096msec
2 (02h)	0.5µsec	9 (09h)	64µsec	16 (10h)	8.192msec
3 (03h)	1µsec	10 (0Ah)	128µsec	17 (11h)	16.384msec
4 (04h)	2µsec	11 (0Bh)	256µsec	18 (12h)	32.768msec
5 (05h)	4µsec	12 (0Ch)	512µsec	19 (13h)	65.536msec
6 (06h)	8µsec	13 (0Dh)	1.024msec	20 (14h)	131.072msec

Isolated Digital Output

- **Channels** 32
- **Output Type** Sink (NPN)
- **Isolation Protection** 2,500 V_{DC}
- **Output Voltage** 5 ~ 40 V_{DC}
- **Sink Current** 500 mA max./channel
- **Opto-isolator Response** 50 µs

General

- **Bus Type** PCI Express V1.0
- **I/O Connectors** 1 x 100-pin SCSI, female
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical: 3.3 V @ 385 mA
Max.: 3.3 V @ 430 mA; 12V @ 55 mA
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH, non-condensing

Ordering Information

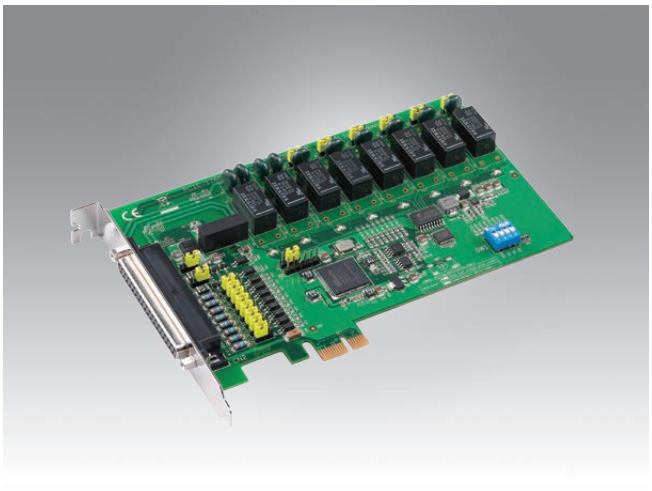
- **PCIE-1756-AE** 64-ch isolated digital I/O PCIe card
- **PCIE-1756H-AE** 64-ch isolated digital I/O PCIe card with digital filter and interrupt function

Accessories

- **PCL-10250-1E** 100-pin SCSI to 2 x 50-pin SCSI cable, 1 m
- **PCL-10250-2E** 100-pin SCSI to 2 x 50-pin SCSI cable, 2 m
- **ADAM-3951-BE** 50-pin DIN rail wiring board w/ LED indicators
- **PCL-101100M-3E** 100-pin SCSI to 100-pin SCSI cable, 3 m
- **ADAM-39100-BE** 100-pin DIN rail wiring board

PCIE-1760

8-Ch Relay and 8-Ch Isolated Digital Input PCI Express Card



Features

- 8 opto-isolated digital input channels with counter/timer function
- 8 relay actuator output channels
- 2 opto-isolated PWM outputs
- LED indicators to show activated relays
- Jumper-selectable dry/wet-contact input signals
- Up event counters for DI
- Programmable digital filter function for DI
- Pattern match interrupt function for DI
- Change-of-state interrupt function for DI
- Board ID switch

Introduction

The PCIE-1760 relay actuator and isolated digital input card is a PC add-on card for the PCI Express bus that satisfies the PCI Express (Revision 1.0) standard. PCIE-1760 features 8 opto-isolated digital inputs with up to 2,500 V_{DC} isolation protection for collecting digital inputs in noisy environments, 8 relay actuators that can be used as on/off control devices or small power switches, and 2 isolated PWM (pulse width modulation) outputs for custom applications.

For easy monitoring, each relay is equipped with a single red LED that indicates the on/off status. Each isolated input supports both dry and wet contact to enable easy interfacing with other devices when no voltage is present in the external circuit.

Specifications

Isolated Digital Input

- **Channels** 8
- **Input Voltage** Logic 0: 1.0 V max.
  Logic 1: 4.5 V min. (12 V max.)
- **Interruptible Channels** 8
- **Isolation Protection** 2,500 V_{DC}
- **Opto-Isolator Response** 25 µs
- **Input Resistance** 2 kΩ 1/4 W

Counter/Timer

- **Channels** 8
- **Resolution** 16 bits
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 500 Hz
- **Isolation Protection** 2,500 V_{DC}
- **PWM Channels** 2
- **Digital Noise Filter** Min. effective high input period ≥ [(2 ~ 65535) x 5 ms] + 5 ms
  Min. effective low input period ≥ [(2 ~ 65535) x 5 ms] + 5 ms

Relay Output

- **Channels** 8
- **Relay Type** 2 x Form C, and 6 x Form A
- **Contact Rating** 1 A @ 125 V_{AC}, 2 A @ 30 V_{DC}
- **Max. Switching Power** 125 VA, 60 W
- **Max. Switching Voltage** 250 V_{AC}, 220 V_{DC}
- **Max. Switching Current** 2 A
- **Operate/Release Time** 5 / 3.5 ms max
- **Resistance** Contact: 50 mΩ max.
  Insulation: 100 MΩ min. @ 500 V_{DC}
- **Life Expectancy (Electrical)** 3 x 10^5 cycles min.: 2 A @ 30 V_{DC}, 1 A @ 125 V_{AC}
  10^6 cycles min.: 1 A @ 30 V_{DC}, 0.5 A @ 125 V_{AC}

General

- **Bus Type** PCI Express V1.0
- **I/O Connectors** 1 x DB37, female
- **Dimensions (L x H)** 168 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical: 5 V @ 450 mA
  Max.: 5 V @ 850 mA
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Humidity** 5 ~ 95 % RH, non-condensing

Ordering Information

- **PCIE-1760-AE** 8-ch relay/IDI PCIe card w/10-ch counter/timer

Accessories

- **PCL-10137-1E** DB37 cable, 1 m
- **PCL-10137-2E** DB37 cable, 2 m
- **PCL-10137-3E** DB37 cable, 3 m
- **ADAM-3937-AE** DB37 DIN rail wiring board

PCIE-1810

800 kS/s, 12-Bit, 16-Ch PCI Express Multifunction DAQ Card



Features

- 16 analog inputs, up to 800 kS/s, 12-bit resolution
- 2 analog outputs, up to 500 kS/s, 12-bit resolution
- Supports digital and analog triggers
- 24 programmable digital I/O lines
- Two 32-bit programmable counter/timers
- Onboard FIFO memory (4,000 samples)
- Automatic channel/gain scanning

Introduction

PCIE-1810 is a multifunction PCI Express card that includes digital I/O, analog I/O, and counter functions. The card also features a 800 kS/s 12-bit A/D converter and supports analog triggers for A/D data acquisition.

Specifications

Analog Input

- **Channels** Single end 16
  Differential 8
- **Resolution** 12 bits
- **Sample Rate** Single channel 800 kS/s max.
  Multiple channels 500 kS/s max.

Note: The sampling rate of each channel is influenced by the number of used channels. For example, if 4 channels are used, the sampling rate will be 500k/4 = 125 kS/s per channel.

- **Trigger Reference** Digital and analog triggers
- **Trigger Mode** Start, Delayed Start
  Stop, Delayed Stop
- **FIFO Size** 4,000 samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 1 GΩ
- **Sampling Modes** Software and external clock
- **Input Range** Software programmable

Gain	0.5	1	2	4	8
Bipolar	±10V	±5	±2.5	±1.25	±0.625
Unipolar	N/A	0 ~ 10	0 ~ 5	0 ~ 2.5	0 ~ 1.25
Absolute Accuracy (% of FSR)*	0.1	0.1	0.2	0.2	0.4

Analog Output

- **Channels** 2
- **Resolution** 12 bits
- **Output Rate** Static software polling
  500 KS/s max.
- **Output Range** Software programmable

Internal Reference	Unipolar	0 ~ 5 V 0 ~ 10 V
	Bipolar	-5 V ~ 5 V -10 V ~ 10 V
External Reference		0 ~ +x V @ -x V (-10 ≤ x ≤ 10)

- **Slew Rate** 20 V/μs
- **Driving Capability** 5 mA
- **Operation Mode** Static update, waveform generation
- **Accuracy** INLE: ± 1 LSB, DNLE: ± 1 LSB

Digital I/O

- **Channels** 24
- **Compatibility** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
  Logic 1: 2.0 V min.
- **Output Voltage** Logic 0: 0.8 V max.
  Logic 1: 2.0 V min.
- **Output Capability** Sink: 15 mA @ 0.8 V
  Source: 15 mA @ 2.0 V

Counter

- **Channels** 2
- **Resolution** 32 bits
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 10 MHz
- **Pulse Generation** Yes
- **Timebase Stability** 50 ppm

General

- **Form Factor** PCI Express x1
- **Triggering** 2 x Analog/2 x digital (12 bits)
- **I/O Connector** 68-pin SCSI, female
- **Dimensions (L x W)** 167 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical: 3.3 V @ 488 mA
  12 V @ 112 mA
  Max.: 3.3 V @ 2.25 A
  12 V @ 390 mA
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F) (refer to IEC 60068-2-1, 2)
- **Storage Temperature** -40 ~ 70 °C (-40 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH non-condensing (refer to IEC 60068-2-3)

Ordering Information

- **PCIE-1810-AE** 800 kS/s, 12-bit multifunction card

Accessories

- **PCL-10168H-1E** 68-pin SCSI shielded cable with noise rejection, 1 m
- **PCL-10168H-2E** 68-pin SCSI shielded cable with noise rejection, 2 m
- **PCL-10168-1E** 68-pin SCSI shielded cable, 1 m
- **PCL-10168-2E** 68-pin SCSI shielded cable, 2 m
- **ADAM-3968-AE** 68-pin DIN rail SCSI wiring board

PCIE-1816
PCIE-1816H

500 KS/s, 16-Bit, 16-Ch PCI Express Multifunction DAQ Card

1 MS/s, 16-Bit, 16-Ch PCI Express Multifunction DAQ Card



FCC CE RoHS

Features

PCIE-1816

- 16 analog inputs, up to 1 MS/s, 16-bit resolution

PCIE-1816H

- 16 analog inputs, up to 5 MS/s, 16-bit resolution

PCIE-1816/1816H

- 2 analog outputs, up to 3 MS/s, 16-bit resolution
- Supports analog and digital triggers for analog I/O
- Supports waveform generation for analog output
- 24 programmable digital I/O lines
- Two 32-bit programmable counter/timers
- Onboard FIFO memory (4,000 samples)

Introduction

PCIE-1816/1816H is a 16-ch (up to 5 MS/s) multifunction DAQ card with integrated digital I/O, analog I/O, and counter functions. PCIE-1816/1816H also features analog and digital triggering support, 2-ch 16-bit analog outputs with waveform generation capability, 24-ch programmable digital I/O lines, and two 32-bit general purpose timer/counters.

Specifications

Analog Input

- **Channels** Single end 16
  Differential 8
- **Resolution** 16 bits
- **Sample Rate** PCIE-1816: Single channel 1 MS/s max. Multiple channels 500 kS/s max.
  PCIE-1816H: Single channel 5 MS/s max. Multiple channels 1 MS/s max.

Note: The sampling rate of each channel is influenced by the number of used channels. For example, if 4 channels are used, the sampling rate will be 1M/4 = 250 kS/s per channel.

- **Trigger Reference** Digital and analog triggers
- **FIFO Size** 4,000 samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 1 GΩ
- **Sampling Mode** Software and external clock
- **Input Range** Software programmable

PCIE-1816					
Gain	0.5	1	2	4	8
Bipolar	±10V	±5	±2.5	±1.25	±0.625
Unipolar	N/A	0 ~ 10	0 ~ 5	0 ~ 2.5	0 ~ 1.25
Absolute Accuracy (% of FSR)*	0.0075	0.0075	0.0075	0.008	0.008

Analog Output

- **Channels** 2
- **Resolution** 16 bits
- **Output Rate** 3 MS/s max.
- **Output Range** Software programmable

Internal Reference	**Unipolar**	0 ~ 5 V 0 ~ 10 V
	Bipolar	-5 V ~ 5 V -10 V ~ 10 V
External Reference		0 ~ +x V @ -x V (-10 ≤ x ≤ 10)

- **Slew Rate** 20 V/μs
- **Driving Capability** 5 mA
- **Operation Mode** Static update, waveform generation
- **Accuracy** INLE: ± 4 LSB, DNLE: ± 1 LSB

Digital I/O

- **Channels** 24
- **Compatibility** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
  Logic 1: 2.0 V min.
- **Output Voltage** Logic 0: 0.8 V max.
  Logic 1: 2.0 V min.
- **Output Capability** Sink: 15 mA @ 0.8 V
  Source: 15 mA @ 2.0 V

Counter

- **Channels** 2
- **Resolution** 32 bits
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 10 MHz
- **Pulse Generation** Yes
- **Timebase Stability** 50 ppm

General

- **Form Factor** PCI Express x1
- **Triggering** 2 x Analog/2 x digital (16 bits)
- **I/O Connector** 68-pin SCSI, female
- **Dimensions (L x W)** 167 x 100 mm (6.6" x 3.9")
- **Power Consumption** Typical: 3.3 V @ 488 mA
  12 V @ 112 mA
  Max.: 3.3 V @ 2.25 A
  12 V @ 390 mA
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -40 ~ 70 °C (-40 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH non-condensing

Ordering Information

- **PCIE-1816-AE** 1 MS/s, 16-bit multifunction card
- **PCIE-1816H-AE** 5 MS/s, 16-bit multifunction card

Accessories

- **PCL-10168H-1E** 68-pin SCSI shielded cable with noise rejection, 1 m
- **PCL-10168H-2E** 68-pin SCSI shielded cable with noise rejection, 2 m
- **PCL-10168-1E** 68-pin SCSI shielded cable, 1 m
- **PCL-10168-2E** 68-pin SCSI shielded cable, 2 m
- **ADAM-3968-AE** 68-pin DIN rail SCSI wiring board

PCIE-1802
PCIE-1802L

8-Ch, 24-Bit, 216 kS/s Dynamic Signal Acquisition PCI Express Card

4-Ch, 24-Bit, 216 kS/s Dynamic Signal Acquisition PCI Express Card



Features

- 8/4 simultaneously sampled analog inputs, up to 216 kS/s
- 24-bit resolution ADCs with 115 dB dynamic range
- Wide input range of ±0.2 ~ 10 V
- Built-in anti-aliasing filter
- Software-configurable 4/10 mA integrated electronic piezoelectric (IEPE) excitation currents
- Software-selectable AC/DC coupling
- Full automatic calibration
- Multiple card synchronization

Introduction

PCIE-1802/1802L is a 24-bit, high-accuracy data acquisition PCI Express module specifically designed for sound and vibration-related applications. This module features built-in 4/10 mA excitation currents for IEPE sensors, such as accelerometers and microphones.

Specifications

Analog Input

Channels	PCIE-1802: 8 PCIE-1802L: 4 (simultaneous sampling differential or 50 Ω pseudo-differential)
Resolution	24 bits (delta sigma)
Max. Sampling Rate	100 S/s to 216 kS/s (with resolution ≤ 363.80 μS/s)
Input Coupling	AC/DC, selectable per channel
AC Cut-Off Frequency	0.727 Hz (-3 dB)
Trigger Modes	Start, Delayed Start, Stop, Delayed Stop
Input Range	±0.2, ±0.5, ±1, ±2, ±5, ±10 V
Offset Error	< ±1 mV
Gain Error	< ±0.2 %
Total Harmonic Distortion (THD)	-100 dB
Total Harmonic Distortion Plus Noise (THD+N)	-98 dB
Dynamic Range	115 dB
IEPE Excitation	0, 4, or 10 mA, selectable per channel
Data Transfer	Direct memory access (DMA)
Multi-Card Support	For synchronizing more than 8 analog input channels

Digital Input/Output

DI Channels	1 (interrupt)
DO Channels	2

General

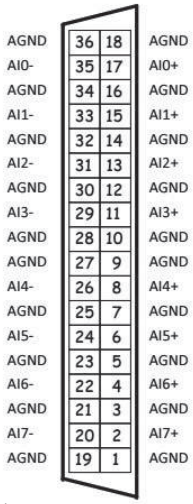
Bus Type	PCI Express x1
I/O Connectors	CN600 36-pin mini SCSI (for analog input) CN601 HDMI (for clock, trigger, and DI/Os)
Dimensions (L x H)	168 x 100 mm (6.6" x 3.9")
Operating Temperature	0 ~ 60 °C (32 ~ 140 °F)
Storage Temperature	-40 ~ 70 °C (-40 ~ 158 °F)
Storage Humidity	5 ~ 95 % RH, non-condensing

Ordering Information

PCIE-1802-AE	8-ch, 24-bit, 216 kS/s dynamic signal acquisition PCI Express card
PCIE-1802L-AE	4-ch, 24-bit, 216 kS/s dynamic signal acquisition PCI Express card
PCLD-8840-AE	20-pin DIN rail HDMI cable wiring board for PCIE-1802 and PCIE-1840
PCL-108BNC-50E	Mini SCSI to 8-BNC cable
PCL-104BNC-50E	Mini SCSI to 4-BNC cable
PCL-10119-1E	HDMI cable

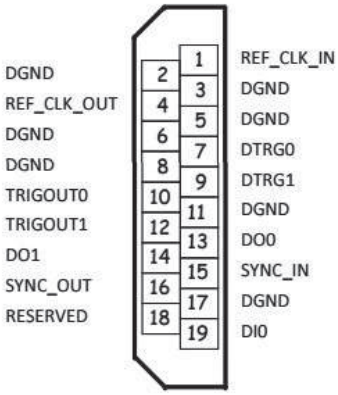
Pin Assignments

Mini SCSI



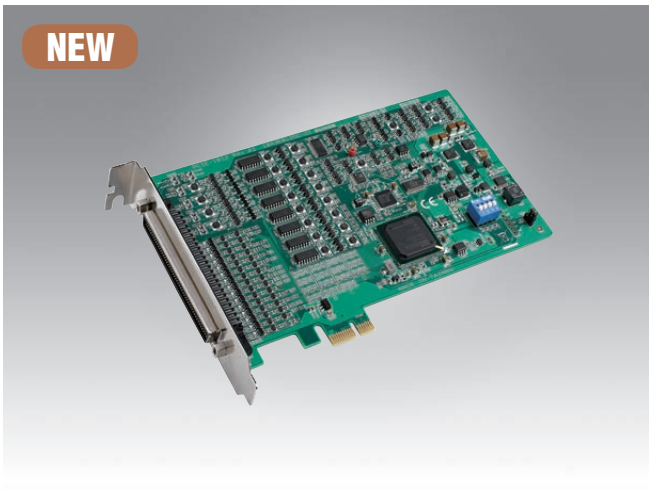
* AI4 to AI7 (PCIE-1802 only)

HDMI



PCIE-1812

250 kS/s, 16-Bit, 8-Ch, Simultaneous Sampling Multifunction PCI Express DAQ Card



Features

- 8 differential simultaneous sampling analog inputs, up to 250 kS/s, 16-bit resolution
- 2 analog outputs, up to 3 MS/s, 16-bit resolution
- Full automatic calibration
- 2 analog triggers and 2 digital triggers for analog I/O
- 32 programmable DI/Os with interrupt functions
- Four 32-bit programmable counters/ timers/ encoders
- Board ID switch

Introduction

PCIE-1812 is a simultaneous-sampling multifunction DAQ card designed to meet a wide range of application requirements. PCIE-1812 supports simultaneous sampling of 8 analog input channels with differential input configuration for maximum noise elimination. In addition to providing 2-ch, 16-bit analog outputs with waveform generation capabilities, PCIE-1812 supports simultaneous waveform generation and analog input functions.

Specifications

Analog Input

- **Channels** 8
- **Mode** Differential input
- **Resolution** 16 bits
- **Sample Rate** 250 kS/s max.
- **Input Impedance** 100GΩ/350pF
- **Sampling Mode** Software and external clock
- **Input Range** Software programmable

Gain	0.5	1	2	4	8
Bipolar	±10V	±5	±2.5	±1.25	±0.625
Unipolar	N/A	0 ~ 10	0 ~ 5	0 ~ 2.5	0 ~ 1.25
Absolute Accuracy (% of FSR)*	0.01	0.01	0.01	0.01	0.01

Analog Output

- **Channels** 2
- **Resolution** 16 bits
- **Output Rate** 3 M max.
- **Output Range** Software programmable

Internal Reference	Unipolar	0 ~ 5 V, 0 ~ 10 V
	Bipolar	-5 V ~ 5 V, -10 V ~ 10 V
External Reference		0 ~ +x V @ -x V (-10 ≤ x ≤ 10)

- **Slew Rate** 20 V/μs
- **Driving Capability** 5 mA
- **Operation Mode** Static update, waveform generation
- **Accuracy** 0.01%

Analog Trigger

- **Channels** 2
- **Resolution** 16 bits
- **Input Range** -10 ~ 10 V
- **Hysteresis** Yes. Hysteresis range is configurable
- **Trigger Edge** Rising edge or falling edge, selected by software

Digital Trigger

- **Channels** 2
- **Input Voltage** Logic 0: 1.5 V max.
Logic 1: 3.5 V min.
- **Trigger Edge** Rising edge or falling edge, selected by software

Digital I/O

- **Channels** 32 (shared)
- **Input Voltage** Logic 0: 1.5 V max.
Logic 1: 3.5 V min.
- **Output Voltage** Low 0.5 V max.@ +20 mA (sink)
High 4.5 V min.@ -20 mA (source)

Counter/ Timer/ Encoder

- **Channels** 4
- **Resolution** 32 bits
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 10 MHz
- **Counter/Timer Functions** Frequency measurement, pulse width measurement, pulse output, PWM output
- **Encoder Functions** Quadrature (X1, X2, X4), dual pulse (CW/CCW), signed pulse (OUT/DIR)

General

- **Form Factor** PCI Express x1
- **I/O Connector** 100-pin SCSI, female
- **Dimensions (L x W)** 167 x 100 mm (6.6" x 3.9")
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F) (refer to IEC 68-2-1, 2)
- **Storage Temperature** -40 ~ 70 °C (-40 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH non-condensing (refer to IEC 68-2-3)
- **Board ID** TM switch

Ordering Information

- **PCIE-1812-AE** 250 kS/s, 16-bit, 8-ch simultaneous sampling multifunction card

Accessories

- **PCL-101100R-1E** 100-pin SCSI shielded cable, female to male, 1 m
- **PCL-101100R-2E** 100-pin SCSI shielded cable, female to male, 2 m
- **ADAM-39100-BE** 100-pin DIN rail SCSI wiring board

PCIE-1813

38.4 kS/s, 26-Bit, 4-Ch, Simultaneous Sampling, Universal Bridge Input, Multifunction PCI Express Card



Features

- 4 simultaneous sampling analog inputs, up to 38.4 kS/s, 26-bit resolution
- Full, half, and quarter-bridge sensor input with built-in anti-aliasing filter
- 2 analog outputs, up to 3 MS/s, 16-bit resolution
- Four 32-bit programmable encoder counters/ timers/ encoder counters
- 32 programmable DI/Os with interrupt functions
- Board ID switch
- Full automatic calibration

Introduction

PCIE-1813 is a 26-bit high-resolution multifunction data acquisition PCI Express card specifically designed for bridge sensor inputs, such as strain gauges, load cells, pressure sensors, and torque sensors. PCIE-1813 also features 2-ch, 16-bit analog outputs with waveform generation capability and supports simultaneous waveform generation and analog input functions.

Specifications

Analog Input Overview

- **Channels** 4
- **Resolution** 26 bits
- **Sample Rate** 38.4 kS/s max. simultaneous

Voltage Input

- **Input Ranges** ±10 V, ±5 V, ±2.5 V, ±1.25 V, ±625 mV, ±312.5 mV
- **Accuracy** ±0.01% of FSR

Bridge Input

- **Input Ranges** ±31.25 mV/V, ±62.5 mV/V, ±125 mV/V, ±250 mV/V,±500 mV/V, and ±1 V/V
- **Bridge Mode** Full, half, quarter
- **Bridge Resistance** 120 Ω, 350 Ω, 1 kΩ
- **Shunt Calibration** 33.333 kΩ, 50 kΩ, 100 kΩ
- **Excitation Voltage** 0 ~ 10 V
- **Remote Sensing** Yes

Analog Output

- **Channels** 2
- **Resolution** 16 bits
- **Output Rate** 3 MSPS max.
- **Output Range** Software programmable

Internal Reference	Unipolar	0 ~ 5 V, 0 ~ 10 V
	Bipolar	-5 V ~ 5 V, -10 V ~ 10 V
External Reference		0 ~ +x V @ -x V (-10 ≤ x ≤ 10)

- **Slew Rate** 20 V/μs
- **Driving Capability** 5 mA
- **Operation Mode** Static update, waveform generation
- **Accuracy** ±0.01% of FSR

Analog Trigger

- **Channels** 2
- **Resolution** 16 bits
- **Input Range** -10 V ~ +10 V
- **Hysteresis** Yes. Hysteresis range is configurable
- **Trigger Edge** Rising edge or falling edge, selected by software

Digital Trigger

- **Channels** 2
- **Input Voltage** Logic 0: 1.5 V max.
Logic 1: 3.5 V min.
- **Trigger Edge** Rising edge or falling edge, selected by software

Digital I/O

- **Channels** 32 (shared)
- **Input Voltage** Logic 0: 1.5 V max.
Logic 1: 3.5 V min.
- **Output Voltage** Low 0.5 V max.@ +20 mA (sink)
High 4.5 V min.@ -20 mA (source)

Counter/ Timer/ Encoder Counter

- **Channels** 4
- **Resolution** 32 bits
- **Input/Output Voltage** Same as that for digital I/O
- **Max. Input Frequency** 10 MHz
- **Counter/Timer Functions** Frequency measurement, pulse width measurement, pulse output, PWM output
- **Encoder Functions** Quadrature (X1, X2, X4), dual pulse (CW/CCW), signed pulse (OUT/DIR)

General

- **Form Factor** PCI Express x1
- **I/O Connector** 100-pin SCSI female ribbon-type connector
- **Dimensions (L x W)** 167 x 100 mm (6.6" x 3.9")
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F) (refer to IEC 68-2-1, 2)
- **Storage Temperature** -40 ~ 70 °C (-40 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH non-condensing (refer to IEC 68-2-3)
- **Board ID** TM switch

Ordering Information

- **PCIE-1813-AE** 38.4 kS/s, 26-bit, 4-ch, simultaneous sampling, universal bridge input, multifunction PCI Express card

Accessories

- **PCL-101100R-1E** 100-pin SCSI shielded cable, 1 m
- **PCL-101100R-2E** 100-pin SCSI shielded cable, 2 m
- **ADAM-39100-BE** 100-pin DIN rail SCSI wiring board

PCIE-1840
PCIE-1840L

4-Ch, 16-Bit, 125 MS/s Digitizer

4-Ch, 16-Bit, 80 MS/s Digitizer



Features

PCIE-1840

- 4 simultaneous analog inputs, up to 125 MHz, 16-bit resolution
- 500 MHz time-interleaved sampling

PCIE-1840L

- 4 simultaneous analog inputs, up to 80 MHz, 16-bit resolution
- 320 MHz time-interleaved sampling

PCIE-1840/PCIE-1840L

- Non-stop data streaming capabilities
- 2 GB of onboard memory
- 1M or 50 Ohm selectable input impedance
- Built-in tunable anti-aliasing filter
- AC/DC coupling support

Introduction

PCIE-1840/1840L is a 16-bit resolution digitizer that provides up to 2 GB of onboard sample memory, true ENOBs of up to 11.4 bits, and sampling rates of up to 125 per second. PCIE-1840/1840L divides the input voltage range into 65,536 digitization levels and can support 1 or 2 digitizing channels (up to 250/500 MSPS).

Specifications

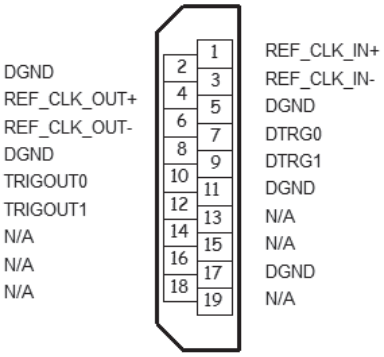
Analog Input

Channels	4 x single ended, simultaneous
Resolution	16 bits
Max. Sampling Rate	125 MS/s (PCIE-1840) 80 MS/s (PCIE-1840L)
Memory Size	2 GB
Overvoltage Protection	30 Vp-p
Input Impedance	50 Ω / 1M Ω For 1 MΩ: AC/DC coupling
Sampling Modes	Software and external clock
Trigger Modes	Start, Delayed Start Stop, Delayed Stop
Input Range	0.2 / 0.4 / 1 / 2 / 4 / 10 / 20 Vpp (input Impedance must be 1 MΩ)
Time Interleaved Sampling	- 4 channels combined, 500 MPS max. (PCIE-1840) 320 MPS max. (PCIE-1840L) - 2 channels combined, 250 MPS max. (PCIE-1840) 160 MPS max. (PCIE-1840L) - Configured automatically by setting sampling rate

General

Bus Type	PCI Express Gen2 x4
I/O Connectors	4 x BNC (for analog input) 1 x HDMI (for external clock and trigger)
Dimensions (L x H)	175 x 100 mm (6.9" x 3.9")
Power Consumption	Under test
Operating Temperature	0 ~ 50 °C (32 ~ 122 °F)
Storage Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
Storage Humidity	5 ~ 95% RH, non-condensing

Pin Assignments

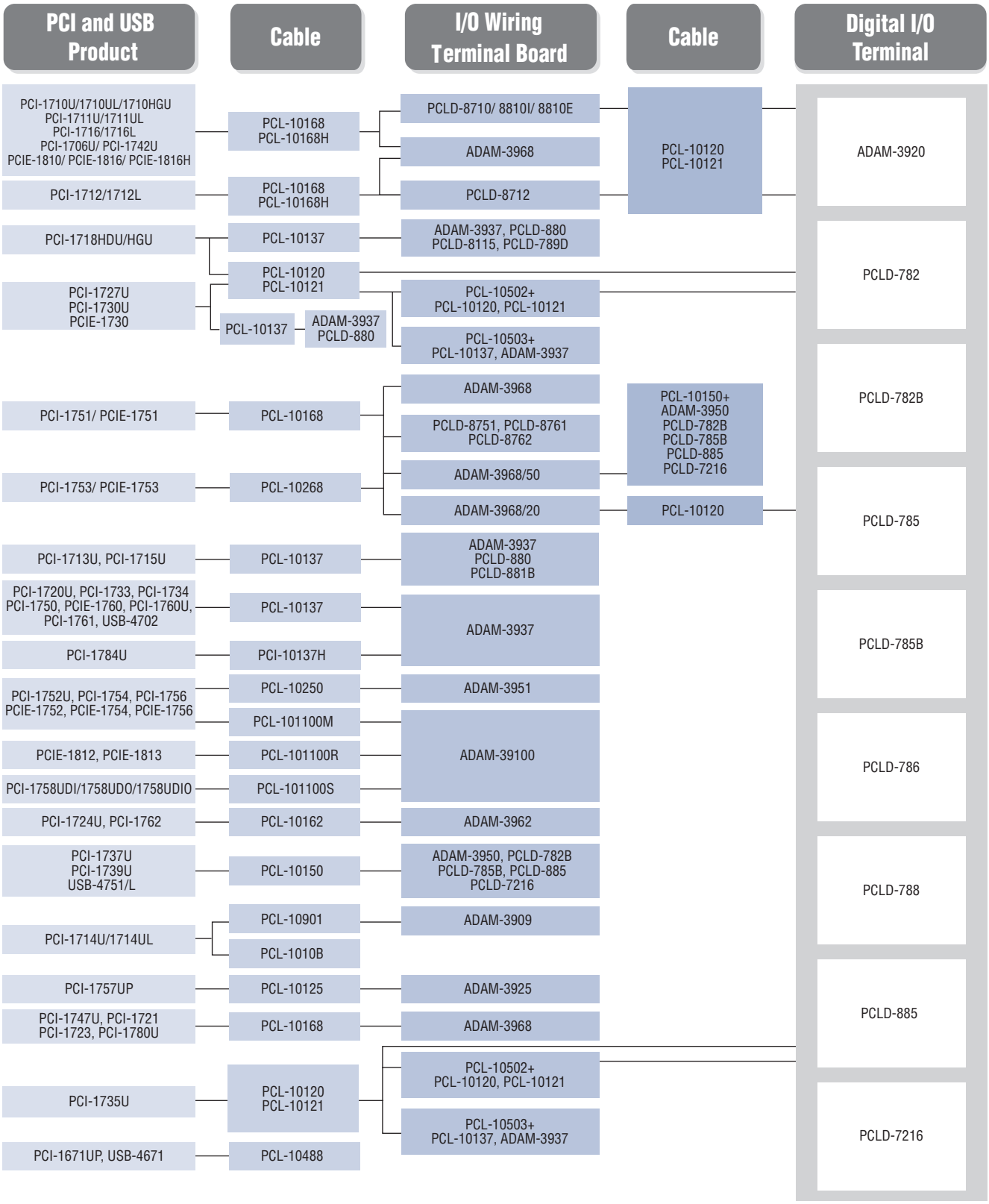


Ordering Information

PCIE-1840-AE	4-ch, 16-bit, 125 MS/s digitizer
PCIE-1840L-AE	4-ch, 16-bit, 80 MS/s digitizer
PCLD-8840-AE	20-pin DIN rail HDMI cable wiring board for PCIE-1802 and PCIE-1840
PCL-10119-1E	HDMI cable
PCL-1010B-1E	BNC coaxial cable, 1 m

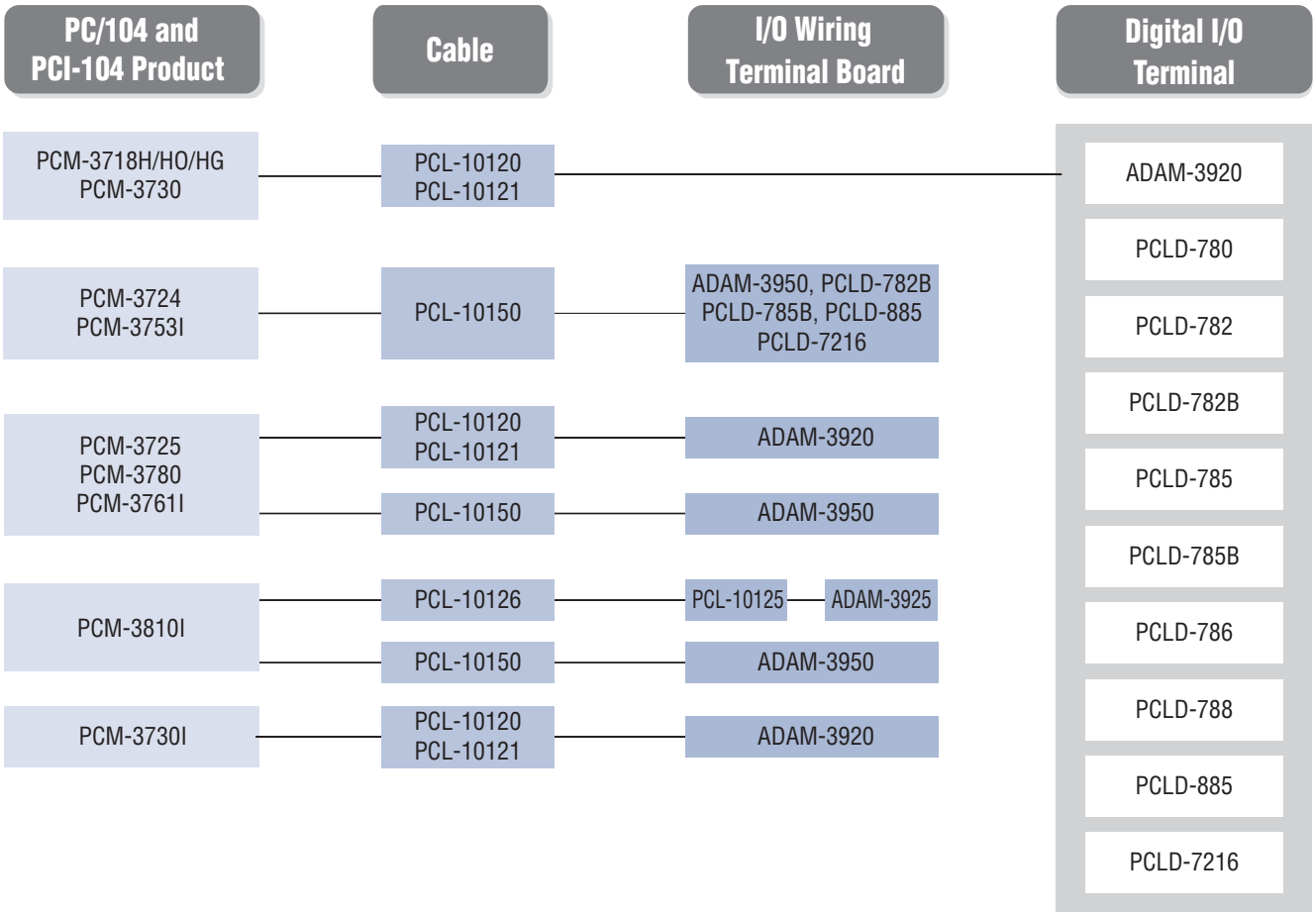
Terminal Board Selection Guide

Recommended Cables, I/O Wiring Terminal Boards, and Isolated Digital I/O Terminals for Connecting to PC/104 and PCI-104 DAQ Products



Terminal Board Selection Guide

Recommended Cables, I/O Wiring Terminal Boards, and Isolated Digital I/O Terminals for Connecting to PC/104 and PCI-104 DAQ Products

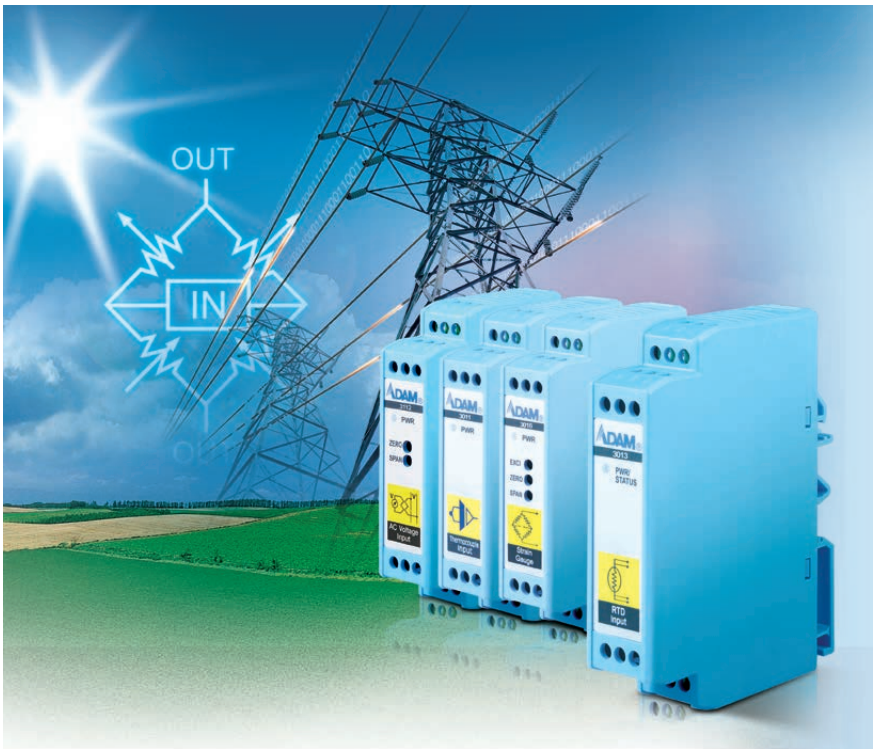


Cable Accessories

Part Number	Description
PCL-1010B-1E	BNC to BNC wiring cable, 1 m
PCL-101100-1E	100-pin SCSI high-speed cable, 1 m
PCL-101100R-1E	100-pin SCSI shielded cable, 1 m
PCL-101100R-2E	100-pin SCSI shielded cable, 2 m
PCL-101100S-1E	100-pin mini SCSI cable, 1 m
PCL-101100S-2E	100-pin mini SCSI cable, 2 m
PCL-101100S-3E	100-pin mini SCSI cable, 3 m
PCL-101100M-3E	100-pin SCSI shielded cable, 3 m
PCL-10120-0.4E	20-pin flat cable, 0.4 m
PCL-10120-1E	20-pin flat cable, 1 m
PCL-10120-2E	20-pin flat cable, 2 m
PCL-10121-2E	20-pin shielded cable, 2 m
PCL-10125-1E	DB25 cable, 1 m
PCL-10125-3E	DB25 cable, 3 m
PCL-10126-0.2E	26-pin to DB25(f) flat cable, 0.2 m
PCL-10137-1E	DB37 cable, 1 m
PCL-10137-2E	DB37 cable, 2 m
PCL-10137-3E	DB37 cable, 3 m
PCL-10137H-1E	DB37 high-speed cable, 1 m

Part Number	Description
PCL-10137H-3E	DB37 high-speed cable, 3 m
PCL-10141-0.2E	40-pin to DB37(f) flat cable, 0.2 m
PCL-10150-1.2E	50-pin flat cable, 1.2 m
PCL-10162-1E	DB62 cable, 1 m
PCL-10162-3E	DB62 cable, 3 m
PCL-10168-1E	68-pin SCSI shielded cable, 1 m
PCL-10168-2E	68-pin SCSI shielded cable, 2 m
PCL-10168H-1E	68-pin SCSI shielded cable with noise rejection, 1 m
PCL-10168H-2E	68-pin SCSI shielded cable with noise rejection, 2 m
PCL-10250-1E	100-pin SCSI to 2 x 50-pin SCSI cable, 1 m
PCL-10250-2E	100-pin SCSI to 2 x 50-pin SCSI cable, 2 m
PCL-10268-1E	100-pin SCSI to 2 x 68-pin SCSI cable, 1 m
PCL-10268-2E	100-pin SCSI to 2 x 68-pin SCSI cable, 2 m
PCL-10488-2	IEEE-488 cable, 2 m
PCL-10502-AE	Dual 20-pin to PC slot plate extender
PCL-10503-AE	Dual 20-pin to DB37 adapter
PCL-10901-3E	DB9 to PS/2 cable, 3 m

ADAM-3000 Series



Features

- 1,000 V_{DC} three-way isolation
- Easy input/output range configuration
- Flexible DIN rail mounting
- Linearized thermocouple/RTD measurement
- Low power consumption
- Wide input bandwidth

Introduction

Advantech's ADAM-3000 series modules are the most cost-efficient, field-configurable, isolation-based, signal conditioners available on the market today. Easy to install, these modules are designed to protect instruments and process signals from damage resulting from ground loops, motor noise, and other electrical interferences.

Affordable Signal Isolation Solution

Featuring optical isolation technology, ADAM-3000 modules offer three-way (input/output/power) 1,000 V_{DC} isolation. Optical isolation provides pin-point accuracy and stability for a wide range of operations with minimal power consumption.

Flexible Analog Data Conversion

The input/output range for ADAM-3000 modules can be configured using internal switches. The modules accept voltage, current, thermocouple, and RTD inputs, as well as pass voltage or current outputs. Thermocouple input is handled by the built-in input thermocouple linearization circuitry and a cold junction compensation function that ensure accurate temperature measurement and conversion into voltage or current output.

Configuration

ADAM-3000 modules accept 24 V_{DC} power, which can be acquired from adjacent modules, greatly simplifying wiring and maintenance. The I/O configuration switches are located inside the modules. To access these switches, simply remove the modules from the DIN rail bracket by sliding the modules downward.

Modular Industrial Design

ADAM-3000 modules can be easily mounted on a DIN rail, with the signal wires connected through screw terminals. The screw terminals and input/output configuration switches are located inside the industrial-grade plastic casing. Using two-wire input/output cables, these modules can be easily integrated to provide reliable solutions for harsh industrial environments.

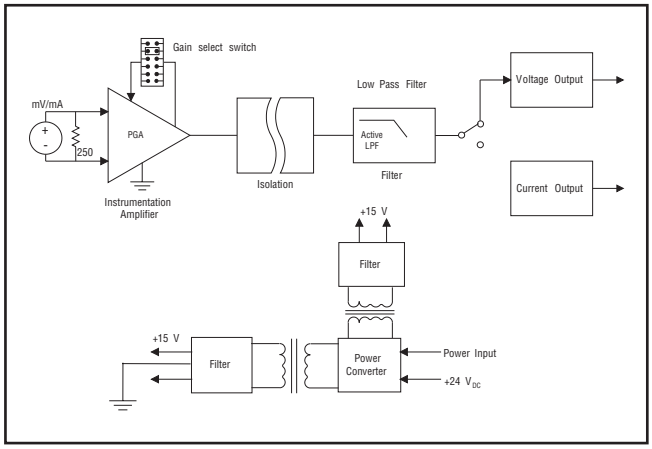
Applications

- Signal isolation
- Signal transmitters
- Thermocouple/RTD/strain gauge measurements
- Signal amplifiers
- Noise filter

Common Specifications

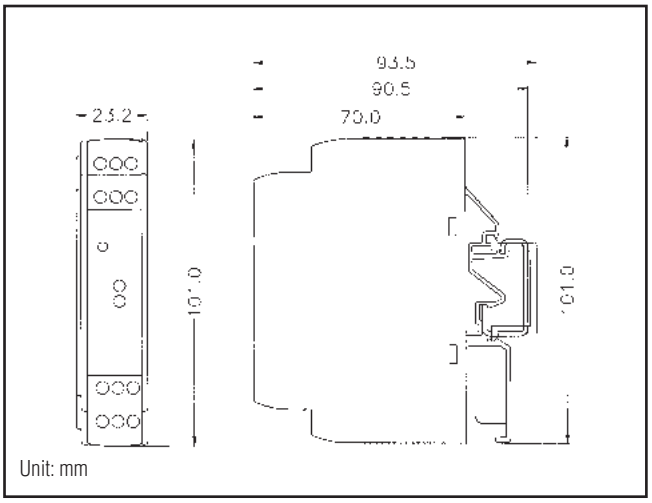
Isolation	1,000 V_{DC}
Indicators	Power LED indicator
Power Requirement	24 V_{DC} ± 10%
Case	ABS
Screw Terminal	Accepts 0.5 mm^2 ~ 2.5 mm^2 1- #12 or 2- #14 ~ #22 AWG
Operating Temperature	0 ~ 70 °C (32 ~ 158 °F) ADAM-3011: 0 ~ 50 °C (32 ~ 122 °F)
Storage Temperature	-25 ~ 85 °C (-13 ~ 185 °F)

Block Diagram



Block Diagram of ADAM-3014

Dimensions

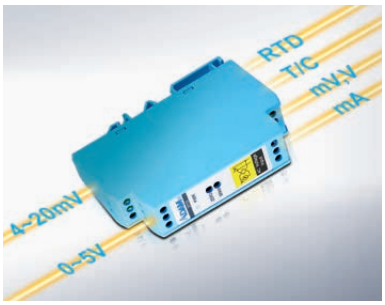


ADAM-3000 Series Modules



Three-Way Signal Isolation

Three-way (input/output/power) 1,000 V_{DC} isolation.



Field Configurable I/O Range

The I/O range can be configured on site via internal switches.



Easy Daisy Chain Power Wiring

Adjacent modules can be linked in a daisy chain and connected to a single power source.



Interfacing with DAQ Cards

A wiring adapter can be used to connect modules to a data acquisition card.

ADAM-3011
ADAM-3013
ADAM-3014

Isolated Thermocouple Input Module

Isolated RTD Input Module

Isolated DC Input/Output Module



ADAM-3011 CE FCC FM APPROVED

Specifications

Thermocouple Input

- **Common Mode Rejection** 115 dB min
- **Input Type**

T/C Type	Temperature Range (°C)	Accuracy at 25 °C
J	-40 ~ 760	±2
K	0 ~ 1,000	±2
T	-100 ~ 400	±2
E	0 ~ 1,000	±2
S	500 ~ 1,750	±4
R	500 ~ 1,750	±4
B	500 ~ 1,800	±4

- **Isolation** 1,000 V_{DC} (three way)
- **Output Impedance** 0.5 Ω
- **Stability (Temperature Drift)** ±2 °C
- **Voltage Output** 0 ~ 10 V

General

- **Connectors** Screw terminal
- **Enclosure** ABS
- **Indicators** Power LED indicator
- **Isolation** 1,000 V_{DC}
- **Power Consumption** 1.4 W
- **Power Input** 24 V_{DC} ± 10%
- **Dimensions (W x H x D)** 23.2 x 101 x 93.5 mm (0.91" x 3.97" x 3.68")
- **Operating Temperature** 0 ~ 50 °C (32 ~ 122 °F)
- **Storage Temperature** -25 ~ 85 °C (-13 ~ 185 °F)

Ordering Information

- **ADAM-3011** Isolated thermocouple input module



ADAM-3013 CE FCC FM APPROVED

Specifications

RTD Input

- **Accuracy** ± 0.1% of full range (voltage) or ± 0.15 °C (voltage)
  ± 0.2% of full range (current)
- **Bandwidth** 4 Hz
- **Input CMR at DC** 92 dB min.
- **Input Connections** 2/3/4 wires
- **Input Type**

RTD Type	α	Temperature Range (°C)
Pt	0.00385	-100 ~ 100
Pt	0.00385	0 ~ 100
Pt	0.00385	0 ~ 200
Pt	0.00385	0 ~ 600
Pt	0.00385	-100 ~ 0
Pt	0.00385	-100 ~ 200
Pt	0.00385	-50 ~ 50
Pt	0.00385	-50 ~ 150
Pt	0.00392	-100 ~ 100
Pt	0.00392	0 ~ 100
Pt	0.00392	0 ~ 200
Pt	0.00392	0 ~ 600
Ni	N/A	0 ~ 100
Ni	N/A	-80 ~ 100

- **Output Range** 0 ~ 5 V, 0 ~ 10 V, 0 ~ 20 mA
- **Output Resistance** < 5 Ω
- **Temperature Drift** ± 30 ppm of full range

General

- **Connectors** Screw terminal
- **Enclosure** ABS
- **Indicators** Power LED indicator
- **Isolation** 1,000 V_{DC}
- **Power Consumption** < 0.95 W
- **Power Input** 24 V_{DC} ±10%
- **Dimensions (W x H x D)** 23.2 x 101 x 93.5 mm (0.91" x 3.97" x 3.68")
- **Operating Temperature** 0 ~ 70 °C (32 ~ 158 °F)
- **Storage Temperature** -25 ~ 85 °C (-13 ~ 185 °F)

Ordering Information

- **ADAM-3013** Isolated RTD input module



ADAM-3014 CE FCC FM APPROVED

Specifications

I/O

- **Accuracy** ±0.1% of full range (typical)
- **Common Mode Rejection** > 100 dB @ 50 Hz/60 Hz
- **Current Input** Bipolar: ±20 mA
  Unipolar: 0 ~ 20 mA
  Input impedance: 250 Ω
- **Current Output** 0 ~ 20 mA
- **Stability (Temperature Drift)** 150 ppm (typical)
- **Voltage Input** Bipolar input:
  ±10 mV, ±50 mV, ±100 mV, ±0.5 V, ±1.0 V, ±5 V, ±10 V
  Unipolar input:
  0 ~ 10 mV, 0 ~ 50 mV, 0 ~ 100 mV, 0 ~ 0.5 V, 0 ~ 1 V, 0 ~ 5 V, 0 ~ 10 V
  Input impedance: 2 MΩ
  Input bandwidth: 2.4 kHz (typical)
- **Voltage Output** Bipolar: ±5 V, ±10 V
  Unipolar: 0 ~ 10 V
  Impedance: < 50 Ω
  Drive: 10 mA max.

General

- **Connectors** Screw terminal
- **Enclosure** ABS
- **Indicators** Power LED indicator
- **Isolation** 1,000 V_{DC} (three way)
- **Power Consumption** 0.85 W (voltage output)
  1.2 W (current output)
- **Power Input** 24 V_{DC} ±10%
- **Dimensions (W x H x D)** 23.2 x 101 x 93.5 mm (0.91" x 3.97" x 3.68")
- **Operating Temperature** -10 ~ 70 °C (14 ~ 158 °F)
- **Storage Temperature** -25 ~ 85 °C (-13 ~ 185 °F)

Ordering Information

- **ADAM-3014** Isolated DC input/output module

ADAM-3016
ADAM-3017

Isolated Strain Gauge Input Module
External Powered IEPE Signal Conditioner



ADAM-3016



ADAM-3017

Specifications

I/O

- **Accuracy** ±0.1% of full range
- **Bandwidth** 2.4 kHz (typical)
- **Isolation Mode Rejection** >100 dB @ 50 Hz/60 Hz
- **Current Output** Current: 0 ~ 20 mA
  Current load resistor: 0 ~ 500 Ω (Source)
- **Stability (Temperature Drift)** 150 ppm (typical)
- **Voltage Specifications** Electrical input: ±10 mV, ±20 mV, ±30 mV, ±100 mV
  Excitation voltage: 1 ~ 10 V_{DC} (60 mA max)
- **Voltage Output** Bipolar: ±5 V, ±10 V
  Unipolar: 0 ~ 10 V
  Impedance: < 50 Ω

General

- **Connectors** Screw terminal
- **Enclosure** ABS
- **Indicators** Power LED indicator
- **Isolation** 1,000 V_{DC} (Three-way)
- **Power Consumption** ≤ 1.85 W (voltage output)
  ≤ 2.15 W (current output)
- **Power Input** 24 V_{DC} ±10%
- **Dimensions (W x H x D)** 23.2 x 101 x 93.5 mm (0.91" x 3.97" x 3.68")
- **Operating Temperature** -10 ~ 70 °C (14 ~ 158 °F)
- **Storage Temperature** -25 ~ 85 °C (-13 ~ 185 °F)

Ordering Information

- **ADAM-3016** Isolated strain gauge input module

Specifications

Integrated Electronic Piezoelectric (IEPE)Excitation

- **Channels** 1
- **Upper Cut-Off Frequency (for all couple settings)**
  x1, x10 gain (-5%) 100 kHz
  x100 gain (-1%) 50 kHz
- **Lower Cut-Off Frequency (-3dB, 1 MΩ load, for all gain settings)**
  DC Couple DC
  AC Couple (1 µF) 0.58 Hz
  AC Couple (47 µF) 0.012 Hz
- **Accuracy** < ±2% for all gain settings
- **Compliance** > 24 V
- **Current** 0, 4, 6, or 10 mA ± 5%
- **Discharge Time Constant (1 MΩ load, for all gain settings)**
  DC Couple 0 second
  AC Couple (1 µF) > 0.3 seconds
  AC Couple (47 µF) > 13 seconds
- **DC Offset** < 30 mV

Isolation Protection

- **Input/Output to Power** 1,000 V_{DC}

General

- **I/O Connectors** Screw terminal
  (Including a female BNC to terminal block adaptor)
- **Dimensions (W x H x D)** 23.2 x 101 x 93.5 mm (0.91" x 3.97" x 3.68")
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH, non-condensing

Ordering Information

- **ADAM-3017-AE** Externally powered IEPE signal conditioner

ADAM-3112
ADAM-3114

Isolated AC Voltage Input Module

Isolated AC Current Input Module



ADAM-3112

CE FCC FM APPROVED

Specifications

Voltage Input

Full Range Mode		400 V	250 V	120 V
Input Voltage	AC (V_{RMS})	0 ~ 400	0 ~ 250	0 ~ 120
	DC (V)	0 ~ 400	0 ~ 250	0 ~ 120
Input Impedance		48 k	30 k	14.4 k

Voltage Output

- **Output Signal** 0 ~ 5 V_{DC}
- **Accuracy** < ±1.0 % for full range
- **Output Impedance** < 10 Ω @ operating frequency <60 Hz
- **Load** > 10 k Ω
- **Ripple** < 120mVp-p
- **Temperature Coefficient** 400 ppm/°C
- **Input Bandwidth** 6 kHz

Power Consumption

- **Supply Voltage** 24 V_{DC} ± 10%
- **Current Consumption** 40 mA

General

- **Isolation Protection** 1,000 V_{DC} (output to power)
  2,500 V_{RMS} (input to output, input to power)
- **Dimensions (W x H x D)** 23.2 x 101 x 93.5 mm (0.91" x 3.97" x 3.68")
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Humidity** 5 ~ 95%

Ordering Information

- **ADAM-3112-AE** Isolated AC voltage input module



ADAM-3114

CE FCC FM APPROVED

Specifications

Current Input

- **AC Current Input** 0 ~ 5 A_{RMS}
- **DC Current Input** 0 ~ 5 A

Voltage Output

- **Output Signal** 0 ~ 5 V_{DC}
- **Accuracy** < ±1.0 % for full range
- **Output Impedance** <10 Ω @ operating frequency <60 Hz
- **Load** > 10 kΩ
- **Ripple** < 120 mVp-p
- **Temperature Coefficient** 400 ppm/°C
- **Input Bandwidth** 10 kHz

Power Consumption

- **Supply Voltage** 24 V_{DC} ± 10%
- **Current Consumption** 40 mA

General

- **Isolation Protection** 1,000 V_{DC} (output to power)
  2,500 V_{RMS} (input to output, input to power)
- **Dimensions (W x H x D)** 23.2 x 101 x 93.5 mm (0.91" x 3.97" x 3.68")
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Humidity** 5 ~ 95%

Ordering Information

- **ADAM-3114-AE** Isolated AC current input module

USB-4620
USB-4622
USB-4630

5-Port Isolated USB 2.0 Full-Speed Hub

5-Port USB 2.0 High-Speed Hub

4-Port Isolated USB 3.0 SuperSpeed™ Hub



USB-4620



USB-4622

NEW



USB-4630

Features

- 5 downstream USB 2.0 ports
- Supports USB 2.0 full speed
- 3,000 V_{DC} voltage isolation for each downstream port
- Suitable for DIN rail mounting
- One lockable USB cable included
- 10 ~ 30 V_{DC} power input (power adapter not included)

Specifications

Connectivity

Ports	1 x Upstream (Type B) 5 x Downstream (Type A)
Compatibility	USB 2.0 full speed
Transfer Speed	12 Mbps
Supply Current	500 mA max. per channel

General

Housing	Plastic (ABS+PC)
Dimensions (L x W x H)	132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
DC Input	10 ~ 30 V_{DC}
Power Consumption	24 V @ 36 mA
Operating Temperature	0 ~ 60 °C (32 ~ 140 °F)
Storage Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
Storage Humidity	5 ~ 95% RH non-condensing

Protection

Isolation Protection	3,000 V_{DC}

Ordering Information

USB-4620-AE	5-port isolated USB 2.0 full-speed hub

Accessories

96PS-A40WDIN	DIN rail power supply, 40 W, 24 V
1960004544	Wall mount bracket
1960005788	VESA mount bracket
USB-LOCKCABLE-AE	Lockable USB 2.0 cable, 1 m, with screw kit

Features

- 5 downstream USB 2.0 ports
- Supports USB 2.0 high speed, USB 2.0 full speed, and USB 1.0
- 480 Mbps high-speed data transfer
- LED indicator
- Suitable for DIN rail mounting
- Lockable USB cable included
- 10 ~ 30 V_{DC} power input (power adapter not included)

Specifications

Connectivity

Ports	1 x Upstream (Type B) 5 x Downstream (Type A)
Compatibility	USB 2.0 high speed, USB 2.0 full speed, and USB 1.0
Transfer Speed	480 Mbps/12 Mbps/1.5 Mbps
Supply Current	500 mA max. per channel

General

Housing	Plastic (ABS+PC)
Dimensions (L x W x H)	132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
DC Input	10 ~ 30 V_{DC}
Power Consumption	24 V @ 36 mA
Operating Temperature	0 ~ 60 °C (32 ~ 140 °F)
Storage Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
Storage Humidity	5 ~ 95% RH non-condensing

Ordering Information

USB-4622-BE	5-port USB 2.0 high-speed hub

Accessories

96PS-A40WDIN	DIN rail power supply, 40 W, 24 V
1960004544	Wall mount bracket
1960005788	VESA mount bracket
USB-LOCKCABLE-AE	Lockable USB 2.0 cable, 1 m, with screw kit

Features

- 2,500 V_{DC} voltage isolation for upstream ports
- 4 x downstream USB 3.0 SuperSpeed™ ports
- Can be powered via a USB bus or 10 ~ 30 V_{DC} external power source
- ESD protection up to ±8 kV (Level 3)
- Power status and downstream port speed LED indicators
- The world's first isolated USB 3.0 SuperSpeed Hub
- Up to 5 Gbps transfer speed
- Lockable USB 3.0 cable is included

Specifications

Connectivity

Ports	1 x Upstream (Type B) 4 x Downstream (Type A)
Compatibility	USB 3.0 SuperSpeed (1)
Transfer Speed	5 Gbps shared by all downstream ports
Load Current	External power: 900 mA max. per port USB bus power: 700 mA max. shared by all ports (2)

General

Housing	Plastic (ABS + PC)
Dimensions (L x W x H)	132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
Power Input	10 ~ 30 V_{DC}
Power Consumption	760 mW (no load)
Operating Temperature	0 ~ 70 °C (32 ~ 158 °F) with external power 0 ~ 60 °C (32 ~ 140 °F) with USB bus power
Storage Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
Storage Humidity	5 ~ 95% RH (non-condensing)

Protection

Isolation Protection	2,500 V_{DC}
ESD Protection	Contact discharge: ±4 kV (Level 2) Air discharge: ±8 kV (Level 3)

Ordering Information

USB-4630-AE	4-port isolated USB 3.0 SuperSpeed™ hub
96PS-A40WDIN	DIN rail power supply, 40 W, 24 V

USB-4702
USB-4704

10 kS/s, 12-Bit, 8-Ch Multifunction DAQ USB Module

48 kS/s, 14-Bit, 8-Ch Multifunction DAQ USB Module



Features

- Supports USB 2.0
- Portable
- Bus powered
- 8 x Analog input channels
- 12-bit (USB-4702), 14-bit (USB-4704) resolution AI
- Sampling rates of up to 10 kS/s (USB-4702), 48 kS/s (USB-4704)
- 8-ch Digital input/8-ch digital output, 2-ch analog output, and 1 x 32-bit counter

Introduction

USB-4702 and USB-4704 are low-cost USB data acquisition modules that can be installed without opening the chassis; simply plug in the modules to access collected data. Reliable and rugged enough for industrial applications, yet sufficiently affordable for home systems, USB-4702 and USB-4704 DAQ modules provide an easy and efficient means of adding measurement and control capabilities to USB-capable computers. Additionally, because USB-4702 and USB-4704 draw power from the computer via the USB port, no external power connection is required, making these modules the most cost-effective solution for testing and measurement applications.

Specifications

Analog Input

- **Channels** 8 single ended/4 differential (software programmable)
- **Resolution** USB-4702: single ended: 11 bits
  Differential: 12 bits
  USB-4704: single ended: 13 bits
  Differential: 14 bits
- **Max. Sampling Rate** USB-4702: 10 kS/s max.
  USB-4704: 48 kS/s max.

Note: The sampling rate of each channel is influenced by the number of used channels. For example, if 4 channels are used, the sampling rate will be 10k/4 = 2.5 kS/s per channel.

- **FIFO Size** 512 samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 127 kΩ
- **Sampling Modes** Software, onboard programmable pacer, and external
- **Input Range and Absolute Accuracy**

Single Ended		±10	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Differential		N/A	±1	±1.25	±2	±2.5	±4	±5	±10	±20
Absolute Accuracy (% of FSR)*	USB-4702	0.2	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
	USB-4704	0.15	0.1	0.1	0.1	0.1	0.1	0.1	0.15	0.15

* ±1 LSB is added as the derivative for absolute accuracy

Analog Output

- **Channels** 2
- **Resolution** 12 bits
- **Output Rate** Static update
- **Output Range** 0 ~ 5 V (software programmable)
- **Slew Rate** 0.7 V/μs
- **Driving Capability** 5 mA
- **Output Impedance** 51 Ω
- **Operation Mode** Single output
- **Accuracy** Relative: ±12 LSB
  Differential non-linearity: ±5 LSB

Digital Input

- **Channels** 8
- **Compatibility** 3.3 V/5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
  Logic 1: 2.0 V min.

Digital Output

- **Channels** 8
- **Compatibility** TTL
- **Output Voltage** Logic 0: 0.4 V max.@ 4 mA (sink)
  Logic 1: 3.5 V min.@ 4 mA (source)

Counter

- **Channels** 1
- **Resolution** 32 bits
- **Compatibility** 3.3 V/TTL
- **Max. Input Frequency** 5 MHz

General

- **Bus Type** USB 2.0
- **I/O Connector** USB-4702: 1 x DB37, female
  USB-4704: Onboard screw terminal
- **Dimensions (L x W x H)** USB-4702: 70 x 70 mm (2.76" x 2.76")
  USB-4704: 132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
- **Power Consumption** Typical: 5 V @ 100 mA
  Max.: 5 V @ 500 mA
- **Operating Temperature** 0 ~ 55 °C (32 ~ 131 °F)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH non-condensing

Ordering Information

- **USB-4702-AE** 10 kS/s, 12-bit, 8-ch multifunction DAQ USB module
- **USB-4704-AE** 48 kS/s, 14-bit, 8-ch multifunction DAQ USB module

Accessories

- **PCL-10137-1E** DB37 cable, 1 m
- **PCL-10137-2E** DB37 cable, 2 m
- **PCL-10137-3E** DB37 cable, 3 m
- **ADAM-3937-BE** DB37 DIN rail wiring board
- **1960004544** Wall mount bracket
- **1960005788** VESA mount bracket

USB-4711A

150 kS/s, 12-Bit, 16-Ch Multifunction DAQ USB Module



Features

- Supports USB 2.0
- Portable
- Bus powered
- 16 x Analog input channels
- 12-bit resolution analog input
- Up to 150 kS/s sampling rate
- 8-ch Digital input/8-ch digital output, 2-ch analog output, and 1 x 32-bit counter
- Detachable screw terminal on modules
- Suitable for DIN rail mounting
- 1 x Lockable USB cable included for connection security

FCC CE RoHS

Introduction

The USB-4700 series comprises plug-and-play DAQ modules that can be installed without opening the chassis; simply plug in the modules to access collected data. Reliable and rugged enough for industrial applications, yet sufficiently affordable for home systems, USB-4700 series modules provide an easy and efficient means of adding measurement and control capabilities to USB-capable computers.

USB-4711A is equipped with an onboard terminal block, 16-ch analog input, 2-ch analog output, 16-ch digital I/O, and a counter channel capable of outputting a constant frequency square wave. Additionally, because USB-4711A draws power from the computer via the USB port, no external power connection is required, making this module a most cost-effective solution for diverse testing and measurement applications.

Specifications

Analog Input

- **Channels** 16 Single ended/8 differential (software programmable)
- **Resolution** 12 bits
- **Max. Sampling Rate** 150 kS/s max.

Note: The sampling rate of each channel is influenced by the number of used channels. For example, if 4 channels are used, the sampling rate will be 150k/4 = 37.5 kS/s per channel.

- **FIFO Size** 1,024 samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 1 GΩ
- **Sampling Modes** Software, onboard programmable pacer, and external
- **Input Range and Absolute Accuracy**

Bipolar	± 10	± 5	± 2.5	± 1.25	± 0.625
Absolute Accuracy (% of FSR)*	0.1	0.1	0.2	0.2	0.4

* ±1 LSB is added as the derivative for absolute accuracy

Analog Output

- **Channels** 2
- **Resolution** 12 bits
- **Output Rate** Static update
- **Output Range** (V, software programmable)

Internal Reference	Unipolar	0 ~ 5, 0 ~ 10
	Bipolar	±5, ±10

- **Slew Rate** 0.125 V/us
- **Driving Capability** 5 mA
- **Output Impedance** 0.1 Ω
- **Operation Mode** Single output
- **Accuracy** Relative: ±1 LSB
  Differential non-linearity: ±1 LSB

Digital Input

- **Channels** 8
- **Compatibility** 3.3 V/5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
  Logic 1: 2.0 V min.

Digital Output

- **Channels** 8
- **Compatibility** 3.3 V/TTL
- **Output Voltage** Logic 0: 0.4 V max.@ 6 mA
  Logic 1: 2.6 V min.@ 6 mA

Event Counter

- **Channels** 1
- **Compatibility** 3.3 V/TTL
- **Max. Input Frequency** 1 kHz

General

- **Bus Type** USB 2.0
- **I/O Connector** Onboard screw terminal
- **Dimensions (L x W x H)** 132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
- **Power Consumption** Typical: 5 V @ 360 mA
  Max.: 5 V @ 450 mA
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH non-condensing

Ordering Information

- **USB-4711A-AE** 150 kS/s, 12-bit, 16-ch multifunction DAQ USB module

Accessories

- **1960004544** Wall mount bracket
- **1960005788** VESA mount bracket

USB-4716

200 kS/s, 16-Bit, 16-Ch Multifunction DAQ USB Module



Features

- Supports USB 2.0
- Portable
- Bus powered
- 16 x Analog input channels
- 16-bit resolution analog input
- Up to 200 kS/s sampling rate
- 8-ch Digital input/8-ch digital output, 2-ch analog output, and 1 x 32-bit counter
- Detachable screw terminal on modules
- Suitable for DIN rail mounting
- 1 x Lockable USB cable included for connection security

Introduction

The USB-4700 series comprises plug-and-play DAQ modules that can be installed without opening the chassis; simply plug in the modules to access collected data. Reliable and rugged enough for industrial applications, yet sufficiently affordable for home systems, USB-4700 series modules provide an easy and efficient means of adding measurement and control capabilities to USB-capable computers.

USB-4716 offers 16 single-ended/8 differential analog inputs with 16-bit resolution, up to 200 kS/s throughput, 16 digital I/Os, 1 user counter, and 2 16-bit analog outputs. Additionally, because USB-4716 draws power from the computer via the USB port, no external power connection is required, making this module a most cost-effective solution for diverse testing and measurement applications.

Specifications

Analog Input

- **Channels** 16 Single ended/ 8 differential (software programmable)
- **Resolution** 16 bits
- **Max. Sampling Rate** 200 kS/s (for USB 2.0)

Note: The sampling rate of each channel is influenced by the number of used channels. For example, if 4 channels are used, the sampling rate will be 200k/4 = 50 kS/s per channel.

- **FIFO Size** 1,024 samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 1 GΩ
- **Sampling Modes** Software, onboard programmable pacer, or external
- **Input Range and Absolute Accuracy**

Single Ended	N/A	0 ~ 10	0 ~ 5	0 ~ 2.5	0 ~ 1.25
Differential	±10	±5	±2.5	±1.25	±0.625
Absolute Accuracy (% of FSR)*	0.015	0.03	0.03	0.05	0.1

* ±1 LSB is added as the derivative for absolute accuracy

Analog Output

- **Channels** 2
- **Resolution** 16 bits
- **Output Rate** Static update
- **Output Range** (V, software programmable)

Internal Reference	**Unipolar**	0 ~ 5 , 0 ~ 10
	Bipolar	±5, ±10

- **Slew Rate** 0.125 V/μs
- **Driving Capability** 5 mA
- **Output Impedance** 0.1 Ω max.
- **Operation Mode** Single output
- **Accuracy** Relative: ±1 LSB

Digital Input

- **Channels** 8
- **Compatibility** 3.3 V/5 V/TTL
- **Input Voltage** Logic 0: 1.0 V max.
  Logic 1: 2.0 V min.

Digital Output

- **Channels** 8
- **Compatibility** 3.3 V/TTL
- **Output Voltage** Logic 0: 0.4 V max.
  Logic 1: 2.4 V min.
- **Output Capability** Sink: 6 mA (sink)
  Source: 6 mA (source)

Event Counter

- **Channels** 1
- **Compatibility** 3.3V/TTL
- **Max. Input Frequency** 1 kHz

General

- **Bus Type** USB 2.0
- **I/O Connector** Onboard screw terminal
- **Dimensions (L x W x H)** 132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
- **Power Consumption** Typical: 5 V @ 360 mA
  Max.: 5 V @ 450 mA
- **Operating Temperature** 0 ~ 60 °C (32 ~ 158 °F)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Operating Humidity** 5 ~ 85% RH non-condensing
- **Storage Humidity** 5 ~ 95% RH non-condensing

Ordering Information

- **USB-4716-AE** 200 kS/s, 16-bit, 16-ch multifunction DAQ USB module

Accessories

- **1960004544** Wall mount bracket
- **1960005788** VESA mount bracket

USB-4718

8-Ch Thermocouple Input USB Module with 8-Ch Isolated Digital Input



Features

- Supports USB 2.0
- Supports voltage, current, and thermocouple inputs
- Bus powered
- 8 x Thermocouple input channels
- 2,500 V_{DC} isolation
- Supports 4 ~ 20 mA current input
- Detachable screw terminal on modules
- 8-ch isolated digital input and 8-ch isolated digital output
- Suitable for DIN rail mounting
- 1 x Lockable USB cable included for connection security

Introduction

The USB-4700 series comprises plug-and-play DAQ modules that can be installed without opening the chassis; simply plug in the modules to access collected data. Reliable and rugged enough for industrial applications, yet sufficiently affordable for home systems, USB-4700 series modules provide an easy and efficient means of adding measurement and control capabilities to USB-capable computers.

USB-4718 offers 8 thermocouple inputs with 16-bit resolution and up to 0.1% input range accuracy. With its compact and portable design, USB-4718 is ideal for field-based applications. Additionally, the module's input channels can be individually configured to enable handling of multiple sensor types.

Specifications

Analog Input

- **Accuracy** ±0.1% for voltage input
- **Bandwidth** 13.1 Hz @ 50 Hz, 15.72 Hz @ 60 Hz
- **Channels** 8 differential
- **Independent Channel Configuration** Yes
- **CMR @ 50/60 Hz** 92 dB min.
- **Resolution** 16 bits
- **Input Impedance** 1.8 MΩ
- **Input Range** 0 ~ 15 mV, 0 ~ 50 mV, 0 ~ 100 mV, 0 ~ 500 mV, 0 ~ 1 V, 0 ~ 2.5 V, 0 ~ 20 mA, 4 ~ 20 mA
- **Input Types** Thermocouple, mV, V, mA
- **Sampling Rate** 10 S/s (shared for all channels)

Note: Because of the hardware design, the sampling rate for each channel is fixed at 10/8 = 1.25 S/s per channel regardless of the number of channels used.

- **Span Drift** ±25 ppm/°C
- **T/C Type and Temperature Ranges**

J	0 ~ 760 °C	**R**	500 ~ 1750 °C
K	0 ~ 1370 °C	**S**	500 ~ 1750 °C
T	-100 ~ 400 °C	**B**	500 ~ 1800 °C
E	0 ~ 1000 °C		

- **TVS/ESD Protection** Built in
- **Zero Drift** ±0.3 μV/°C

Isolated Digital Input

- **Channels** 8
- **Input Voltage** Logic 0: 3 V max. Logic 1: 5 V min. (30 V max.)
- **Isolation Protection** 2,500 V_{DC}
- **Opto-Isolator Response** 25 μs

Isolated Digital Output

- **Channels** 8
- **Output Type** Sink (NPN)
- **Isolation Protection** 2,500 V_{DC}
- **Output Voltage** 5 ~ 30 V_{DC}, 1.1 A max./ total
- **Sink Current** 200 mA max./channel
- **Opto-Isolator Response** 25 μs

General

- **Bus Type** USB 2.0
- **I/O Connector** Onboard screw terminal
- **Dimensions (Lx W x H)** 132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
- **Power Consumption** 100 mA @ 5 V
- **Watchdog Timer** 1.6 sec. (system)
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH non-condensing

Ordering Information

- **USB-4718-AE** 8-ch thermocouple input USB module

Accessories

- **1960004544** Wall mount bracket
- **1960005788** VESA mount bracket

USB-4750
USB-4761

32-Ch Isolated Digital I/O USB Module
8-Ch Relay, 8-Ch Isolated Digital Input USB Module



USB-4750



USB-4761

Features

- Compatible with USB 1.1/2.0
- Bus powered
- 16 x isolated digital input and 16 x digital output channels
- High voltage isolation on all channels (2,500 V_{DC})
- High sink current on isolated output channels (200 mA/channel)
- Supports 5 ~ 60 V_{DC} isolated input channels
- Interrupt handling capability
- Timer/counter capability
- Suitable for DIN rail mounting
- 1 x Lockable USB cable included for connection security

Specifications

Isolated Digital Input

Channels	16
Input Voltage	Logic 0: 2 V max. Logic 1: 5 V min. (60 V max.) or dry contact
Interruptible Channels	2
Isolation Protection	2,500 V_{DC}

Isolated Digital Output

Channels	16
Output Type	Sink (NPN)
Isolation Protection	2,500 V_{DC}
Output Voltage	5 ~ 40 V_{DC}
Sink Current	200 mA max. per channel Total 1.1 A max.

Isolated Counter

Channels	2
Resolution	32 bit
Max. Input Frequency	1 MHz
Isolation Protection	2,500 V_{DC}

General

Bus Type	USB 1.1/2.0
I/O Connector	Onboard screw terminal
Dimensions (L x W x H)	132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
Power Consumption	Typical: 5 V @ 200 mA Max.: 5 V @ 350 mA
Operating Temperature	0 ~ 60 °C (32 ~ 140 °F)
Storage Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
Storage Humidity	5 ~ 95% RH, non-condensing

Ordering Information

USB-4750-BE	32-ch isolated digital I/O USB module

Accessories

1960004544	Wall mount bracket
1960005788	VESA mount bracket

Features

- Compatible with USB 1.1/2.0
- Portable
- Bus powered
- 8 x Relay output and 8 x isolated digital input channels
- LED indicators to show activated relays
- 8 x Form C-type relay output channels
- High-voltage isolation on input channels (2,500 V_{DC})
- High ESD protection (2,000 V)
- Wide input range (5 ~ 30 V_{DC})
- Interrupt handling capability
- Detachable screw terminal on modules
- Suitable for DIN rail mounting
- 1 x Lockable USB cable included for connection security

Specifications

Isolated Digital Input

Channels	8
Input Voltage	Logic 0: 2 V max. Logic 1: 5 V min. (30 V max.)
Isolation Protection	2,500 V_{DC}
Opto-Isolator Response	50 µs

Relay Output

Contact Rating	0.25 A @ 240 V_{AC}, 1 A @ 30 V_{DC}
Max. Switching Power	62.5 VA, 60 W
Max. Switching Voltage	250 V_{AC}, 220 V_{DC}
Max. Switching Current	5 A
Operate/Release Time	max. 5 / 4 ms
Life Expectancy (Electrical)	5 x 10^7 cycles typ. @ 10 mA/12 V 2 x 10^5 cycles typ. @ 2000 mA/30 V

General

Bus Type	USB 1.1/2.0
I/O Connector	Onboard screw terminal
Dimensions (L x W x H)	132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
Power Consumption	Typical: 5 V @ 60 mA Max.: 5 V @ 400 mA
Operating Temperature	0 ~ 60 °C (32 ~ 140 °F)
Storage Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
Storage Humidity	5 ~ 95 % RH, non-condensing

Ordering Information

USB-4761-BE	8-ch relay/isolated digital input USB module

Accessories

1960004544	Wall mount bracket
1960005788	VESA mount bracket

USB-4751
USB-4751L

48-Ch Digital I/O USB Module

24-Ch Digital I/O USB Module



Features

- Compatible with USB 1.1/2.0
- Portable
- Bus powered
- 48/24 x TTL digital I/O
- Emulates Mode 0 of the Intel® 8255 PPI chip
- Buffered circuits offer a higher driving capacity compared to the Intel® 8255 PPI chip
- Interrupt handling capability
- Timer/Counter interrupt capability
- Supports both dry and wet contact
- 50-pin Opto-22-compatible box header
- Suitable for DIN rail mounting
- 1 x Lockable USB cable included for connection security

Introduction

The USB-4700 series comprises plug-and-play DAQ modules that can be installed without opening the chassis; simply plug in the modules to access collected data. Reliable and rugged enough for industrial applications, yet sufficiently affordable for home systems, USB-4700 series modules provide an easy and efficient means of adding measurement and control capabilities to USB-capable computers.

USB-4751 and USB-4751L are 48/24-bit digital I/O modules that feature a USB interface, event counter, and three 16-bit timers, which can be cascaded to provide a 32-bit timer. The 48/24 bits are divided into six/three 8-bit I/O ports that can be individually configured as input or output ports using software.

Specifications

Digital Input

- **Channels** USB-4751: 48 (shared with output)
  USB-4751L: 24 (shared with output)
- **Compatibility** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
  Logic 1: 2 V min.

Digital Output

- **Channels** USB-4751: 48 (shared with input)
  USB-4751L: 24 (shared with input)
- **Compatibility** 5 V/TTL
- **Output Voltage** Logic 0: 0.5 V max.
  Logic 1: 3.8 V min.
- **Output Capability** Sink: 12 mA @ 0.5 V
  Source: 12 mA @ 3.8 V for single channels
  5 mA @ 3.8 V for all channels in high status

Counter/Timer

- **Channels** 2
- **Resolution** 32-bit
- **Max. Input Frequency** 8 MHz

General

- **Bus Type** USB 1.1/2.0
- **I/O Connector** 50-pin box headers, pin assignments are fully compatible with Opto-22 I/O module racks
- **Dimensions (L x W x H)** 132 x 80 x 32 mm (5.2" x 3.15" x 1.26")
- **Power Consumption** Typical: 5 V @ 200 mA
  Max.: 5 V @ 500 mA
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH, non-condensing

Ordering Information

- **USB-4751-AE** 48-ch digital I/O USB module
- **USB-4751L-AE** 24-ch digital I/O USB module

Accessories

- **1960004544** Wall mount bracket
- **1960005788** VESA mount bracket
- **PCL-10150-1.2E** 50-pin flat cable, 1.2 m
- **ADAM-3950-AE** 50-pin DIN rail flat cable wiring board
- **PCLD-782B-AE** 24-ch IDI board with 20-pin and 50-pin flat cables
- **PCLD-785B-AE** 24-ch relay board with 20-pin and 50-pin flat cables

Serial Communication Card Selection Guide

Serial Communication Cards

NEW



Bus		PCI Express								
Part Number		PCI-1602	PCI-1602UP	PCI-1604	PCI-1604L	PCI-1610	PCI-1612	PCI-1620	PCI-1622	PCI-1680U
I/O Ports		2	2	2	2	4	4	8	8	2
Communication Interfaces	RS-232	V	V	V	V	V	V	V	V	-
	RS-422	V	V	-	-	-	V	-	V	-
	RS-485	V	V	-	-	-	V	-	V	-
	CAN	-	-	-	-	-	-	-	-	V
Drivers		Windows 7/8/10 and Linux								
Protection	ESD	15KV (air), 8KV (contact)								8KV (air), 4KV (contact)
	Isolation (V_{DC})	3,000	3,000	3,000	-	3,000	3,000	-	3,000	1,000



Bus		PCI Express						
Part Number		PCIE-1602	PCIE-1604	PCIE-1610	PCIE-1612	PCIE-1620	PCIE-1622	PCIE-1680
I/O Ports		2	2	4	4	8	8	2
Communication Interfaces	RS-232	V	V	V	V	V	V	-
	RS-422	V	-	-	V	-	V	-
	RS-485	V	-	-	V	-	V	-
	CAN	-	-	-	-	-	-	V
Drivers		Windows 7/8/10 and Linux						
Protection	ESD	15KV (air), 8KV (contact)						
	Isolation (V_{DC})	3,000	3,000	-	3,000	-	3,000	2,500



Bus	PCI Express	
Part Number	PCE-USB4	PCE-USB8
Host Controller	4 x Renesas µPD720202	
USB 3.0 Ports	4	8
Drivers	Windows 7/8/10 and Linux (in box)	
Max. Current Per Port	1,500mA	

PC/104 Communication Modules









Bus		PC/104						
Part Number		PCM-3680	PCM-3660	PCM-3610	PCM-3612	PCM-3614	PCM-3618	PCM-3641
I/O Ports		2	2	2	2	4	8	4
Communication Interfaces	Ethernet	-	V	-	-	-	-	-
	RS-232	-	-	V	-	-	-	V
	RS-422	-	-	V	V	V	V	-
	RS-485	-	-	V	V	V	V	-
	CAN	V	-	-	-	-	-	-
Protection	ESD	8KV (air), 4KV (contact)						
	Isolation (V_{DC})	2,500	-	2,500	-	-	-	-

PCI-104 Communication Modules




Bus		PCI-104	
Part Number		PCM-3680I	PCM-3612I
I/O Ports		2	4
Communication Interfaces	Current Loop	-	-
	RS-232	-	V
	RS-422	-	V
	RS-485	-	V
	CAN	V	-
Protection	ESD	8KV (air), 4KV (contact)	15KV (air), 8KV (contact)
	Isolation (V_{DC})	2,500	-

Accessories



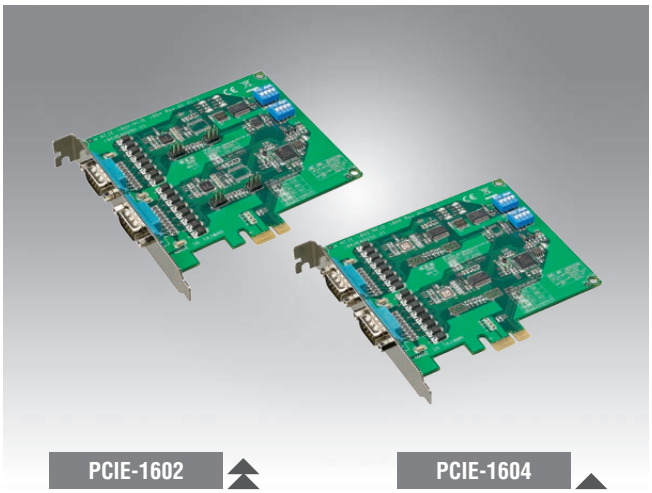




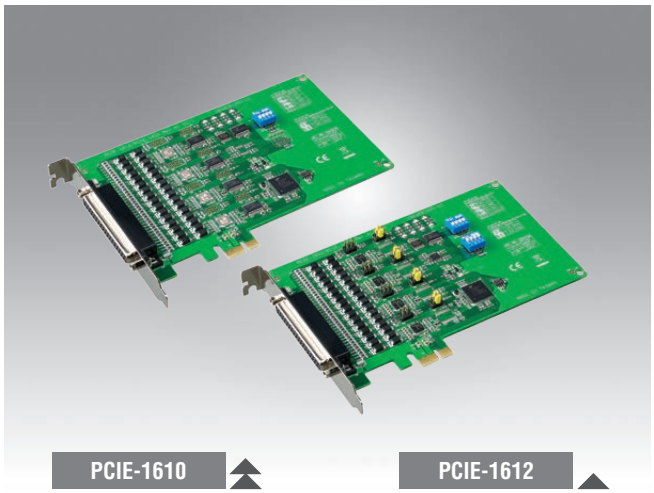
Part Number		1700018791	OPT4A	OPT8C	OPT8H	OPT8J
Length		30 cm	30 cm	1 m	1 m	1 m
Communication Interfaces	Connector Type	DB37 Male	DB37 Male	DB62 Male	DB62 Male	DB78
	Qty	1	1	1	1	1
	Connector Type	DB25 Male	DB9 Male	DB25 Male	DB9 Male	DB9 Male
	Qty	4	4	8	8	8
Applications		PCI-1610B, PCI-1610C, PCI-1612B, PCI-1612C, PCIE-1610B, PCIE-1612B, PCIE-1612C	PCI-1610B, PCI-1610C, PCI-1612B, PCI-1612C, PCIE-1610B, PCIE-1612B, PCIE-1612C	PCI-1620A, PCI-1620B, PCIE-1620A, PCIE-1622B	PCI-1620A, PCI-1620B, PCIE-1620A, PCIE-1622B	PCI-1622C, PCIE-1622C
Page		online	online	online	online	online

PCIE-1602
PCIE-1604
PCIE-1610
PCIE-1612

2-Port RS-232/422/485 PCI Express Communication Card
2-Port RS-232 PCI Express Communication Card
4-Port RS-232 PCI Express Communication Card
4-Port RS-232/422/485 PCI Express Communication Card



PCIE-1602 PCIE-1604



PCIE-1610 PCIE-1612

Features

- PCI Express bus 2.0 compliant
- Up to 921.6 kbps speed for extremely fast data transmissions
- Supports any baud rate setting
- 2 x RS-232 or RS- 232/422/485 ports
- Supports Windows XP/7/8/10, and Linux operating systems
- XR17V352 UART with 256-byte FIFOs

Specifications

General

- **Bus Type** PCI Express bus 2.0 compliant
- **Bus Interface** PCI Express x1
- **Certification** CE, FCC class A
- **Connectors** 2 x DB9, male
- **Dimensions (L x H)** 119.63 x 111 mm (4.71" x 4.4")
- **Power Consumption** 260 mA @ +3.3 V (typ.)

Communications

- **Comm. Controller** XR17V352
- **Data Bits** 5, 6, 7, 8
- **FIFO** 256 bytes
- **Parity** None, Odd, Even, Mark and Space
- **Speed** 50 bps ~ 921.6 kbps
- **Stop Bits** 1, 1.5, 2

Software

- **Bundled Software** ICOM tools
- **OS Support** Windows XP/7/8/10 and Linux (check the software release note for versions supported)

Environment

- **Operating Humidity** 5 ~ 95% RH, non-condensing
- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
- **Storage Temperature** -25 ~ 85 °C (-13 ~ 185 °F)

Protection

Part Number	ESD Protection	EFT Protection	Surge Protection	Isolation Protection
PCIE-1602B	15KV (air), 8KV (contact)	1000 V	1000 VDC	
PCIE-1602C	15KV (air), 8KV (contact)	1000 V	1000 VDC	3000 VDC
PCIE-1604B	15KV (air), 8KV (contact)	1000 V	1000 VDC	
PCIE-1604C	15KV (air), 8KV (contact)	1000 V	1000 VDC	3000 VDC

Ordering Information

- **PCIE-1602B-AE** 2-port RS-232/422/485 PCI Express comm. card w/surge
- **PCIE-1602C-AE** 2-port RS-232/422/485 PCI Express comm. card w/surge and isolation
- **PCIE-1604B-AE** 2-port RS-232 PCI Express comm. card w/surge
- **PCIE-1604C-AE** 2-port RS-232 PCI Express comm. card w/surge and isolation

Features

- PCI Express bus 2.0 compliant
- Up to 921.6 kbps speed for extremely fast data transmissions
- Supports any baud rate setting
- 4 x RS-232 or RS- 232/422/485 ports
- Supports Windows XP/7/8/10, and Linux operating systems
- XR17V354 UART with 256-byte FIFOs

Specifications

General

- **Bus Type** PCI Express bus 2.0 compliant
- **Bus Interface** PCI Express x1
- **Certification** CE, FCC class A
- **Connectors** 1 x DB37, female
- **Dimensions (L x H)** 168 x 111 mm (6.6" x 4.4")
- **Power Consumption** 260 mA @ +3.3 V (typ.)

Communications

- **Comm. Controller** XR17V354
- **Data Bits** 5, 6, 7, 8
- **FIFO** 256 bytes
- **Parity** None, Odd, Even, Mark and Space
- **Speed** 50 bps ~ 921.6 kbps
- **Stop Bits** 1, 1.5, 2

Software

- **Bundled Software** ICOM tools
- **OS Support** Windows XP/7/8/10 and Linux (check the software release note for versions supported)

Environment

- **Operating Humidity** 5 ~ 95% RH, non-condensing
- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
- **Storage Temperature** -25 ~ 85 °C (-13 ~ 185 °F)

Protection

Part Number	ESD Protection	EFT Protection	Surge Protection	Isolation Protection
PCIE-1610B	15KV (air), 8KV (contact)	1000 V	1000 VDC	
PCIE-1612B	15KV (air), 8KV (contact)	1000 V	1000 VDC	
PCIE-1612C	15KV (air), 8KV (contact)	1000 V	1000 VDC	3000 VDC

Ordering Information

- **PCIE-1610B-AE** 4-port RS-232 PCI Express comm. card w/surge
- **PCIE-1612B-AE** 4-port RS-232/422/485 PCI Express comm. card w/surge
- **PCIE-1612C-AE** 4-port RS-232/422/485 PCI Express comm. card w/surge and isolation

Note: This series includes an OPT4A cable.

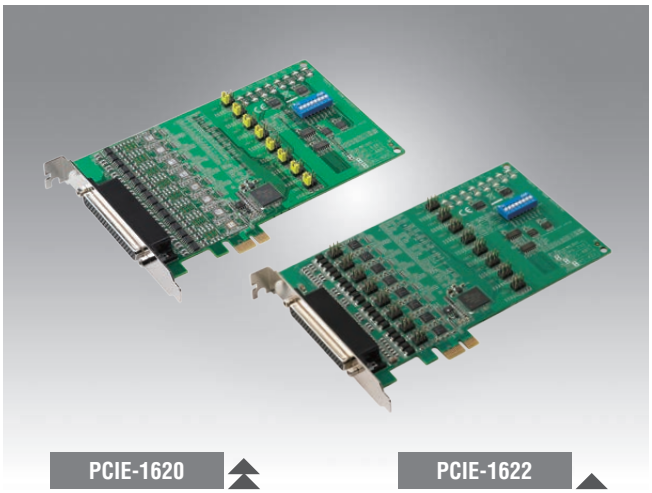
Accessories

- **OPT4A-AE** 1 x DB37 to 4 x DB9 cable, 30 cm
- **1700018791** 1 x DB37 to 4 x DB25 cable, 30 cm

PCIE-1620
PCIE-1622

8-Port RS-232 PCI Express Communication Card

8-Port RS-232/422/485 PCI Express Communication Card



Features

- PCI Express bus 2.0 compliant
- Up to 921.6 kbps speed for extremely fast data transmissions
- Supports any baud rate setting
- 8 x RS-232 or RS-232/422/485 ports
- XR17V358 UART with 256-byte FIFOs
- Supports Windows XP/7/8/10, and Linux operating systems
- Board ID function for fixed COM ports

Introduction

PCIE-1620 and PCIE-1622 are 8-port RS-232/RS-232/422/485 PCI Express communication cards, compatible with the PCI Express x1 specification. Featuring 8 EFT protected ports (up to 1,000 V) with high data transmission speeds (up to 921.6 kbps) and high-performance XR17V358 UARTs with 256-byte FIFOs to reduce CPU load, PCIE-1620 and PCIE-1622 are ideal for diverse applications in multitasking environments.

Specifications

General

- **Bus Type** PCI Express bus 2.0 compliant
- **Bus Interface** PCI Express x1
- **Certification** CE, FCC class A
- **Connectors** 1 x DB62, female (PCIE-1620A/22A/22B)
  1 x DB78, female (PCIE-1622C)
- **Dimensions (L x H)** 168 x 111 mm (6.6" x 4.4")
- **Power Consumption** 260 mA @ +3.3 V (typ.)

Communications

- **Comm. Controller** XR17V358
- **Data Bits** 5, 6, 7, 8
- **Data Signals** RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD (PCIE- 1620A/22B) TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI (PCIE-1622C) RS-422: Tx+, Tx-, Rx+, Rx- (PCIE-1620A/22A/22B) CTS+, CTS-, RTS+, RTS-, Tx+, Tx-, Rx+, Rx- (PCIE- 1622C) RS-485: Data+, Data- (PCIE-1622)
- **FIFO** 256 bytes
- **Flow Control** DTR/DSR, RTS/CTS, Xon/Xoff
- **Parity** None, Odd, Even, Mark, or Space
- **Speed** 50 bps ~ 921.6 kbps
- **Stop Bits** 1, 1.5, 2

Protection

Part Number	ESD Protection	EFT Protection	Surge Protection	Isolation Protection
PCIE-1620A	15KV (air), 8KV (contact)	1000 V		
PCIE-1622B	15KV (air), 8KV (contact)	1000 V	1000 V	
PCIE-1622C	15KV (air), 8KV (contact)	1000 V	1000 V	3000 V_{DC}

Software

- **Bundled Software** ICOM tools
- **OS Support** Windows XP/7/8/10 and Linux (check the software release note for versions supported)

Environment

- **Operating Humidity** 5 ~ 95% RH, non-condensing
- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
- **Storage Temperature** -25 ~ 85 °C (-13 ~ 185 °F)

Ordering Information

- **PCIE-1620A-BE** 8-port RS-232 PCI Express comm. card
- **PCIE-1622B-BE** 8-port RS-232/422/485 PCI- Express comm. card w/ surge
- **PCIE-1622C-AE** 8-port RS-232/422/485 PCI- Express comm. card w/ surge and isolation protection

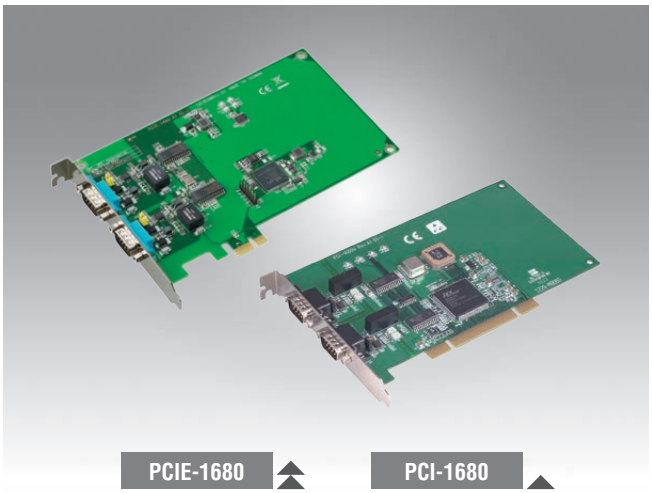
Accessories

- **OPT8C-AE** 1 x DB62 to 8 x DB25 cable, 1 m (for PCIE-1620A-BE and PCIE-1622B-BE)
- **OPT8H-AE** 1 x DB62 to 8 x DB9 cable, 1 m (for PCIE-1620A-BE and PCIE-1622B-BE)
- **OPT8J-AE** 1 x DB78 to 8 x DB9 cable, 1 m (for PCIE-1622C-AE)

PCIE-1680
PCI-1680

2-Port CAN Bus PCIE Card with Isolation Protection

2-Port CAN Bus Universal PCI Card with Isolation Protection



FCC CE

Features

- PCIe bus specification 1.1 compliant
- 2 x Independent CAN ports
- Up to 1 Mbps transmission speeds
- 16 MHz CAN controller frequency
- Optical isolation protection of 2,500 V_{DC}
- I/O address automatically assigned by PCI PnP
- Transmit/Receive status LED indicators
- Windows DLL library and examples included
- Supports Windows CE5/CE6/XP/7/8.1/10 drivers and utilities
- Supports Linux 2.4.xx/2.6.xx, QNX 6.5, and Intel® x86 architecture

Introduction

PCI-1680 and PCIE-1680 are purpose-built communication cards that ensure CAN connectivity. With 2 independent CAN controllers built in, PCI-1680 and PCIE-1680 enable bus arbitration and error detection with automatic transmission repetition, drastically reducing data loss and ensuring system reliability. Additionally, both PCI-1680 and PCIE-1680 operate at baud rates of up to 1 Mbps.

Specifications

General

- **Bus Type** PCI Express V1.0/Universal PCI
- **Certification** CE, FCC
- **Connectors** 2 x DB9, male
  2 x 10 pin box wafer (optional)
- **Ports** 2
- **Power Consumption** 3.3 V @ 600 mA (typical)

Communication

- **CAN Controller** NXP SJA-1000
- **CAN Transceiver** NXP TJA1051T
- **Signal Support** CAN_H, CAN_L
- **Protocol** CAN 2.0 A/B
- **Data Transfer Rate** Programmable up to 1 Mbps
- **CAN Frequency** 16MHz

Protection

- **Isolation Protection** 2,500 V_{DC}

Mechanical and Environmental

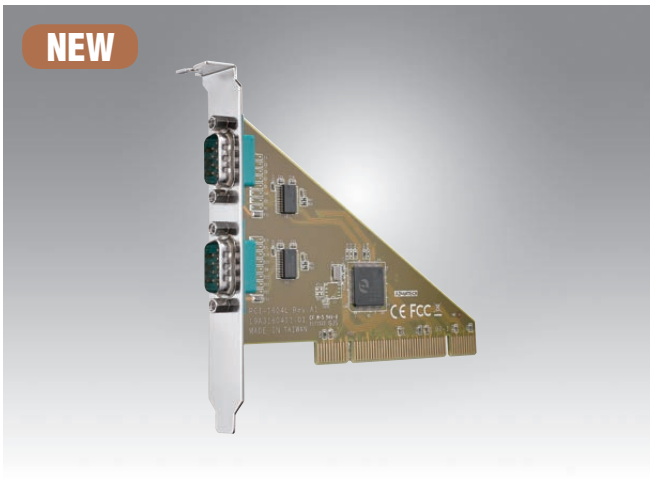
- **Operating Temperature** 0 ~ 70 °C (32 ~ 158 °F) (refer to IEC 60068-2-1, 2)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 5 ~ 95% relative humidity, non-condensing
- **Dimensions (L x H)** 168 x 111 mm (6.6" x 4.4")

Ordering Information

- **PCIE-1680-AE** 2-port CAN bus PCIE card with isolation protection
- **PCI-1680-BE** 2-port CAN bus PCI card with isolation protection

PCI-1604L
PCI-1602UP

2-Port RS-232 PCI Communication Card
2-Port RS-232/422/485 Low-Profile Universal PCI Communication Card with Isolation Protection



PCI-1604L

FCC CE RoHS

Features

- PCI bus 2.2 compliant
- Up to 921.6 kbps speed for extremely fast data transmissions
- Level 4 ESD protection (air 15 KV , contact 8 KV)
- 2 x RS-232 ports
- 128-byte FIFO
- Supports Windows XP/7/8/10 and Linux operating systems
- -20 ~ 60 °C operating temperature

Specifications

General

- **Bus Type** Universal PCI v2.2
- **Certification** CE, FCC class A
- **Connectors** 2 x DB9, male
- **Dimensions (L x H)** 119.91 x 83.06 mm (4.72" x 3.27")
- **Power Consumption** 200mA @ +3.3V (typ.)

Communications

- **Comm. Controller** PI7C8952
- **Data Bits** 5, 6, 7, 8
- **Data Signals** RS232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI
- **FIFO** 128 bytes
- **Flow Control** DTR/DSR, RTS/CTS, Xon/Xoff
- **Parity** None, Odd, Even, Mark, or Space
- **Speed** 50 bps ~ 921.6 kbps
- **Stop Bits** 1, 1.5, 2

Protection

- **ESD Protection** 15 KV (air), 8 KV (contact)
- **EFT Protection** 1 KV

Software

- **Bundled Software** ICOM tools
- **OS Support** Windows XP/7/8/10, and Linux

Environment

- **Operating Humidity** 5 ~ 95% RH, non-condensing
- **Operating Temperature** -20 ~ 60 °C (-4 ~ 140 °F)
- **Storage Temperature** -25 ~ 85 °C (-13 ~ 185 °F)

Ordering Information

- **PCI-1604L-AE** 2-port RS-232 PCI comm. card



PCI-1602UP

Features

- PCI bus 2.2 compliant
- Up to 921.6 kbps speed for extremely fast data transmissions
- 2 x RS-232/422/485 ports
- Supports Windows XP/7/8/10 and Linux operating systems
- 3,000 V_{DC} isolation protection
- Automatic RS-485 data flow control
- Powerful and easy-to-use utility (ICOM tools)
- Supports any baud rate setting

Specifications

General

- **Bus Type** Universal PCI V 2.2
- **Certification** CE, FCC class A
- **Connectors** 1 x DB25, female
- **Dimensions (L x H)** 119.91 x 64.41 mm (4.72" x 2.5") (low-profile MD1)
- **Power Consumption** 260mA@ +3.3V (typ.)

Communications

- **Communication Controller** PI7C8952
- **Data Bits** 5, 6, 7, 8
- **Data Signals** RS-232: TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI
  RS-422: Tx+, Tx-, Rx+, Rx-, RTS+, RTS-, CTS+, CTS-
  RS-485: Data+, Data-
- **FIFO** 128 bytes
- **Flow Control** CTS/RTS, Xon/Xoff
- **Parity** None, Even, Odd, Mark and Space
- **Speed** 50 bps ~ 921.6 kbps
- **Stop Bits** 1, 1.5, 2

Protection

- **EFT Protection** 1 KV
- **Isolation Protection** 3,000 V_{DC}
- **ESD Protection** 15KV (air), 8KV (contact)
- **Surge Protection** 1 KV

Software

- **Bundled Software** ICOM tools
- **OS Support** Windows XP/7/8/10 and Linux (check the software release note for versions supported)

Environment

- **Operating Humidity** 5 ~ 95% RH, non-condensing
- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
- **Storage Temperature** -25 ~ 85 °C (-13 ~ 185 °F)

Ordering Information

- **PCI-1602UP-CE** 2-port RS-232/422/485 low-profile universal PCI comm card w/ isolation protection

Note: Both PCI-1602UP are equipped with a DB25 to 2 x DB9 cable.

MIC-1810

12-Bit, 500 KS/s, 12-Ch DAQ Platform with Intel® Core™ i3/Celeron® Processer



Features

- 16 x Analog inputs, up to 800 kS/s, 12-bit resolution
- 2 x Analog outputs, up to 500 kS/s, 12-bit resolution
- Supports digital and analog triggers
- 24 x Programmable digital I/O lines
- 2 x 32-bit programmable counter/timers
- Onboard FIFO memory (4,000 samples)
- 2 x RS-232 ports
- 2 x 10/100/1000 Base-T RJ-45 LAN ports
- 2 x USB 2.0 and 2 x USB 3.0 ports

MIC-1810-S4A1E

- Intel® Celeron® 1047UE processer, 1.4 GHz

MIC-1810-S6A1E

- Intel® Core™ i3-3217UE processor 1.6 GHz

Introduction

MIC-1810 is a stand-alone automation controller featuring an integrated DAQ module and signal conditioning to provide digital I/O, analog I/O, and counter functions. This application-ready controller also supports serial communication ports and several other networking interfaces to enable seamless integration and rapid system development.

Specifications

Analog Input

- **Channels** 16-ch single ended, 8-ch differential
- **Resolution** 12 bits
- **Sample Rate** Single channel: 800 kS/s max.; Multiple channels: 500 kS/s max.

Note: The sampling rate of each channel is influenced by the number of used channels. For example, if 4 channels are used, the sampling rate will be 500k/4 = 125 kS/s per channel.

- **Trigger Reference** Digital and analog triggers
- **Trigger Mode** Start, Delayed Start; Stop, Delayed Stop
- **FIFO Size** 4,000 samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 1 GΩ
- **Sampling Modes** Software and external clock
- **Input Range** Software programmable

Gain	0.5	1	2	4	8
Unipolar	NA	0~10	0~5	0~2.5	0~1.25
Bipolar	±10	±5	±2.5	±1.25	±0.625
Gain Error (%FSR)	0.1	0.1	0.2	0.2	0.4

Analog Output

- **Channels** 2
- **Resolution** 12 bits
- **Sample Rate** 500 kS/s max.
- **Output Range** Software programmable

Output Range	Internal Reference	0V~5V, 0V~10V, ±5V, ±10V	
	External Reference	Reference Input	Maximum Range
	Unipolar	-10V ≦ x ≦ 10V	0 ~ x V
	Bipolar		-x V ~ x V

Digital I/O

- **Channels** 24
- **Compatibility** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max. Logic 1: 2.0 V min.
- **Output Voltage** Logic 0: 0.8 V max. Logic 1: 2.0 V min.
- **Output Capability** Sink: 15 mA @ 0.8 V Source: 15 mA @ 2.0 V

Counter

- **Channels** 2
- **Resolution** 32 bits
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 10 MHz
- **Pulse Generation** Yes
- **Timebase Stability** 50 ppm

General

- **Dimensions (W x H x D)** 165 x 59 x 130 mm (6.49" x 2.32" x 5.11")
- **Power Consumption** 45 W (typical)
- **Power Requirements** Single 12V_{DC} power input
- **Weight** 2.4 kg (typical)
- **OS Support** Windows 7

System Hardware

- **CPU** Intel® Celeron® 1047UE processer, 1.4 GHz (MIC-1810-S4A1E) Intel® Core™ i3-3217UE processor, 1.6 GHz (MIC-1810-S6A1E)
- **Memory** 4G SODIMM DDR3-1600
- **Indicators** LEDs for Power, IDE and LAN (Active, Status)
- **Keyboard/Mouse** USB
- **Storage** 1 x 2.5" SSD

Environment

- **Storage Humidity** 5 ~ 95% RH, non-condensing
- **Operating Temperature** 0 ~ 50 °C (14 ~140 °F) @ 5 ~ 85% RH with 0.7m/s air flow
- **Storage Temperature** -20 ~ 80 °C (-4 ~ 176 °F)

Ordering Information

- **MIC-1810-S4A1E** DAQ platform with Intel® Celeron® 1047UE processer
- **MIC-1810-S6A1E** DAQ platform with Intel® Core™ i3-3217UE processer
- **2070014966** img WES7P MIC-1810 64bit 1701 10MUI

Optional Accessories

- **1700001714** Power cord (BSMI) 3P, 7A, 125V, 18AWG, 180 cm
- **1702002600** Power cord UL/CSA (USA) 3P, 10A, 125V, 1.83 m, 180 D
- **1700023535-01** Power cord (CCC) 3P, 16A, 250V, 183 cm
- **1960077844N001** Table mount (130 x 175 mm)
- **2070014966** Image WES7P (64 bit)

MIC-1816

16-Bit, 1MS/s, 16-Ch DAQ Platform with Intel® Core™ i3/Celeron® Processer



Features

- 16 x Analog inputs, up to 1 MS/s, 16-bit resolution
- 2 x Analog outputs, up to 3 MS/s, 16-bit resolution
- Supports digital and analog triggers
- 24 x Programmable digital I/O lines
- 2 x 32-bit programmable counter/timers
- Onboard FIFO memory (4,000 samples)
- 2 x RS-232 ports
- 2 x 10/100/1000 Base-T RJ-45 LAN ports
- 2 x USB 2.0 and 2 x USB 3.0 ports

MIC-1816-S4A1E

- Intel® Celeron® 1047UE processer, 1.4 GHz

MIC-1816-S6A1E

- Intel® Core™ i3-3217UE processor 1.6 GHz

Introduction

MIC-1816 is a stand-alone automation controller featuring an integrated DAQ module and signal conditioning to provide digital I/O, analog I/O, and counter functions. This application-ready controller also supports serial communication ports and several other networking interfaces to enable seamless integration and rapid system development.

Specifications

Analog Input

- **Channels** 16-ch single ended, 8-ch differential
- **Resolution** 16 bits
- **Sample Rate** Single channel: 5 MS/s max.; Multiple channels: 1 MS/s max.

Note: The sampling rate of each channel is influenced by the number of used channels. For example, if 4 channels are used, the sampling rate will be 1MS/4 = 250 kS/s per channel.

- **Trigger Reference** Digital and analog triggers
- **Trigger Mode** Start, Delayed Start; Stop, Delayed Stop
- **FIFO Size** 4,000 samples
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 1 GΩ
- **Sampling Modes** Software and external clock
- **Input Range** Software programmable

Gain	0.5	1	2	4	8
Unipolar	NA	0~10	0~5	0~2.5	0~1.25
Bipolar	±10	±5	±2.5	±1.25	±0.625
Gain Error (%FSR)	0.1	0.1	0.2	0.2	0.4

Analog Output

- **Channels** 2
- **Resolution** 16 bits
- **Sample Rate** 3 MS/s max.
- **Output Range** Software programmable

Output Range	Internal Reference	0V~5V, 0V~10V, ±5V, ±10V	
	External Reference	Reference Input	Maximum Range
	Unipolar	-10V ≦ x ≦ 10V	0 ~ x V
	Bipolar		-x V ~ x V

Digital I/O

- **Channels** 24
- **Compatibility** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.; Logic 1: 2.0 V min.
- **Output Voltage** Logic 0: 0.8 V max.; Logic 1: 2.0 V min.
- **Output Capability** Sink: 15 mA @ 0.8 V; Source: 15 mA @ 2.0 V

Counter

- **Channels** 2
- **Resolution** 32 bits
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 10 MHz
- **Pulse Generation** Yes
- **Timebase Stability** 50 ppm

General

- **Dimensions (W x H x D)** 165 x 59 x 130 mm (6.49" x 2.32" x 5.11")
- **Power Consumption** 45 W (typical)
- **Power Requirements** Single 12V_{DC} power input
- **Weight** 2.4 kg (typical)
- **OS Support** Windows 10 and Windows 7

System Hardware

- **CPU** Intel® Celeron® 1047UE processer, 1.4 GHz (MIC-1816-S4A1E); Intel® Core™ i3-3217UE processor, 1.6 GHz (MIC-1816-S6A1E)
- **Memory** 4G DDR3
- **Indicators** LEDs for Power, IDE and LAN (Active, Status)
- **Keyboard/Mouse** USB
- **Storage** 1 x 2.5" SSD

Environment

- **Storage Humidity** 5 ~ 95% RH, non-condensing
- **Operating Temperature** 0 ~ 50 °C (14 ~140 °F) @ 5 ~ 85% RH with 0.7m/s air flow
- **Storage Temperature** -20 ~ 80 °C (-4 ~ 176 °F)

Ordering Information

- **MIC-1816-S4A1E** DAQ platform with Intel® Celeron® 1047UE processer
- **MIC-1816-S6A1E** DAQ platform with Intel® Core™ i3-3217UE processer
- **2070015202** img WES7P MIC-1816 64bit 1701 10MUI

Optional Accessories

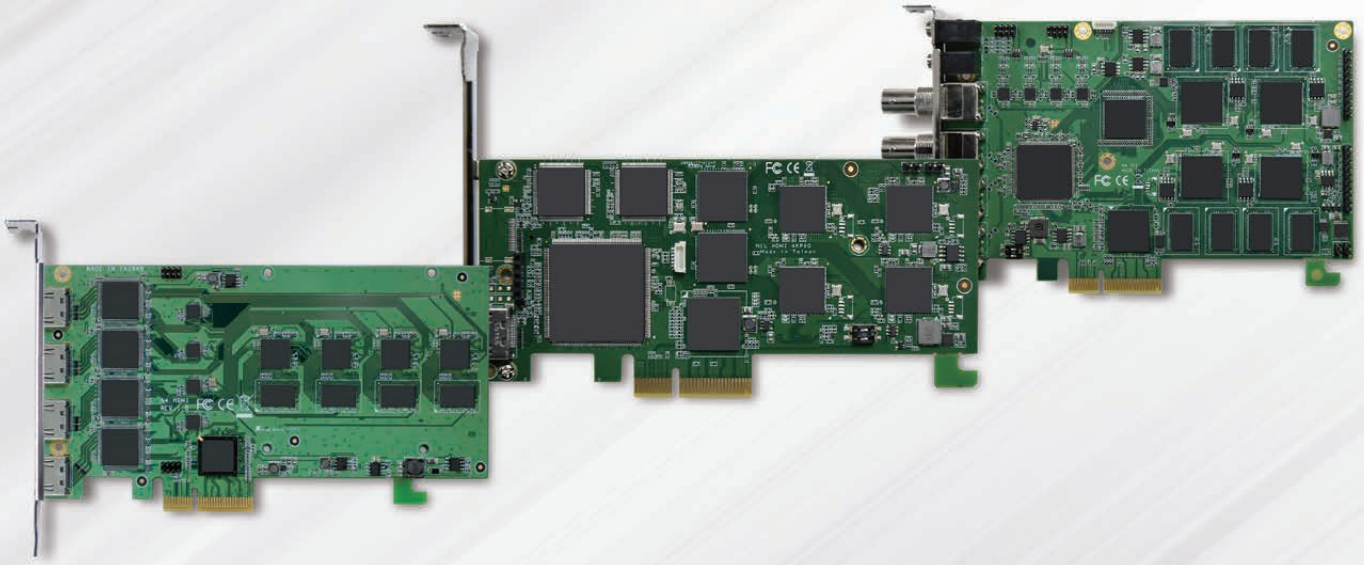
- **1700001714** Power cord (BSMI) 3P, 7A, 125V, 18AWG, 180 cm
- **1702002600** Power cord UL/CSA (USA) 3P, 10A, 125V, 1.83 m, 180 D
- **1700023535-01** Power cord (CCC) 3P, 16A, 250V, 183 cm
- **1960077844N001** Table mount (130 x 175 mm)

2

Intelligent Video Solution

Selection Guide		*2-2*
DVP-7011HE	1-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK	*2-4*
DVP-7013HE	1-ch H.264/MPEG4 Low-Power PCIe Video Capture Card with SDK	*2-5*
DVP-7016HE	1-ch Full HD H.264 MiniPCIe Video Capture Card with SDK	*2-6*
DVP-7017HE	1-ch Full HD H.264 Mini PCIe Video Capture Card with SDK	*2-7*
DVP-7019HE	1-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK	*2-8*
DVP-7021HE	2-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK	*2-9*
DVP-7031HE	4-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK	*2-10*
DVP-7033HE	4-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK	*2-11*
DVP-7035HE	4-ch Full HD H.264/MPEG4 AHD/CVI/TVI/CVBS PCIe Video Capture Card with SDK	*2-12*
DVP-7634HE	4ch Full HD H.264 PCIe Video Capture Card with SDK	*2-13*
DVP-7635HE	4-ch Full HD H.264/MPEG4 AHD/CVI/TVI PCIe Video Capture Card with SDK	*2-14*
DVP-7011MHE	1-ch Full HD H.264 M.2 Video Capture Card with SDK	*2-15*
DVP-7012MHE	1-ch Full HD H.264 M.2 Video Capture Card with SDK	*2-16*
DVP-7011UHE	1-ch H.264 4K HDMI 2.0 PCIe Video Capture Card with SDK	*2-17*
DVP-5311D	Vide (DVI-DVI), Control and Data Transmission Extender	*2-18*

To view all of Advantech's Intelligent Video Solution, please visit www.advantech.com/products.

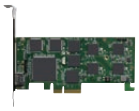


DVP Video Capture Card

NEW NEW

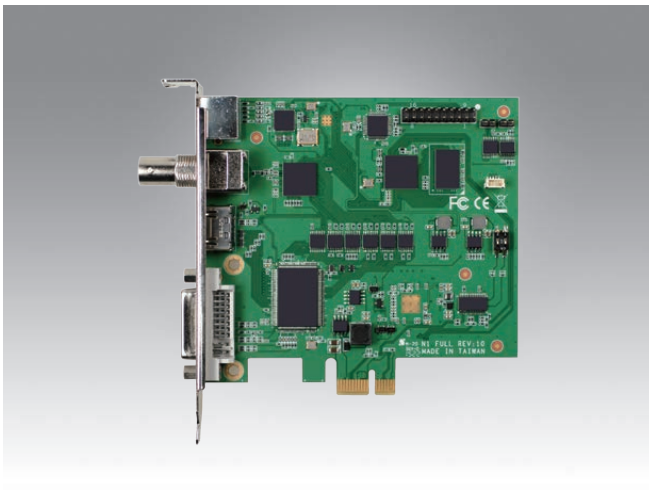


Model Name		DVP-7011HE	DVP-7013HE	DVP-7016HE	DVP-7017HE	DVP-7019HE	DVP-7021HE	DVP-7031HE
Video	Compression	SW H.264	SW H.264	S/W H.264	S/W H.264	S/W H.264	S/W H.264	SW H.264
	Channels	1	1	1	1	1	2	4
	Host Interface	PCIe x1 (Gen2)	PCIe x1 (Gen 2)	Mini PCIe x1 (Gen 2)	Mini PCIe x1 (Gen2)	PCIe x1 (Gen1)	PCIe x1 (Gen2)	PCIex4 (Gen2)
	Input Interface	SDI/HDMI/DVI/ VGA/YPbPr/ Composite/ S-Video	HDMI/DVI/ VGA/YPbPr/ Composite/ S-Video	1 x HDMI/DVI/ YPbPr/VGA	1 x SDI	SDI/DVI/ VGA/HDMI/ Composite/ YPbPr/S-video	SDI/DVI/ VGA/HDMI/ Composite/ YPbPr/S-video/ VGA	HDMI
	Max. Display Resolution	1920 x 1080p @ 60/50	1920 x 1080p @ 60/50	1920 x 1080 @ 30/25	1920 x 1080p @ 30/25	1920 x 1080p @ 60/50	1920 x 1080p @ 60/50	1920 x 1080 @ 60/50
	Max. Recording Resolution	1920 x 1080p @ 60/50	1920 x 1080p @ 60/50	1920 x 1080 @ 30/25	1920 x 1080p @ 30/25	1920 x 1080p @ 30/25	1920 x 1080p @ 60/50	1920 x 1080 @ 60/50
	Max. Display Rate	60/50 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)
	Max. Recording Rate	60/50 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)
	Video Outputs	-	HDMI/DVI/ YPbPr/ Composite/ S-Video Loop Through	-	1 x SDI (Loop Through)	-	-	-
Audio	Audio Inputs	1 x SDI, 1 x HDMI, 2 x RCA	1 x HDMI / 2 x RCA	1 x HDMI / 2 x RCA	1 x SDI + 2 x RCA	HDMI/SDI/ Audio (L/R)	2 x HDMI / Audio (L/R)	4 x HDMI
	Format	Stereo/16 bits/ 32000 ~ 48000 Hz	Stereo/16 bits/ 32000 ~ 48000 Hz	Stereo/16 bits/ 32000 ~ 48000 Hz	Stereo / 16 bits / 32000~48000 Hz	Stereo/16 bits/ 32000 ~ 48000 Hz	Stereo/16 bits/ 32000 ~ 48000 Hz	Stereo/16 bits/ 32000 ~ 48000 Hz
Watchdog		Yes	Yes	No	NO	-	-	Yes
Physical Characteristic	Operating Temperature	-20 ~ 70 °C (-4~ 158 °F)	-20 ~ 70 °C (-4~ 158 °F)	-20 ~ 70 °C (-4~ 158 °F)	-20 ~ 70 °C (-4~ 158 °F)	-20 ~ 70 °C (-4~ 158 °F)	-20 ~ 70 °C (-4~ 158 °F)	-20 ~ 70 °C (-4~ 158 °F)
	Storing Temperature	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimensions (W x H x D)	107 x 101 mm (4.21" x 3.97")	135 x 69 mm (5.31" x 2.71")	30 x 51 mm (1.18" x 2")	30 x 51 mm (1.18" x 2")	105 x 69 mm (4.13" x 2.71") PCIe Low profile	108 x 85 mm (4.25" x 3.34") PCIe Full Height	168 x 93 mm (6.64" x 3.66")
	Safety	CE/FCC	CE/FCC	CE/FCC	CE/FCC	CE/FCC	CE/FCC	CE/FCC
Operating System	Operating System	Windows XP/ XPe/Vista/7/ Win8/Win8.1/ Win10; Linux 2.6.14 or higher; 32/64 bits	Windows XP/ XPe/Vista/7/ Win8/Win8.1/ Win10; Linux 2.6.14 or higher; 32/64 bits	Windows XP/ XPe/Vista/7/ Win8/Win8.1/ Win10; Linux 2.6.14 or higher; 32/64 bits	Windows XP/XPe/ Vista/7/8/8.1/ Win10; Linux 2.6.14 or higher; 32/64 bits	Windows XP/ XPe/Vista/7/ Win8/Win8.1/ Win10; Linux 2.6.14 or higher; 32/64 bits	Windows XP/ XPe/Vista/7/ Win8/Win8.1/ Win10; Linux 2.6.14 or higher; 32/64 bits	Windows XP/ XPe/Vista/7/ Win8/Win8.1/ Win10; Linux 2.6.14 or higher; 32/64 bits
Page		2-4	2-5	2-6	2-7	2-8	2-9	2-10

			NEW	NEW	NEW	NEW	NEW 4K
							
Model Name		DVP-7033HE	DVP-7035HE	DVP-7635HE	DVP-7011MHE	DVP-7012MHE	DVP-7011UHE
Video	Compression	SW H.264	S/W H.264	H/W H.264	S/W H.264	S/W H.264	S/W H.264
	Channels	4	4	4	1	1	1
	Host Interface	PCIe x4 (Gen2)	PCIe x4 (Gen2)	PCIe x 4	PCIeM.2	PCIeM.2	PCIe x 4
	Input Interface	3G-SDI/HD-SDI/ SDI	TVI/CVI/AHD/ Composite (CVBS)	TVI/CVI/AHD/ Composite (CVBS)	HDMI/DVI/VGA/ YPbPr	SDI	HDMI 2.0
	Max. Display Resolution	1920 x 1080 @ 60/50	1920 x 1080p @ 30/25	1920 x 1080p @ 30/25	1920 x 1080p @ 60/50	1920 x 1080p @ 60/50	4096 x 2160p @ 60/50
	Max. Recording Resolution	1920 x 1080 @ 60/50	1920 x 1080p @ 30/25	1920 x 1080p @ 30/25	1920 x 1080p @ 30/25	1920 x 1080p @ 30/25	4096 x 2160p @ 60/50
	Max. Display Rate	60/50 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)
	Max. Recording Rate	60/50 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	30/25 fps (NTSC/PAL)	60/50 fps (NTSC/PAL)
	Video Outputs	-	-	-	-	SDI x 1 (Loop through)	-
Audio	Audio Inputs	4 x SDI + 2 x 3.5mm Audio	2 x 3.5mm Audio	-	1 x HDMI / Audio (L/R)	1 x SDI / Audio (L/R)	HDMI/SDI/ Audio (L/R)
	Format	Stereo/16 bits/ 32000 ~ 48000 Hz	Stereo/16 bits/ 32000 ~ 48000 Hz	Stereo/16 bits/ 32000 ~ 48000 Hz	Stereo/16 bits/ 32000 ~ 48000 Hz	Stereo/16 bits/ 32000 ~ 48000 Hz	Stereo/16 bits/ 32000 ~ 48000 Hz
Watchdog		Yes	-	Yes	-	-	Yes
Physical Characteristic	Operating Temperature	-20 ~ 70 °C (-4~ 158 °F)	-20 ~ 70 °C (-4~ 158 °F)	-20 ~ 70 °C (-4~ 158 °F)	-20 ~ 70 °C (-4~ 158 °F)	-20 ~ 70 °C (-4~ 158 °F)	-20 ~ 70 °C (-4~ 158 °F)
	Storing Temperature	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimensions (W x H x D)	140 x 101 mm (5.51" x 3.97")	128 x 101mm (5.03" x 3.97") PCIe Full Height	150 x 101 mm (5.9" x 3.97")	22 x 60 mm (0.86" x 2.36") M.2 Type B/M	22 x 60 mm (0.86" x 2.36") M.2 Type B/M	145 x 69 mm (5.7" x 2.71") PCIe Low profile
	Safety	CE/FCC	CE/FCC	CE/FCC	CE/FCC	CE/FCC	CE/FCC
Operating System	Operating System	Windows XP/ XPe/Vista/7/Win8/ Win8.1/Win10; Linux 2.6.14 or higher; 32/64 bits	Windows XP/ XPe/Vista/7/Win8/ Win8.1/Win10; Linux 2.6.14 or higher; 32/64 bits	Windows XP/ XPe/Vista/7/Win8/ Win8.1/Win10; Linux 2.6.14 or higher; 32/64 bits	Windows XP/XPe/ Vista/7/Win8/ Win8.1/Win10; Linux 2.6.14 or higher; 32/64 bits	Windows XP/XPe/ Vista/7/Win8/ Win8.1/Win10; Linux 2.6.14 or higher; 32/64 bits	Windows XP/ XPe/Vista/7/Win8/ Win8.1/Win10; Linux 2.6.14 or higher; 32/64 bits
Page		2-11	2-12	2-14	2-15	2-16	2-17

DVP-7011HE

1-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK



Features

- 1-channel HD-SDI/HDMI/DVI-D/DVI-A/YPbPr video input with H.264/MPEG4 software compression
- 60/50 fps (NTSC/PAL) at up to 1920 x 1080p resolution for recording and display
- PCIe x 1 host interface
- Supports Watchdog function
- Windows/Linux OS supported

FC CE RoHS COMPLIANT 2002/95/EC

Introduction

DVP-7011HE is a PCIe-bus, software compression video capture card with 1 channel of either HD-SDI, HDMI, DVI-D, DVI-A, or YPbPr video and 1 audio input. DVP-7011HE supports H.264/MPEG4 compression format at up to Full HD 1080p for each channel. With an easy-to-use software development kit (SDK) and flexibility to stack multiple cards, DVP-7011HE is an ideal solution for various video capture applications or video surveillance.

Specifications

Video	Video Input	1 x SDI/HDMI/DVI-D/DVI-A/YPbPr
	Compression	S/W H.264 / MPEG4
	Max. Display Rate	60/50 fps (NTSC/PAL) @ 1920 x 1080p
	Max. Recording Rate	60/50 fps (NTSC/PAL) @ 1920 x 1080p
Audio	Audio Input	1 x SDI, 1 x HDMI, 2 x RCA
	Format	STEREO/16 bits/32000 ~ 48000 Hz
System Requirements	CPU (Display)	IIntel® Core™ 2 Duo E2200 2.2 GHz
	CPU (Recording)*	Intel® Core™ 2 Quad Q9400 2.6GHz
	Memory	2 GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	PCIe x 1
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storing Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	107 x 101 mm (4.2" x 3.9")
	Safety	CE/FCC

*For high quality full HD video recording at max. recording rate, Intel Sandy Bridge processor or above and Win7 OS are recommended

Ordering Information

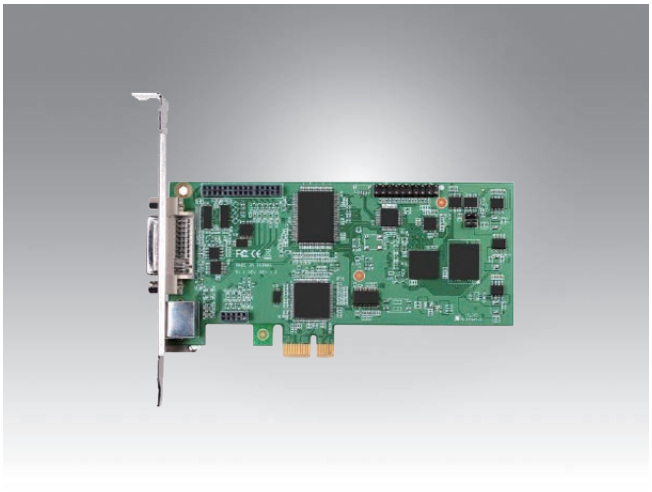
Part Number	Description
DVP-7011HE	1-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK

Packing List

Item	Amount
DVP-7011HE Capture Card	1 (piece)
Audio (RCA) / Video (YPbPr) cable	1 (piece)

DVP-7013HE

1-ch H.264/MPEG4 Low-Power PCIe Video Capture Card with SDK



Features

- 1-channel HDMI/DVI-I/YPbPr/S-Video/Composite video input with H.264 software compression
- 60/50 fps (NTSC/PAL) at up to full HD resolution for recording and display
- PCIe x1 (Gen2) host interface
- Low power consumption
- Supports Watchdog function
- Windows/Linux OS supported

FC CE RoHS COMPLIANT 2002/95/EC

Introduction

DVP-7013HE is a PCIe-bus, low-power software compression video capture card with 1 channel of either HDMI/DVI-I/YPbPr/S-Video/Composite and 2 audio inputs. DVP-7013HE supports H.264 baseline compression format at up to full HD resolution at real-time frame rate (60/50fps). With an easy-to-use software development kit (SDK) and the flexibility to stack multiple cards; DVP-7013HE is an ideal solution for various video capture applications.

Specifications

Video	Video Input	1 x HDMI/DVI-I/YPbPr/S-Video/Composite
	Video Output	1 x HDMI/DVI-I/YPbPr/S-Video/Composite Loop Through
	Compression	S/W H.264/MPEG4
	Max. Display Rate	60/50 fps (NTSC/PAL) @ 1920 x 1080p
	Max. Recording Rate	60/50 fps (NTSC/PAL) @ 1920 x 1080p
Audio	Audio Input	2 x RCA (Audio L/R through component cable)
	Format	Stereo/16 bits/32000~48000Hz
System Requirements	CPU (Display)	Intel® Core™ 2 Duo E2200 2.2 GHz
	CPU (Recording)*	Intel® Core™ 2 Quad Q9400 2.6 GHz
	Memory	2 GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7/8/8.1/10; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	PCIe x1 (Gen 2)
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	135 x 69 mm (5.3" x 2.7")
	Safety	CE/FCC

*For high quality, full HD video recording at max. recording rate, Intel® Sandy Bridge processor or above and Win7 OS are recommended

Ordering Information

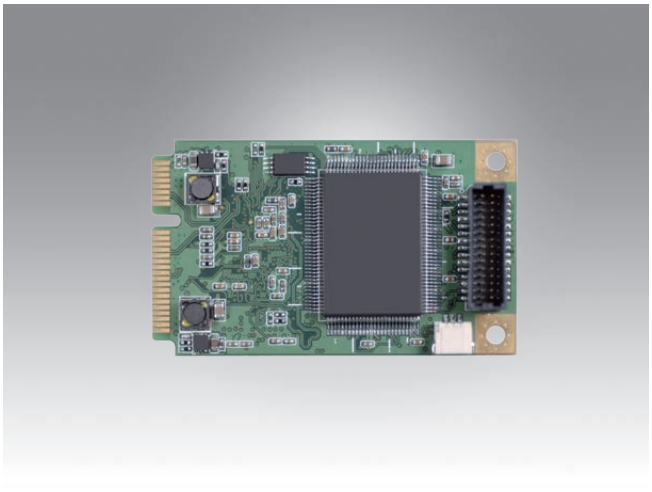
Part Number	Description
DVP-7013HE	1-ch H.264/MPEG4 Low-Power PCIe Video Capture Card with SDK

Packing List

Item	Amount
DVP-7013HE Capture Card	1 (piece)
YPbPr Cable	2 (piece)
S/AV Cable	2 (piece)
Short bracket (One to One)	2 (piece)

DVP-7016HE

1-ch Full HD H.264 MiniPCIe Video Capture Card with SDK



Features

- 1 channel HDMI/DVI-D/DVI-A/YPbPr channel video inputs with H.264 software compression
- 30/25 fps (NTSC/PAL) at up to full HD resolution for recording and display
- Mini PCIe x1 (Gen2) host interface
- Windows/Linux OS supported

FC CE RoHS COMPLIANT 2002/95/EC

Introduction

DVP-7016HE is a Mini PCIe-bus, software compression video capture card with 1 video and 1 audio inputs. DVP-7016HE supports H.264 compression format at up to full HD resolution at real-time frame rate (30/25fps). With an easy-to-use software development kit (SDK), DVP-7016HE is an ideal solution for various video capture applications.

Specifications

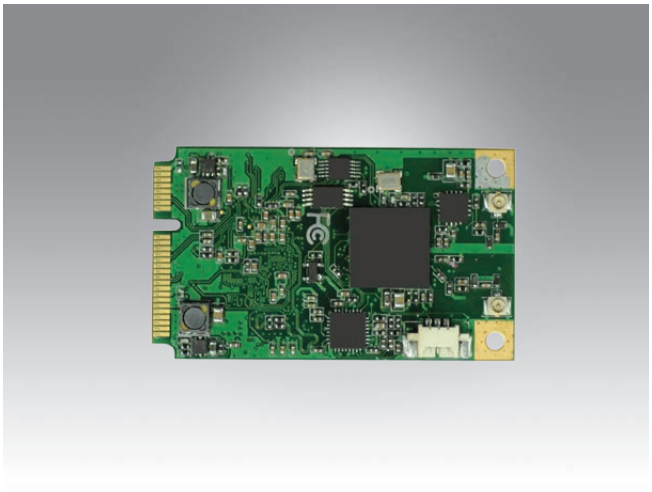
Video	Video Standard	NTSC/PAL
	Video Input	1 x HDMI/DVI-D/DVI-A/YPbPr
	Compression	S/W H.264
	Max. Resolution / FPS	1920 x 1080 @ 60/50 FPS (Input) 1920 x 1080 @ 30/25 FPS (Output)
	RAW Data Format	YV12/NV12/YUY2/RGB24/RGB32
Audio	Audio Input	HDMI Embedded Audio/ Audio L/R
	Format	Stereo / 16-bit / 32000 ~ 48000Hz
System Requirements	CPU (Display)	Intel® Core™ 2 Duo E2200 2.2 GHz
	CPU (Recording)	Intel® Core™ 2 Quad Q9400 2.6 GHz
	Memory	2 GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7/8/8.1/10; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	Mini PCIe x1 (Gen 2)
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	30 x 51 mm (4.2" x 3.9")
	Certification	CE/FCC

Ordering Information

Part Number	Description
DVP-7016HE	1-ch Full HD H.264 MiniPCIe Video Capture Card with SDK
XMSE1-MC-HDV-CB	HDMI/VGA Cable (optional)
XKUO-A56-A072-V126	HDMI/VGA Cable (optional)

DVP-7017HE

1-ch Full HD H.264 Mini PCIe Video Capture Card with SDK



Features

- 1 channel SDI channel video inputs with H.264 software compression
- 30/25 fps (NTSC/PAL) at up to full HD resolution for recording and display
- Mini PCIe x1 (Gen2) host interface
- Windows/Linux OS supported

FCC CE RoHS COMPLIANT 2002/95/EC

Specifications

Video	Video Standard	NTSC/PAL
	Video Input	1 x SDI
	Compression	S/W H.264
	Max. Resolution /FPS	60/50 fps @ 1920 x 1080p (Input) 30/25 fps @ 1920 x 1080p (Output)
Audio	Audio Input	SDI Embedded Audio Audio L/R (2 × RCA through wafer connector to RCA cable)
	Format	Stereo / 16-bit / 32000 ~ 48000Hz
System Requirements	CPU (Display)	Intel® Core™ 2 Duo E2200 2.2 GHz
	CPU (Recording)	Intel® Core™ 2 Quad Q9400 2.6 GHz
	Memory	2 GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7/8/8.1; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	Mini PCIe x1 (Gen 2)
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	30 x 50.95 mm (1.1" x 2")
	Certification	CE/FCC

Ordering Information

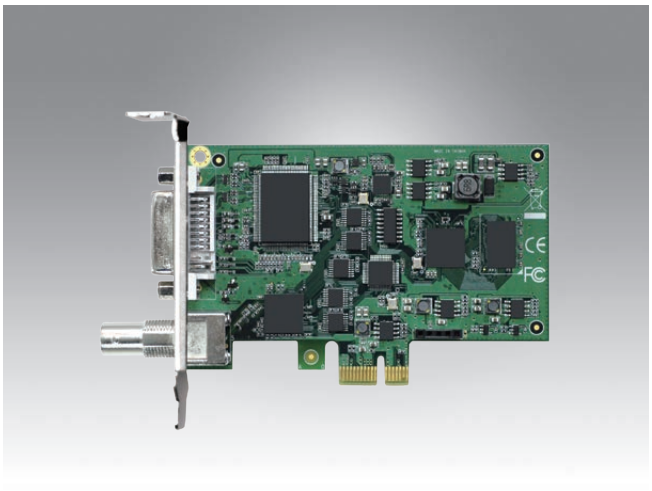
Part Number	Description
DVP-7017HE	1-ch Full HD H.264 MiniPCie Video Capture card with SDK
XKUO-A56-D009-V12	SDI Video cable (optional)

Packing List

Item	Amount
DVP-7017HE Capture Card	1pcs

DVP-7019HE

1-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK



Features

- 1-channel SDI/HDMI/DVI-D/DVI-A/YPbPr video input with H.264/MPEG4 software compression
- 60/50 fps (NTSC/PAL) at up to 1920 x 1080p resolution
- PCIe x 1 host interface
- Windows/Linux OS supported

FC CE RoHS COMPLIANT 2002/95/EC

Introduction

DVP-7019HE is a PCIe-bus, software compression video capture card with 1 channel of either SDI, HDMI, DVI-D, DVI-A, or YPbPr video and 1 audio input. DVP-7019HE supports H.264/MPEG4 compression format at up to Full HD 1080p for each channel. With an easy-to-use software development kit (SDK) and flexibility to stack multiple cards, DVP-7011HE is an ideal solution for various video capture applications or video surveillance.

Specifications

Video	Video Input	1 x SDI/HDMI/DVI-D/DVI-A/YPbPr
	Compression	S/W H.264 / MPEG4
	Max. Video input	60/50 fps (NTSC/PAL) @ 1920 x 1080p
	Max. Video Output	30/25 fps (NTSC/PAL) @ 1920 x 1080p
Audio	Audio Input	1 x SDI, 1 x HDMI, 2 x RCA
	Format	STEREO/16 bits/32000 ~ 48000 Hz
System Requirements	CPU (Display)	Intel® Core™2 Duo E2200 2.2 GHz
	CPU (Recording)*	Intel® Core™2 Quad Q9400 2.6GHz
	Memory	2 GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	PCIe x 1
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storing Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	105 x 69 mm (4.1" x 2.7")
	Safety	CE/FCC

*For high quality full HD video recording at max. recording rate, Intel Sandy Bridge processor or above and Win7 OS are recommended.

Ordering Information

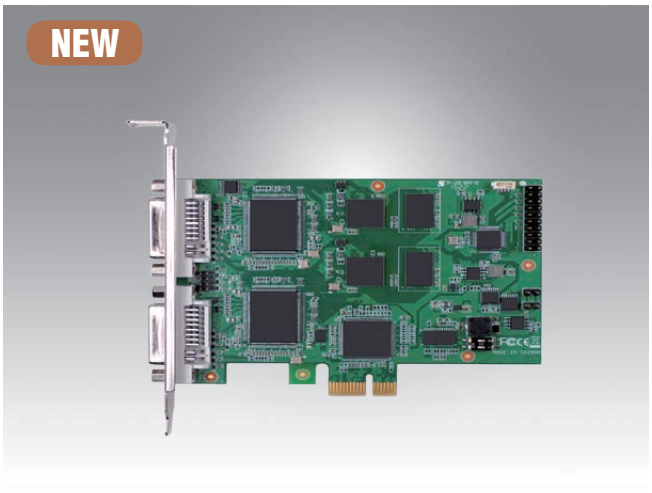
Part Number	Description
DVP-7019HE	1-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK

Packing List

Item	Amount
DVP-7019HE Capture Card	1 (piece)
DVI to YPbPr/AV/S-video cable	1

DVP-7021HE

2-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK



Features

- 2-channel HDMI/DVI/VGA/S-Video/YPbPr video inputs with H.264/MPEG4 software compression
- 60/50 fps (NTSC/PAL) at up to 1920 x 1080p resolution for recording and display for each channel
- PCIe x1 host interface
- Supports Watchdog function
- Windows/Linux OS supported

FCC CE RoHS COMPLIANT 2002/95/EC

Introduction

DVP-7021HE is a PCIe-bus, software compression video capture card with 2ch HDMI/DVI/VGA/S-Video/YPbPr video and 2ch audio inputs. DVP-7021HE supports H.264/MPEG4 compression format at up to Full HD 1080p for each channel. With an easy-to-use software development kit (SDK) and the flexibility to stack multiple cards, DVP-7021HE is an ideal solution for various video capture applications.

Specifications

Video	Video Standard	HDMI/DVI/VGA/S-Video/YPbPr
	Video Input	2 x HDMI/DVI/VGA/S-Video/YPbPr
	Compression	S/W H.264 / MPEG4
	Max. Display Rate	60/50 fps (NTSC/PAL) @ 1920 x 1080p/ch
	Max. Recording Rate	60/50 fps (NTSC/PAL) @ 1920 x 1080p/ch
Audio	Audio Input	2 x HDMI/ 2 x RCA
	Format	STEREO/16 bits/32000 ~ 48000 Hz
System Requirements	CPU (Display)	Intel® Core™ 2 Duo E2200 2.2 GHz
	CPU (Recording)*	Intel® Core™ 2 Quad Q9400 2.6 GHz
	Memory	2 GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7/8/8.1/10; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	PCIe x1
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	108 x 85 mm (4.2" x 3.3")
	Safety	CE/FCC

*For high quality full HD video recording at max. recording rate, Intel Sandy Bridge processor or above and Win7 OS are recommended.

Ordering Information

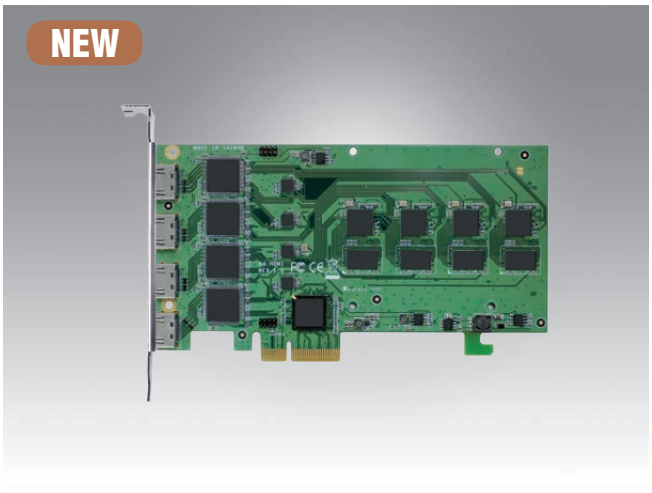
Part Number	Description
DVP-7021HE	2-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK

Packing List

Item	Amount
DVP-7021HE Capture Card	1 (piece)
DVI to YPbPr / AV / S-video cable	2 (piece)

DVP-7031HE

4-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK



Features

- 4-channel HDMI video inputs with H.264/MPEG4 software compression
- 60/50 fps (NTSC/PAL) at up to 1920 x 1080p resolution for recording and display for each channel
- PCIe x4 host interface
- Supports Watchdog function
- Windows/Linux OS supported

FCC CE RoHS COMPLIANT 2002/95/EC

Introduction

DVP-7031HE is a PCIe-bus, software compression video capture card with 4 HDMI video and 4 audio inputs. DVP-7031HE supports H.264/MPEG4 compression format at up to Full HD 1080p for each channel. With an easy-to-use software development kit (SDK) and the flexibility to stack multiple cards, DVP-7031HE is an ideal solution for various video capture applications.

Specifications

Video	Video Standard	HDMI
	Video Input	4 x HDMI
	Compression	S/W H.264 / MPEG4
	Max. Display Rate	60/50 fps (NTSC/PAL) @ 1920 x 1080p/ch
	Max. Recording Rate	60/50 fps (NTSC/PAL) @ 1920 x 1080p/ch
Audio	Audio Input	4 x HDMI
	Format	STEREO/16 bits/32000 ~ 48000 Hz
System Requirements	CPU (Display)	Intel® Core™ 2 Duo E2200 2.2 GHz
	CPU (Recording)*	Intel® Core™ 2 Quad Q9400 2.6 GHz
	Memory	2 GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	PCIe x4
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	167.65 x 93.04 mm (6.6" x 3.6")
	Safety	CE/FCC

*For high quality full HD video recording at max. recording rate, Intel Sandy Bridge processor or above and Win7 OS are recommended.

Ordering Information

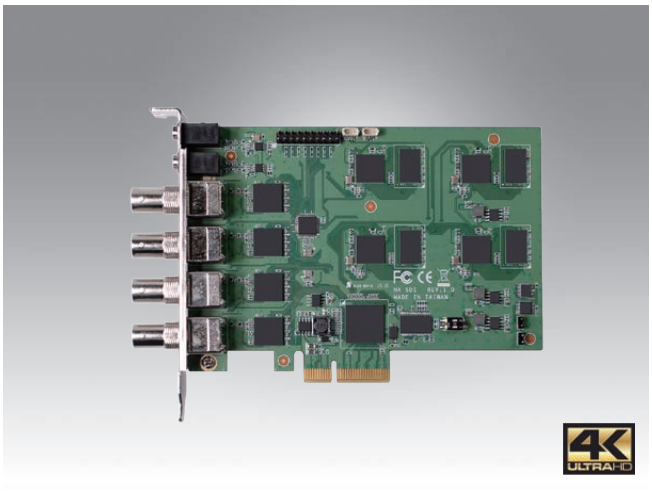
Part Number	Description
DVP-7031HE	4-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK

Packing List

Item	Amount
DVP-7031HE Capture Card	1 (piece)

DVP-7033HE

4-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK



Features

- 4-channel SDI video inputs with H.264/MPEG4 software compression
- 60/50 fps (NTSC/PAL) at up to 1920 x 1080p resolution for recording and display for each channel
- 4K (4096 x 2160) ultra HD video capture supported
- HEVC/H.265 software compression (with Intel Skylake platform)
- PCIe x4 host interface
- Supports Watchdog function
- Windows/Linux OS supported

Introduction

DVP-7033HE is a PCIe-bus, software compression video capture card with 4 HD-SDI video and 4 audio inputs. DVP-7033HE supports H.264/MPEG4 compression format at up to Full HD 1080p for each channel. With an easy-to-use software development kit (SDK) and the flexibility to stack multiple cards, DVP-7033HE is an ideal solution for various video capture applications.

Specifications

Video	Video Standard	SDI (3G-SDI / HD-SDI / SD-SDI)
	Video Input	4 x SDI
	Compression	S/W H.264 / MPEG4
	Max. Resolution / FPS	1920 x 1080 @ 60/50 FPS (Input) 1920 x 1080 @ 60/50 FPS (Output)
	Raw Data Format	YV12/NV12/YUY2/RGB24/RGB32
Audio	Audio Input	4 x SDI
	Format	Stereo/16 bits/32000~48000 Hz
System Requirements	CPU (Display)	Intel® Core™ 2 Duo E2200 2.2 GHz
	CPU (Recording)*	Intel® Core™ 2 Quad Q9400 2.6GHz
	Memory	2 GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7/8/8.1/10; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	PCIe x4
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	140 x 101 mm (5.5" x 3.9")
	Safety	CE/FCC

*For high quality full HD video recording at max. recording rate, Intel Sandy Bridge processor or above and Win7 OS are recommended.

Ordering Information

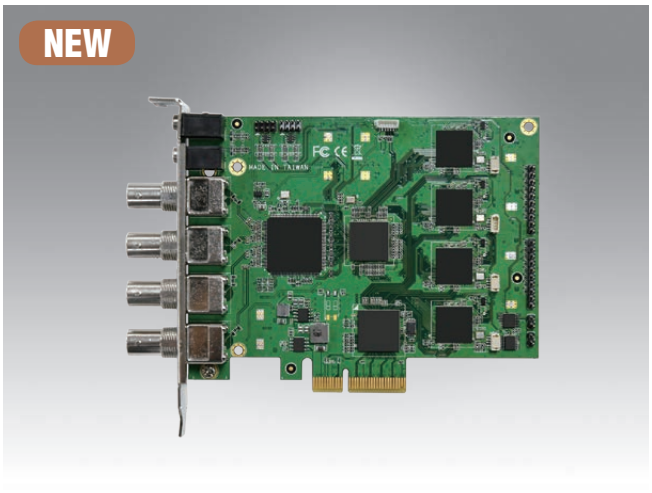
Part Number	Description
DVP-7033HE	4-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK

Packing List

Item	Amount
DVP-7033HE Capture Card	1 (piece)
Audio Cable	2 (piece)

DVP-7035HE

4-ch Full HD H.264/MPEG4 AHD/CVI/TVI/ CVBS PCIe Video Capture Card with SDK



Features

- 4-channel AHD/CVI/TVI/Composite (CVBS) software compression
- 30/25 fps (NTSC/PAL) at up to 1920 x 1080p resolution for recording and display for each channel
- PCIe x4 host interface
- Supports Watchdog function
- Windows/Linux OS supported

FC CE RoHS COMPLIANT 2002/95/EC

Introduction

DVP-7035HE is a PCIe-bus, software compression video capture card with 4ch AHD/CVI/TVI/Composite (CVBS) video and 4 audio inputs. DVP-7035HE supports H.264/MPEG4 compression format at up to Full HD 1080p for each channel. With an easy-to-use software development kit (SDK) and the flexibility to stack multiple cards, DVP-7035HE is an ideal solution for various video capture applications.

Specifications

Video	Video Standard	AHD/CVI/TVI
	Video Input	4 x AHD/CVI/TVI/Composite (CVBS)
	Compression	S/W H.264 / MPEG4
	Max. Resolution / FPS	1920 x 1080 @ 30/25 FPS (Input) 1920 x 1080 @ 30/25 FPS (Output)
	Raw Data Format	YV12/NV12/YUY2/RGB24/RGB32
Audio	Audio Input	4 x AHD/CVI/TVI/Composite (CVBS)
	Format	Stereo/16 bits/32000~48000 Hz
System Requirements	CPU (Display)	Intel® Core™ i3-4330
	CPU (Recording)*	Intel® Core™ i3-4330
	Memory	4 GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7/8/8.1/10; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	PCIe x4
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	128 x 101 mm (5" x 3.9")
	Safety	CE/FCC

Ordering Information

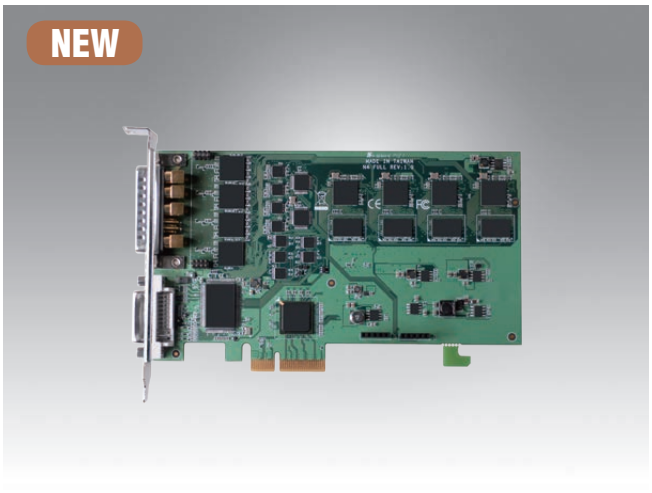
Part Number	Description
DVP-7035HE	4-ch Full HD H.264/MPEG4 AHD/CVI/TVI/Composite (CVBS) PCIe Video Capture Card with SDK

Packing List

Item	Amount
DVP-7035HE Capture Card	1 (piece)
Audio Cable	2 (piece)

DVP-7634HE

4ch Full HD H.264 PCIe Video Capture Card with SDK



Features

- 4ch SDI + VGA/HDMI/DVI/Composite/S-Video/YPbPr video input with H.264 (High Profile) hardware compression
- 30/25 fps (NTSC/PAL) at up to 1080p resolution for display and recording
- PCIe x4 host interface
- Windows/Linux OS supported

FCC CE RoHS COMPLIANT 2002/95/EC

Introduction

DVP-7634HE is a PCIe-bus, hardware compression video capture card with 4ch SDI + VGA/HDMI/DVI/Composite/S-Video/YPbPr video and input. DVP-7634HEsupports H.264 high profile compression format at up to Full HD 1080p for each channel. With an easy-to-use software development kit (SDK) and flexibility to stack multiple cards, DVP-7634HE is an ideal solution for various video capture applications.

Specifications

Video	Video Input	4ch SDI + VGA/HDMI/DVI/Composite/S-Video/YPbPr
	Compression	H/W H.264 High Profile
	Max. Display Rate	30/25 fps (NTSC/PAL) @ 1920 x 1080p
	Max. Recording Rate	30/25 fps (NTSC/PAL) @ 1920 x 1080p
Audio	Audio Input	SDI / HDMI / Audio L/R
	Format	STEREO/16 bits/32000~48000 Hz
System Requirements	CPU (Display)	Intel® Core™ 2 Duo E2200 2.2 GHz
	CPU (Recording)	Intel® Core™ 2 Duo E2200 2.2 GHz
	Memory	2 GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7/8/8.1; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	PCIe x4
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	167.65 x 101.03 mm (6.6" x 3.9")
	Safety	CE/FCC

Ordering Information

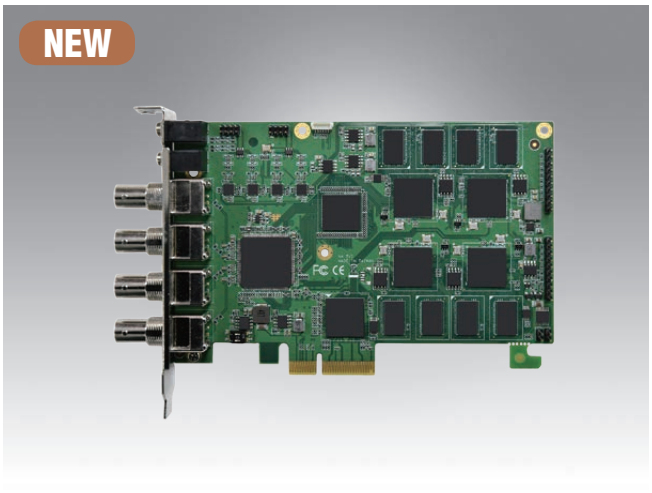
Part Number	Description
DVP-7634HE	4ch Full HD H.264 PCIe Video Capture Card with SDK

Packing List

Item	Amount
DVP-7634HE Capture Card	1 (piece)
4 BNC/4 RCA cable	1 (piece)
DVI to YPbPr/AV/S-video	1 (piece)

DVP-7635HE

4-ch Full HD H.264/MPEG4 AHD/CVI/TVI PCIe Video Capture Card with SDK



Features

- 4-channel AHD/CVI/TVI/Composite (CVBS) hardware compression
- 30/25 fps (NTSC/PAL) at up to 1920 x 1080p resolution for recording and display for each channel
- PCIe x4 host interface
- Supports Watchdog function
- Windows/Linux OS supported

FC CE RoHS COMPLIANT 2002/95/EC

Introduction

DVP-7635HE is a PCIe-bus, hardware compression video capture card with 4ch AHD/CVI/TVI/Composite (CVBS) video and 4 audio inputs. DVP-7635HE supports H.264/MPEG4 compression format at up to Full HD 1080p for each channel. With an easy-to-use software development kit (SDK) and the flexibility to stack multiple cards, DVP-7635HE is an ideal solution for various video capture applications.

Specifications

Video	Video Standard	AHD/CVI/TVI
	Video Input	4 x AHD/CVI/TVI/Composite (CVBS)
	Compression	H/W H.264
	Max. Resolution / FPS	1920 x 1080 @ 30/25 FPS (Input) 1920 x 1080 @ 30/25 FPS (Output)
	Raw Data Formate	YV12/NV12/YUY2/RGB24/RGB32
Audio	Audio Input	2 x 3.5mm Audio
	Format	Stereo/16 bits/32000~48000 Hz
System Requirements	CPU (Display)	Intel® Core™ i3-4330
	CPU (Recording)*	Intel® Core™ i3-4330
	Memory	4GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7/8/8.1/10; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	PCIe x4
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	150 x 101 mm (5.9" x 3.9")
	Safety	CE/FCC

Ordering Information

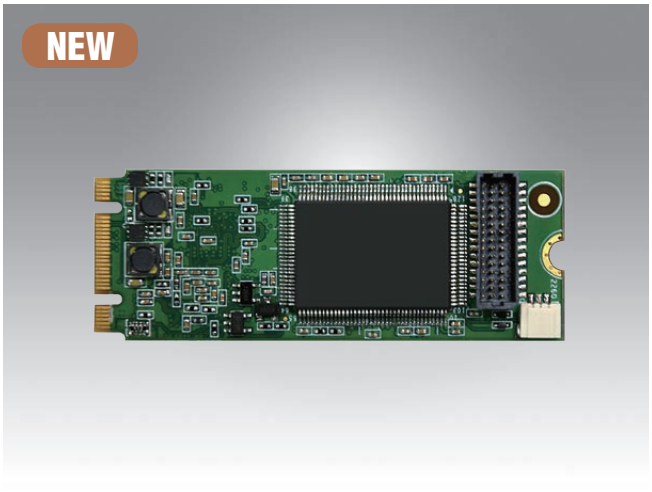
Part Number	Description
DVP-7635HE	4-ch Full HD H.264/MPEG4 AHD/CVI/TVI/Composite (CVBS) PCIe Video Capture Card with SDK

Packing List

Item	Amount
DVP-7635HE Capture Card	1 (piece)
Audio Cable	2 (piece)

DVP-7011MHE

1-ch Full HD H.264 M.2 Video Capture Card with SDK



Features

- 1 channel HDMI/DVI-D/DVI-A/YPbPr channel video inputs with H.264 software compression
- 30/25 fps (NTSC/PAL) at up to full HD resolution for recording and display
- PCIe M.2 (B/M) host interface
- Windows/Linux OS supported

Introduction

DVP-7011MHE is a PCIe M.2, software compression video capture card with 1 video and 1 audio inputs. DVP-7011MHE supports H.264 compression format at up to full HD resolution at real-time frame rate (30/25fps). With an easy-to-use software development kit (SDK), DVP-7011MHE is an ideal solution for various video capture applications.

Specifications

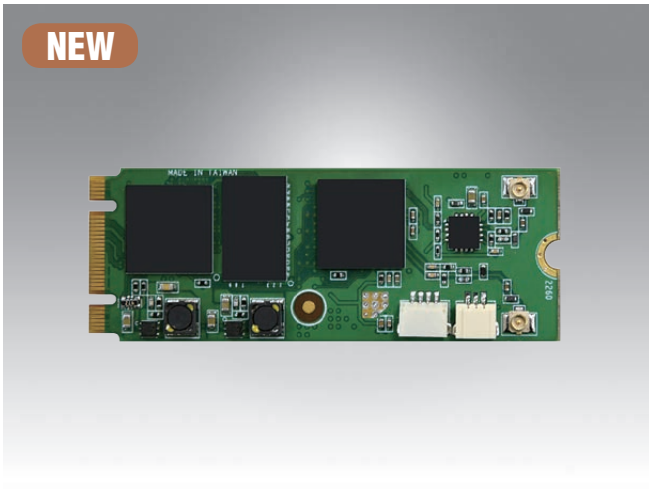
Video	Video Standard	NTSC/PAL
	Video Input	1 x HDMI/DVI-D/DVI-A/YPbPr
	Compression	S/W H.264
	Max. Resolution / FPS	1920 x 1080 @ 60/50 FPS (Input) 1920 x 1080 @ 30/25 FPS (Output)
	RAW Data Format	YV12/NV12/YUY2/RGB24/RGB32
Audio	Audio Input	HDMI Embedded Audio/ Audio L/R
	Format	Stereo / 16-bit / 32000 ~ 48000Hz
System Requirements	CPU (Display)	Intel® Core™2 Duo E2200 2.2 GHz
	CPU (Recording)	IIntel® Core™2 Quad Q9400 2.6 GHz
	Memory	2 GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7/8/8.1/10; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	PCIe M.2 (B/M)
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storing Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	60 x 22 mm (2.3" x 0.8")
	Certification	CE/FCC

Ordering Information

Part Number	Description
DVP-7011MHE	1-ch Full HD H.264 PCIe M.2 Video Capture Card with SDK
XMSE1-MC-HDV-CB	HDMI/VGA Cable (optional)
XKUO-A56-A072-V126	HDMI/VGA Cable (optional)

DVP-7012MHE

1-ch Full HD H.264 M.2 Video Capture Card with SDK



Features

- 1 channel SDI channel video inputs with H.264 software compression
- 30/25 fps (NTSC/PAL) at up to full HD resolution for recording and display
- PCIe M.2 (B/M) host interface
- Windows/Linux OS supported

Specifications

Video	Video Standard	NTSC/PAL
	Video Input	1 x SDI
	Compression	S/W H.264
	Max. Resolution /FPS	60/50 fps @ 1920 x 1080p (Input) 30/25 fps @ 1920 x 1080p (Output)
Audio	Audio Input	SDI Embedded Audio Audio L/R (2 × RCA through wafer connector to RCA cable)
	Format	Stereo / 16-bit / 32000 ~ 48000Hz
System Requirements	CPU (Display)	Intel® Core™ 2 Duo E2200 2.2 GHz
	CPU (Recording)	Intel® Core™ 2 Quad Q9400 2.6 GHz
	Memory	2 GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7/8/8.1; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	PCIe M.2 (B/M)
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	22 x 60 mm (0.8" x 2.3")
	Certification	CE/FCC

Ordering Information

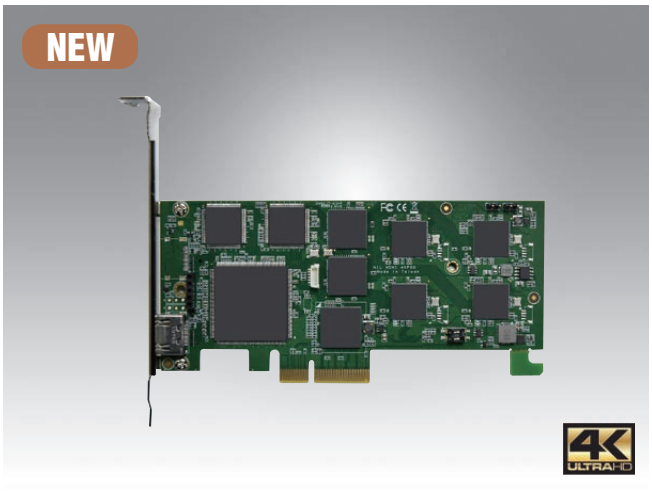
Part Number	Description
DVP-7012MHE	1-ch Full HD H.264 PCIe M.2(B/N) Video Capture card with SDK
XKUO-A56-D009-V12	SDI Video cable (optional)

Packing List

Item	Amount
DVP-7012MHE Capture Card	1pcs

DVP-7011UHE

1-ch H.264 4K HDMI 2.0 PCIe Video Capture Card with SDK



Features

- 1-channel 4K HDMI 2.0 video input with H.264 software compression
- 60/50 fps (NTSC/PAL) at up to 4096 x 2160p resolution for recording and display
- PCIe x 4 host interface
- Low profile size
- Windows/Linux OS supported

FCC CE RoHS COMPLIANT 2002/95/EC

Introduction

DVP-7011UHE is a PCIe-bus, hardware compression video capture card with 1 channel 4K HDMI 2.0 inputs. DVP-7011UHE supports H.264 software compression format at up to 4K resolution at real-time frame rate (60/50fps). With an easy-to-use software development kit (SDK) and the flexibility to stack multiple cards; DVP-7011UHE is an ideal solution for various video capture applications.

Specifications

Video	Video Input	1 x 4K HDMI 2.0
	Compression	S/W H.264
	Max. Display Rate	60/50 fps (NTSC/PAL) @ 4096 x 2160p
	Max. Recording Rate	60/50 fps (NTSC/PAL) @ 4096 x 2160p
Audio	Audio Input	1 x HDMI Embedded audio
	Format	Stereo/16 bits/32000~48000Hz
System Requirements	CPU (Display)	Intel® Core™ i5-6500
	CPU (Recording)*	Intel® Core™ i5-6500
	Memory	8 GB
	VGA	1024 x 768, DirectX 9.0c
	Operating System	Windows XP/XPe/Vista/7/8/8.1/10; Linux 2.6.14 or higher; 32/64 bits
Physical Characteristics	Host Interface	PCIe x 4
	Operating Temperature	-20 ~ 70 °C (-4 ~ 158 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Dimension (L x H)	145 x 69 mm (5.7" x 2.7")
	Safety	CE/FCC

Ordering Information

Part Number	Description
DVP-7011UHE	1-ch HDMI 2.0 4K Software compression PCIe Video Capture Card with SDK

Packing List

Item	Amount
DVP-7011UHE Capture Card	1 (piece)
Low Profile bracket	1 (piece)

DVP-5311D

Video (DVI-DVI), Control and Data Transmission Extender



Features

- Supports High Resolution 1920x1200 @ 60Hz WUXGA
- Zero pixel loss with TMDS signal correction
- DVI loop-through for supporting local display and monitoring
- Extremely low latency(<3 ms) for video, control and data transmission
- Full re-locking for the receiver regenerates digital signal producing top signal quality
- Supports 4 USB 2.0 devices in the remote location (keyboard, mouse, touch panel, storage…)
- Support RS-232 serial communication transmission interface
- Power Over Ethernet Cable. Only one power supply supports both transmitter and receiver
- Strong and mountable design for Industry application scenario
- Extends up to 100 meter (330 ft)

Introduction

The DVP-5311D video and control extender Let you control a PC from up to 100m *33ft) away from a single Cat 5e or Cat 6 cable connection, with uncompressed 1920 x 1200 DVI-D video, with 24-bit color depth, and access to up to four connected USB devices (keyboard, mouse, touch panel, storage or other peripherals) and RS-232 control interface, with less than 3 milliseconds latency.

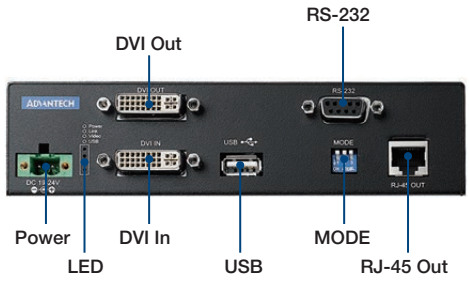
DVP-5311D enable users to install critical industry PC in a secure and controlled environment away from work station or control room. And with Power-Over-Cable feature, users just need to supply the power to one device to have the whole set working for solving the hassle of running power cables. DVP-5311D is the most suitable solution for remote display and control in industrial applications.

Specifications

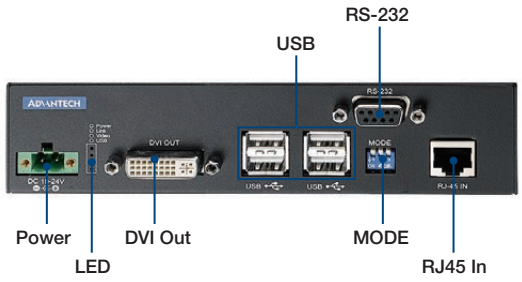
		Extender Transmitter (Tx)	Extender Receiver (Rx)
Electronic	Video Interface	DVI-D (29 pins female) DVI-D (29 pins female) - Loop Through	DVI-D (29 pins female)
	Video Transmission Cable	CAT 5/6	CAT 5/6
	Video Bandwidth	340 MHz (10.2Gbps)	340 MHz (10.2Gbps)
	Video Resolution	480p / 720p / 1080p@60 / 1920x1200@60	480p / 720p / 1080p@60 / 1920x1200@60
	Transmission Distance	100 meters (328 ft)	100 meters (328 ft)
	USB Port(s)	1 USB port for connecting to IPC, comply with USB 2.0	4 x USB 2.0 ports, for keyboard, mouse, touch panel and data transmission (client)
	RS232	Supported	Supported
	Dimension (W x H x D)	80 x 50 x 160 mm (3.1" x 1.9" x 6.2")	80 x 50 x 160 mm (3.1" x 1.9" x 6.2")
	Input Power	19 - 24 V_{DC} ± 20%	19 - 24 V_{DC} ± 20%
	ESD Protection	8KV (contact) / 15KV (air)	8KV (contact) / 15KV (air)
	Power Connector	Phoenix-type (2 pins) The power can also be transferred to Rx side via CAT5/6 cable (power over cable)	Phoenix-type (2 pins) The power can also be transferred to Tx side via CAT5/6 cable (power over cable)
	HDCP Compliance	Yes (1.4)	Yes (1.4)
	Indicator Light	Power, Link, USB, Video	Power, Link, USB, Video
	Grounding	grounding screw for the better noise immunity	grounding screw for the better noise immunity
	DIP Switch	RS-232 Configuration & Firmware Update	RS-232 Configuration & Firmware Update
Mechanical	Housing	Metal	Metal
	Mounted design	Support DIN-Rail, Pole and VESA mount installation	Support DIN-Rail, Pole and VESA mount installation
Environmental	Operation Temperature	0 ~ 60 °C	0 ~ 60 °C
	Storage Temperature	-20 ~ 70 °C	-20 ~ 70 °C
	Humidity	95% RH@ 40 °C	95% RH@ 40 °C

Connector

Extender Transmitter (Tx)



Extender Receiver (Rx)



Switch Mode

DIP Switch Pin 1	RS-232 Mode
On (down)	DTE mode
Off (up)	DCE mode

	Pin 2 On (down)	Pin 2 Off (up)
Pin 3 On (down)	FW update for MCU 1	FW update disabled
Pin 3 Off (up)	FW update for MCU 2	FW update disabled

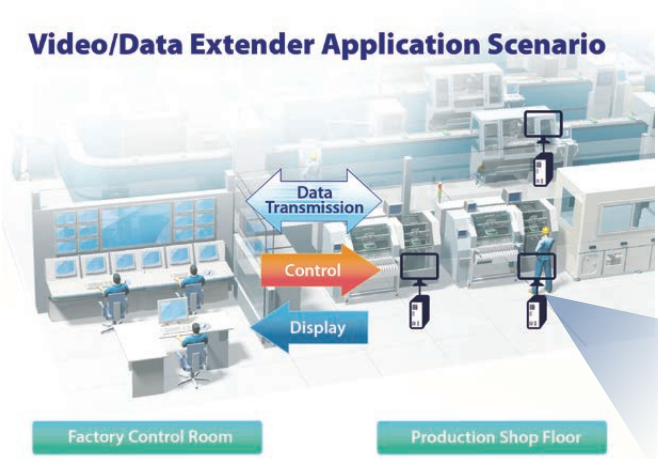
Ordering Information

Part Number	Description
DVP-5311D	DVI Extender : Extender Transmitter (TX) & Extender Receiver(RX)

Packing List

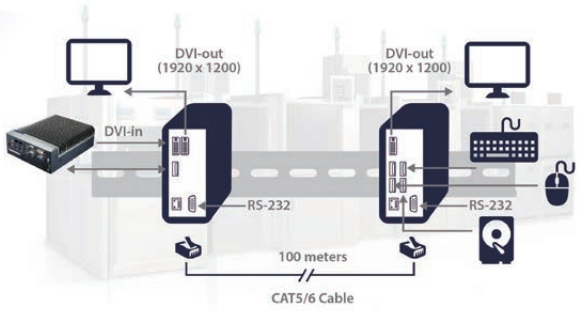
Part Number	Description	Quantity
DVP-5311D	DVI Extender : Extender Transmitter (TX) & Extender Receiver(RX)	TX x 1 / RX x 1
Power Adaptor	ADP A/D 100-240V 65W 19V C6 TERMINAL BLOCK 2PIN	1
DIN-Rail Bracket	1950016395T101	1

Extender Scenario



Video / Data Extender – Scenario Diagram

Advantech focuses on industrial application and provides industry grade product. Mountable design for industrial application scenario. Easy to use for multiple equipment alignments.



Advanced Video Cards Fulfill Industrial Applications

Well-developed Capture Cards Well-prepared SDKs



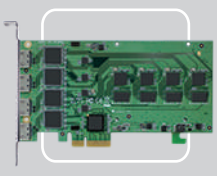
ADVANTECH

Enabling an Intelligent Planet

Advantech provides the completed solution which includes video capture card and the industry-grade video process system, capable of supporting all possible video-related applications. From lecture recording, medical imaging, event broadcasting, live video streaming, surveillance to in-time video analysis. Furthermore, with Advantech Software Development Kit (SDK), developers could implement the application software more efficiently and, effectively to fulfill all types of requirements from end-customers.



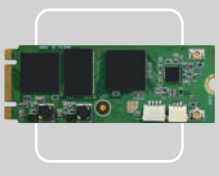
DVP-7011HE
- HDMI/VGA/DVI/YPb Pr-CVBS/S-Video
- 1080p/60
- PCIe x 1
- Windows/Linux
- SDK Supported



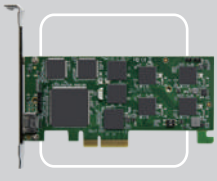
DVP-7031HE
- HDMI (x4 channels)
- 1080p/60
- PCIe x 4
- Windows/Linux
- SDK Supported



DVP-7016HE
- HDMI/VGA/DVI
- 1080p/30
- MiniPCIe
- Windows/Linux
- SDK Supported



DVP-7012MHE
- HDMI/VGA/DVI
- 1080p/30
- M.2 B/M
- Windows/Linux
- SDK Supported



DVP-7011UHE
- HDMI 2.0
- 4Kp/60
- PCIe x 4
- Windows/Linux
- SDK Supported

www.advantech.com

3

Intelligent Transportation Platforms

Selection Guide		*3-2*
ITA-1501	Freescale® i.MX6 Quad Fanless Compact System with Multiple COM Ports and Dual Displays	*3-4*
ITA-1611	Intel® Celeron™J1900 Fanless Compact System with Dual Gigabit Ethernet LAN and Dual Displays	*3-6*
ITA-1711	Intel® Celeron™J1900 Fanless Compact System with Multiple COM Ports and Dual Displays	*3-8*
ITA-2111	Intel® Atom™ E3845 1U Fanless System; EN 50121-4 Compliant for Railway Applications	*3-10*
ITA-2211	Intel® Atom™ E3845 2U Fanless System; EN 50121-4 Compliant for Railway Applications	*3-12*
ITA-2231	Intel® 6th Generation Core™ i Processor 2U Fanless System; EN 50121-4 Compliant for Railway Applications	*3-14*
ITA-5612	Intel® Atom™ E3950 Fanless Compact System; EN 50155 Compliant for Railway Applications	*3-16*
ITA-5831	Intel® 6th Generation Core™ i Processor Fanless System; EN 50155 Compliant for Railway Applications	*3-18*
ITA-5231	Intel® 6th Generation Core™ i Processor 2U Fanless System; EN 50155 Compliant for Railway Applications	*3-20*

To view all of Advantech's Intelligent Transportation Platforms, please visit www.advantech.com/products.



Intelligent Transportation Platforms






Model Name		ITA-1501	ITA-1611	ITA-1711	ITA-2111
Processor System	CPU	i.MX6 Quad Cortex-A9	Intel® Celeron™ J1900	Intel® Celeron™ J1900	Intel® Atom™ E3845
	CPU TDP	5W	10W	10W	10W
	Frequency	1.0 GHz	2.0 GHz	2.0 GHz	1.91 GHz
	Core Number	4	4	4	4
	L2 Cache	1MB	2MB	2MB	2MB
	BIOS	-	AMI SPI 64Mbit	AMI SPI 64Mbit	AMI SPI 64Mbit
	Chipset	-	-	-	-
Memory	Technology	Single channel DDR3 1066	Dual channel DDR3 1333	Dual channel DDR3 1333	Dual channel DDR3 1333
	Capacity	Up to 2GB	Up to 8GB	Up to 8GB	Up to 8GB
	Onboard Memory	2GB	4GB	4GB	4GB
	DIMM Slot	-	1	1	1
Display	Graphic Memory	Freescale i.MX6 integrated Hardware accelerators	Shared with system memory up to 256MB	Shared with system memory up to 256MB	Shared with system memory up to 256MB
	Multiple Display	Dual	Dual	Dual	Dual
	Display Interface	VGA +HDMI or 2 x VGA Single channel: 1920 x 1080 @ 60 Hz Dual channel: 1920 x 1080 @ 60 Hz	2 x VGA or VGA + DVI-D or VGA + LVDS Single channel max: 1920 x 1080 @ 60Hz Dual channel max: 1920 x 1080 @ 60Hz	2 x VGA or VGA + DVI-D or VGA + LVDS Single channel max: 1920 x 1080 @ 60Hz Dual channel max: 1920 x 1080 @ 60Hz	VGA + DVI-D Single channel max: 1920 x 1080 @ 60Hz Dual channel max: 1920 x 1080 @ 60Hz
Ethernet	Controller	1 x RTL8211E	2 x Intel® I211	2 x Intel® I211	4 x Intel® I210-IT
	Speed	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Connector	1 x RJ45	2 x RJ45	2 x RJ45	4 x RJ45
Storage	Onboard Slot	1 x SD	1 x mSATA	1 x mSATA	1 x mSATA
	HDD/SSD	1 x 2.5" SSD	1 x 2.5" HDD/SSD	1 x 2.5" HDD/SSD	1 x 3.5" or 2 x 2.5" HDD/SSD
	Easy Swap Module	-	-	1	-
Expansion Interface	Mini PCIe	1	1	1	1
	PCIe	-	-	-	-
	PCI	-	-	-	-
	PCI104	-	-	-	1
	ITA-EM	-	-	-	-
I/O	Display	VGA +HDMI or 2 x VGA	2 x VGA or VGA + DVI-D or VGA + LVDS	2 x VGA or VGA + DVI-D or VGA + LVDS	VGA + DVI-D
	Audio	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in
	Ethernet	1	2	2	4
	USB3.0	-	1	1	1
	USB2.0	6	5	5	6
	COM	Up to 6 ports	Up to 6 ports	Up to 14 ports	10
	Digital I/O	-	8 GPIO	Up to 24 DI and 24 DO	-
Power	Input Range	DC 12V	DC 9V~36V	DC 9V~36V	AC 100V~240V or DC 110V
Physical Characteristics	Dimensions (W x H x D)	188 x 66 x 129 mm (7.28" x 2.59" x 5.11")	200 x 70 x 190 mm (7.87" x 2.75" x 7.48")	200 x 100 x 190 mm (7.87" x 3.93" x 7.48")	427 x 44 x 325 mm (19.0" x 1.73" x 12.79")
Environment	Operating Temperature	0 ~ 60 °C (With SSD)	-25 ~ 60 °C (With SSD) 0 ~ 40 °C (With HDD)	-25 ~ 60 °C (With SSD) 0 ~ 40 °C (With HDD)	-25 ~ 60 °C (With SSD) 0 ~ 40 °C (With HDD)
Certification	EMC	CE, FCC, CCC	CE, FCC, CCC	CE, FCC, CCC	CE, FCC, CCC
	Safety Certifications	UL, CB, CCC	UL, CB, CCC, BSMI	UL, CB, CCC, BSMI	UL, CB, CCC
	Other	-	-	-	EN 50121-4
Page		3-4	3-6	3-8	3-10







ITA-2211	ITA-2231	ITA-5231	ITA-5612	ITA-5831
Intel® Atom™ E3845	Intel® Core™ i7-6822EQ	Intel® 6th Gen. Core™ i7/i5/i3	Intel®Atom™ X7-E3950	Intel® 6th Gen. Core™ i7/i5/i3
10W	25W	25W	12W	25W
1.91 GHz	2.0 GHz	Up to 2.0 GHz	Up to 2.0 GHz	Up to 2.0 GHz
4	4	4/2	4	4/2
2MB	8MB	8/6/3MB	2MB	8/6/3MB
AMI SPI 64Mbit	AMI SPI 128Mbit	AMI SPI 128Mbit	AMI SPI 128Mbit	AMI SPI 128Mbit
-	Intel® QM170	Intel® QM170	-	Intel® QM170
Dual channel DDR3 1333	Dual channel DDR4 2133	Dual channel DDR4 2133	Dual channel DDR3L 1600	Dual channel DDR4 2133
Up to 8GB	Up to 32GB	Up to 16GB	Up to 8GB	Up to 16GB
4GB	16GB	8GB	4GB	8GB
1	1	1	1	1
Share with system memory up to 256MB	Share with system memory up to 512MB	Share with system memory up to 512MB	Share with system memory up to 256MB	Share with system memory up to 512MB
Dual	Dual	Dual	Dual	Dual
VGA + DVI-D Single channel max: 1920 x 1080 @ 60Hz Dual channel max: 1920 x 1080 @ 60Hz	DVI-I + DVI-D Single channel max: 1920 x 1200 @ 60Hz Dual channel max: 1920 x 1200 @ 60Hz	DVI-I + DVI-D Single channel max: 1920 x 1200 @ 60Hz Dual channel max: 1920 x 1200 @ 60Hz	DVI-I + DVI-D (Optional) Single channel max: 1920 x 1200 @ 60Hz Dual channel max: 1920 x 1200 @ 60Hz	DVI-I + DVI-D (Optional) Single channel max: 1920 x 1200 @ 60Hz Dual channel max: 1920 x 1200 @ 60Hz
2 x Intel® I210-IT	1 x Intel® i219LM and 1 x Intel® i210-IT	1 x Intel® i219LM and 2 x Intel® i210-IT	3 x Intel® i210-IT	3 x Intel® i210-IT
10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
2 x RJ45	2 x RJ45	3 x M12 X-coded(F)	3 x M12 X-coded(F)	3 x M12 X-coded(F)
1 x mSATA	1 x M.2 (with SATA interface)	1 x mSATA	1 x mSATA	1 x mSATA
1 x 3.5" or 2 x 2.5" HDD/SSD	2 x 3.5" or 3 x 2.5" HDD/SSD	-	-	-
-	-	Max to 4 x 2.5" SSD or 3 x 2.5" HDD	2 x 2.5" SSD	Max to 3 x 2.5" SSD or 2 x 2.5" HDD
1	1	3	1 (Shared Slot with mSATA)	3
-	-	-	-	-
-	-	-	-	-
1	1	-	-	-
3	3	4	-	2
VGA + DVI-D	DVI-I + DVI-D	DVI-I + DVI-D	1 x DVI-I	1 x DVI-I
1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in
2	2	3	3	3
1	4	2	2	2
6	3	1 x USB2.0 with M12 A-coded(F) 4-pin	-	1 x USB2.0 with M12 A-coded(F) 4-pin
2	2	2	1	2
-	-	4 DI and 4 DO	8 GPIO	4 DI and 4 DO
AC 100V~240V or DC 110V	AC 100V~240V or DC 110V	Optional DC 24/48/72/110V input compliant with EN50155 class S2/C2	Optional DC 24/48/72/110V input compliant with EN50155 class S2/C1	Optional DC 24/48/72/110V input compliant with EN50155 class S2/C1
483 x 88 x 325 mm (19.0" x 3.46" x 12.79")	483 x 88 x 325 mm (19.0" x 3.46" x 12.79")	427 x 88 x 200 mm (19.0" x 3.46" x 7.87")	205 x 72 x 210 mm (8.07" x 2.83" x 8.26")	220 x 88 x 200 mm (8.66" x 3.46" x 7.87")
-25 ~ 60 °C (With SSD) 0 ~ 40 °C (With HDD)	-25 ~ 60 °C (With SSD) 0 ~ 40 °C (With HDD)	EN 50155 TX -40 ~ 70 °C (With SSD)	EN 50155 TX -40 ~ 70 °C (With SSD)	EN 50155 TX -40 ~ 70 °C (With SSD)
CE, FCC, CCC	CE, FCC, CCC	CE, FCC, CCC	CE, FCC, CCC	CE, FCC, CCC
UL, CB, CCC	UL, CB, CCC, BSMI	UL, CB, CCC, BSMI	UL, CB, CCC, BSMI	UL, CB, CCC, BSMI
EN 50121-4	EN 50121-4	EN 50155, EN 50121-3-2, EN 50121-4, EN 45545	EN 50155, EN 50121-3-2, EN 45545	EN 50155, EN 50121-3-2, EN 50121-4, EN 45545
3-12	3-14	3-20	3-16	3-18

ITA-1501

Freescale® i.MX6 Quad Fanless Compact System with Multiple COM Ports and Dual Displays



Features

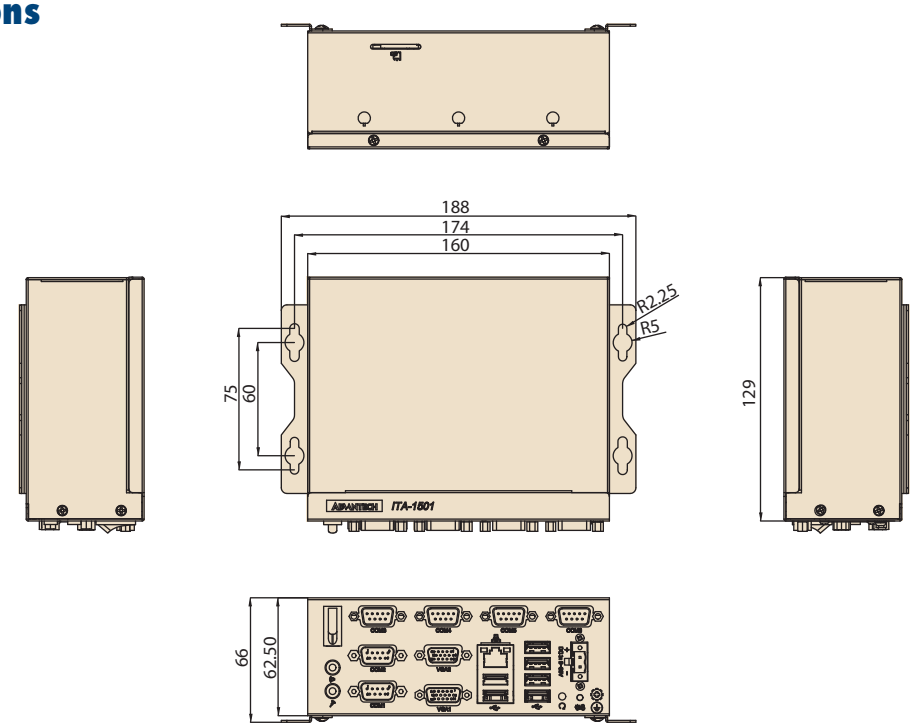
- Built-in i.MX6 Quad - 4x Cortex-A9 processor
- Onboard 2G DDR3L memory design
- Supports 8G/16G EMMC NAND Flash for OS
- Supports 6 x USB 2.0
- Supports 2 x DB9(RS232/422/485),4 x DB9(RS232)
- Supports Dual Displays
  - Optional 2 x VGA Display
  - Optional VGA + HDMI Display
- Supports 1 x GbE

Specifications

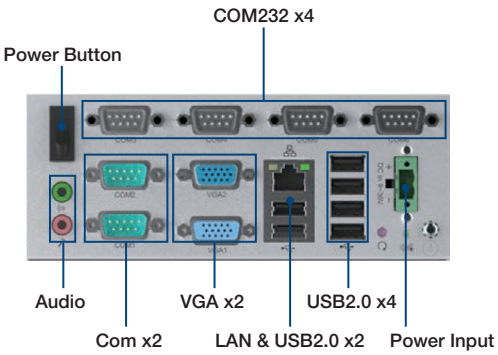
Processor System	CPU	Freescale i.MX6 Quad - 4x Cortex-A9	
	Processor Base Frequency	1.0 GHz (Burst Frequency 1.2GHz)	
	L2 Cache	1 MB	
	Core Number	4	
Memory	Technology	Single channel DDR3L 1066 MHz SDRAM on board	
	Capacity	2GB	
Graphics	Controller	Freescale i.MX6 integrated hardware accelerators	
	Dual display	VGA +HDMI or 2 x VGA Single channel :1920 x 1080 @ 60 Hz Dual channel :1920 x 1080 @ 60 Hz	
Ethernet	Interface	10/100/1000 Mbps	
	Controller	RTL8211E	
	Connector	1 x RJ-45	
Storage	Internal	8GB EMMC NAND Flash for O.S & 4MB SPI NOR Flash for ADV Loader	
	External	1 x 2.5" SDD bay or CF module	
I/O	Main Display	VGA1	
	Second Display	HDMI or VGA2 (optional)	
	SATA	1 x SATA 2.0	
	USB	6 x USB2.0	
	SD	1 x SD	
	Serial Port	2 x DB9, RS232/422/485 with automatic flow control 4 x DB9, RS232(only support TX/RX) (pinhead)	
	Audio	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in	
	Mini PCIe	1 x Mini PCIe with SIM slot	
Power	Input Voltage	12 V_{DC}	
Watchdog Timer	Output	System reset	
	Interval	Programmable 1~255 sec/min	
Environment	Operating Temperature	Operating	Non-operating
	Temperature	0 ~ 60 °C	-40 ~ 85 °C
Mechanical Features	Dimension (W x H x D)	160 x 62.5 x 129 mm (6.3" x 2.46" x 5.08")/188 x 66 x 129 mm (7.4" x 2.6" x 5.08") with mounting kits	
	Install	Desktop/Wall-mounting	
Certifications	EMC	CCC/CE/FCC	
	Safety	CCC/UL/CB	

Dimensions

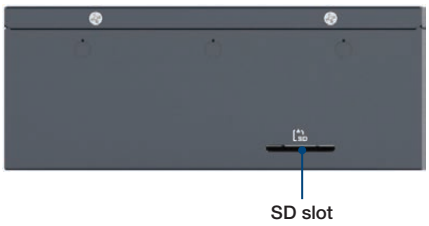
Unit: mm



Front View



Rear View



Ordering Information

Part Number	CPU	Onboard Memory	Display	LAN	USB	SD	COM (RS232/422/485)	COM (Only RS232)
ITA-1501-00A1	Cortex A9	2GB DDR3	VGA x 2	1	6	1	2	4
ITA-1501-01A1	Cortex A9	2GB DDR3	VGA + HDMI	1	6	1	2	4

ITA-1611

Intel® Celeron™J1900 Fanless Compact System with Dual Gigabit Ethernet LAN and Dual Displays



Features

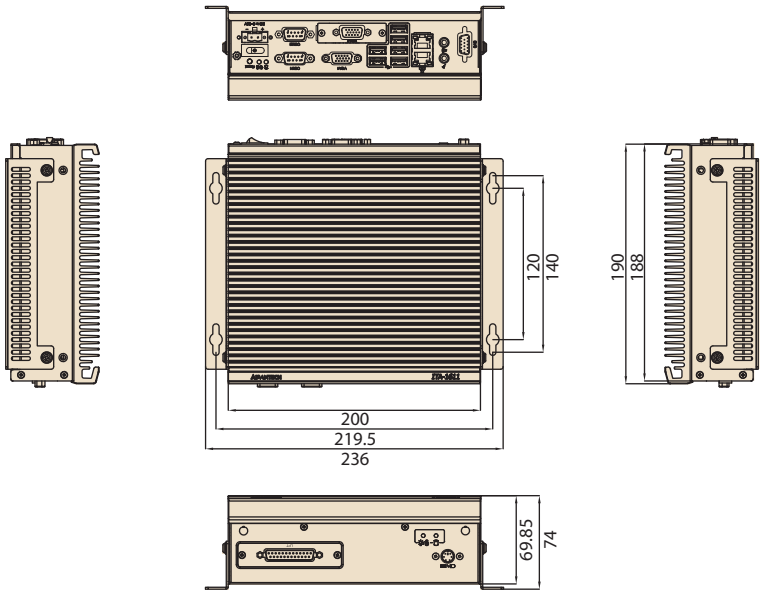
- Built-in Intel® Celeron™ J1900 quad-core processor, 2.0 GHz
- Fanless, compact system design
- 4 GB of DDR3 memory onboard with optional NVRAM
- 2 x LAN, 6 x USB, 6 x COM, and 1 x USB 3.0 ports
- Replaceable secondary display (VGA 2/DVI-D/LVDS)
- Supports dual outputs of full HD resolution video

System Specifications

Processor System	CPU	Intel® Celeron™ J1900		
	Max Speed	2.0 GHz		
	L2 Cache	2 MB		
	Core Quantity	4		
	BIOS	AMI® SPI 64 Mb		
Memory	Technology	Dual-channel DDR3 1333		
	Capacity	Onboard 4 GB (up to 8 GB with SODIMM)		
Graphics	Chipset	Embedded Intel® Gen 7 Graphics		
	VRAM	Shared system memory up to 256 MB SDRAM		
	Dual Display	2 x VGA/VGA + DVI-D/VGA + LVDS Single channel maximum: 1920 x 1080 @ 60 Hz Dual channel maximum: 1920 x 1080 @ 60 Hz		
	LVDS (optional)	Supports 18/24-bit dual channel, up to 1920 x 1080 @ 60 Hz		
Ethernet	Interface	10/100/1000 Mbps		
	Controller	2 x Intel® I211		
	Connector	2 x RJ-45		
Storage	NVRAM	1 Mb FRAM (optional)		
	Internal	1 x mSATA socket		
	External	Supports 1 x 2.5" HDD/SSD (optional)		
I/O Interface	Main Display	VGA 1		
	Secondary Display	VGA 2/DVI-D/LVDS		
	LAN	2		
	USB	6 (5 x USB 2.0, 1 x USB 3.0)		
	COM	2 x RS 232/422/485 ports with automatic flow control (up to 6 ports, supports 4 additional optional RS-232 serial ports)		
	Digital I/O	1 x 8-channel GPIO		
	Audio	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in		
	PS/2 (front panel)	1		
	Reserved Area (front panel)	1 (1 x LPT port as default; 2 x VGA with PCA-5650 optional)		
Expansion Slots	Mini PCIe	1		
Power	Input Voltage	9 ~ 36 V DC		
Watchdog Timer	Output	System reset		
	Interval	Programmable 1~255 sec/min		
Environment		Operating (w/o HDD)	Operating (with HDD)	Non-Operating
	Temperature	-25 ~ 60 °C	0 ~ 40 °C	-40 ~ 85 °C
Physical Characteristics	Dimensions (W x H x D)	200 x 69.85 x 190 mm (7.87" x 2.75" x 7.47")/236 x 74 x 190 mm (9.28" x 2.91" x 7.47") with mounting kits		

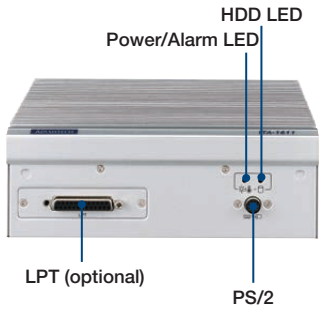
Dimensions

Unit: mm

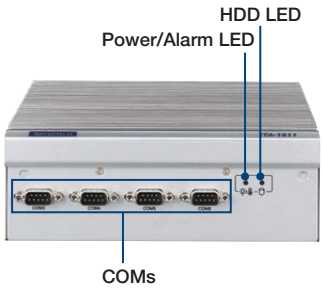


Front View

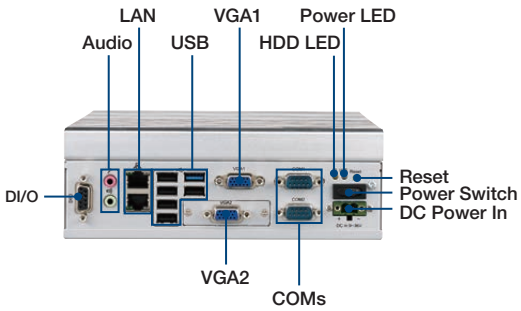
ITA-1611-10A1E



ITA-1611-S0A1E



Rear View



Ordering Information

Part Number	CPU	Onboard Memory	Display	COM	D/O	GbE LAN	USB
ITA-1611-00A1E	J1900	4 GB DDR3	VGA+DVI	2	8 bit	2	6
ITA-1611-10A1E	J1900	4 GB DDR3	VGA*2	2	8 bit	2	6
ITA-1611-20A1E	J1900	4 GB DDR3	VGA+LVDS	2	8 bit	2	6
ITA-1611-S0A1E	J1900	4 GB DDR3	VGA+DVI	6	8 bit	2	6

Packing List

Part Number	Description	Quantity
2001161100	Startup menu (CH)	1
2001161110	Startup menu (CH)	1
2062171010	CD-ROM	1
1960054855N001	HDD bracket part 1	1
1960057417N301	HDD bracket part 2	1
1700009409	HDD SATA cable	1
1700017839	HDD power cable	1
1990021361N000	HDD thermal pad 1	1
1990021362N000	HDD thermal pad 2	1
1960052263T001	Mounting bracket	2
1652002205	Plug-in connector	1

Optional Accessories

Part Number	Description
PCA-5650-00A1E	Mini PCIe VGA card
96PSA-A60W12P2-1	Adapter 100-240V 60W 12V
1700000596-11	Power cord (China) CCC,10A 250V, 3P 1.83 M
1702002600-01	Power cord UL/CSA (USA) 125V 10A, 3P, 1.83 M
1700023534-01	Power cord (UK) 13A, 250V, 3P, 1.83 M
1702002605-01	Power cord (EU) 10A/16A, 250V, 3P, 1.83 M
1700019592	LPT Cable (front panel)
1960057418N001	VGA bracket (front panel)

ITA-1711

Intel® Celeron™J1900 Fanless Compact System with Multiple COM Ports and Dual Displays



Features

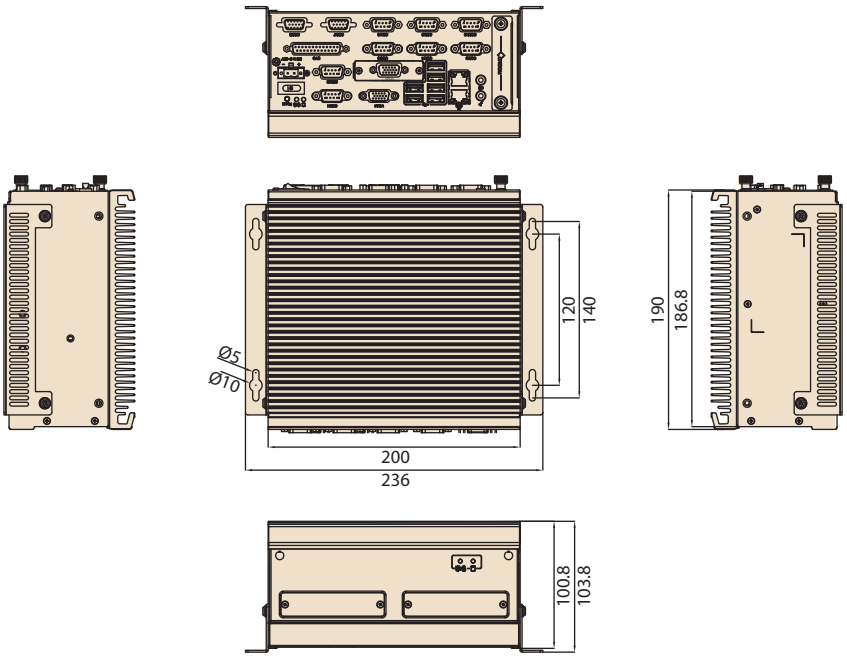
- Built-in Intel® Celeron™ J1900 quad-core processor, 2.0 GHz
- Fanless, compact system design
- 4 GB of DDR3 memory onboard with optional NVRAM
- 2 x LAN, 6 x USB, 14 x COM, and 1 x USB 3.0 ports
- Replaceable secondary display (VGA 2/DVI-D/LVDS)
- Supports dual outputs of full HD resolution video
- Serial ports support RS-232/422/485 with automatic flow control
- Supports up to 48 digital I/O (24 inputs and 24 outputs)

System Specifications

Processor System	CPU	Intel® Celeron™ J1900		
	Max Speed	2.0 GHz		
	L2 Cache	2 MB		
	Core Quantity	4		
	BIOS	AMI® SPI 64 Mb		
Memory	Technology	Dual-channel DDR3 1333		
	Capacity	Onboard 4 GB (up to 8 GB with SODIMM)		
Graphics	Chipset	Embedded Intel® Gen 7 Graphics		
	VRAM	Shared system memory up to 256 MB SDRAM		
	Dual Display	2 x VGA/VGA + DVI-D/VGA + LVDS Single channel maximum: 1920 x 1080 @ 60 Hz Dual channel maximum: 1920 x 1080 @ 60 Hz		
	LVDS (optional)	Supports 18/24-bit dual channel, up to 1920 x 1080 @ 60 Hz		
Ethernet	Interface	10/100/1000 Mbps		
	Controller	2 x Intel® I211		
	Connector	2 x RJ-45		
Storage	NVRAM	1 Mb FRAM (optional)		
	Internal	1 x mSATA socket Supports 1 x 2.5" HDD/SSD (optional)		
	External	1 x Easy swap SATA slim/CompactFlash module		
I/O Interface	Main Display	VGA 1		
	Secondary Display	VGA 2/DVI-D/LVDS		
	LAN	2		
	USB	6 (5 x USB 2.0, 1 x USB 3.0)		
	COM	10 x RS 232/422/485 ports with automatic flow control (up to 14 ports, supports 4 additional optional RS-232 serial ports)		
	Digital I/O	1 x 24-bit GPIO (48-bit GPIO optional)		
	Audio	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in		
	Reserved Area (front panel)	1 (LPT, DIO2, PS/2 optional)		
Expansion Slots	Mini PCIe	1		
Power	Input Voltage	9 ~ 36 V DC		
Watchdog Timer	Output	System reset		
	Interval	Programmable 1~255 sec/min		
Environment		Operating (w/o HDD)	Operating (with HDD)	Non-Operating
	Temperature	-25 ~ 60 °C	0 ~ 40 °C	-40 ~ 85 °C
Physical Characteristics	Dimensions (W x H x D)	200 x 100.8 x 190 mm (7.87" x 3.96" x 7.47")/236 x 103.8 x 190 mm (9.28" x 4.08" x 7.47") with mounting kits		

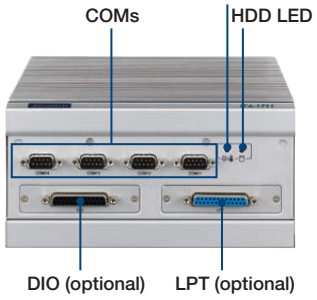
Dimensions

Unit: mm



Front View

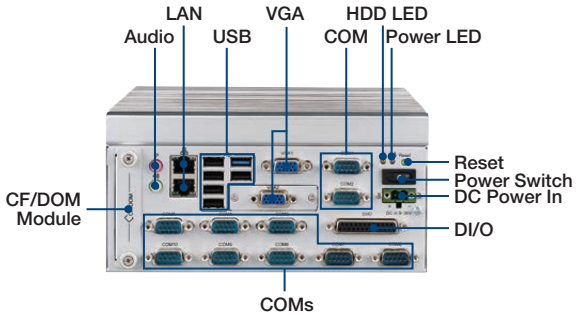
ITA-1711-S0A1E



ITA-1711-10A1E



Rear View



Ordering Information

Part Number	CPU	Onboard Memory	Display	COM	D/O	GbE LAN	USB	CF Tray
ITA-1711-00A1E	J1900	4 GB DDR3	VGA+DVI	10	24 bit	2	6	Yes
ITA-1711-10A1E	J1900	4 GB DDR3	VGA*2	10	24 bit	2	6	Yes
ITA-1711-20A1E	J1900	4 GB DDR3	VGA+LVDS	10	24 bit	2	6	Yes
ITA-1711-S0A1E	J1900	4 GB DDR3	VGA+DVI	14	48 bit	2	6	Yes

Packing List

Part Number	Description	Quantity
2001171100	Startup menu (CH)	1
2001171110	Startup menu (CH)	1
2062171010	CD-ROM	1
1960054855N001	HDD bracket part 1	1
1960065108N001	HDD bracket part 2	1
1700009409	HDD SATA cable	1
1700017839	HDD power cable	1
1990021361N000	HDD thermal pad 1	1
1990021362N000	HDD thermal pad 2	1
1960052263T001	Mounting bracket	2
1652002205	Plug-in connector	1

Optional Accessories

Part Number	Description
PCA-5650-00A1E	Mini PCIe VGA card
96PSA-A60W12P2-1	Adapter 100-240V 60W 12V
1700000596-11	Power cord (China) CCC,10A 250V, 3P 1.83 M
1702002600-01	Power cord UL/CSA (USA) 125V 10A, 3P, 1.83 M
1700023534-01	Power cord (UK) 13A, 250V, 3P, 1.83 M
1702002605-01	Power cord (EU) 10A/16A, 250V, 3P, 1.83 M
1700020061-11	PS/2 Cable (front panel)
1960057419N011	DI/O bracket (front panel)
1960057419N001	LPT bracket (front panel)
1960057418N001	VGA bracket (front panel)

ITA-2111

Intel® Atom™ E3845 1U Fanless System; EN 50121-4 Compliant for Railway Applications



Features

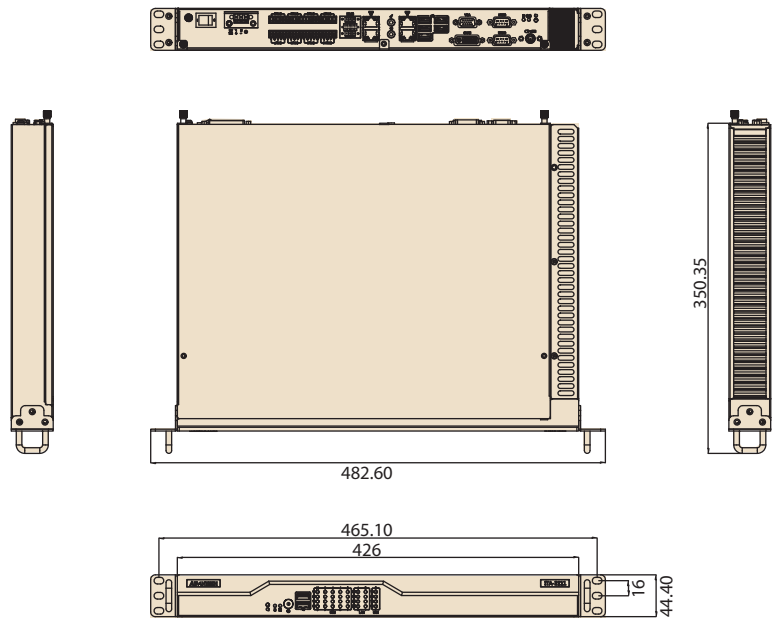
- Built-in Intel® Atom™ E3845 quad-core processor, 1.91 GHz
- 4 GB of DDR3 memory onboard
- 1U fanless rackmount system
- 4 x GbE and 10 x RS-232/422/485 ports with isolation design
- 6 x USB 2.0 and 1 x USB 3.0 slots
- 1 x VGA and 1 x DVI-D display outputs
- Compliant with EN 50121-4 for railway applications

System Specifications

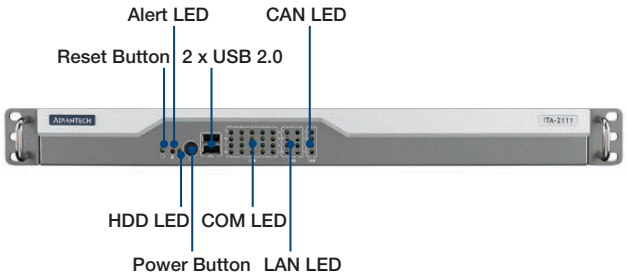
Processor System	CPU	Intel® Atom™ E3845 quad-core processor		
	Max Speed	1.91 GHz		
	L2 Cache	1 MB		
	BIOS	AMI® SPI 64 Mb		
Memory	Technology	Dual-channel DDR3 1333		
	Max. Capacity	Onboard 4 GB (up to 8 GB with SODIMM)		
Graphics	Chipset	Intel® Gen 7 Graphics (542 MHz)		
	VRAM	Shared system memory of up to 256 MB SDRAM		
	Dual Display	1 x VGA and 1 x DVI-D Single channel maximum: 1920 x 1080 @ 60 Hz Dual channel maximum: 1920 x 1080 @ 60 Hz		
Ethernet	Interface	10/100/1000 Mbps		
	Controller	4 x Intel® I210-IT		
	Connector	4 x RJ-45		
Storage	SSD	1 x mSATA socket (optional with SATA2)		
	HDD	1 x 3.5" or 2 x 2.5" HDD bay		
I/O Interface	VGA	1		
	DVI-D	1		
	LAN	4		
	USB	6 x USB 2.0, 1 x USB 3.0		
	Serial	2 x DB9 (RS-232/422/485) and 8 x RS-232/422/485 with 2 x 20-pin terminal block		
	CAN	2		
	PS/2	1		
	Audio	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in		
Expansion Slots	PCI104	1		
	Mini PCIe	1		
Power Module	Input Range	100 ~ 240 V_{AC}/110 V_{DC}		
	Connector	1 x 3-pin terminal block (5.08 mm)		
	Wattage (60 °C)	110 W		
Watchdog Timer	Output	System Reset		
	Interval	Programmable 1 ~ 255 sec/min		
Environment		Operating (with SSD)	Operating (with HDD)	Non-Operating
	Temperature	-25 ~ 60 °C	0 ~ 40 °C	-40 ~ 85 °C
Physical Characteristics	Dimensions (W x H x D)	426 x 44.4 x 326.65 mm (16.77" x 1.75" x 12.86")/482.6 x 44.4 x 350.35 mm (19" x 1.75" x 13.8") with mounting kits		
Certification	EMC	CE/FCC Class A		
	Safety	UL, CB, CCC		
	Compliance	EN 50121-4, Level 4 EMS		

Dimensions

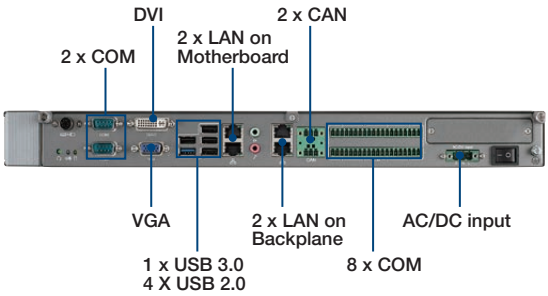
Unit: mm



Front View



Rear View



Packing List

Part Number	Description	Quantity
2001211100	Startup manual	1
2061221100	Driver CD	1
1700020513-01	SATA cable*7P	2
1700017929	SATA power cable*4P	1
1700022322-01	SATA power cable*5P	1
1990001365	HDD rubber	4
1960018229N100	2.5" HDD bracket	2
1656303100	Terminal block*3P	1
1652006700-01	Terminal block*20P	2
1652007247-01	Terminal block*3P	2
1960066407T000	1U rackmount ear	2
1960040525N003	Handle bracket	2

Ordering Information

Part Number	Description
ITA-2111-00A1E	Intel Atom E3845 CPU, 4G onboard memory, single AC/DC power input, 1U rackmount

Optional Accessories

Part Number	Description
1700025366-01	Power cable: 3P terminal block -> AC-IN Jack, 10cm

ITA-2211

Intel® Atom™ E3845 2U Fanless System; EN 50121-4 Compliant for Railway Applications



Features

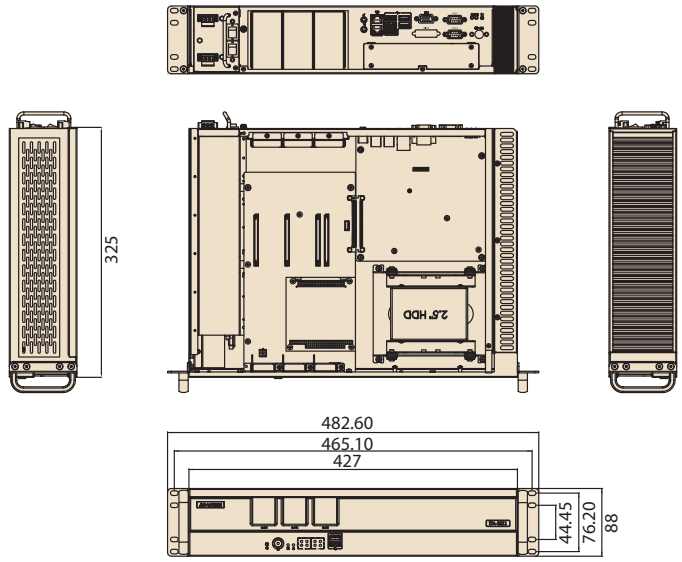
- Built-in Intel® Atom™ E3845 quad-core processor, 1.91 GHz
- 4 GB of DDR3 memory onboard
- 2U fanless rackmount system
- Supports 3 x ITA-EM modules for I/O expansion
- Supports Easy-Swap power module
- Up to 26 GbE or 26 Serial ports with ITA-EM modules
- Compliant with EN 50121-4 for railway applications

System Specifications

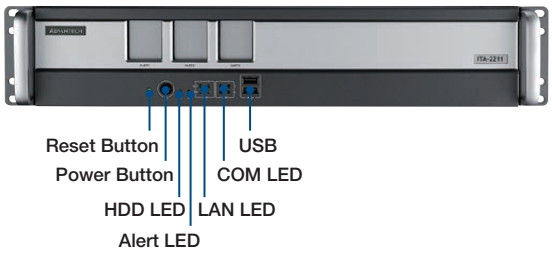
Processor System	CPU	Intel® Atom™ E3845 quad-core processor		
	Max. Speed	1.91 GHz		
	L2 Cache	2 MB		
	BIOS	AMI® SPI 64 Mb		
Memory	Technology	Dual-channel DDR3 1333		
	Max. Capacity	Onboard 4 GB (up to 8 GB with SODIMM)		
Graphics	Chipset	Intel® Gen 7 Graphics (542 MHz)		
	VRAM	Shared system memory up to 256 MB SDRAM		
	Dual Display	1 x VGA and 1 x DVI-D Single channel maximum: 1920 x 1080 @ 60 Hz Dual channel maximum: 1920 x 1080 @ 60 Hz		
Ethernet	Interface	10/100/1000 Mbps		
	Controller	2 x Intel® I210-IT		
	Connector	2 x RJ-45		
Storage	SSD	1 x mSATA slot (optional with SATA2)		
	HDD	1 x 3.5" or 2 x 2.5" HDD bay		
I/O Interface	VGA	1		
	DVI-D	1		
	LAN	2		
	USB	6 x USB 2.0 and 1 x USB 3.0		
	Serial	2 x DB9 (RS-232/422/485)		
	PS/2	1		
	Audio	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in		
Expansion Slots	ITA-EM	3		
	PCI104	1		
	Mini PCIe	1		
Power Module		Single Power Module	Dual Power Module	
	Input Range	100 ~ 240 V_{AC}/110 V_{DC}	Dual 100 ~ 240 V_{AC}/110 V_{DC}	
	Connector	1 x 3-pin terminal block (5.08 mm)	2 x 3-pin terminal block (5.08 mm)	
	Wattage (60 °C)	110 W	110 W (load balance)	
Watchdog Timer	Output	System Reset		
	Interval	Programmable 1 ~ 255 sec/min		
Environment		Operating (with SSD)	Operating (with HDD)	Non-Operating
	Temperature	-25 ~ 60 °C	0 ~ 40 °C	-40 ~ 85 °C
Physical Characteristics	Dimensions (W x H x D)	427 x 88 x 325 mm (16.81" x 3.46" x 12.79")/482.6 x 88 x 344.77 mm (19" x 3.46" x 13.57") with mounting kits		
Certification	EMC	CE/FCC Class A		
	Safety	UL, CB, CCC		
	Compliance	EN 50121-4, Level-4 EMS		

Dimensions

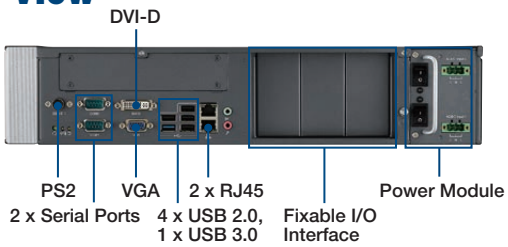
Unit: mm



Front View



Rear View



ITA-EM I/O Module and Power Module

ITA-EM I/O modules provide optional LAN, CAN & Serial port expansion, see below:





Packing List

Part Number	Description	Quantity
200K221000	Startup manual	1
206K221000	Driver CD	1
1700020513-01	SATA cable, 7 pin	2
1700017929	SATA power cable, 4 pin	1
1700022322-01	SATA power cable, 5 pin	1
1990001365	HDD rubber	4
1960018229N100	2.5" HDD bracket	2
1656303100	Terminal block, 3 pin	2
1960000406T004	2U rackmount ear	2
1960021557S000	Handle bracket	2

Ordering Information

Part Number	Description
ITA-2211-00A1E	Intel Atom E3845, 4G onboard memory, single AC/DC power input, 2U rackmount
ITA-2211-10A1E	Intel Atom E3845, 4G onboard memory, dual AC/DC power input, 2U rackmount
ITA-2211-20A1E	Intel Atom E3845, 4G on board memory, single AC-IN jack, 2U rackmount
ITA-2211-30A1E	Intel Atom E3845, 4G on board memory, dual AC-IN jack, 2U rackmount

Optional Accessories

Part Number	Description
ITA-EM-SR21-10A1E	8-port RS-232/422/485 ITA-EM module
ITA-EM-SR21-00A1E	8-port RS-232/422/485 ITA-EM module with 2.5KV isolation
ITA-EM-NC21-C0A1E	8-port GbE ITA-EM module with RJ45 connector
ITA-EM-NC22-C0A1E	4-port GbE ITA-EM module with RJ45 connector
ITA-EM-NC22-F0A1E	4-port GbE ITA-EM module with SFP connector
ITA-EM-NC23-00A1E	2-port GbE and 2-port CAN ITA-EM module
1700025366-01	Power cable: 3P terminal block -> AC-IN Jack, 10cm

ITA-2231

Intel® 6th Generation Core™ i Processor 2U Fanless System; EN 50121-4 Compliant for Railway Applications



Features

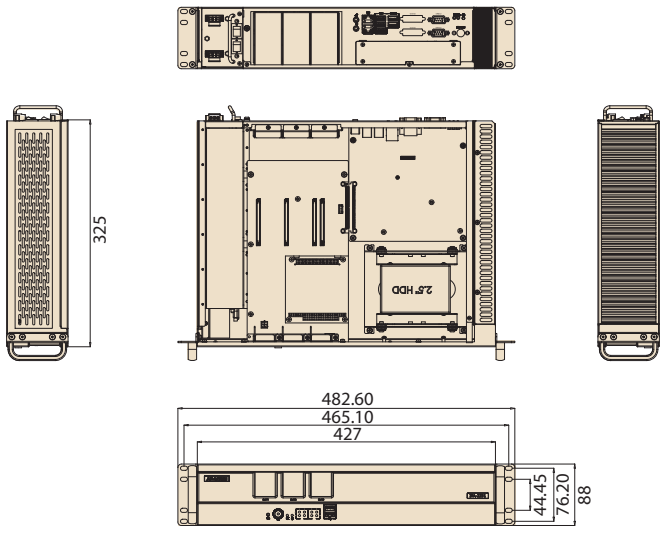
- Built-in Intel® Core™ i7-6822EQ quad-core processor, 2.0GHz
- 16GB of DDR4 memory onboard
- 2U fanless rackmount system
- Supports 3 ITA-EM modules for I/O expansion
- Supports Easy-Swap power module
- Up to 26 GbE or 26 Serial ports with ITA-EM modules
- Compliant with EN 50121-4 for railway applications

System Specifications

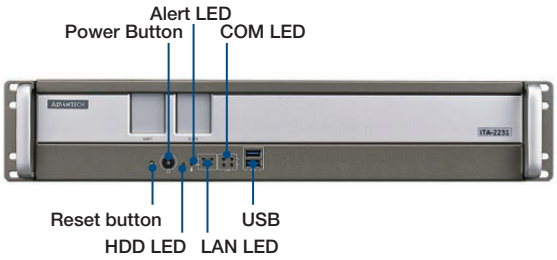
Processor System	CPU	Intel® Core™ i7-6822EQ quad-core processor		
	Max Speed/Turbo Boost	2.0/2.8 GHz		
	L3 Cache	8 MB		
	Chipset	QM170		
	BIOS	AMI® SPI 128 Mb		
Memory	Technology	Dual-channel DDR4 2133		
	Max. Capacity	Onboard 16 GB (Up to 32 GB with SODIMM)		
Graphics	Chipset	Intel® HD Graphics 530		
	VRAM	Shared system memory up to 512 MB SDRAM		
	Dual display	1 x DVI-I and 1 x DVI-D Single channel maximum: 1920 x 1200 @ 60 Hz Dual channel maximum: 1920 x 1200 @ 60 Hz		
Ethernet	Interface	10/100/1000 Mbps		
	Controller	1 x Intel® I219IT, 1 x Intel® I210IT		
	Connector	2 x RJ-45		
Storage	SSD	1 x M.2 (with SATA interface)		
	HDD	2 x 3.5" or 3 x 2.5" HDD bay		
I/O Interface	DVI-I	1		
	DVI-D	1		
	LAN	2		
	USB	4 x USB 3.0, 3 x USB 2.0		
	Serial	2 x DB9 (RS-232/422/485) with 2.5KV Isolation		
	Audio	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in		
Expansion Slots	ITA-EM	3		
	PCI104	1		
	Mini PCIe	1		
Power module		Single Power Module	Dual Power Module	
	Input Range	100 ~ 240 V_{AC}/110 V_{DC}	Dual 100 ~ 240 V_{AC}/110 V_{DC}	
	Connector	1 x 3pin 5.08mm Terminal Block	2 x 3pin 5.08mm Terminal Block	
	Wattage (60 °C)	110 W	110W (Load Balance)	
Watchdog Timer	Output	System Reset		
	Interval	Programmable 1~255 sec/min		
Environment		Operating (With SSD)	Operating (With HDD)	Non-Operating
	Temperature	-25 ~ 60 °C	0 ~ 40 °C	-40 ~ 85 °C
Physical Characteristics	Dimensions (W x H x D)	427 x 88 x 325 mm (16.81" x 3.46" x 12.79")/482.6 x 88 x 344.77 mm (19" x 3.46" x 13.57") with mounting kits		
Certification	EMC	CE/FCC Class A		
	Safety	UL, CB, CCC, BSMI		
	Compliance	EN 50121-4, Level 4 EMS		

Dimensions

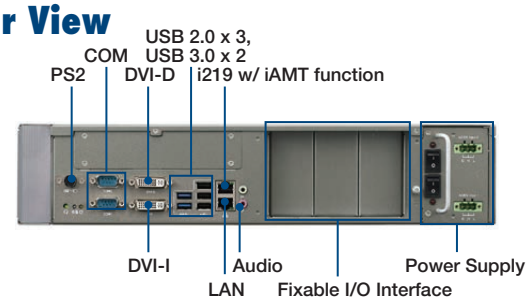
Unit: mm



Front View

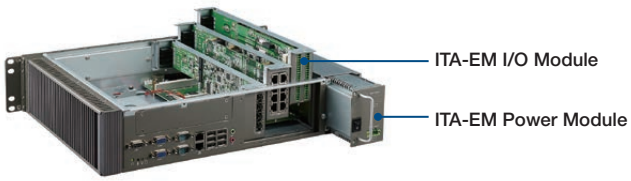


Rear View



ITA-EM I/O Module & Power Module

ITA-EM I/O modules provide optional LAN & Serial port expansion, see below:





Packing List

Part No.	Description	Quantity
2001223100	Startup manual	1
206K223100	Driver CD	1
1700008941	SATA cable*7P	2
1700017929	SATA power cable*4P	1
1700022322-01	SATA power cable*5P	1
1990001365	HDD rubber	4
1960018229N100	2.5" HDD bracket	2
1656303100	Terminal block*3P	2
1960018229N100	2U Rack mount ear	2
1960021557S000	Handle bracket	2

Ordering Information

Part No.	Description
ITA-2231-00A1E	Intel Core i7, 16G on board DDR, Single AC/DC power input, 2U Rackmount RAID 0/1/5
ITA-2231-10A1E	Intel Core i7, 16G on board DDR, Dual AC/DC power input, 2U Rackmount RAID 0/1/5
ITA-2231-20A1E	Intel Core i7, 16G on board DDR, Single AC-IN jack input, 2U Rackmount RAID 0/1/5
ITA-2231-30A1E	Intel Core i7, 16G on board DDR, Dual AC-IN jack input, 2U Rackmount RAID 0/1/5

Optional Accessories

Part No.	Description
ITA-EM-SR21-10A1E	8-port RS-232/422/485 ITA-EM module
ITA-EM-SR21-00A1E	8-port RS-232/422/485 ITA-EM module with 2.5KV isolation
ITA-EM-NC21-C0A1E	8-port GbE ITA-EM module with RJ45 connector
ITA-EM-NC22-C0A1E	4-port GbE ITA-EM module with RJ45 connector
ITA-EM-NC22-F0A1E	4-port GbE ITA-EM module with SFP connector
ITA-EM-NC23-00A1E	2-port GbE and 2-port CAN ITA-EM module
1700025366-01	Power cable: 3P terminal block -> AC-IN Jack, 10cm

ITA-5612

Intel® Atom™ E3950 Fanless Compact System; EN 50155 Compliant for Railway Applications



Features

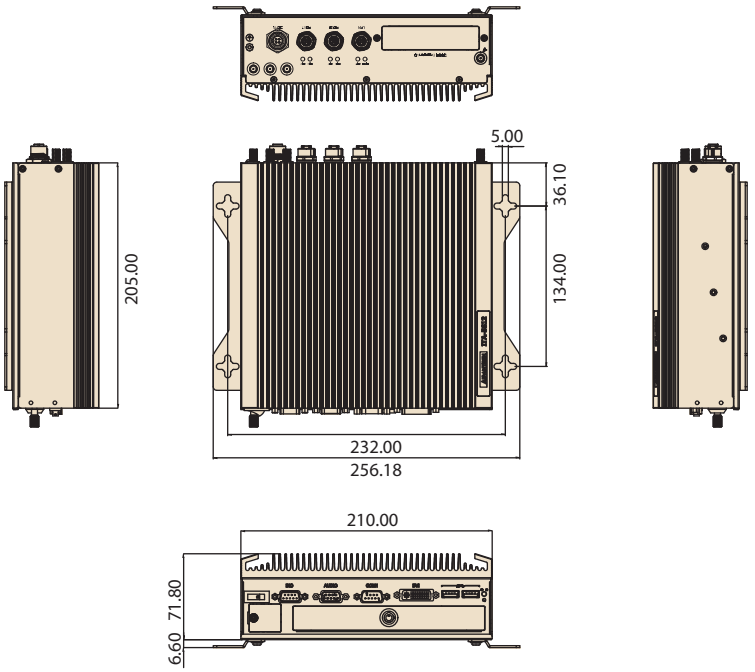
- Built-in Intel® Atom™ X7-E3950 quad-core processor
- Fanless computer for railway vehicle compact system for rolling stock applications, fully compliant with EN 50155
- Satisfies temp. standard: EN 50155 TX (-40 ~ 70 °C) and IEC 61373 body mount class B
- Compliant with EN 50121-3-2 EMC test standard
- Ruggedized connectors (M12) used for communication and power ports
- Supports Easy-swap SSD module

Specifications

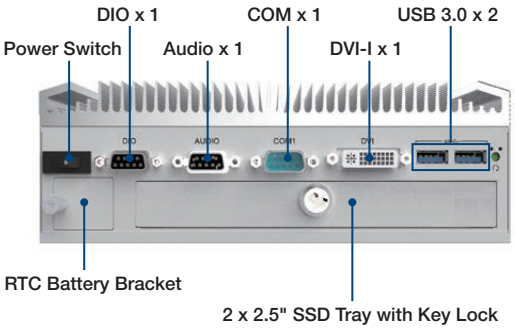
Processor System	CPU	Intel® Atom™ X7-E3950 quad-core processor, TDP 12W	
	Max Speed	Up to 2.0 GHz	
	L2 Cache	2MB	
	BIOS	AMIR SPI 64 Mb	
Memory	Technology	on board 4G memory, DDR3L 1600MHz	
	Capacity	Onboard 4 GB (up to 8 GB with SODIMM)	
Graphics	Chipset	Intel® HD Graphics 505	
	Display ports	1 x DVI-I	
Ethernet	Controller	3 x Intel® I210-IT	
	Interface	10/100/1000 Mbps	
	Connector	Up to 3 x M12 X-coded(F)	
Storage	SSD/SSD	2 x 2.5" SSD	
	mSATA	1 x mSATA socket (optional with SATA2)	
Others	GPS	1 (optional)	
Front I/O	USB3.0	2 x USB3.0 with Type A	
	Serial Port	1 x DB9, RS-232/422/485 with 2KV Isolation, supports auto-flow control	
	Display	1 x DVI-I (Optional to DVI-D+VGA via Y cable)	
	Audio	1 x DB9, 1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in	
	Digital I/O	1 x 8 bit GPIO	
Rear I/O	LAN	2x LAN or 1 x LAN+2 x POE with M12 X-coded(F)	
	Expansion	1 x iDoor bracket	
Expansion Slots	Mini PCIe	1 x Mini PCIe with 1 x SIM slot	
Power Input	Input Voltage	DC 24V input compliant with EN50155 class S2/C1 (Optional DC 48/72/110V input)	
	Connector	1 x M12 S-coded(M) 4-pin	
Watch Dog	Output	System reset	
	Interval	Programmable 1 ~ 255 sec/min	
Environment		Operating	Storage
	Temperature	-40 ~ 70 °C	-40 ~ 85 °C
	Relative Humidity	5~ 95% @ 40 °C non-condensing	0 ~ 95% @ 40 °C non-condensing
	Maximum vibration	2Grms (5-500Hz), 1Grms (5-500Hz)	2Grms
	Maximum shock	20G w/ SSD, DOM; 10G w/ HDD	30G
Mechanical	Dimensions (W x H x D)	210 x 71.8 x 205 mm (8.27" x 2.83" x 8.07")/256.18 x 78.4 x 205 mm (10.08" x 3.09" x 8.07") with mounting kits	
	Installation	Wall-mount by mounting bracket	
Certification	EMC	CE/FCC Class A, CCC, BSMI	
	Safety	UL, CB, CCC, BSMI	
EN50155 Compliance	Ambient Temperature	EN 50155 Tx (-40 ~ 70 °C)	
	Shock and Vibration	IEC 61373 body mount class B	
	Interruptions of Voltage Supply	Class S2	
	Supply Change Over	Class C1	
	EMC	EN 50121-3-2	

Dimensions

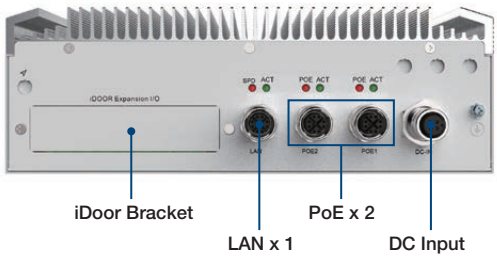
Unit: mm



Front View



Rear View



Ordering Information

Part Number	CPU	Memory	Ethernet (M12/ x-code/8-pin/ Female)	POE (M12/ x-code/8-pin/ Female)	USB3.0 (Type A)	mini-PCIe	Storage	mSATA	COM	DVI-I	GPS
ITA-5612-00A1	X7-E3950	4GB on board + 1 SODIMM socket	2	0	2	1	2 x 2.5" SSD	optional	1	1	Yes
ITA-5612P-00A1	X7-E3950	4GB on board + 1 SODIMM socket	1	2	2	0	2 x 2.5" SSD	optional	1	1	No

Optional Accessories

M12 Connector (Must purchase separately)

Part Number	Description
1700026952-01	M12 S-coded, 4-pin, female, for power input
1700026951-01	M12 X-coded, 8-pin Male, LAN

M12 Cable (Must purchase separately)

Part Number	Description
1700025857-21	Power cable: M12 S-code-> 2pin Terminal Block,10cm
1700026432-21	LAN cable: M12 x-code-> RJ45,10cm

ITA-5831

Intel® 6th Generation Core™ i Processor Fanless System; EN 50155 Compliant for Railway Applications



Features

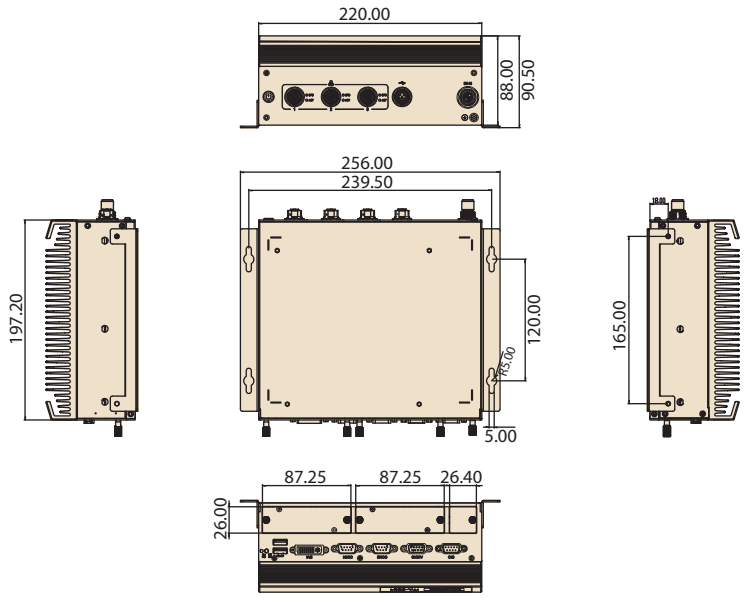
- Intel® Core™ i7-6822EQ platform with QM170
- Fanless computer for railway vehicle applications, fully compliant with EN 50155
- Satisfies temp. standard: EN 50155 TX (-40 ~ 70 °C) and IEC 61373 body mount class B
- Compliant with EN 50121-3-2/ EN 50121-4 EMC test standard
- Ruggedized connectors (M12) used for communication and power ports
- Supports easy-swap storage module and I/O module

Specifications

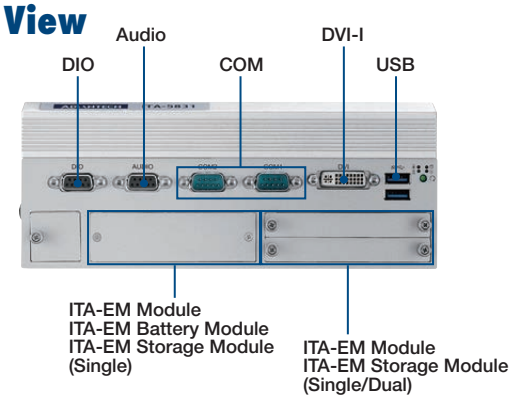
System Chipset	CPU	Intel® Core™ i7-6822EQ	i5-6442EQ	Celeron G3902E
	Base frequency/Turbo Boost	2.0/2.8 GHz	1.9/2.7GHz	1.6 GHz/ NA
	L3 Cache	8M	6M	2M
	Cores/Threads	4C/8T	4C/4T	2C/2T
	Chipset	QM170		
	BIOS	AMI SPI 16M byte		
Memory	Technology	8GB on board memory, DDR4 2133MHz		
	SODIMM slot	1		
	Max. Capacity	Up to 16G		
Graphics	Chipset	Intel Integrated Graphics GT2, Celeron with GT1		
	VRAM	Shared with system memory to 512MB (Default setting)		
	Display	DVI-I: 1920 x 1200 @ 60Hz		
I/O	USB	2 x USB3.0 with Type A 1 x USB2.0 with M12 A-coded(F) 4-pin		
	Serial Port	2 x DB9, RS-232/422/485 with 2KV Isolation, supports auto-flow control		
	DIO	1 x DB9, 4-bit DI/ 4-bit DO with 2KV Isolation		
	Display	1 x DVI-I (Optional to DVI-D+VGA via Y cable)		
	Audio	1 x DB9, 1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in		
Ethernet	Controller	Intel i210-IT (Industrial)		
	Interface	10/100/1000 Mbps		
	Connector	Up to 3 x M12 X-coded(F)		
Storage	HDD/SSD easy-swap module	1 x ITA-EM-ST61-00A1E,supports 2 x 7mm/2.5" SSD (Default) Max to 3 x 2.5" SSD, 2 of 7mm SSD and 1 of 7mm/9.5mm SSD		
	mSATA	1 x mSATA slot on board		
Others	Mini PCIe	3 x Mini PCIe Socket (Full size)		
	SIM card	2 x SIM slot		
LED & Button	LED	1 x power, 1 x storage, 1 x alert, 1 x BATT		
	Button	1 x power on/off switch 1 x reset button		
Power	Input Voltage	DC 24V input compliant with EN50155 class S2/C1(Optional DC 48/72/110V input)		
	Connector	1 x M12 S-coded(M) 4-pin		
Watchdog Timer	Output	System reset		
	Interval	Programmable 1~255 sec/min		
Environment		Operating (with Industrial SSD/CF)		Non-operating
	Temperature	-40 ~ 70 °C		-40 ~ 85 °C
	Humidity	5% ~ 95% @ 40 °C (Non-Condensing)		
Mechanical	Dimension (W x H x D)	220 x 88 x 198.8 mm (8.65" x 3.46" x 7.83")/256 x 92 x 198.8 mm (10.08" x 3.62" x 7.83") with mounting kits		
	Install	Wall-mount by mounting bracket		
	Ingress Protection	IP40 rating, IP50 with I/O caps		
Certification	EMC	CE/FCC Class A, CCC		
	Safety	UL, CB, CCC		
EN 50155 Compliance	Ambient Temperature	EN 50155 TX (-40 ~ 70 °C)		
	Shock and Vibration	IEC 61373 body mount class B		
	Interruptions of Voltage Supply	Class S2: 10 ms interruptions		
	Supply Change Over	Class C1: at 0,6 Un during 100 ms without interruptions		
	EMC	EN 50121-3-2/EN 50121-4		

Dimensions

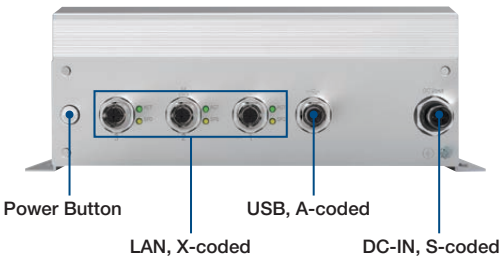
Unit: mm



Front View



Rear View



Ordering Information

Voltage (M12-S-Male)	Part Number	Processor	Ethernet (M12-X-Female)	USB2.0 (M12-A-Female)	USB3.0 (Type A)	mini-PCIe	2.5" SSD	mSATA slot	COM	Digital I/O	Display
24V_{DC}	ITA-5831-L7A1E	i7-6822EQ	3	1	2	3	Up to 3	1	2 (Default)	4DI/4DO	DVI-I
	ITA-5831-L5A1E	i5-6442EQ	3	1	2	3	Up to 3	1	2 (Default)	4DI/4DO	DVI-I
	ITA-5831-L0A1E	G3902E	3	1	2	3	Up to 3	1	2 (Default)	4DI/4DO	DVI-I
48V_{DC}	ITA-5831-M7A1E	i7-6822EQ	3	1	2	3	Up to 3	1	2 (Default)	4DI/4DO	DVI-I
	ITA-5831-M5A1E	i5-6442EQ	3	1	2	3	Up to 3	1	2 (Default)	4DI/4DO	DVI-I
72V_{DC}	ITA-5831-H7A1E	i7-6822EQ	3	1	2	3	Up to 3	1	2 (Default)	4DI/4DO	DVI-I
	ITA-5831-H5A1E	i5-6442EQ	3	1	2	3	Up to 3	1	2 (Default)	4DI/4DO	DVI-I
	ITA-5831-H0A1E	G3902E	3	1	2	3	Up to 3	1	2 (Default)	4DI/4DO	DVI-I
110V_{DC}	ITA-5831-S7A1E	i7-6822EQ	3	1	2	3	Up to 3	1	2 (Default)	4DI/4DO	DVI-I
	ITA-5831-S5A1E	i5-6442EQ	3	1	2	3	Up to 3	1	2 (Default)	4DI/4DO	DVI-I
	ITA-5831-S0A1E	G3902E	3	1	2	3	Up to 3	1	2 (Default)	4DI/4DO	DVI-I

ITA-5831 Series supports various I/O expansion. For more specifications, please contact your distributor or sales representative.

Optional List

Part Number	Description
ITA-EM-SR61-00A1E	Easy-swap module, 4 x RS232/422/485 with 2KV Isolation
ITA-EM-CN61-00A1E	Easy-swap module, 2 x CAN ports with 2KV Isolation
ITA-EM-PE61-00A1E Note1	2 PoE: Each port max to 7.5W @ 52V_{DC} 1 PoE: Up to 15.4W @ 52V_{DC}
ITA-EM-ST61-00A1E	Dual Easy-swap storage tray, support 2 x 2.5" SSD (7mm)
ITA-EM-ST61-10A1E	Single Easy-swap storage tray, support 1 x 2.5" SSD (7mm/9.5mm)

Note1: Only supports EN 50155 T2 class: -40 ~ 55 °C

Part Number	Description
1700025295-31	USB cable: M12 A-code-> USB Type A,10cm
1700026432-21	LAN cable: M12 x-code-> RJ45,10cm
1700025857-21	Power cable: M12 S-code-> 2pin Terminal Block,10cm
1700004713	Y cable: DVI 29P(M) -> DVI 29P(F)+D-SUB 15P(F), 18cm

ITA-5231

Intel® 6th Generation Core™ i Processor Fanless System; EN 50155 Compliant for Railway Applications



Features

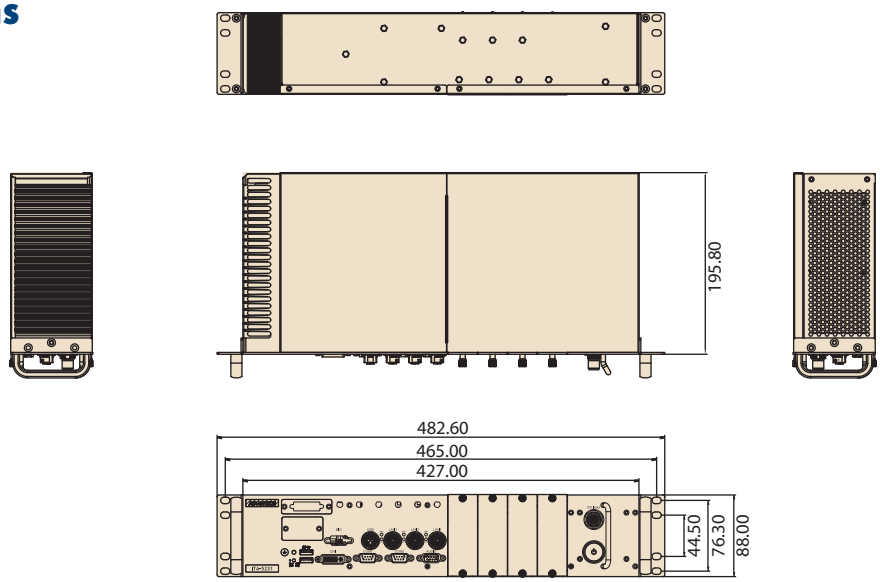
- H-series, 6th generation Intel® Core™ i3/i5/i7 platform with QM170
- Fanless computer for railway vehicle applications, fully compliant with EN 50155
- Satisfies temp. standard: EN 50155 TX (-40 ~ 70 °C) and IEC 61373 body mount class B
- Compliant with EN 50121-3-2/ EN 50121-4 EMC test standard
- Ruggedized connectors (M12) used for communication and power ports
- Supports easy-swap storage module and I/O module

Specifications

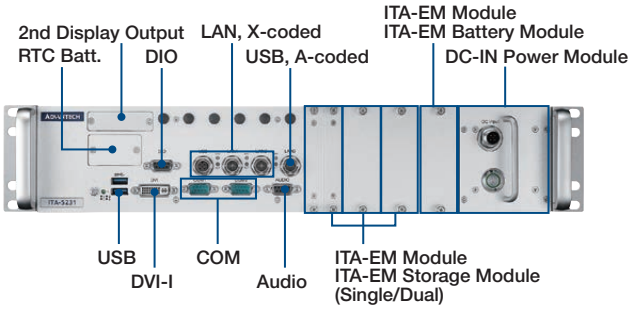
System Chipset	CPU	Intel® Core™ i7-6822EQ	i5-6442EQ	Celeron® G3902E
	Base Frequency/Turbo Boost	2.0/2.8 GHz	1.9/2.7GHz	1.6GHz/NA
	L3 Cache	8M	6M	2M
	Cores/Threads	4C/8T	4C/4T	2C/2T
	Chipset	QM170		
	BIOS	AMI SPI 128Mb		
Memory	Technology	8GB on board memory, DDR4 2133MHz		
	SODIMM slot	1		
	Max. Capacity	Up to 16GB		
Graphics	Chipset	Intel® HD Graphics 530, Celeron with Intel® HD Graphics 510		
	VRAM	Shared with system memory up to 512MB		
	Display	DVI-I: 1920x1200 @ 60Hz		
I/O	USB	2 x USB3.0 with Type A 1 x USB2.0 with M12 A-coded(F) 4-pin		
	Serial Port	2 x DB9, RS-232/422/485 with 2KV Isolation, supports auto-flow control		
	DIO	1 x DB9, 4-bit DI/ 4-bit DO with 2KV Isolation		
	Main Display	1 x DVI-I (Optional to DVI-D+VGA via Y cable)		
	Audio	1 x DB9, 1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in		
Ethernet	Controller	Intel i210-IT /i219LM (Industrial)		
	Interface	10/100/1000 Mbps		
	Connector	3 x M12 X-coded(F), LAN1 with i219LM and LAN2/LAN3 with i210-IT		
Storage	HDD/SSD easy-swap module	1 x ITA-EM-ST51-00A1E, supports 2 x 2.5" SSD (Default setting) Max to 4 x 2.5" SSD (7mm/9.5mm)		
	mSATA	1 x mSATA slot on board		
Others	Mini PCIe	3 x Mini PCIe Socket (Full size)		
	SIM card	2 x SIM slot		
LED & Button	LED	1 x power, 1 x storage, 1 x alert,1 x BATT		
	Button	1 x power on/off switch 1 x reset button		
Power	Input Voltage	DC 24V input compliant with EN50155 class S2/C2 (optional DC 48/72/110V input)		
	Connector	1 x M12 S-coded(M) 4-pin		
Watchdog Timer	Output	System reset		
	Interval	Programmable 1~255 sec/min		
Environment		Operating (with Industrial/Wide-temperature SSD/mSATA)		Non-operating
	Temperature	-40 ~ 70 °C		-40 ~ 85 °C
	Humidity	5% ~ 95% @ 40 °C (Non-condensing)		
Mechanical	Dimension (W x H x D)	427 x 88 x 195.8 mm (16.81" x 3.46" x 7.71")/482.6 x 88 x 221.3 mm (19" x 3.46" x 8.71") with mounting kits		
	Install	Rack-mounting		
Certification	EMC	CE/FCC Class A, CCC		
	Safety	UL, CB, CCC		
EN 50155 Compliance	Ambient Temperature	EN 50155 TX (-40 ~ 70 °C)		
	Shock and Vibration	IEC 61373 body mount class B		
	Interruptions of Voltage Supply	Class S2		
	Supply Change Over	Class C2		
	EMC	EN 50121-4		

Dimensions

Unit: mm



Front View



Ordering Information

Voltage (M12-S-Male)	Part Number	Processor	Ethernet (M12-X-Female)	USB2.0 (M12-A-Female)	USB3.0 (Type A)	mini-PCIe	2.5" SSD	mSATA slot	COM	DIO	Display
24V_{DC}	ITA-5231-L7A1E	i7-6822EQ	3	1	2	3	Up to 4	1	2(Default)	4DI/4DO	DVI-I
	ITA-5231-L5A1E	i5-6442EQ	3	1	2	3	Up to 4	1	2(Default)	4DI/4DO	DVI-I
	ITA-5231-L0A1E	G3902E	3	1	2	3	Up to 4	1	2(Default)	4DI/4DO	DVI-I
48V_{DC}	ITA-5231-M7A1E	i7-6822EQ	3	1	2	3	Up to 4	1	2(Default)	4DI/4DO	DVI-I
72/110V_{DC}	ITA-5231-S7A1E	i7-6822EQ	3	1	2	3	Up to 4	1	2(Default)	4DI/4DO	DVI-I
	ITA-5231-S5A1E	i5-6442EQ	3	1	2	3	Up to 4	1	2(Default)	4DI/4DO	DVI-I

ITA-5231 Series supports various I/O expansion. For more specifications, please contact your distributor or sales representative.

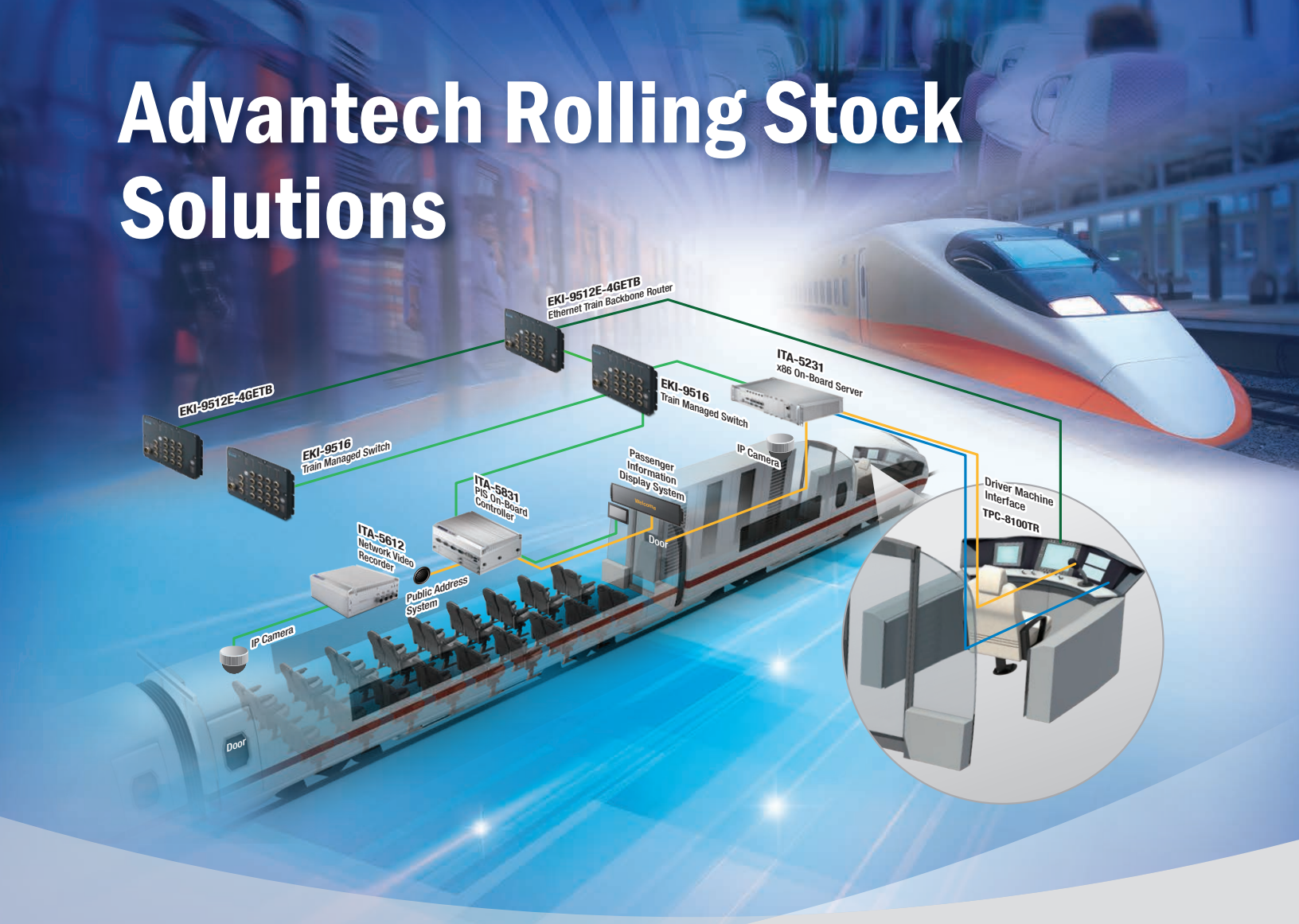
Optional List

Part Number	Description
ITA-EM-SR51-00A1E	Easy-swap module, 4 x RS232/422/485 with 2KV Isolation
ITA-EM-CN51-00A1E	Easy-swap module, 2 x CAN ports with 2KV Isolation
ITA-EM-PE51-00A1E Note1	2 PoE: Each port max to 7.5W @ 52V_{DC} 1 PoE: Up to 15.4W @ 52V_{DC}
ITA-EM-ST51-00A1E	Easy-swap storage tray, support 2 x 2.5" SSD (7mm/9.5mm)
ITA-EM-ST51-10A1E	Easy-swap storage tray, support 1 x 2.5" SSD (7mm/9.5mm/15mm)

Note1: Only supports EN 50155 T2 class: -40 ~ 55 °C

P/N	Description
1700025295-31	USB cable: M12 A-code-> USB Type A,10cm
1700026432-21	LAN cable: M12 x-code-> RJ45,10cm
1700025857-21	Power cable: M12 S-code-> 2pin Terminal Block,10cm
1700004713	Y cable: DVI 29P(M) -> DVI 29P(F)+D-SUB 15P(F), 18cm

Advantech Rolling Stock Solutions



ADVANTECH

Enabling an Intelligent Planet

Advantech's Rolling Stock solution provides fully customization and CTOS service to fulfills a wide range of applications as it guarantee reliable performance under railway harsh environment for passenger information and display system, train WLAN/WWAN connectivity, on-board infotainment and CCTV surveillance systems.



ITA-5231
Intel 6th Generation On Board Server



ITA-5831
Intel® 6th Generation Core™ i Processor EN 50155 Fanless System



ITA-5612
Intel® Atom™ E3950 Modular Rail Computer



ARS-P3800
38" Stretched EN 50155 Panel Computer



TPC-8100TR
10.4" EN50155 DMI Railway Panel Computer



EKI-9512/16 Series
EN50155 Managed Ethernet Switch and train router

www.advantech.com

intel IoT Solutions Alliance Premier

4

Intelligent Inspection Systems

Selection Guide		***4-2***
AIIS-1200P (GigE PoE) **AIIS-1200U (USB 3.0)**	Palm Size Vision System, Supports Intel® Braswell SoC, 2-CH Camera Interface for GigE PoE or USB 3.0	***4-4***
AIIS-3400P (PoE) **AIIS-3400U (USB 3.0)**	Compact Vision System, Intel® 6th/7th Gen Core i CPU, 4-CH Camera Interface for GigE PoE or USB 3.0	***4-6***
AIIS-3410P (PoE) **AIIS-3410U (USB 3.0)**	Compact Vision System, Intel® 6th/7th Gen Core i CPU, 4-CH Camera Interface for GigE PoE or USB 3.0, PCIe expansion slot	***4-8***
AIIS-5410P	Fanless Vision System with Intel® Core™ i Processor, 4-Channel GigE PoE Camera Interface, and PCIe expansion slot	***4-10***
PCE-USB4 (4 ports) **PCE-USB8 (8 ports)**	PCI Express x4, 4/8-Port USB 3.0 Expansion Card	***4-11***
PCE-GIGE2 (2 ports) **PCE-GIGE4 (4 ports)**	PCI Express x4, 2/4-Port GbE Expansion Card	***4-12***

To view all of Advantech's Intelligent Inspection Systems, please visit www.advantech.com/products.



Intelligent Inspection Systems







Model name		AIIS-1200P	AIIS-1200U	AIIS-5410
Form Factor		Compact	Compact	Compact
Processor System	Chipset	-	-	QM170
	CPU	Intel Braswell N3160/N3710 SoC	Intel Braswell N3160/N3710 SoC	Intel 6th Generation Core i7/i5 BGA1440 processor
	Core	4	4	4
	Cache	2 MB	2 MB	8MB
	Memory	DDR3L 1600 On board 8GB	DDR3L 1600 On board 8GB	Dual Channel DDR4 1866/2133 MHz (non-ECC) Max 32GB
Graphic	Graphics controller	Integrated Intel HD Graphics	Integrated Intel HD Graphics	Integrated Intel HD Graphics
	VRAM	Shared system memory is subject to OS	Shared system memory is subject to OS	Shared system memory is subject to OS
Expansion	PCIe x16	-	-	-
	PCIe x8	-	-	1
	PCIe x4	-	-	-
	PCIe x1	-	-	-
	PCI*	-	-	1x riser card
	mini PCIe	1	1	1
Storage	HDD Bay	1 x Internal 2.5" HDD Bay	1 x Internal 2.5" HDD Bay	2 x Internal 2.5 HDD Bay
	mSATA	1	1	1
	CFast	-	-	1
	RAID	-	-	RAID 0/1
Ethernet	Ethernat interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	1 x Intel I210	1 x Intel I210	2 x Intel I210
Machine vision connector	interface	2 x channel PoE	2 x channel USB3.0	4x channel PoE
	Controller	Intel I210	Renesas uPD720202	Intel I210
Front I/O	Display	VGA	VGA	VGA + DVI-D
	LAN	1	1	2
	USB	2 x USB3.0	2 x USB3.0	8 x USB3.0
	COM	1 x RS-232/422/485 1 x RS-232	1 x RS-232/422/485 1 x RS-232	-
	PS/2	-	-	-
	Audio	-	-	Line-out/Mic-in
Rear I/O	Display	1 x DP	1 x DP	-
	LAN	-	-	-
	USB	2 x USB3.0	2 x USB3.0	-
	COM	-	-	2 x RS-232/422/485
	PS/2	-	-	-
	Audio	Line-out & Mic-in	Line-out & Mic-in	-
	DIO	8 Channels (isolated)	8 Channels (isolated)	8 Channels (isolated)
Watchdog timer output	Output	System reset	System reset	System reset
	Interval	Programmable 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min
Power Supply	Output Wattage	-	-	-
	Input range	DC 9-36V	DC 9-36V	DC 9-36V
	Remote power switch	1	1	1
Cooling	System fan	-	-	-
	Air filter	-	-	-
Physical Characteristics	Dimensions (W x H x D)	137 x 58 x 118 mm (5.39" x 2.28" x 4.65")	137 x 58 x 118 mm (5.39" x 2.28" x 4.65")	235 x 88 x 188 mm (9.25" x 3.46" x 7.4")
	Weight	1.1Kg	1.1Kg	2.9 kg
Page		4-4	4-4	4-10






AIIS-3400P	AIIS-3400U	AIIS-3410P	AIIS-3410U
Compact	Compact	Compact	Compact
H110	H110	H110	H110
Intel 6th/7th generation Core i CPU (LGA1151)	Intel 6th/7th generation Core i CPU (LGA1151)	Intel 6th/7th generation Core i CPU (LGA1151)	Intel 6th/7th generation Core i CPU (LGA1151)
Max.4	Max.4	Max.4	Max.4
Max. 8 MB	Max. 8 MB	Max. 8 MB	Max. 8 MB
Dual Channel DDR4 1866/2133 MHz (non-ECC) Max 32GB	Dual Channel DDR4 1866/2133 MHz (non-ECC) Max 32GB	Dual Channel DDR4 1866/2133 MHz (non-ECC) Max 32GB	Dual Channel DDR4 1866/2133 MHz (non-ECC) Max 32GB
Integrated Intel HD Graphics	Integrated Intel HD Graphics	Integrated Intel HD Graphics	Integrated Intel HD Graphics
Shared system memory is subject to OS	Shared system memory is subject to OS	Shared system memory is subject to OS	Shared system memory is subject to OS
-	-	-	-
-	-	1	1
-	-	-	-
-	-	-	-
-	-	1x riser card (optional)	1x riser card (optional)
-	-	1	1
1 x Internal 2.5 HDD Bay	1 x Internal 2.5 HDD Bay	1 x Internal 2.5 HDD Bay	1 x Internal 2.5 HDD Bay
-	-	-	-
1	1	1	1
-	-	-	-
10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
LAN1: Intel i219LM LAN2: Intel i210	LAN1: Intel i219LM LAN2: Intel i210	LAN1: Intel i219LM LAN2: Intel i210	LAN1: Intel i219LM LAN2: Intel i210
4 x channel PoE	4 x channel USB	4 x channel PoE	4 x channel USB
Intel I210	Renesas µPD720202	Intel I210	Renesas µPD720202
VGA + DVI-D	VGA + DVI-D	VGA + DVI-D	VGA + DVI-D
2	2	2	2
4 x USB3.0	4 x USB3.0	4 x USB3.0	4 x USB3.0
2 x RS-232/422/485	2 x RS-232/422/485	2 x RS-232/422/485	2 x RS-232/422/485
-	-	-	-
Line-in/Line-out/Mic-in	Line-in/Line-out/Mic-in	Line-in/Line-out/Mic-in	Line-in/Line-out/Mic-in
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
8 Channels (isolated)	8 Channels (isolated)	8 Channels (isolated)	8 Channels (isolated)
System reset	System reset	System reset	System reset
Programmable 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min	Programmable 1 ~ 255 sec/min
-	-	-	-
DC 19-24V	DC 19-24V	DC 19-24V	DC 19-24V
1	1	1	1
1 (6cm / 27.7 CFM)	1 (6cm / 27.7 CFM)	1 (8cm / 57 CFM)	1 (8cm / 57 CFM)
-	-	-	-
230 x 70 x 175 mm (9.06" x 2.76" x 6.89")	230 x 70 x 175 mm (9.06" x 2.76" x 6.89")	240 x 97 x 190 mm (9.45" x 3.82" x 7.48")	240 x 97 x 190 mm (9.45" x 3.82" x 7.48")
1.8 kg	1.8 kg	2.4 kg	2.4 kg
4-6	4-6	4-8	4-8

AIIS-1200P (GigE PoE)
AIIS-1200U (USB 3.0)

Palm Size Vision System, Supports Intel® Braswell SoC, 2-CH Camera Interface for GigE PoE or USB 3.0



Features

- Intel® Braswell Celeron N3160/Pentium N3710 SoC
- AIIS-1200P: 2-CH GbE PoE (Power over Ethernet)
  - Powered device auto detection and classification
  - IEEE 802.3af compliant and supports IEEE 1588
  - Compatible with GigE Cameras
- AIIS-1200U: 2-CH USB 3.0 with dedicated controller
  - Maximize the USB3.0 bandwidth for multi-cameras
  - Compatible with USB 3.0 Cameras
- Compact & thoughtful design
  - Volume less than 0.9 Liter
  - Isolated Digital I/O
  - Wall or DIN-Rail mounting kit (optional)

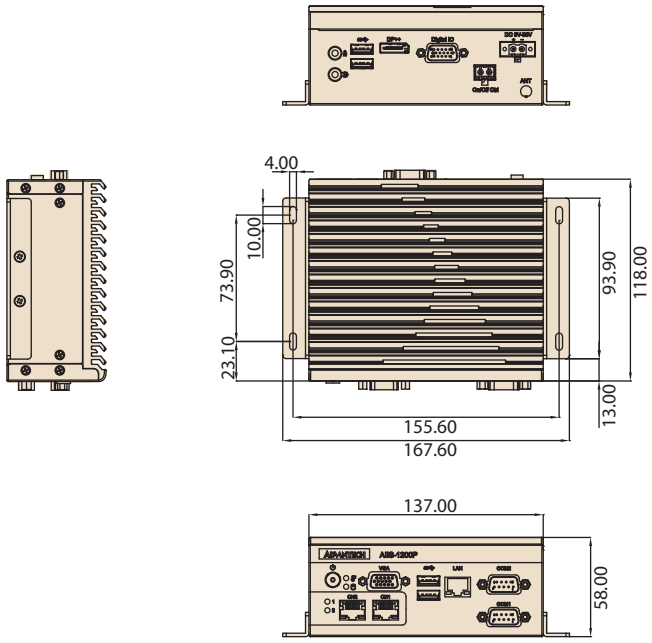
Specifications

Processor System	CPU	Intel Celeron N3160	Intel Pentium N3710
	Core	4	4
	Base Frequency	1.6GHz	1.6GHz
	L2 Cache	2MB	2MB
	Chipset	N/A	N/A
	BIOS	AMI 64Mb SPI Flash	
Memory	Technology	Dual Channel DDR3L 1600 MHz (Non ECC)	
	Max. Capacity	On board 8GB	
Graphics	Chipset Integrated	Integrated Intel HD Graphics	
Camera Interface PoE (AIIS-1200P)	Controller	CH1 ~ CH2: Intel i210	
	Compliant	IEEE 802.3af	
	Power Output	15.4W per Channel	
Camera Interface USB 3.0 (AIIS-1200U)	Controller	CH1 ~ CH2: µPD720202	
	Compliant	USB 3.0	
	Power Output	4.5W per Channel	
Ethernet	Interface	10/100/1000 Mbps	
	Controller	Intel i210	
Expansion	Mini PCIe	1 x Full-size (Supports mSATA)	
Storage	Internal 2.5" HDD Bay	1 (max. 9.5 mm height)	
	mSATA	1 (via mini PCIe slot)	
Front I/O	Display	VGA	
	USB	2 USB3.0	
	Serial	COM 1 (RS-232/422/485 via BIOS setting; RS-485 with auto-flow control) COM 2 (RS-232)	
Rear I/O	Audio	Line-out & Mic-in	
	Display	DP++	
	USB	2 USB 3.0	
	DIO	8 Channels (4 isolated DI and 4 isolated DO channels)	
Watchdog Timer	Output	System reset	
	Interval	Programmable 1 ~ 255 sec/min	
Power Requirement	Power Type	AT/ATX	
	Power Input Voltage	9 V_{DC} ~ 36 V_{DC}	
Miscellaneous	LED Indicators	Power, HDD, temperature	
	Control	Power on/off switch	
Environment		Operating	Non-operating
	Temperature	HDD: 0 ~ 40 °C (32 ~ 104 °F) with 0.7m/s air flow SSD: -10 ~ 60 °C (-4 ~ 140 °F) with 0.7m/s air flow	-40 ~ 70 °C (-40 ~ 158 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration	HDD: 0.5G, random, 5~500Hz, 3 axes, 1 hr/axis SSD: 3G, random, 5~500Hz, 3 axes, 1 hr/axis	2G, sine wave, 5~500Hz, 3 axes, 1 hr/axis
	Shock	HDD: 10G, half sine wave, 11 ms duration SSD: 50G, half sine wave, 11 ms duration	
Physical Characteristics	Dimension (W x H x D)	137 x 58 x 118 mm (5.39" x 2.28" x 4.65")	
	Weight	1.1Kg (2.425lb)	

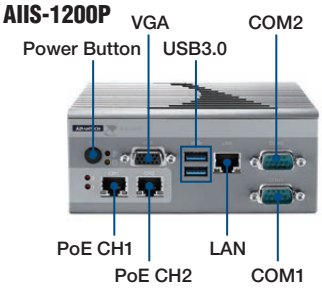
* Depends on CPU

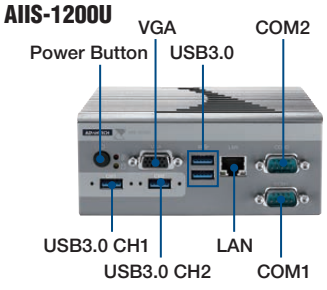
Dimensions

Unit: mm

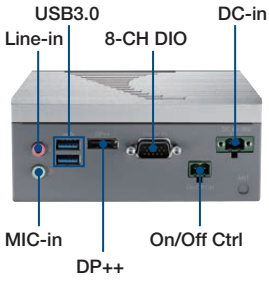


Front View





Rear View



Ordering Information

Part Number	CPU	Camera Interface	Display	USB 3.0	Isolated DIO	COM1 (RS-232/422/485)	COM2 (RS-232)
AIIS-1200P-S6A1E	Intel Celeron N3160	2-CH GigE PoE	VGA + DP++	4	8-CH	1	1
AIIS-1200U-S6A1E	Intel Celeron N3160	2-CH USB 3.0	VGA + DP++	4	8-CH	1	1
AIIS-1200P-16A1E	Intel Pentium N3710	2-CH GigE PoE	VGA + DP++	4	8-CH	1	1
AIIS-1200U-16A1E	Intel Pentium N3710	2-CH USB 3.0	VGA + DP++	4	8-CH	1	1

Packing List

Items	Part Number	Quantity
Bare System	AIIS-1200	1
Startup Manual	2001120001	1
Driver CD	2061120001	1
Wallmount Bracket	1960052226N002	2
2-pin Phoenix DC power connector	1652002205	1
DIN-Rail Bracket	1950016395T102	1
2-Pin PW on/off Ctrl connector	1652002207	1

Optional Accessories

Part Number	Description
1700001524	Power Cord 3P UL 10A 125V 180cm
170203183C	POWER Cord 3P Europe (WS-010+WS-083)183cm
1700021376-01	Power Cord 3P PSE 7A 125V 250cm(IEC60320-C5)
96PSA-A65W19P2-2	DC19 Adapter 65Watt
1700023217-01	8-CH DIO Cable for Wiring Board
ADAM-3925-AE	8-CH DIO DB-25 Wiring Terminal, DIN-rail Mount

Note: If there is no 9~36V_{DC} source in your facility, this adapter is required to power on the system

Embedded OS

Part Number	Description
2070014323	img Win10Ent AIIS-1200 x64 V10.0.10240.0 10MUI
2070014481	Img WES7P AIIS-1200 x64 V5.8.0 10MUI

AIIS-3400P (PoE)
AIIS-3400U (USB 3.0)

Compact Vision System, Intel® 6th/7th Gen Core i CPU, 4-CH Camera Interface for GigE PoE or USB 3.0



Features

- Intel 6th/7th generation Core i CPU (LGA1151)
- AIIS-3400P: 4-CH GbE PoE (Power over Ethernet)
  - Powered device auto detection and classification
  - IEEE 802.3af compliant, supports IEEE 1588
  - Compatible with GigE cameras
- AIIS-3400U: 4-CH USB 3.0 with dedicated controller
  - Maximize the USB3.0 bandwidth for multi-cameras
  - Compatible with USB 3.0 cameras
- Compact & thoughtful design
  - Volume less than 3 Liter
  - Isolated Digital I/O
  - Internal USB 2.0 connector

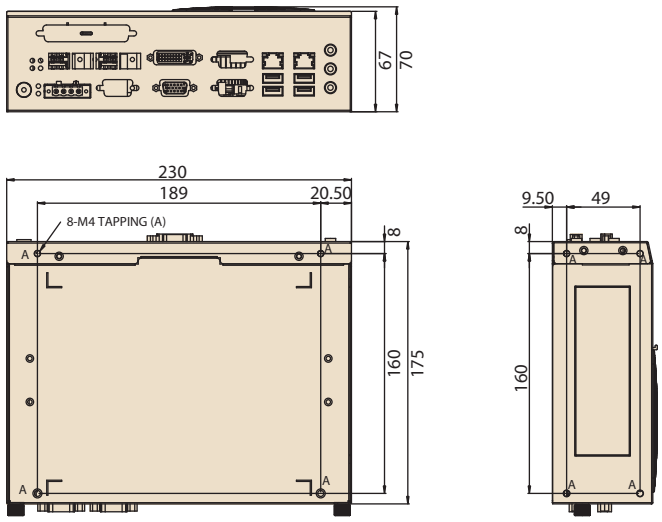
Specifications

		6th generation CPU					7th generation Core i CPU		
Processor System	CPU	i7-6700	i5-6500	i3-6100	G4400	G3900	i7-7700	i5-7500	i3-7101E
	Core	4	4	2	2	2	4	4	2
	Base Frequency	3.4 GHz	3.2 GHz	3.7 GHz	3.3 GHz	2.8 GHz	3.6GHz	3.5GHz	3.9GHz
	L3 Cache	8 MB	6 MB	4 MB	3 MB	2 MB	8MB	6MB	3MB
	Chipset	H110							
	BIOS	AMI 128Mb SPI Flash							
Memory	Technology	Dual Channel DDR4 1866/2133 MHz (non-ECC)							
	Max. Capacity	32 GB (16 GB per DIMM)							
	Socket	260-pin SO-DIMM							
Graphics	Chipset Integrated	Integrated Intel HD Graphics							
Ethernet	Interface	10/100/1000 Mbps							
	Controller	LAN1: Intel i219LM, LAN2: Intel i210AT (Both support Wake on LAN)							
Camera Interface PoE (AIIS-3400P)	Controller	CH1 ~ CH4: Intel i210							
	Compliant	IEEE 802.3af							
	Power Output	15W per channel / 30W for 1 & 2 channel (Note: selected by BIOS)							
Camera Interface USB 3.0 (AIIS-3400U)	Controller	CH1 ~ CH4: µPD720202							
	Compliant	USB 3.0							
	Power Output	4.5W per Channel							
Storage	Internal 2.5" HDD Bay	1 (max. 9.5 mm height)							
	CFast	1							
Front I/O	Display	VGA + DVI-D							
	USB	4 USB3.0							
	Serial	2 (RS-232/422/485, via BIOS setting ; RS-485 support auto-flow control)							
	Isolated DIO (Default)	4 DI and 4 DO Channels							
	Isolated DIO (Optional)	AIIS-E730-AE (16-CH DI, 16-CH DO) High output driving capacity (500 mA max./channel) Interrupt capable for all 16 DI channel Supports 3~30 V_{DC} isolated input channel Dry/Wet contact support High-voltage isolation on output channels (2,500 V_{DC})							
Internal Connector	USB	1 USB 2.0 connector							
Watchdog Timer	Output	System reset							
	Interval	Programmable 1 ~ 255 sec/min							
Power Requirement	Power Type	ATX/AT							
	Power Input Voltage	19 V_{DC} ~ 24 V_{DC} (± 10%)							
	Minimum Power Input	DC 19-24V @ 8-6.3A							
	Power Adapter	AC to DC, DC24V/9.16A, 220W (Optional)							
Cooling	System Fan	1 (6cm / 27.7 CFM)							
Miscellaneous	LED Indicators	Power, HDD, temperature							
	Control	Power on/off switch							
Environment		Operating				Non-operating			
	Temperature	0 ~ 45 °C (32 ~ 113 °F)*				-40 ~ 70 °C (-40 ~ 158 °F)			
	Humidity	10 ~ 95% @ 40 °C, non-condensing				10 ~ 95% @ 60 °C, non-condensing			
	Vibration	0.5Grms, random, 5~500Hz, 3 axes, 1 hr/axis				2G, sine wave, 5~500Hz, 3 axes, 1 hr/axis			
	Shock	10G, half sine wave, 11 ms duration							
Physical Characteristics	Dimension (W x H x D)	230 x 70 x 175 mm (9.06" x 2.76" x 6.89")							
	Weight	1.8 kg (3.97 lb) (w/o CPU cooler)							

* Depends on CPU

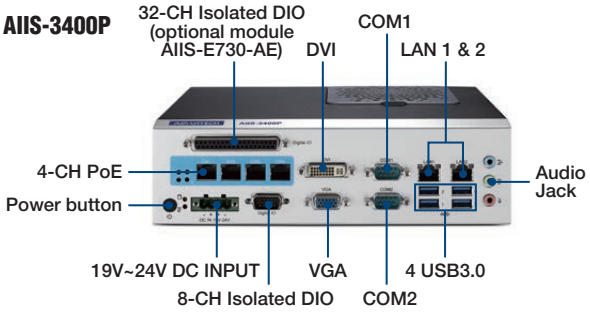
Dimensions

Unit: mm

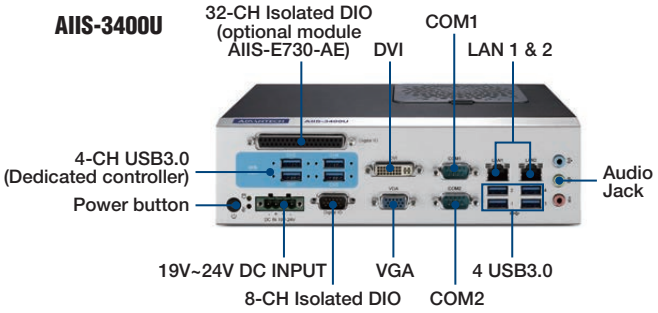


Front View

AIIS-3400P



AIIS-3400U



Ordering Information

Part Number	Camera Interface	Display	USB 3.0	Isolated DIO	COM 232/422/485
AIIS-3400P-00A1E	4-CH GigE PoE	VGA+DVI-D	4	8-CH	2
AIIS-3400U-00A1E	4-CH USB 3.0	VGA+DVI-D	4	8-CH	2

Packing List

Items	Part Number	Quantity
Bare System	AIIS-3400	1
Startup manual (EN/CN)	2001340000	1
Startup manual (TC)	2001340010	1
Driver CD	2061340011	1
Wallmount Bracket	1960014487T006	2
Rubber Foot	1990006571S000	4
CPU Cooler	1960060620N001	1
4-pin Phoenix DC power connector	1652003234	1
2-pin Phoenix DC power connector	1652002205	1

Embedded OS

Part Number	Description
2070014568	img WES7P AIIS-3400/3410 x64 V5.8.0 10MUI

*7th generation CPU only supports Win10 OS

Optional Accessories

Part Number	Description
98R2124000E	DIN-Rail Bracket
96PSA-A220W24P4-1	220Watt DC24 Adapter
1702002600	Power cord 3-pin UL/CSA (USA) 125 V 10A 1.83 M 180D
1700022940-01	Power cord PSE 7A 125 V 3P 3 m DAC-ST01
1702002605	Power cord 2P (France) 10A/16A 220 V 1.83 M 90D
1700023217-01	8-CH DIO Cable for Wiring Board
ADAM-3925-AE	8-CH DIO DB-25 Wiring Terminal, DIN-rail Mount
AIIS-DIO32-00A1E	Isolated DIO module, 32-CH, 9-pin USB interface
AIISE7301701-T	Isolated DIO module, 32-CH, MIO with PCIex1 interface
PCL-10137-1E	32-CH DIO Cable 1M for Wiring Terminal
ADAM-3937-BE	32-CH DIO DB-37 Wiring Terminal, DIN-rail Mount

Note: If there is no 19~24V_{DC} source in your facility, this adapter is required to power on the system

AIIS-3410P (PoE)
AIIS-3410U (USB 3.0)

Compact Vision System, Intel® 6th/7th Gen Core i CPU, 4-CH Camera Interface for GigE PoE or USB 3.0, PCIe expansion slot



Features

- Intel 6th/7th generation Core i CPU (LGA1151)
- AIIS-3410P: 4-CH GbE PoE (Power over Ethernet)
  - Powered device auto detection and classification
  - IEEE 802.3af compliant, supports IEEE 1588
  - Compatible with GigE cameras
- AIIS-3410U: 4-CH USB 3.0 with dedicated controller
  - Maximize the USB3.0 bandwidth for multi-cameras
  - Compatible with USB 3.0 cameras
- Compact & thoughtful design
  - PCIe or PCI extension compatibility
  - Isolated Digital I/O
  - Internal USB 2.0 connector

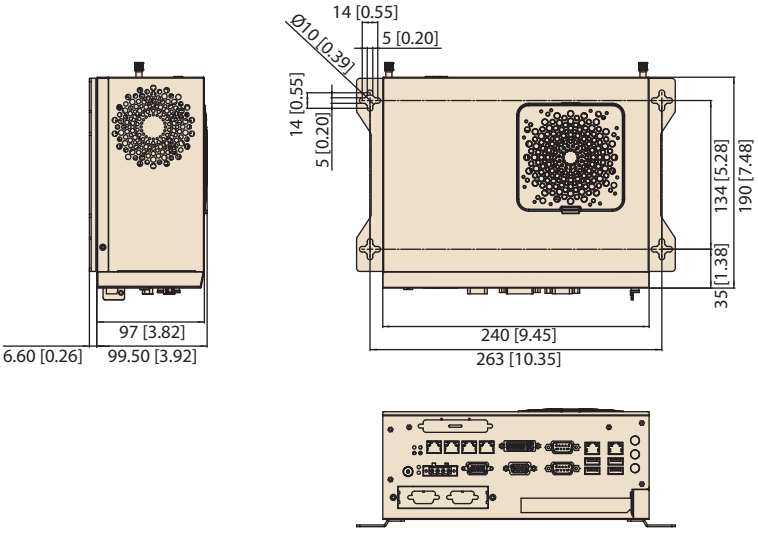
Specifications

		6th generation CPU					7th generation Core i CPU		
Processor System	CPU	i7-6700	i5-6500	i3-6100	G4400	G3900	i7-7700	i5-7500	i3-7101E
	Core	4	4	2	2	2	4	4	2
	Base Frequency	3.4 GHz	3.2 GHz	3.7 GHz	3.3 GHz	2.8 GHz	3.6GHz	3.5GHz	3.9GHz
	L3 Cache	8 MB	6 MB	4 MB	3 MB	2 MB	8MB	6MB	3MB
	Chipset	H110							
	BIOS	AMI 128Mb SPI Flash							
Memory	Technology	Dual Channel DDR4 1866/2133 MHz (non-ECC)							
	Max. Capacity	32 GB (16 GB per DIMM)							
	Socket	260-pin SO-DIMM							
Graphics	Chipset Integrated	Integrated Intel HD Graphics							
Ethernet	Interface	10/100/1000 Mbps							
	Controller	LAN1: Intel i219LM, LAN2: Intel i210AT (Both support Wake on LAN)							
Camera Interface PoE (AIIS-3410P)	Controller	CH1 ~ CH4: Intel i210							
	Compliant	IEEE 802.3af							
	Power Output	15W per channel / 30W for 1 & 2 channel (Note: selected by BIOS)							
Camera Interface USB 3.0 (AIIS-3410U)	Controller	CH1 ~ CH4: µPD720202							
	Compliant	USB 3.0							
	Power Output	4.5W per Channel							
Storage	Internal 2.5" HDD Bay	1 (max. 9.5 mm height)							
	CFast	1							
Expansions	PCIe	1 (PCIe x16 slot with x8 signal), full height: 111.15 mm, length: max. 172 mm							
	miniPCIe	1 (USB2.0/SATA)							
	i-door	1							
Front I/O	Display	VGA + DVI-D							
	USB	4 USB3.0							
	Serial	2 (RS-232/422/485, via BIOS setting ; RS-485 support auto-flow control)							
	Isolated DIO (Default)	4 DI and 4 DO Channels							
	Isolated DIO (Optional)	AIIS-E730-AE (16-CH DI, 16-CH DO) High output driving capacity (500 mA max./channel) Interrupt capable for all 16 DI channel Supports 3~30 V_{DC} isolated input channel Dry/Wet contact support High-voltage isolation on output channels (2,500 V_{DC})							
Internal Connector	USB	1 USB 2.0 connector							
Watchdog Timer	Output	System reset							
	Interval	Programmable 1 ~ 255 sec/min							
Power Requirement	Power Type	ATX/AT							
	Power Input Voltage	19 V_{DC} ~ 24 V_{DC} (± 10%)							
	Minimum Power Input	DC 19-24V @ 8-6.3A							
	Power Adapter	AC to DC, DC24V/9.16A, 220W (Optional)							
Cooling	System Fan	1 (8 cm/57 CFM)							
Miscellaneous	LED Indicators	Power, HDD, temperature							
	Control	Power on/off switch							
Environment		Operating				Non-operating			
	Temperature	0 ~ 45 °C (32 ~ 113 °F)*				-40 ~ 70 °C (-40 ~ 158 °F)			
	Humidity	10 ~ 95% @ 40 °C, non-condensing				10 ~ 95% @ 60 °C, non-condensing			
	Vibration	0.5Grms, random, 5~500Hz, 3 axes, 1 hr/axis				2G, sine wave, 5~500Hz, 3 axes, 1 hr/axis			
	Shock	10G, half sine wave, 11 ms duration							
Physical Characteristics	Dimension (W x H x D)	240 x 97 x 190 mm (9.45" x 3.82" x 7.48")							
	Weight	2.4 kg (5.29 lb) (w/o CPU cooler)							

* Depends on CPU

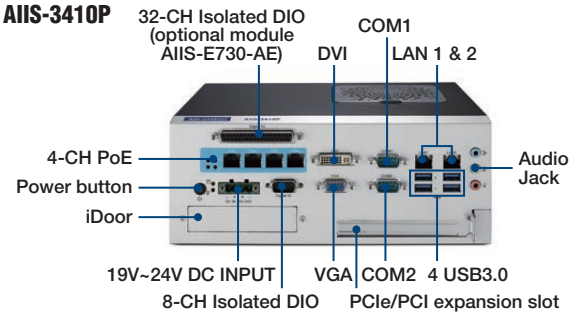
Dimensions

Unit: mm [inch]

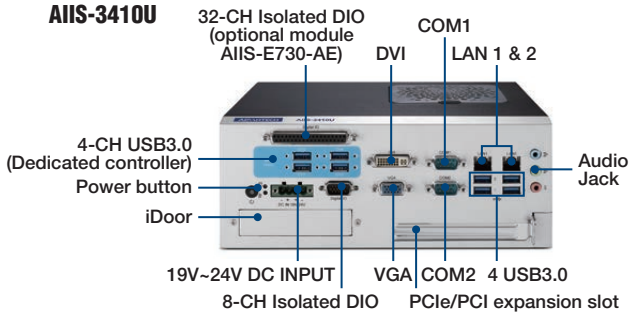


Front View

AIIS-3410P



AIIS-3410U



Ordering Information

Part Number	Camera Interface	Display	USB 3.0	Isolated DIO	COM 232/422/485	Expansion slot
AIIS-3410P-00A1E	4-CH GigE PoE	VGA+DVI-D	4	8-CH	2	1 PCIe x8 or 1 PCI*
AIIS-3410U-00A1E	4-CH USB 3.0	VGA+DVI-D	4	8-CH	2	1 PCIe x8 or 1 PCI*

* Optional PCI riser card

Packing List

Items	Part Number	Quantity
Bare System	AIIS-3410	1
Startup manual (EN/CN)	2001341000	1
Startup manual (TC)	2001341010	1
Driver CD	2061340011	1
Wallmount Bracket	1960014487T006	2
Hole Protector	1990022908S000	4
CPU Cooler	1960060620N001	1
4-pin Phoenix DC power connector	1652003234	1
2-pin Phoenix DC power connector	1652002205	1

Embedded OS

Part Number	Description
2070014568	img WES7P AIIS-3400/3410 x64 V5.8.0 10MUI

*7th generation CPU only supports Win10 OS

Optional Accessories

Part Number	Description
96PSA-A220W24P4-1	220Watt DC24 Adapter
1702002600	Power cord 3-pin UL/CSA (USA) 125 V 10A 1.83 M 180D
1700022940-01	Power cord PSE 7A 125 V 3P 3 m DAC-ST01
1702002605	Power cord 2P (France) 10A/16A 220 V 1.83 M 90D
1700023217-01	8-CH DIO Cable for Wiring Board
ADAM-3925-AE	8-CH DIO DB-25 Wiring Terminal, DIN-rail Mount
AIIS-DIO32-00A1E	Isolated DIO module, 32-CH, 9-pin USB interface
AIISE7301701-T	Isolated DIO module, 32-CH, MIO with PCIex1 interface
PCL-10137-1E	32-CH DIO Cable 1M for Wiring Terminal
ADAM-3937-BE	32-CH DIO DB-37 Wiring Terminal, DIN-rail Mount
9891341010E	PCI riser module for addtional PCI card

Note:
1. AIIS-3410 supports the i-door module (both MOS and PCM series). Visit the Advantech website for more information.
2. The PCM series module requires a bracket (P/N: 1960065854N001) that must be ordered separately.

AIIS-5410P

Fanless Vision System with Intel® Core™ i Processor, 4-Channel GigE PoE Camera Interface, and PCIe Slot



Features

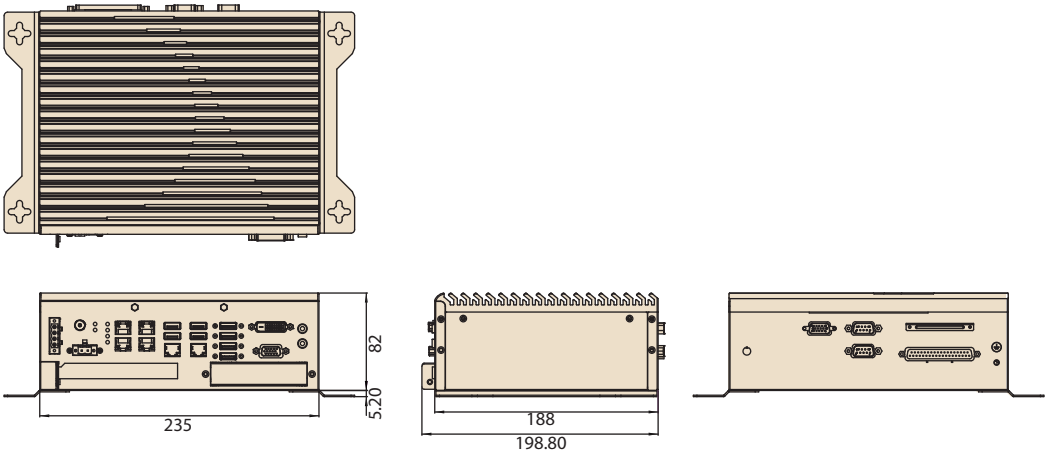
- Intel® 6th Generation Core™ i7/i5 BGA1440 processor
- Four-channel Gigabit Power over Ethernet (GbE PoE)
- Powered device auto detection and classification
- Compliant with IEEE 1588 and IEEE 802.3af standards
- Compatible with Gigabit Ethernet (GigE) cameras
- Wide input power range (9 ~ 36 V DC)
- Wide operating temperature range (-20 ~ 60 °C)
- Isolated digital I/O
- Internal USB dongle space with lock design
- Desk/wall mounting kit

Specifications

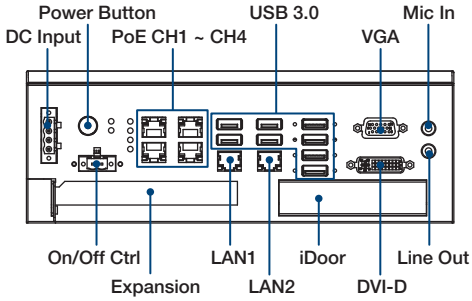
Processor System	CPU	i7-6822EQ	i5-6442EQ
	Core	4	4
	Base Frequency	2 GHz	1.9 GHz
	L3 Cache	8 MB	6 MB
	Chipset	QM170	
	BIOS	AMI 64 Mb SPI Flash	
Memory	Technology	Dual-channel DDR4 at 1866/2133 MHz (non ECC)	
	Max. Capacity	Equipped with 4 GB, can be expanded to a maximum of 32 GB	
	Socket	2 x 260-pin DDR4 SODIMM sockets (4 GB minimum and 16 GB maximum per socket)	
Graphics	Chipset	Integrated Intel® HD Graphics	
PoE	Controller	Intel® I210 Ethernet controller	
	Compliant	IEEE 802.3af	
	Power Output	15.4 W per channel	
Storage	Internal 2.5" HDD Bay	2 (1 with a maximum height of 9.5 mm and 1 with a maximum height of 15 mm)	
	CFast	1	
	mSATA	1 (via mini PCIe socket)	
Expansions	PCIe x8	1, full height: 111.15 mm, length: max. 167.65 mm	
	mini PCIe	1	
Ethernet	Interface	10/100/1000 Mbps	
	Controller	2 x Intel® I210 Ethernet controller	
Front I/O	Display	VGA and DVI-D	
	USB	8 x USB 3.0	
	Audio	1 x line-out, 1 x mic-in	
Rear I/O	Serial	2 x RS-232/422/485 via BIOS setup; RS-485 with auto-flow control	
	DI/O (Default)	Digital IO	
	Isolated DI/O (Optional)	AIIS-DIO32-00A1E (16 x DI/16 x DO) High-voltage isolation, up to 2,500 V_{DC} on all channels Dry/wet contact support Supports 5 ~ 60 V DC isolated input channels High-sink current for isolated output channels (100mA max. per channel) Interrupt handling and timer/counter capabilities	
Watchdog Timer	Output	System reset	
	Intervals	Programmable 1 ~ 255 sec/min	
Power Requirement	Power Type	ATX/AT	
	Input Voltage	9 ~ 36 V_{DC}	
	Power Adapter	150W (optional)	
Miscellaneous	LED Indicators	Power, HDD, Temperature	
	Controls	Power On/Off switch	
Environment		Operating	Non-operating
	Temperature	HDD: 0 ~ 40 °C with 0.7 m/s air flow SSD: -20 ~ 60 °C with 0.7 m/s air flow	-40 ~ 70 °C
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration	HDD: 1G, random, 5 ~ 500 Hz, 3 axes, 1 hr/axis SSD: 3G, random, 5 ~ 500 Hz, 3 axes, 1 hr/axis	2G, sine wave, 5 ~ 500 Hz, 3 axes, 1 hr/axis
	Shock	HDD: 10G, half sine wave, 11 ms duration SSD: 50G, half sine wave, 11 ms duration	
Physical Characteristics	Dimensions (W x H x D)	235 x 82 x 188 mm (9.25" x 3.22" x 7.4")	
	Weight	2.9 kg (6.39 lbs)	

Dimensions

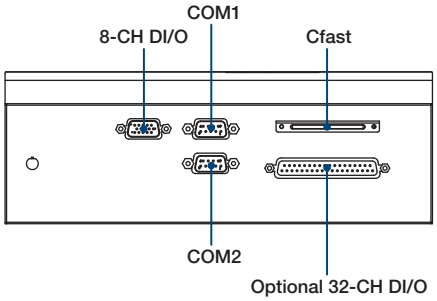
Unit: mm



Front View



Rear View



Ordering Information

Part Number	CPU	PoE Port	Display	USB 3.0	DI/DO	COM 232/422/485	Expansion Slot
AIIS-5410P-U0A1E	i7-6822EQ	4-channel	VGA+DVI	8	8-channel	2	1 PCIex8; 1 PCI*
AIIS-5410P-S9A1E	i5-6442EQ	4-channel	VGA+DVI	8	8-channel	2	1 PCIex8; 1 PCI*

Note : System default expansion slot is PCIex8. PCI needs to change the riser card and it is in accessory box.

Packing List

Items	Part Number	Quantity
Bare system	AIIS-5410P	1
Start-up manual (EN/CN/TC)	2001541000	1
Driver CD	2061750000	1
Wall mount bracket	1960070543N002	2
4-pin Phoenix DC power connector	1652003234	1
2-pin Phoenix DC power connector	1652005203	1
SATA cable	1700018971	2
SATA power cable	1700024372-01	2
PCI riser card	9691541010E	1

Embedded OS

Part Number	Description
2070014222	img WES7P AIIS-5410P x64 V5.6.6 10MUI

Optional Accessories

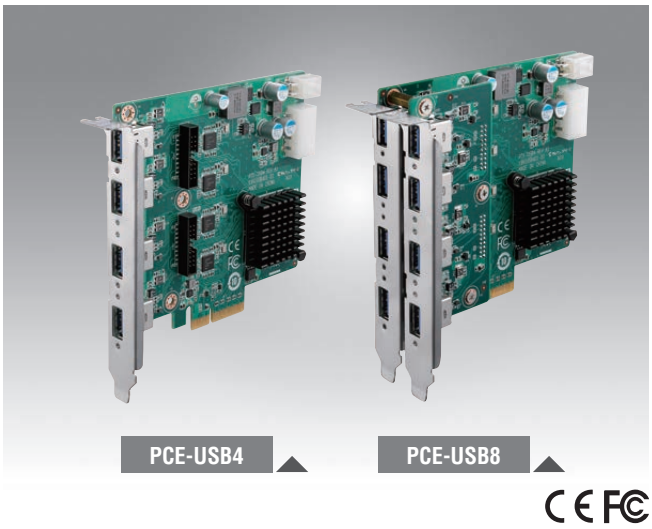
Part Number	Description
96PSA-A150W19P4-1	Adaptor AD 100 ~ 240 V 150 W 19 V
1702002600	Power cord 3-pin UL/CSA (USA) 125 V 10A 1.83 M 180D
1700022940-01	Power cord PSE 7A 125 V 3P 3 m DAC-ST01
1702002605	Power cord 2P (France) 10A/16A 220 V 1.83 M 90D
AIIS-DIO32-00A1E	Isolated D I/O module, 32-channel, 9-pin USB interface
PCL-10137-1E	32-channel D I/O cable (1 M) for wiring terminal
ADAM-3937-BE	32-channel DI/O DB-37 wiring terminal, DIN-rail mount
1700023217-01	8-CH DIO Cable for Wiring Board
ADAM-3925-AE	8-CH DIO DB-25 Wiring Terminal, DIN-rail Mount

Note:

1. MIC-7500 supports the i-door module (both MOS and PCM series). Visit the Advantech website for more information.
2. The PCM series module requires a bracket (P/N: 1960065854N001) that must be ordered separately.

PCE-USB4 (4 ports)
PCE-USB8 (8 ports)

PCI Express x4, 4/8-Port USB 3.0 Expansion Card



Features

- Four USB 3.0 host controllers
- Supports 1500mA Max. current per port
- Supports four or eight USB 3.0 ports
- Compliant with USB 3.0 specification and Intel® xHCI specification, revision 1.0
- PCI Express x4 interface
- Supports Microsoft Windows 7/8.1/10 and Linux operating systems

Introduction

PCE-USB4 is a 4-port PCIe x4 expansion card aimed at industrial imaging applications. Featuring four independent Renesas µPD720202 USB 3.0 host controllers, a Gen 2 PCI Express® x4 interface, and a per-port bandwidth of 5 Gbps when operating four ports simultaneously, PCE-USB4 delivers maximal per-port performance. PCE-USB4 features four USB 3.0 ports (for expansion, PCE-USB8 features eight USB 3.0 ports) with 1500 mA current to ensure stable power for external USB devices. PCE-USB4 is a high-bandwidth industrial-power expansion card designed for machine vision, factory automation, and medical applications, as well as any other applications that require high data transfer speeds.

Specifications

USB	Interface	PCI Express x4
	Connector	4 x USB 3.0 Type A (PCE-USB4-00A1E) 8 x USB 3.0 Type A (PCE-USB8-00A1E)
	Host Bus	4-lane Gen 2 PCIe interface, compliant with PCI Express Base Specification, Revision 2.0
	Controller	4 x Renesas µPD720202 host controllers Compliant with Universal Serial Bus 3.0 Specification and Intel® xHCI Specification, Revision 1.0
	Max. current	1500 mA maximum per port
	Data Transfer Rate	Super speed (5.0 Gbps)/high speed (480.0 Mbps)/full speed (12.0 Mbps)/low speed (1.5 Mbps)
Environment	Operating Temperature	0 ~ 60 °C
	Storage Temperature	-40 ~ 85 °C
	Dimensions (L x H)	118 x 111 mm (4.64" x 4.37")
	Certifications	CE/FCC

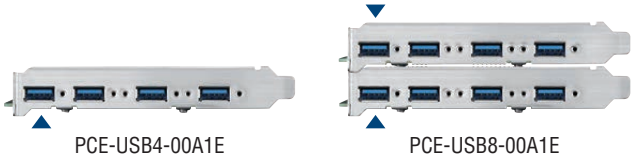
Ordering Information

Part Number	Description
PCE-USB4-00A1E	PCIe x4, 4-port USB 3.0 expansion card
PCE-USB8-00A1E	PCIe x4, 8-port USB 3.0 expansion card

Optional USB3.0 Cable

Part Number	Description
1700025427-01	USB 3.0 cable, 5 m, Micro B (locking) to Type A
1700025428-01	USB 3.0 cable, 3 m, Micro B (locking) to Type A
1700025429-01	USB 3.0 cable, 5 m, Micro B (locking) to Type A (locking)
1700025430-01	USB 3.0 cable, 3 m, Micro B (locking) to Type A (locking)

I/O View



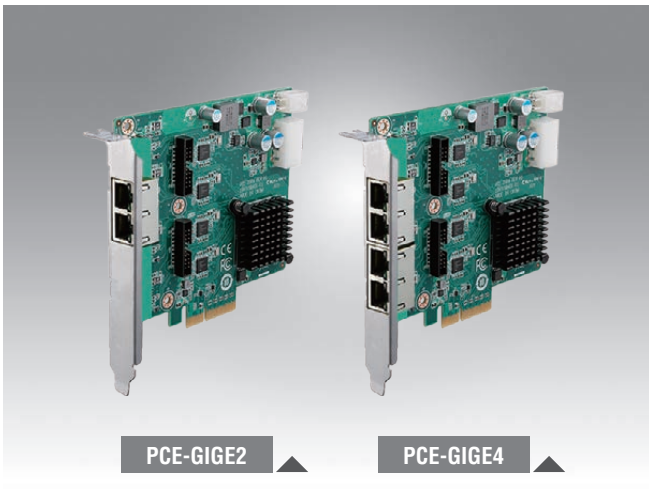
PCE-USB4-00A1E

PCE-USB8-00A1E

Note: Indicated USB3.0 port cannot support USB3.0 type A locking cable.

PCE-GIGE2 (2 ports)
PCE-GIGE4 (4 ports)

PCI Express x4, 2/4-Port GbE Expansion Card



CE FC

Features

- Intel Ethernet Controller i210
- Supports Wake-on-LAN function
- Supports two or four GbE LAN ports
- Supports PXE function
- PCI Express x4 interface
- Supports Microsoft Windows 7/8.1/10 and Linux operating systems

Introduction

PCE-GIGE4 is a 4-port PCIe x4 expansion card compliant with industrial cameras for machine vision applications. With powerful Intel Ethernet controller i210, PCE-GIGE2/4 can support Wake-on-LAN and PXE functions. PCE-GIGE2/4 is a multi ports GbE expansion card designed for machine vision, factory automation, surveillance or any other applications that require fast and stable data transmission.

Specifications

GIGE	Interface	PCI Express x4
	Connector	2 x RJ45 LAN ports (PCE-GIGE2-00A1E) 4 x RJ45 LAN ports (PCE-GIGE4-00A1E)
	Host Bus	4-lane Gen 2 PCIe interface, compliant with PCI Express Base Specification, Revision 2.0
	Controller	4 x Intel i210 Ethernet Controller
	Data Transfer Rate	10/100/1000MB/s
Environment	Operating Temperature	0 ~ 60 °C
	Storage Temperature	-40 ~ 85 °C
	Dimensions (L x H)	118 x 111 mm (4.64" x 4.37")
	Certifications	CE/FCC

Ordering Information

Part Number	Description
PCE-GIGE2-00A1E	PCIe x4, 2-port GbE expansion card
PCE-GIGE4-00A1E	PCIe x4, 4-port GbE expansion card

I/O View



PCE-GIGE2-00A1E



PCE-GIGE4-00A1E

Advantech AIIS, Your Intelligent Eyes

Full Range Machine Vision System



ADVANTECH

Enabling an Intelligent Planet

Advantech AIIS Series are closely aligned with Machine Automation applications such as Automated Optical Inspection (AOI), Wafer Inspection, and alignment inspection which heavily rely on machine vision. With PoE/USB3.0 Vision and rich I/O Interface, AIIS Series are characterized with performance computing and low power consumption, intelligent management, and extended product longevity. Our machine vision controllers, AIIS Series, save on space and make installation economical and easy—perfect for vision inspection applications. With a powerful CPU and built-in PoE/USB3.0 channels, AIIS Series enhance overall application by outstanding machine vision performance. With the latest Intel Core processors, Advantech deliver state-of-art computing and graphics performance.

AIIS Series Product Features

GiGE VISION USB VISION

Support main stream camera interface

Compact size for limited spaces

POINT GREY BASLER the power of sight

TOSHIBA TELI CORPORATION

Compliant vision camera partners

Speed & reliable transmission for image acquisition and analysis

www.advantech.com

intel IoT Solutions Alliance Premier

Advantech Headquarters
No. 1, Alley 20, Lane 26, Rueiguang Road,
Neihu District, Taipei 114, Taiwan, R. O. C.
Tel: 886-2-2792-7818
Fax: 886-2-2794-7304

5

Modular IPCs

Selection Guide		***5-2***
AiMC-3202	Micro Computer, Intel® Core™ i7/i5/i3 CPU, H110, 2 Expansions, 250W 80Plus PSU	***5-4***
AiMC-3422	Micro Computer, Intel® Core™ i7/i5/i3 CPU, H110, 4 Expansions, 300W 80Plus PSU	***5-6***
MIC-7300	Intel® Celeron N3350/ Atom x7 E3950 Processor	***5-8***
MIC-7500	Intel® 6th Generation Core™ i Compact Fanless System	***5-10***
MIC-7700	Intel® 6th/7th Generation Core i Socket Compact Fanless System	***5-12***
MIC-7900	Intel Xeon Processor Broadwell-DE SoC Compact Fanless System	***5-14***
i-Modules for MIC-7 Series		***5-16***
MIC-7420	Intel 6th Generation Core i Processor Compact Fanless System	***5-17***
ARK-5261	Intel® Celeron® Processor J1900 Fanless Embedded BOX PC with PCI/PCIe Expansion and Dual Mobile HDDs/SSDs	***5-19***

To view all of Advantech's Modular IPCs, please visit www.advantech.com/products.



Modular IPCs







Model name		AiMC-3202	AiMC-3422	MIC-7900
Form Factor		Compact	Compact	Compact
Processor System	Chipset	H110	H110	-
	CPU	Intel® 6th/7th Gen Core™ i (LGA1151)	Intel® 6th/7th Gen Core™ i (LGA1151)	Intel® Xeon® D-1559/D-1539 BGA type
	Core	Max.4	Max.4	Max.12
	Cache	Max. 8M	Max. 8M	12M/18M
	Memory	DDR4 1866/2133 MHz (non-ECC) max. 32 GB	DDR4 1866/2133 MHz (non-ECC) max. 32 GB	Dual DDR4 2133 MHz (supports ECC) max. 32 GB
Graphic	Graphics Controller	Intel® HD Graphics	Intel® HD Graphics	ASPEED AST1400 with 256 MB VGA memory provides basic 2D VGA function
	VRAM	Shared system memory is subject to OS	Shared system memory is subject to OS	Shared system memory is subject to OS
Expansion	PCIe x16	AIMC-3202-00A1E 1 x PCIe x16, 1 x PCIe x4 AIMC-3202-01A1E 1 x PCIe x16, 1 x PCI	AIMC-3422-00A1E 1 x PCIe x16, 1 x PCIe x1, 2 x PCI AIMC-3422-01A1E 1 x PCIe x16, 3 x PCI	Supported via i-Module
	PCIe x8	-	-	-
	PCIe x4	-	-	-
	PCIe x1	-	-	-
	PCI	-	-	-
	Mini PCIe	-	-	1
Storage	HDD Bay	2 x 2.5" internal HDD bay	1 x 3.5" or 2 x 2.5" internal HDD bay	1 x 2.5" internal HDD bay
	mSATA	1	1	1
	CFast	-	-	1
	RAID	-	-	-
Ethernet	Ethernet Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN 1: Intel® I219V LAN 2: Intel® I211AT	LAN 1: Intel® I219V LAN 2: Intel® I211AT	4 x Intel® i210IT
Front I/O	Display	VGA+DVI-D	VGA	VGA
	LAN	2	2	4
	USB	3 x USB 3.0	1 x USB 3.0	4 x USB 3.0
	COM	2 x RS-232	2 x RS-232	2 x RS-232/422/485
	PS/2	1	1	-
	Audio	-	-	Line-Out/Mic-In
Rear I/O	Display	-	-	-
	LAN	-	-	-
	USB	-	2 x USB 2.0	-
	COM	-	-	-
	PS/2	-	-	-
	Audio	-	-	-
Watchdog Timer	Output	System reset	System reset	System reset
	Interval	Programmable 1 ~ 255 sec/min	Programmable 1~ 255 sec/min	Programmable 1~ 255 sec/min
Power Supply	Output Wattage	250W	300W	-
	Input Range	100 ~ 240 V_{AC}	100 ~ 240 V_{AC}	9 ~ 36 V_{DC}
	Remote Power Switch	-	-	-
Cooling	System Fan	2 (6 cm/14.1 CFM)	1 (9 cm/53 CFM)	-
	Air Filter	Yes	Yes	-
Physical Characteristics	Dimensions (W x H x D)	232 x 90 x 232 mm (9.13" x 3.54" x 9.13")	150 x 222 x 270 mm (5.9" x 8.74" x 10.62")	74 x 192 x 230 mm (2.91" x 7.55" x 9.05")
	Weight	4.5 kg	5 kg	2.9 kg
Page		5-4	5-6	5-14

	NEW	NEW	NEW	
				
MIC-7500	MIC-7700	MIC-7300	MIC-7420	ARK-5261
Compact	Compact	Compact	Compact	Compact
QM170	Q170/H110	-	QM170	-
Intel® Core™ i (BGA) with QM170 chipset	Intel® 6th/7th Gen Core™ i (LGA1151)	Intel® Celeron® N3350/Atom™ x7-E3950	Intel® Core™ i (BGA) with QM170 chipset	Intel® Celeron® J1900
Max.4	Max.4	Max.4	Max.4	4
8M/6M/3M/2M	8M/6M/4M/3M	2M	8M/3M	2M
Dual DDR4 2133MHz Max 32GB	Dual DDR4 2133MHz Max 32GB	Dual DDR3L 1867MHz Max 8GB	Dual DDR4 2133MHz Max 32GB	DDR3L-1333 MHz Max 8GB
Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics	Intel® HD Graphics
Shared system memory is subject to OS	Shared system memory is subject to OS	Shared system memory is subject to OS	Shared system memory is subject to OS	Shared system memory is subject to OS
Supported via i-Module	Supported via i-Module	Supported via i-Module	-	ARK-5261S-J0A1E 1 x PCIe x1, 2 x PCI ARK-5261P-J0A1E 3 x PCI ARK-5261I-J0A1E 1 x PCIe x1, 2 x PCI
-	-	-	-	-
-	-	-	2	-
-	-	-	-	-
-	-	-	2	-
2	2	1	1	1 (only ARK-5261P-J0A1E)
1 x 2.5" internal HDD bay	1 x 2.5" internal HDD bay	1 x 2.5" internal HDD bay	2 x 3.5" internal HDD bay	2 x 2.5" internal HDD bay
1	1	1	1	1
1	1	-	-	-
0/1/5/10	0/1/5/10 (Q SKU only)	-	0/1	-
10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
Intel® i219LM Intel® i210IT	Intel® i219LM Intel® i210IT	2 x Intel® i210AT	LAN 1: Intel® i219LM LAN 2: Intel® i210	LAN 1: Intel® i211AT LAN 2: Intel® i211AT
VGA+DVI-D	VGA+DVI-D	VGA+DVI-D	-	VGA
2	2	2	-	2
8 x USB 3.0	Q170: 8 x USB 3.0 H110: 4 x USB 3.0, 4 x USB 2.0	2 x USB 3.0 6 x USB 2.0	2 x USB 2.0	1 x USB 3.0 4 x USB 2.0
2 x RS-232/422/485 2 x RS-232	2 x RS-232/422/485 2 x RS-232	2 x RS-232/422/485 2 x RS-232	-	ARK-5261S & ARK-5261P 4 x RS-232/422/485 ARK-5261I 4 x RS-422/485 with isolation
-	-	-	-	1
Line-Out/Mic-In	Line-Out/Mic-In	Line-Out/Mic-In	-	Line-Out/Mic-In
-	-	-	DVI-I + DVI-D	-
-	-	-	2	-
-	-	-	2 x USB 3.0 4 x USB 2.0	-
-	-	-	2 x RS-232/422/485	-
-	-	-	1	-
-	-	-	Line-Out/Mic-In	-
System reset	System reset	System reset	System reset	System reset
Programmable 1~ 255 sec/min	Programmable 1~ 255 sec/min	Programmable 1~ 255 sec/min	Programmable 1~ 255 sec/min	Programmable 1~ 255 sec/min
-	-	-	150W	-
9 ~ 36 V_{DC}	9 ~ 36 V_{DC}	9 ~ 36 V_{DC}	100 ~ 240 V_{AC}	9 ~ 36 V_{DC}
-	-	1	-	-
-	-	-	-	-
-	-	-	-	-
74 x 192 x 230 mm (2.91" x 7.55" x 9.05")	78 x 192 x 230 mm (3.07" x 7.55" x 9.05")	74 x 192 x 230 mm (2.91" x 7.55" x 9.05")	427 x 88 x 325 mm (16.81" x 3.46" x 12.79")	137 x 189 x 221 mm (5.39" x 7.44" x 8.70")
2.9 kg	2.8 kg	2.8 kg	5 kg	4.2 kg
5-10	5-12	5-8	5-17	5-19

AiMC-3202

Micro Computer with Intel® Core™ i7/i5/i3 Processor, Intel® H110 Chipset, 2 x Expansion Slots, and 250W 80PLUS PSU



Features

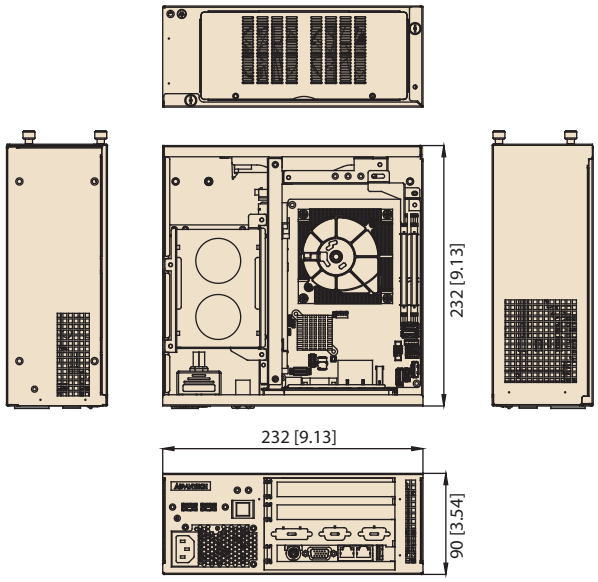
- Intel® 6th/7th Gen Core™ i7/i5/i3/Celeron® processer with Intel® H110 chipset
- 1 x PCIe x16 (1 x PCI for AIMC-3202-01) and 1 x PCIe x4 expansion slots
- Compact design with front-accessible I/O
- 1 x VGA+DVI-D, 2 x GbE LAN, 3 x USB 3.0, 2 x COM
- 2 x 2.5" internal, shock-resistant SATA HDD bays
- Supports chassis intrusion alerts
- 250W 80PLUS PSU offers energy savings

Specifications

Processor	CPU	i7-7700	i5-7500	i3-7100E	i7-7700T	i5-7500T	i3-7101TE	i7-6700	i5-6500	i3-6100	i7-6700TE	i5-6500TE	i3-6100TE	G4400TE	G3900TE
	Core	4	4	2	4	4	2	4	4	2	4	4	2	2	2
	Base Frequency	3.6 GHz	3.4 GHz	3.9 GHz	2.9 GHz	2.7 GHz	3.4 GHz	3.4 GHz	3.2 GHz	3.7 GHz	2.4 GHz	2.3 GHz	2.7 GHz	2.9 GHz	2.6 GHz
	L3 Cache	8 MB	6 MB	3 MB	8 MB	6 MB	3 MB	8 MB	6 MB	4 MB	8 MB	6 MB	4 MB	3 MB	2 MB
	TDP	65W	65W	65W	35W	35W	35W	65W	65W	65W	35W	35W	35W	35W	35W
	Chipset	Intel® H110													
	BIOS	AMI 128Mb SPI Flash													
Memory	Technology	Dual-channel DDR4 1866/2133 MHz (non-ECC)													
	Max. Capacity	32 GB (16 GB per DIMM)													
	Socket	2 x 260-pin SODIMM													
Graphics	Integrated Chipset	Intel® HD Graphics													
Ethernet	Interface	2 x RJ45, 10/100/1000 Mbps													
	Controller	LAN 1: Intel® i219V LAN 2: Intel® i211AT													
Expansion Slots (AIMC-3202-00)	PCI Express x16	1 (Upper-layer slot); full height: 111.15 mm, length: max. 180 mm													
	PCI Express x4	1 (lower-layer slot); full height: 111.15 mm, length: max. 180 mm													
Expansion Slots (AIMC-3202-01)	PCI Express x16	1 (lower-layer slot); full height: 111.15 mm, length: max. 180 mm													
	PCI	1 (Upper-layer slot); full height: 111.15 mm, length: max. 180 mm													
SATA	Data Transfer Rate	600 MB/s (SATA 3.0)													
	HDD Bay	2 x 2.5" internal SATA HD (height: max. 15 mm)													
I/O Interface	Display	VGA+DVI-D (1920 x 1200 pixel @ 60Hz)													
	USB	3 x USB 3.0, 1 x USB 2.0 internal type-A for software key													
	Serial	2 x RS-232													
	PS/2	1													
Watchdog Timer	Output	System reset													
	Interval	Programmable 1 ~ 255 sec/min													
Power Supply	Output Rating	AC 250W, ATX													
	Input Voltage	100 ~ 240 V_{AC}													
Cooling	System Fan	2 (6 cm/14.1CFM)													
	Air Fan	Yes													
Miscellaneous	Chassis Intrusion Alert	Yes													
	LED Indicators	Power, HDD, temperature													
	Control	Power on/off switch													
Environment		Operating								Non-operating					
	Temperature	0 ~ 40 °C (32 ~ 104 °F)								-20 ~ 60 °C (-4 ~ 140 °F)					
	Humidity	10-85% @ 40 °C non-condensing								10-95% @ 40 °C non-condensing					
	Vibration	1Gms, random, 5 ~ 500 Hz, 3 axes, 1 hr/axis								2Gms, random, 5 ~ 500 Hz, 3 axes, 1 hr/axis					
	Shock	10G, half sine wave, 11ms duration													
	EMC	CE/FCC, CCC, BSMI													
	Safety	UL/CB, CCC, BSMI													
Physical Characteristics	Dimensions (W x H x D)	232 x 90 x 232 mm (9.13" x 3.54" x 9.13")													
	Weight	4.5 kg													

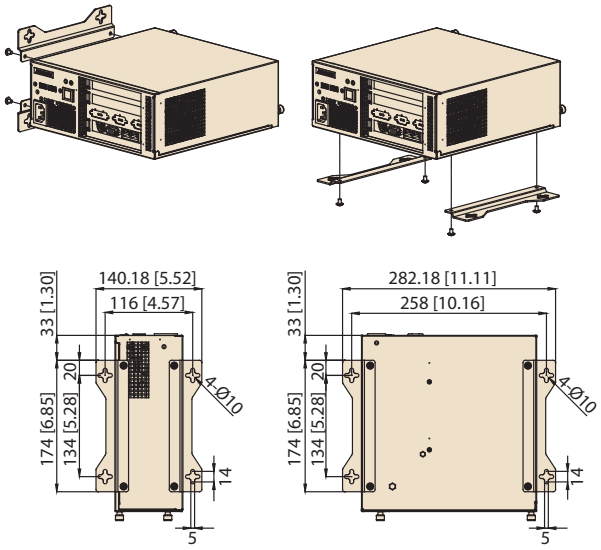
Dimensions

Unit: mm [inch]

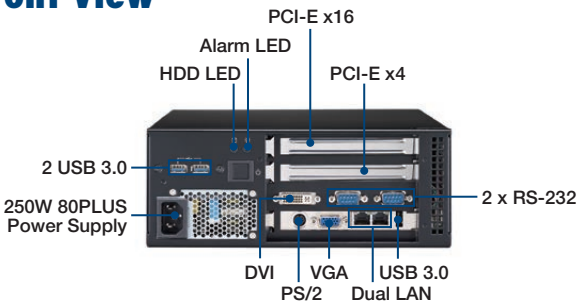


Installation

Unit: mm [inch]



Front View



Rear cover for easy fan replacement



Ordering information

Part Number	VGA	DVI	USB 3.0	GbE	RS-232	PS/2	PSU	PCIe	PCI	Cooler
AIMC-3202-00A1E	1	1	3	2	2	1	250W	2 (x16/x4)	-	1.5U/1U
AIMC-3202-01A1E	1	1	3	2	2	1	250W	1 (x16)	1	1.5U/1U

Packing List

Part Number	Description	Quantity
AIMC-3202-0xAIE	AIMC-3202 bare system	1
2061302902	Driver CD	1
1700002223	LPT cable	1
1700014398-11	4-port USB 2.0 cable with bracket	1
1700020277-01	2 port USB 3.0 cable wit bracket	1
1700060202	PS/2 cable	1

Optional Accessories

Part Number	Description
1960053207N001	1.5U cooler for all CPUs, supports 1 expansion slot
1960053065N001	1U cooler for CPU iX-XXXXTX and GXXXXXX, supports 2 expansion slots
PCIE-1674PC-AE	4-port PCI express GbE PoE card
PCIE-1672PC-AE	2-port PCI express GbE PoE card
PCA-COM485-00A1E	4-port RS-485/422 module by LPC
PCA-COM232-00A1E	4-port RS-232 module by LPC
PCA-AUDIO-HDA1E	Audio extension module with HD audio interface
PCA-TPM-00A1E	Trusted platform module compliant with TCG 1.2
98R1320210E	6025 fan module

Note: Customers must use the Advantech proprietary CPU cooler. Other brands of CPU coolers are NOT compatible.

AiMC-3422

Micro Computer with Intel® Core™ i7/i5/i3 Processor, Intel® H110 Chipset, 4 x Expansion Slots, and 300W 80PLUS PSU



Features

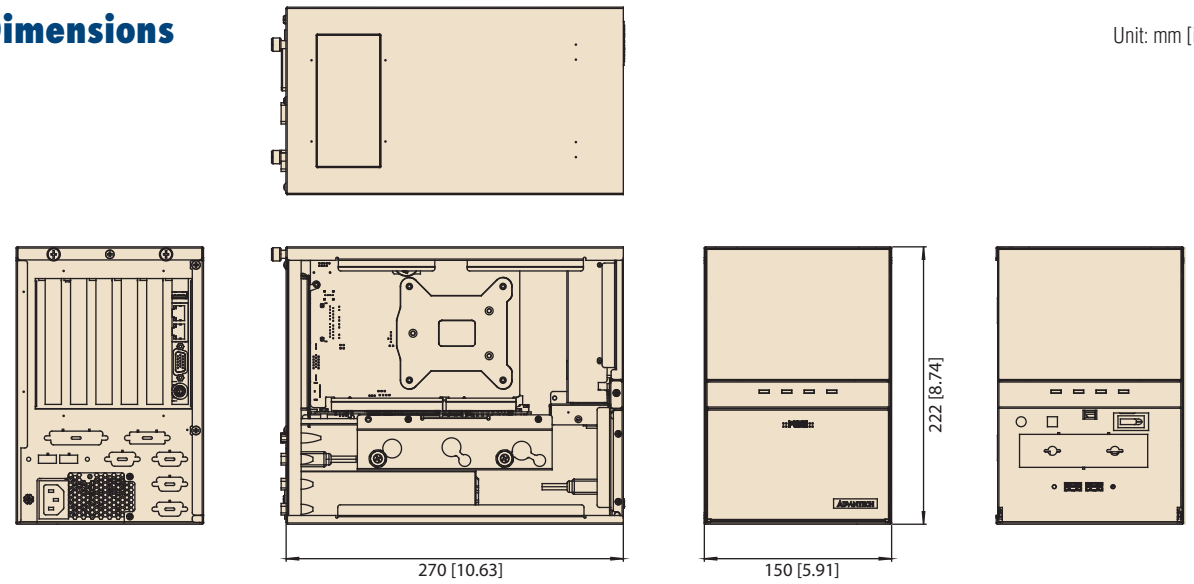
- Intel® 6th/7th Gen Core™ i7/i5/i3/Celeron® processer with Intel® H110 chipset
- Two PCIe (x16/x1) & two PCI expansion slots
- Compact design with front-accessible I/O
- 1 x VGA, 2 x GbE LAN, 2 x USB 2.0, 1 x USB 3.0, 2 x COM
- 1 x 3.5" shock-resistant HDD bay
- Reusable filter and system fan for easy maintenance
- 300W 80PLUS PSU offers energy savings

Specifications

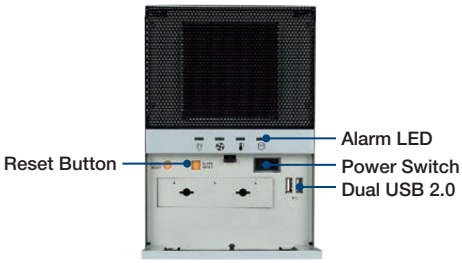
Processor	CPU	i7-7700	i5-7500	i3-7100E	i7-7700T	i5-7500T	i3-7101TE	i7-6700	i5-6500	i3-6100	i7-6700TE	i5-6500TE	i3-6100TE	G4400TE	G3900TE
	Core	4	4	2	4	4	2	4	4	2	4	4	2	2	2
	Base Frequency	3.6 GHz	3.4 GHz	3.9 GHz	2.9 GHz	2.7 GHz	3.4 GHz	3.4 GHz	3.2 GHz	3.7 GHz	2.4 GHz	2.3 GHz	2.7 GHz	2.9 GHz	2.6 GHz
	L3 Cache	8 MB	6 MB	3 MB	8 MB	6 MB	3 MB	8 MB	6 MB	4 MB	8 MB	6 MB	4 MB	3 MB	2 MB
	TDP	65W	65W	65W	35W	35W	35W	65W	65W	65W	35W	35W	35W	35W	35W
	Chipset	Intel® H110													
	BIOS	AMI 128Mb SPI Flash													
Memory	Technology	Dual-channel DDR4 1866/2133 MHz (non-ECC)													
	Max. Capacity	32 GB (16 GB per DIMM)													
	Socket	2 x 260-pin SODIMM													
Graphics	Integrated Chipset	Intel® HD Graphics													
Ethernet	Interface	2 x RJ45, 10/100/1000 Mbps													
	Controller	LAN 1: Intel® i219V LAN 2: Intel® i211AT													
Expansion Slots (AIMC-3422-00)	PCI Express x16	1 (Lower-layer slot); full height: 111.15 mm, length: max. 180 mm													
	PCI Express x1	1 (Lower-layer slot); full height: 111.15 mm, length: max. 180 mm													
	PCI	2 (Lower-layer slot); full height: 111.15 mm, length: max. 180 mm													
Expansion Slots (AIMC-3422-01)	PCI Express x16	1 (Lower-layer slot); full height: 111.15 mm, length: max. 180 mm													
	PCI	3 (Lower-layer slot); full height: 111.15 mm, length: max. 180 mm													
SATA	Data Transfer Rate	600 MB/s (SATA 3.0)													
	HDD Bay	1 x 3.5" internal HDD													
I/O Interface	Display	VGA+DVI-D (1920 x 1200 pixel @ 60Hz)													
	USB	1 x USB 3.0, 2 x USB 2.0 (front accessible)													
	Serial	2 x RS-232													
	PS/2	1													
Watchdog Timer	Output	System reset													
	Interval	Programmable 1 ~ 255 sec/min													
Power Supply	Output Rating	AC 300W, ATX													
	Input Voltage	100 ~ 240 V_{AC}													
Cooling	System Fan	1 (9 cm/53CFM)													
	Air Fan	Yes													
Miscellaneous	Chassis Intrusion Alert	Yes													
	LED Indicators	Power, fan, temperature, HDD													
	Control	Power on/off switch, Reset button													
Environment		Operating							Non-operating						
	Temperature	0 ~ 40 °C (32 ~ 104 °F)							-20 ~ 60 °C (-4 ~ 140 °F)						
	Humidity	10-85% @ 40 °C non-condensing							10-95% @ 40 °C non-condensing						
	Vibration	1Gms, random, 5 ~ 500 Hz, 3 axes, 1 hr/axis							2Gms, random, 5 ~ 500 Hz, 3 axes, 1 hr/axis						
	Shock	10G, half sine wave, 11ms duration													
	EMC	CE/FCC, CCC, BSMI													
	Safety	UL/CB, CCC, BSMI													
Physical Characteristics	Dimensions (W x H x D)	150 x 222 x 270 mm (5.9" x 8.74" x 10.62")													
	Weight	5 kg													

Dimensions

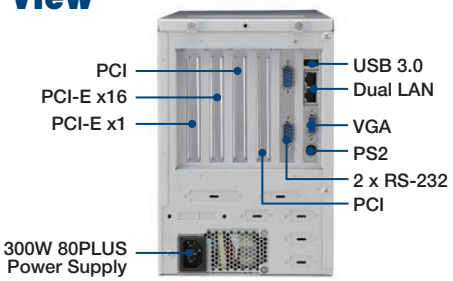
Unit: mm [inch]



Front View



Rear View



IDT-3120E



Optional mobile rack for dual 2.5" SATA HDDs with a 3.5" drive bay occupancy

Ordering Information

Part Number	PCIe x16	PCIe x1	PCI
AIMC-3422-00A1E	1	1	2
AIMC-3422-01A1E	1	0	3

Packing List

Part Number	Description	Quantity
AIMC-3422	AIMC-3422 bare system	1
2061302902	Driver CD	1
1700014398-11	4-port USB 2.0 cable with bracket	1
1700002223	LPT cable	1
1960048518N001	Mounting bracket	1
1990012452S000	Rubber foot	4
1700020277-01	2 port USB 3.0 cable wit bracket	1

Optional Accessories

Part Number	Description
1960053207N001	1.5U cooler for all CPUs, supports 3 expansion slots
1960053065N001	1U cooler for CPU iX-XXXXTX and GXXXXXX, supports 4 expansion slots
PCIE-1674PC-AE	4-port PCI express GbE PoE card
PCIE-1672PC-AE	2-port PCI express GbE PoE card
1700021831-01	DP to DVI-D cable w/ BKT
IDT-3120E	Dual removable 2.5" HDD trays
PCA-COM485-00A1E	4-port RS-485/422 module by LPC
PCA-COM232-00A1E	4-port RS-232 module by LPC
PCA-AUDIO-HDA1E	Audio extension module with HD audio interface
PCA-TPM-00A1E	Trusted platform module compliant with TCG 1.2

Note: Customers must use the Advantech proprietary CPU cooler. Other brands of CPU coolers are NOT compatible.

MIC-7300

Compact Fanless System with Intel® Celeron® N3350/Atom™ x7-E3950 Processor



Features

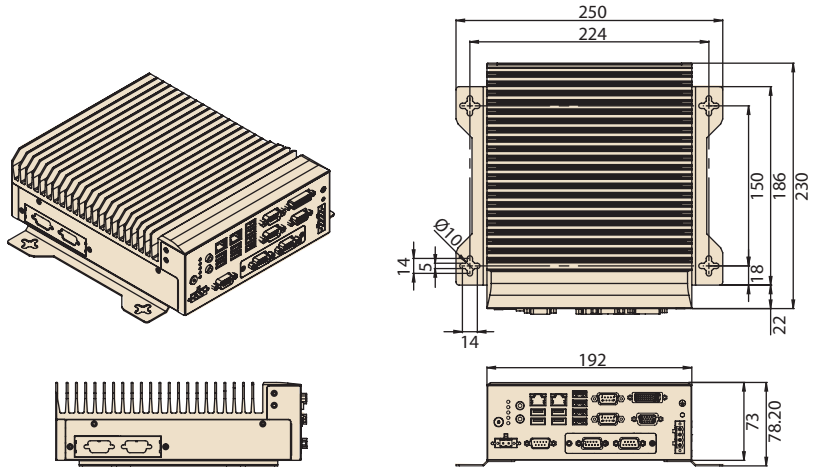
- Intel® Celeron® N3350/Atom™ x7-E3950 processor
- 2 x RS-232/422/485 and 4 x RS232 serial ports (with expansion cable)
- 1 x 2.5" HDD and 1 x mSATA
- Supports 1 x 6-bit GPIO module
- 6 x USB 2.0 and 2 x USB 3.0
- VGA and DVI output
- Supports Advantech i-Modules, SUSIAccess, and embedded software APIs
- 9 ~ 36V_{DC} input power
- Wide operating temperature N3350 (-10 ~ 60 °C)
- Wide operating temperature E3950 (-20 ~ 60 °C)

Specifications

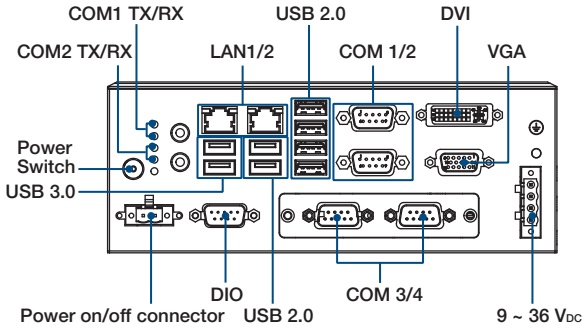
System Chipset	CPU	Intel® Celeron® N3350	Intel® Atom™ x7-E3950	
	Maximum Speed	2.4 GHz	2.0 GHz	
	L3 Cache	2M	2M	
	BIOS	128Mb SPI ROM		
Memory	Technology	Dual channel DDR3L (up to 1867 MT/s) (without ECC)		
	Socket	2 x SODIMM DDR3L (up to 4GB per socket)		
	Maximum Capacity	8GB		
Display	Chipset	Low-power Gen9 graphics with up to 18EUs		
	VGA	1 x DB15, up to 1920 x 1080 resolution		
	DVI	1 x DVI, up to 1920 x 1080 resolution (with optional cable expansion for second DVI connector)		
	Multiple Display	Supports 3 x independent displays		
Ethernet	Controller	LAN1: Intel® i210AT (supports wake-on-LAN) LAN2: Intel® i210AT (supports wake-on-LAN)		
	Interface	2 x RJ45		
Storage	HDD	1 x 2.5" HDD		
I/O	USB	2 x front USB 3.0, 6 x front USB 2.0, 1 x internal USB 2.0		
	Serial Port	2 x DB9, RS232/422/485 with automatic flow control and 4 x RS-232 (with optional cable expansion)		
	Audio	2 (1 x line out and 1 x mic in)		
Expansion	Module	Supports Advantech i-Modules (MIC-73M13, MIC-73M11, MIC-73M20)		
	Mini PCIe	1 x mini PCIe or mSATA		
LED and Switch	LED	2 x TX, 2 x RX, and 1 x Storage		
	Button	1 x Power on/off switch		
Power	Type	ATX/AT		
	Input Voltage	9 ~ 36 V_{DC}		
Watchdog Timer	Output	System reset		
	Interval	Programmable 1 ~ 255 sec/min		
Environment	Temperature	Operating (with industrial SSD)	Operating (with HDD)	Non-operating
		N3350: -10 ~ 60 °C with 0.7 m/s air flow E3950: -20 ~ 60 °C with 0.7 m/s air flow	0 ~ 40 °C	-40 ~ 85 °C
	Humidity	95% @ 40 °C (non-condensing)		
	Vibration	With SSD: 3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis With 2.5" HDD: 1 Grms @ 5 ~ 500 Hz, random, 1 hr/axis		
	Shock	With SSD: 20G, IEC-68-2-27, half-sine wave, 11 ms duration		
Mechanical	Dimensions (W x H x D)	74 x 192 x 230 mm (2.91" x 7.55" x 9.05")		
	Weight	2.9 kg (6.39 lbs)		
	Installation	Desktop/wall mount		
Certifications	EMC	CE/FCC Class A, CCC, BSMI		
	Safety	UL, CCC, BSMI		

Dimensions

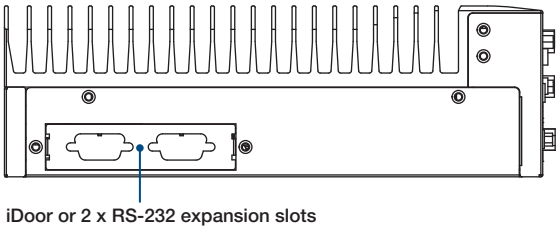
Unit: mm



Front View



Side View



iDoor or 2 x RS-232 expansion slots

Ordering Information

Part Number	CPU	VGA	DVI	2.5" HDD	USB2.0	USB3.0	GbE	COM	PCIe	Power
MIC-7300-S6A1E	Intel® Atom™ x7-E3950	1	1	1	6	2	2	4	i-Module (optional)	9 ~ 36V_{DC}
MIC-7300-S1A1E	Intel® Celeron® N3350	1	1	1	6	2	2	4	i-Module (optional)	9 ~ 36V_{DC}

Packing List

Part Number	Description
MIC-7300	Intel® Celeron® N3350/Atom™ x7-E3950 processor
2061730000	CD-ROM
2001730000	MIC-7300 startup manual (ENG+CN)
2001730010	MIC-7300 startup manual (TC)
1652003234	4-pin Phoenix power connector
1960070543N001	2 x Mounting bracket
1700013095	SATA cable
1700024372-01	SATA power cable
1701200220	Dual DB9 port cable

Optional i-Modules*

Part Number	Description
MIC-73M13	4-slot expansion module (1x PCIe and 3x PCI slots)
MIC-73M20	2-slot expansion module (2x PCIe slots)
MIC-73M11	2-slot expansion module (1x PCIe and 1x PCI slots)

*Additional i-Module information is provided on page 5-16.

Optional Accessories

Part Number	Description
96PSA-A150W19P4-1	Adaptor A/D, 100-240V, 150W, 19V
1702002600	Power cord (USA) UL/CSA, 3-pin, 10A, 125V, 1.83 M, 180 D
1700022940-01	Power cord PSE, 3-pin, 7A, 125V, 3 m, DAC-ST01
1702002605	Power cord (EU) 2-pin, 10/16A, 220V, 1.83 M, 90 D
AIIS-DIO32-00A1E	AIIS GPIO module (32 bit)
98R2C48510E	Isolation COM module
PCA-TPM-00B1E	TPM 2.0 module
98R1750000E	Secondary DVI cable accessory kit
98R1750010E	Secondary HDMI cable/Remote power connector accessory kit
1701200220	DP9 2 port cable

Note:
1. MIC-7300 supports Advantech iDoor modules (both MOS and PCM series). Visit the Advantech website for more information.
2. The PCM series module requires a bracket (P/N: 1960065854N001) that must be ordered separately.

Embedded OS

Part Number	Description
TBD	WES7P MIC-7300 x64 image

MIC-7500

Compact Fanless System with 6th Gen Intel® Core™ i Processor



Features

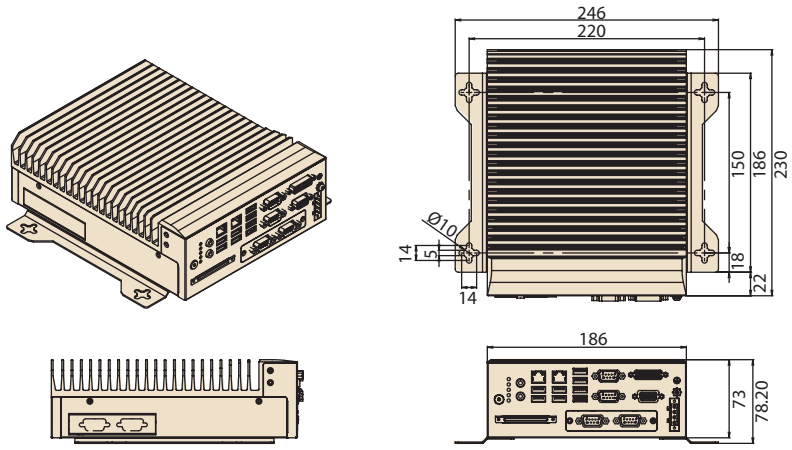
- Intel® 6th Gen Core™ i7/i5/i3/Celeron® (BGA-type) processor with Intel® QM170 chipset
- Wide operating temperature (-20 ~ 60 °C)
- 9 ~ 36 V DC input power range
- 2 x RS-232/422/485 and 4 x RS232 serial ports (with expansion cable)
- 1 x 2.5" HDD, 1 x CFast, and 1 x mSATA
- Supports isolation COM and 32-bit GPIO modules
- 2 x GigaLAN and 8 x USB 3.0
- VGA and DVI output
- Supports Advantech i-Modules, SUSIAccess, and embedded software APIs

Specifications

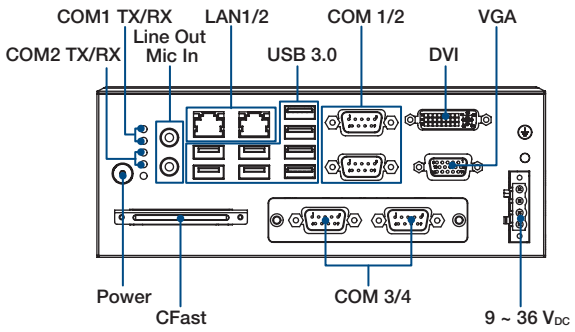
System Chipset	CPU	Intel® Core™ i7-6820EQ	Intel® Core™ i7-6822EQ	Intel® Core™ i5-6442EQ	Intel® Core™ i3-6102E	Intel® Celeron® G3900E
	Maximum Speed	2.8 GHz	2.0 GHz	1.9GHz	1.9 GHz	2.4 GHz
	L3 Cache	8M	8 MB	6 MB	3 MB	2 MB
	Chipset	Intel® QM170				
	BIOS	AMI® SPI 64 Mb				
Memory	Technology	Dual-channel DDR4 2133 MHz (without ECC)				
	Socket	2 x 260-pin DDR4 SODIMM (up to 16 GB per socket)				
Display	Chipset	Intel® HD Graphics 530, supports DirectX 12				
	VGA	1 x DB15, up to 2048 x 1536 maximum resolution				
	DVI	1 x DVI, up to 1920 x 1200 maximum resolution @ 30Mhz (with optional cable expansion for second DVI connector)				
	Multiple Display	Supports 3 x independent displays				
Ethernet	Controller	LAN1: Intel® i219-LM LAN2: Intel® i210 (supports wake-on-LAN)				
	Interface	2 x RJ45				
Storage	HDD	1 x 2.5" HDD				
	CFast	1				
	RAID	0/1/5/10				
I/O	USB	8 x USB 3.0 and 1 x internal USB 2.0				
	Serial Port	2 x DB9, RS232/422/485 with automatic flow control and 4 x RS-232 (with optional cable expansion)				
	Audio	2 (1 x line out and 1 x mic in)				
Expansion	Module	Supports Advantech i-Modules				
	Mini PCIe	2 x Mini PCIe, One for USIM, One for m-SATA				
LED and Switch	LED	2 x TX, 2 x RX, and 1 x Storage				
	Button	1 x Power on/off switch				
Power	Type	ATX/AT				
	Input Voltage	9 ~ 36 V_{DC}				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Environment	Temperature	i7-6820EQ Operating (with industrial SSD only)	Operating (with industrial SSD)		Operating (with HDD)	Non-operating
		-20 ~ 50 °C with 0.7 m/s air flow Note: MIC-7500 i7-6820EQ system support SSD only.	-20 ~ 60 °C with 0.7 m/s air flow		0 ~ 40 °C	-40 ~ 85 °C
	Humidity	95% @ 40 °C (non-condensing)				
	Vibration	With SSD: 3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis With 2.5" HDD: 1 Grms @ 5 ~ 500 Hz, random, 1 hr/axis			2G	
	Shock	With SSD: 20G, IEC-68-2-27, half-sine wave, 11 ms duration			50G 11 ms	
Mechanical	Dimensions (W x H x D)	74 x 192 x 230 mm (2.91" x 7.55" x 9.05")				
	Weight	2.9 kg (6.39 lbs)				
	Installation	Desktop/wall mount				
Certifications	EMC	CE/FCC Class A, CCC, BSMI				
	Safety	UL, CCC, BSMI				

Dimensions

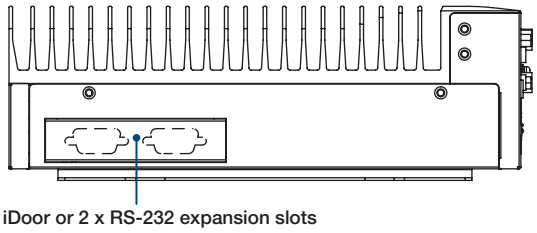
Unit: mm



Front View



Side View



Ordering Information

Part Number	CPU	Memory	VGA	DVI	2.5" HDD	CFast	USB 3.0	GbE	COM	PCIe	Power
MIC-7500B-U8A1E	i7-6820EQ (45W)	4G (Socket type)	1	1	1	1	8	2	4	i-Module (optional)	9 ~ 36VDC
MIC-7500B-U0A1E	i7-6822EQ	4G (Socket type)	1	1	1	1	8	2	4	i-Module (optional)	9 ~ 36VDC
MIC-7500B-S9A1E	i5-6442EQ	4G (Socket type)	1	1	1	1	8	2	4	i-Module (optional)	9 ~ 36VDC
MIC-7500B-19A1E	i3-6102E	4G (Socket type)	1	1	1	1	8	2	4	i-Module (optional)	9 ~ 36VDC
MIC-7500B-U4A1E	G3900E (45W)	4G (Socket type)	1	1	1	1	8	2	4	i-Module (optional)	9 ~ 36VDC

Packing List

Part Number	Description
MIC-7500	Fanless system with 6th Gen Intel® Core™ i processor
2061750000	CD-ROM
2001750000	Startup manual
1652003234	4-pin Phoenix power connector
1960070543N001	2 x Mounting bracket
1700019445	SATA cable
1700024372-01	SATA power cable
1701200220	Dual DP9 port cable

Optional i-Modules*

Part Number	Description
MIC-75M40	4-slot expansion module (4 x PCIe slots)
MIC-75M13	4-slot expansion module (1 x PCIe and 3 x PCI slots)
MIC-75M20	2-slot expansion module (2 x PCIe slots)
MIC-75M20-01	2-slot expansion module (2xPCIe slots)
MIC-75M11	2-slot expansion module (1 x PCIe and 1 x PCI slots)
MIC-75M10	1-slot expansion module (1xPCIE16)
MIC-75S20	2-slot expansion and storage module (2 x PCIe and 2 x 2.5 hot swappable HDDs)

*Additional i-Module information is provided on page 5-16.

Optional Accessories

Part Number	Description
96PSA-A220W24P4-1	Adaptor A/D, 100-240V, 220W, 24V
96PSA-A150W19P4-1	Adaptor A/D, 100-240V, 150W, 19V
1702002600	Power cord (USA) UL/CSA, 3-pin, 10A, 125V, 1.83 M, 180 D
1700022940-01	Power cord PSE, 3-pin, 7A, 125V, 3 m, DAC-ST01
1702002605	Power cord (EU) 2-pin, 10/16A, 220V, 1.83 M, 90 D
AIIS-DIO32-00A1E	AIIS GPIO module (32 bit)
98R1C48500E	Isolation COM module
PCA-TPM-00B1E	TPM 2.0 module
98R1750000E	Secondary DVI cable accessory kit
98R1750010E	Secondary HDMI cable/Remote power connector accessory kit
98R1750020E	MIC-7000 series DIN rail accessory

Note:
1. MIC-7500 supports Advantech's iDoor modules (both MOS and PCM series). Visit the Advantech website for more information.
2. The PCM series module requires a bracket (P/N: 1960065854N001) that must be ordered separately.

Embedded OS

Part Number	Description
2070014106	WES7P MIC-7500 x64 V5.6.6 10MUI image
2070014584	WES7P MIC-7500 x32 V5.3.0 10MUI image

MIC-7700

Compact Fanless System with 6th/7th Gen Intel® Core™ i CPU Socket (LGA 1151)



Features

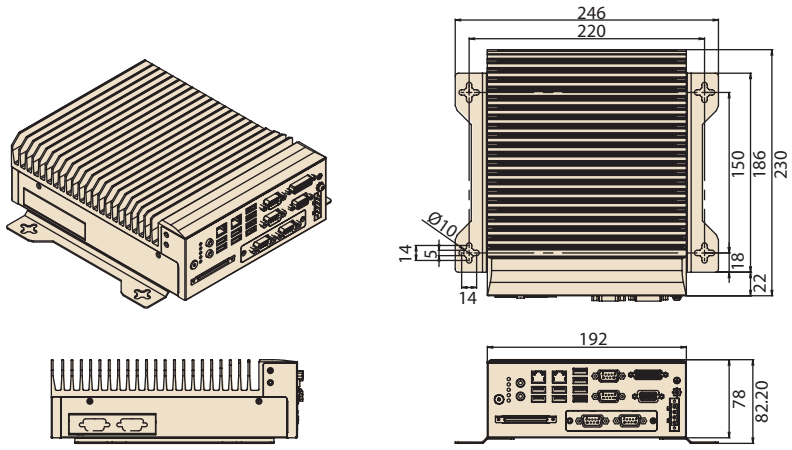
- Intel® 6th/7th Gen Core™ i CPU socket (LGA1151) with Intel® Q170/H110 chipset
- VGA and DVI output
- 2 x GigaLAN and 8 x USB 3.0
- 2 x RS-232/422/485 and 4 x RS232 serial ports
- 1 x 2.5" HDD, 1 x CFast, and 1 x mSATA
- 9 ~ 36 V_{DC} input power range
- Supports 2 x LAN, isolation COMs, and 32-bit GPIO modules
- Supports Advantech i-Modules
- Supports Advantech SUSIAccess and embedded software APIs

Specifications

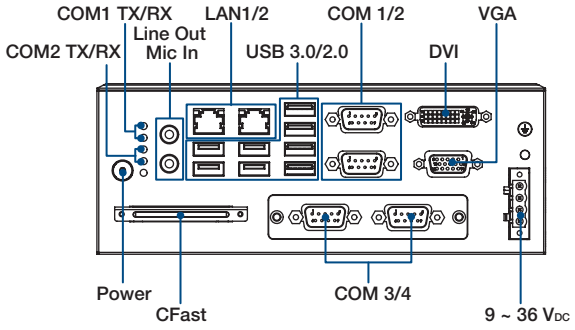
6th Generation Processor (TDP 35W)	CPU	i7-6700TE	i5-6500TE	i3-6100TE	G4400TE
	Core	4	4	2	2
	Base Frequency	2.4 GHz	2.3 GHz	2.7 GHz	2.9 GHz
	L3 Cache	8 MB	6 MB	4 MB	3 MB
	Temperature	-10 ~ 50 °C (with SSD)			
	Chipset	Q170/H110			
	BIOS	AMI 128Mb SPI Flash			
6th/7th Generation Processor (TDP 65W)	CPU	I5-7500	I3-7101E	I5-6500	I3-6100
	Core	4	2	4	2
	Base Frequency	3.4 GHz	3.9 GHz	3.2 GHz	3.7 GHz
	L3 Cache	6 MB	3 MB	6 MB	4 MB
	Temperature	-10 ~ 40 °C (with SSD)			
	Chipset	Q170/H110			
	BIOS	AMI 128Mb SPI Flash			
Memory	Technology	Dual-channel DDR4 2133 MHz (without ECC)			
	Socket	2 x 260-pin DDR4 SODIMM (up to 16 GB per socket)			
	Maximum Capacity	32GB (16GB per DIMM)			
Display	Chipset	Q170: Intel® HD Graphics 530, supports DirectX 12 H110: Intel® HD Graphics 510, supports DirectX 12			
	VGA	1 x DB15, up to 2048 x 1152 maximum resolution			
	DVI	1 x DVI, up to 1920 x 1080 maximum resolution @ 30Mhz			
	Multiple Display	Q170: 3 x independent displays (third display output via optional cable) H110: 2 x independent displays			
Ethernet	Controller	Q170 LAN1: Intel® I219LM, LAN2: Intel® i210IT H110 LAN1: Intel® I219V, LAN2: Intel® i210IT			
	Interface	2 x RJ45			
Storage	HDD	1 x 2.5" HDD			
	CFast	1			
	mSATA	1			
	RAID	0/1/5/10 (MIC-7700Q only)			
I/O	USB	Q170: 8 x USB 3.0 and 1 x internal USB 2.0 H110: 4 x USB 3.0 and 4 x USB 2.0			
	Serial Port	2 x RS-232/422/485 support auto flow control; 4 x RS-232			
	Audio	2 (1 x line out and 1 x mic in)			
Expansion	Module	Supports Advantech i-Modules			
	Mini PCIe	Q170: 2 x mini PCIe (1 x via USIM and 1 x mini PCIe/mSATA) H110: 2 x mini PCIe (1 x via USIM and 1 x mSATA)			
LED and Switch	LED	2 (1 x Storage and 1 x Power)			
	Button	1 x Power on/off switch			
Power	Type	ATX/AT			
	Input Voltage	9 ~ 36 V_{DC}			
Watchdog Timer	Output	System reset			
	Interval	Programmable 1 ~ 255 sec/min			
Environment	Temperature	65W CPU w/ industrial SSD	35W CPU w/ industrial SSD		Non-operating
		-10 ~ 40 °C	-10 ~ 50 °C		-40 ~ 85 °C
	Humidity	95% @ 40 °C (non-condensing)			
	Vibration	With SSD: 3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis With 2.5" HDD: 1 Grms @ 5 ~ 500 Hz, random, 1 hr/axis			2G
	Shock	With SSD: 20G, IEC-68-2-27, half-sine wave, 11 ms duration			50G 11 ms
Mechanical	Dimensions (W x H x D)	78 x 192 x 230 mm (3.07" x 7.55" x 9.05")			
	Weight	2.8 kg (6.17 lbs)			
	Installation	Desktop/wall mount			
Certifications	EMC	CE/FCC Class A, CCC, BSMI			
	Safety	UL, CCC, BSMI			

Dimensions

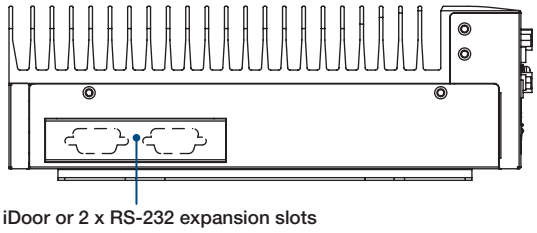
Unit: mm



Front View



Side View



Ordering Information

Part Number	VGA	DVI	2.5" HDD	CFast	USB 3.0	USB 2.0	GbE	COM	PCIe	Power
MIC-7700Q-00A1	1	1	1	1	8	0	2	4	i-Module (optional)	9 ~ 36V$_{DC}$
MIC-7700H-00A1	1	1	1	1	4	4	2	4	i-Module (optional)*	9 ~ 36V$_{DC}$

*MIC-7700H does not support MIC-75M40 or MIC-75M20-01

Packing List

Part Number	Description
MIC-7700	MIC-7700 bare system
2061770010	Driver CD
2001770000	MIC-7700 startup manual (ENG+CN)
2001770010	MIC-7700 startup manual (TC)
1652003234	4-pin Phoenix power connector
1960070543N001	2 x Mounting bracket
1700013095	SATA cable
1700024372-01	SATA power cable
1701200220	Dual DB9 port cable

Optional i-Modules**

Part Number	Description
MIC-75M40 (Q170 only)	4-slot expansion module (4 x PCIe slots)
MIC-75M13	4-slot expansion module (1 x PCIe and 3 x PCI slots)
MIC-75M20	2-slot expansion module (2 x PCIe slots)
MIC-75M20-01 (Q170 only)	2-slot expansion module (2 x PCIe slots)
MIC-75M11	2-slot expansion module (1 x PCIe and 1 x PCI slots)
MIC-75M10	1-slot expansion module (1 x PCIe)
MIC-75S20	2-slot expansion and storage module (2 x PCIe and 2 x 2.5 hot swappable HDDs)

**Additional i-Module information is provided on page 5-16.

Optional Accessories

Part Number	Description
96PSA-A220W24P4-1	Adaptor A/D, 100-240V, 220W, 24V
96PSA-A150W19P4-1	Adaptor A/D, 100-240V, 150W, 19V
1702002600	Power cord (USA) UL/CSA, 3-pin, 10A, 125V, 1.83 M, 180 D
1700022940-01	Power cord PSE, 3-pin, 7A, 125V, 3 m, DAC-ST01
1702002605	Power cord (EU) 2-pin, 10/16A, 220V, 1.83 M, 90 D
AIIS-DIO32-00A1E	AIIS GPIO module (32 bit)
98R1C48500E	Isolation COM module
PCA-TPM-00B1E	TPM 2.0 module
98R1750000E	Secondary DVI cable accessory kit
98R1750010E	Secondary HDMI cable/Remote power connector accessory kit
98R1770000E	Dual LAN module

Note:
1. MIC-7700 supports Advantech iDoor modules (both MOS and PCM series), excluding the PoE model.
2. The PCM series module requires a bracket (P/N: 1960065854N001) that must be ordered separately.

Embedded OS

Part Number	Description
TBD	WES7P MIC-7700 x64 image

MIC-7900

Compact Fanless System with Intel® Xeon® SoC Processor



Features

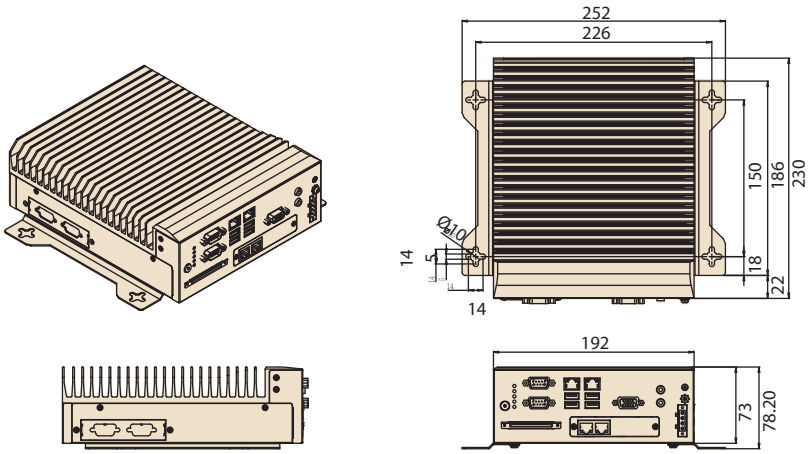
- Intel® Xeon® D-1539/D-1559 SoC processor
- Wide operating temperature (-20 ~ 50 °C)
- 9 ~ 36 V_{DC} input power range
- 2 x RS-232/422/485 and 4 x RS232 serial ports (with expansion cable)
- 1 x 2.5" HDD, 1 x CFast, 1 x M.2
- 4 x GigaLAN and 4 x USB 3.0
- Supports Advantech i-Modules, SUSIAccess, and embedded software APIs

Specifications

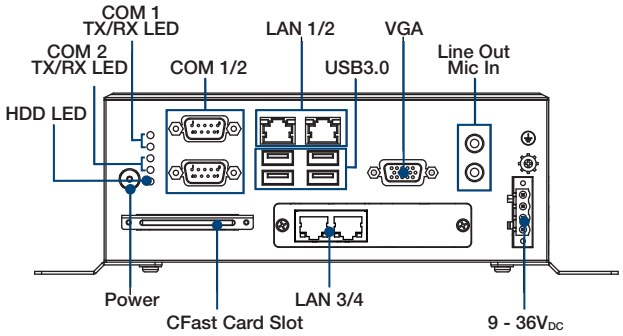
System Chipset	CPU	D-1539	D-1559	
	Maximum Speed	1.6GHz	1.5GHz	
	L3 Cache	12M	18M	
	Core	8	12	
	BIOS	AMI® SPI 64 Mb		
Memory	Technology	Dual-channel DDR4 2133 MHz (supports ECC)		
	Socket	2 x 260-pin SODIMM (up to 16 GB per socket)		
	Maximum Capacity	Up to 32 GB		
Display	Chipset	ASPEED 1400 with 256MB VGA memory provides basic 2D VGA functoin		
	VGA	1 x DP15, up to 1920 x 1200 maximum resolution		
Ethernet	Controller	LAN1: Intel® i210IT (supports wake-on-LAN) LAN2: Intel® i210IT (supports wake-on-LAN) LAN3: Intel® i210IT LAN4: Intel® i210IT		
	Interface	4 x RJ45		
Storage	HDD	1 x 2.5" HDD (with MIC-75S20 i-Module, total storage room up to 5 x 2.5" HDD)		
	CFast	1		
	M.2	1 (Supports PCIE signals)		
I/O	USB	4 x USB 3.0 and 1 x internal USB 2.0		
	Serial Port	2 x DB9, RS232/422/485 with automatic flow control and 4 x RS-232 (with optional cable expansion)		
	Audio	2 (1 x line out and 1 x mic in)		
Security	TPM	Supports TPM 2.0 (Infineon SLB9665XQ2.0)		
Expansion	Module	Supports Advantech i-Modules (MIC-75M13/MIC-75M40/MIC-75M20/MIC-75M20-01/MIC-75M11/MIC-75S20)		
	Mini PCIe	1 x mini PCIe (does not support m-SATA)		
LED and Switch	LED	2 x TX, 2 x RX, and 1 x Storage		
	Button	1 x Power on/off switch		
Power	Type	ATX/AT		
	Input Voltage	9 ~ 36 V_{DC}		
	Power Consumption	180W (with i-Modules)		
Watchdog Timer	Output	System reset		
	Interval	Programmable 1 ~ 255 sec/min		
Environment	Temperature	Operating (with industrial SSD)	Operating (with HDD)	Non-operating
		-20 ~ 50 °C with 0.7 m/s air flow	0 ~ 40 °C	-40 ~ 85 °C
	Humidity	95% @ 40 °C (non-condensing)		
	Vibration	With SSD: 3 Grms @ 5 ~ 500 Hz, random, 1 hr/axis With MIC-75S20/5xSSD: 1 Grms @ 5 ~ 500Hz, random, 1 hr/axis With 2.5" HDD: 1 Grms @ 5 ~ 500 Hz, random, 1 hr/axis		
	Shock	With SSD: 50G, IEC 60068-2-27, half-sine wave, 11 ms duration		
Mechanical	Dimensions (W x H x D)	74 x 192 x 230 mm (2.91" x 7.55" x 9.05")		
	Weight	2.9 kg (6.39 lbs)		
	Installation	Desktop/wall mount		
Certifications	EMC	CE/FCC Class B, CCC, BSMI		
	Safety	UL, CCC, BSMI		

Dimensions

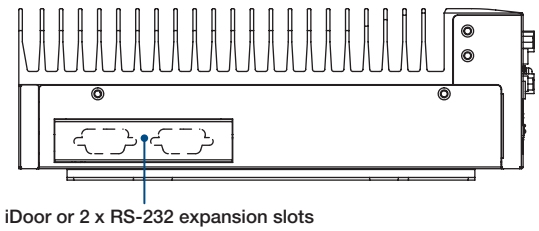
Unit: mm



Front View



Side View



Ordering Information

Part Number	CPU	VGA	2.5" HDD	CFast	USB 3.0	GbE	COM	PCIe
MIC-7900-S5A1E	D-1559	1	1	1	4	4	2	i-Module (optional)
MIC-7900-S6A1E	D-1539	1	1	1	4	4	2	i-Module (optional)

Packing List

Part Number	Description
MIC-7900	Fanless system with Intel® Xeon® SoC processor
1652003234	4-pin Phoenix power connector
1700013095	SATA cable
1700024372-01	SATA power cable
1701200220	Dual DP9 port cable
1960070543N001	2 x Mounting bracket
2061790000	CD-ROM
2001790000	MIC-7900 startup manual (ENG+CN)
2001790010	MIC-7900 startup manual (TC)

Optional i-Modules*

Part Number	Description
MIC-75M40	4-slot expansion module (4 x PCIe slots)
MIC-75M13	4-slot expansion module (1 x PCIe and 3 x PCI slots)
MIC-75M20	2-slot expansion module (2 x PCIe slots)
MIC-75M20-01	2-slot expansion module (2 x PCIe x 8 slots)
MIC-75M11	2-slot expansion module (1 x PCIe and 1 x PCI slots)
MIC-75M10	1-slot expansion module (1 x PCIe x16 slot)
MIC-75S20	2-slot expansion and storage module (2 x PCIe and 2 x 2.5 hot swappable HDDs)

*Additional i-Module information is provided on page 5-16.

Optional Accessories

Part Number	Description
96PSA-A220W24P4-1	Adaptor A/D, 100-240V, 220W, 24V
96PSA-A150W19P4-1	Adaptor A/D, 100-240V, 150W, 19V
1702002600	Power cord (USA) UL/CSA, 3-pin, 10A, 125V, 1.83 M, 180 D
1700022940-01	Power cord PSE, 3-pin, 7A, 125V, 3 m, DAC-ST01
1702002605	Power cord (EU) 2-pin, 10/16A, 220V, 1.83 M, 90 D
1700018704	Power Cord UK BSI 2P 10A 250V 180cm 18AWG
AIIS-DIO32-00A1E	AIIS GPIO module (32 bit)
98R2C48510E	Isolation COM module
98R1750020E	MIC-7000 series DIN rail accessory

Note:
1. MIC-7900 supports Advantech iDoor modules (both MOS and PCM series). Visit the Advantech website for more information.
2. The PCM series module requires a bracket (P/N: 1960065854N001) that must be ordered separately.

Embedded OS

Part Number	Description
2070014719	WES7P MIC-7900 x64 V5.8.0 10MUI image

i-Modules for MIC-7 Series

Compatible with MIC-7 Series Fanless Systems

4-Slot Expansion Modules

MIC-75M40



- 1 x PCIE x8
- 3 x PCIE x4
- 1 x SATA (2 x 2.5" HDD bays)
- Supports 1 x 8-cm fan (optional)
- Dimensions (W x H x D): 163 x 192 x 230 mm (6.41" x 7.55" x 9.05")

Note

1. For expansion cards with more than 45W power consumption, a fan should be added for thermal management.
2. MIC-75M40 does not support MIC-73 series systems or MIC-7700H.

MIC-75M13



- 1 x PCIE x16
- 3 x PCI
- 1 x SATA (2 x 2.5" HDD bays)
- Supports 1 x 8-cm fan (optional)
- Dimensions (W x H x D): 163 x 192 x 230 mm (6.41" x 7.55" x 9.05")

Note

1. For expansion cards with more than 45W power consumption, a fan should be added for thermal management.
2. For MIC-73 series systems (with Intel® Atom™ CPU), only 1 PCIE x4 is supported.

2-Slot Expansion Modules

MIC-75M20
MIC-75M20-01



- MIC-75M20: 1 x PCIE x16/1 x PCIE x4
- MIC-75M20-01: 2 x PCIE x8
- Supports 2 x 4-cm fans (optional)
- Dimensions (W x H x D): 123 x 192 x 230 mm (4.84" x 7.55" x 9.05")

Note

1. For expansion cards with more than 45W power consumption, a fan should be added for thermal management.
2. MIC-75M20 does not support MIC-73 series systems.
3. MIC-75M20-01 does not support MIC-7700H.

MIC-75M11



- 1 x PCIE x16
- 1 x PCI
- Supports 2 x 4-cm fans (optional)
- Dimensions (W x H x D): 123 x 192 x 230 mm (4.84" x 7.55" x 9.05")

Note

1. For expansion cards with more than 45W power consumption, a fan should be added for thermal management.
2. MIC-73 series systems (with Intel® Atom™ CPU) support 1 PCIE x4 or 3 PCI sockets.

MIC-75S20



- 1 x PCIE x16
- 1 x PCIE x4
- 2 x Hot-swappable HDD trays (15 mm)
- Supports 1 x 8-cm fan (optional)
- Dimensions (W x H x D): 163 x 192 x 230 mm (6.41" x 7.55" x 9.05")

Note

1. Install an SSD for wide temperature range. If the system does not feature an SSD, a fan should be added for thermal management.
2. MIC-75S20 does not support high-power consumption expansion cards (i.e., graphics cards).
3. MIC-75S20 does not support MIC-73 series systems.

MIC-75M10



- 1 x PCIE x16
- Dimensions (W x H x D): 97 x 192 x 230 mm (3.81" x 7.55" x 9.05")

Note

1. MIC-75M10 does not support fan modules.
2. MIC-75M10 does not support high-power consumption expansion cards (i.e., graphics cards).

Optional Accessories

Part Number	Description
98R1751300E	8-cm fan for 4-slot i-Modules
98R1752000E	2 x 4-cm fan for 2-slot i-Modules
98R1752010E	Secondary HDD bracket (for 2-slot i-Modules)

Ordering Information

Part Number	Description
MIC-75M13-00A1E	4-slot expansion i-Module with 1 PCIe x16, 3 PCI
MIC-75M40-00A1E	4-slot expansion i-Module with 1 PCIe x8, 3 PCIe x4
MIC-75M11-00A1E	2-slot expansion i-Module with 1 PCIe x16, 1 PCI
MIC-75M20-00A1E	2-slot expansion i-Module with 1 PCIe x16, 1 PCIe x4
MIC-75M10-00A1	1-slot expansion i-Module with 1 PCIex16
MIC-75M20-01A1E	2-slot expansion i-Module with 2 PCIe x 8
MIC-75S20-00A1E	2-slot expansion i-Module with 1 PCIe x16, 1 PCIe x4, 2 2.5" HDD bay

MIC-7420

Compact Fanless System with Intel® 6th Gen Core™ i Processor



R33138

Features

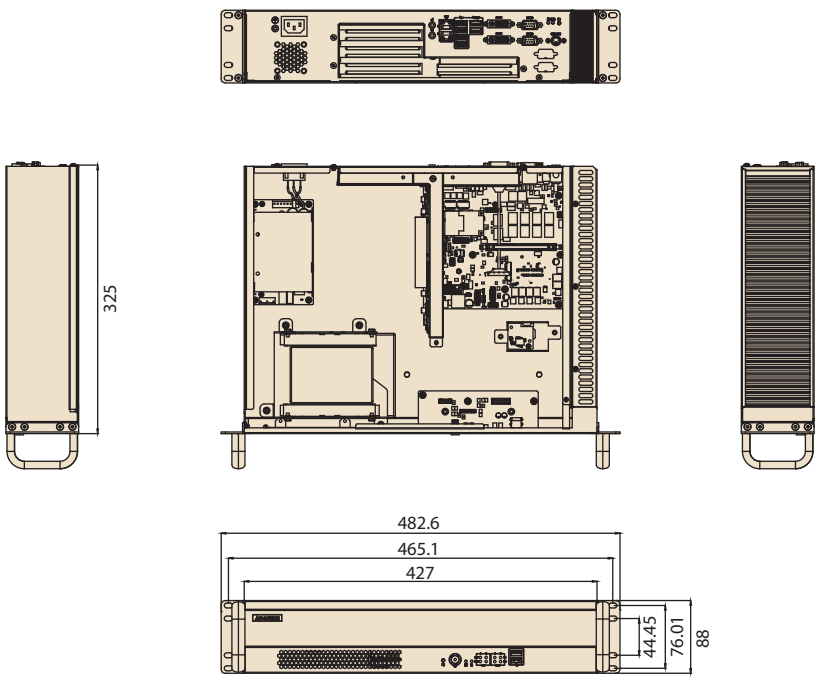
- Intel® 6th Gen Core™ i7/i3 (BGA type) processor with Intel® QM170 chipset
- 8 GB of DDR4 memory, up to 24 GB
- 2 x DVI
- 2 x GbE LAN/8 x USB ports
- 2 x PCIe x4/ 2 x PCI expansion slots
- 2 x 3.5" HDD and 1 x M.2
- Supports RAID 0/1
- Wide operating temperature (-20 ~ 60 °C)
- 100 ~ 240V_{AC} input power

Specifications

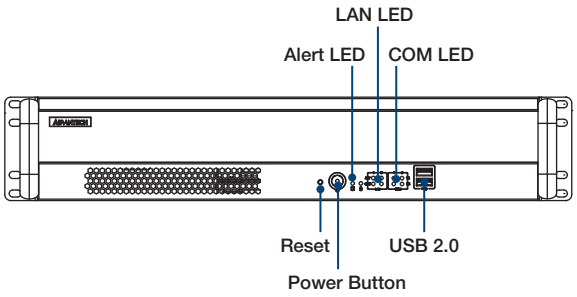
Processor	CPU	Intel® Core™ i7-6822EQ	Intel® Core™ i3-6100E		
	Max Speed	2.0 GHz	2.8 GHz		
	L2 Cache	8 MB	3 MB		
	Chipset	Intel® QM170			
	BIOS	AMI SPI 128Mb			
Memory	Technology	8 GB of DDR4, 2133 MHz (without ECC)			
	Socket	1 x 260-pin DDR4 SODIMM socket, up to 16 GB			
	Maximum Capacity	24GB			
Graphics	Chipset	Intel® HD Graphics 530, supports DirectX 12			
	Dual Display	1 x DVI-I, 1 x DVI-D			
Ethernet	Interface	10/100/1000 Mbps			
	Controller	LAN 1: Intel® i219-LM; LAN 2: Intel® i210IT			
	Connector	2 x RJ45			
Storage	SSD	1 x M.2 (2260 M-Key, with SATA interface)			
	HDD	2 x 3.5" HDD or 2 x 2.5" HDD bay			
I/O Interface	DVI	1 x DVI-I, 1 x DVI-D			
	LAN	2			
	USB	8 (2 x USB 3.0, 6 x USB 2.0)			
	Serial	2 x DB9 (RS-232/422/485) with 2.5KV Isolation protection			
	PS/2	1			
	Audio	1 x Speaker-out with 2 x 4W amplifier, 1 x Mic-in			
Expansion Slots	PCIe	2 x PCIe x4			
	PCI	2 x PCI			
	Mini PCIe	1 (PCIe & USB)			
Power Module	Input Range	100 ~ 240V_{AC} or 110V_{DC}			
	Connector	1 x 3-pin terminal block (5.08 mm)			
	Wattage (60 °C)	110 W			
Watchdog Timer	Output	System reset			
	Interval	Programmable 1~255 sec/min			
Environment		Operating (w/o add-on card)	Operating (with add-on card)	Operating (with add-on card)	Non-operating
	Storage	SSD	SSD	HDD	-
	Temperature	-20 ~ 60 °C	-20 ~ 40 °C	0 ~ 40 °C	-40 ~ 85 °C
Physical Characteristics	Dimensions (W x H x D)	427 x 88 x 325 mm (16.81" x 3.46" x 12.79")			
Certification	EMC	CE/FCC Class A, CCC, BSMI			
	Safety	CB/UL, CCC, BSMI			

Dimensions

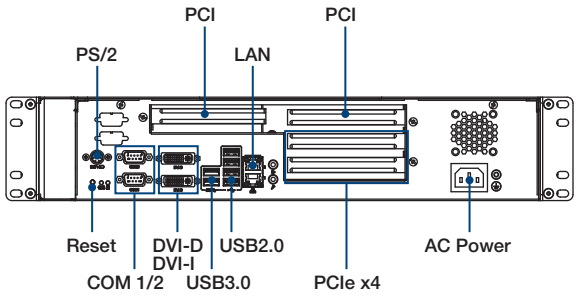
Unit: mm



Front View



Rear View



Packing List

Part Number	Description	Quantity
2001742000	Startup manual En\CN for MIC-7420	1
206K223100	Driver CD	1
1700008941	SATA cable 7P	2
1700017929	SATA power cable 4P	1
1700022322-01	SATA power cable 5P	1
1990001365	HDD rubber	4
1960018229N100	2.5" HDD bracket	2
1656303100	3-pin terminal block	2
1960018229N100	2U rackmount ear	2
1960021557S000	Handle bracket	2

Ordering Information

Part Number	Description
MIC-7420-U0A1	Intel® Core™ i7-6822EQ processor with 8 GB onboard memory, 2U
MIC-7420-19A1	Intel® Core™ i3-6100E processor with 8 GB onboard memory, 2U

Optional Accessories

Part Number	Description
1700023045-01	Power cable, 3 pin (F), 10 cm, for ITA-2210

ARK-5261

Fanless Embedded Box PC with Intel® Celeron® J1900 Processor, PCI/PCIe Expansion Slots, and Dual Mobile HDDs/SSDs



ARK-5261S
ARK-5261P

Features

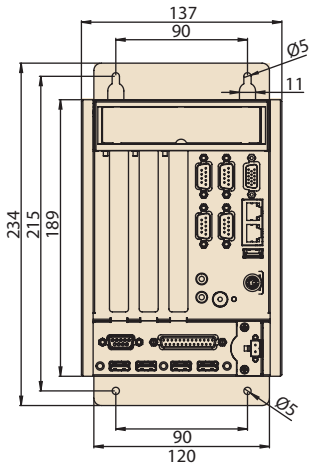
- Fanless embedded box PC with Intel® Celeron® J1900 processor, 2.0 GHz
- 2 x Giga LAN, 1 x USB 3.0, and 5 x USB 2.0
- 4 x RS-232/422/485 with auto-flow control, 1 x COM1, and 1 x COM2 ports with 5V/12V power
- 1 x PCIe and 2 x PCI or 3 x PCI expansion slots
- 4 x RS-422/485 (isolation type)
- Rubber anti-vibration card holder for PC expansion boards
- 9 ~ 30V_{DC} input power range
- Wide operating temperature (-20 ~ 60 °C)
- Supports Advantech SUSIAccess and embedded software APIs

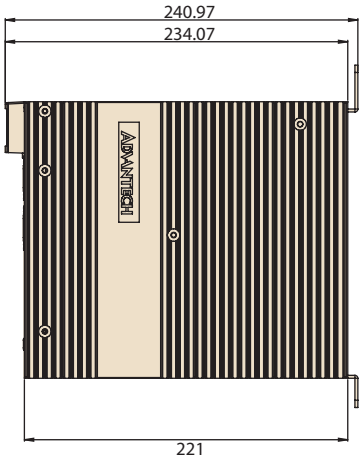
Specifications

System	CPU	Intel® Celeron® J1900 processor, 2.0 GHz		
	Max. Speed	2.41 GHz		
	BIOS	AMI 16 Mbit SPI BIOS		
Memory	Technology	Dual channel DDR3L-1333 (low power 1.35V)		
	Max. Capacity	4 GB memory built in, supports up to 8 GB		
	Socket	2 x 204-pin SODIMM		
Graphics	Integrated Chipset	Intel® HD Graphics		
	VRAM	Up to 224 MB SDRAM of shared system memory		
	Interface	VGA: 2560 x 1600 @ 60Hz		
Ethernet	LAN1	10/100/1000 Mbps Intel® I211GigaLAN controller, supports Wake-on-LAN		
	LAN2	10/100/1000 Mbps Intel® I211GigaLAN controller, supports Wake-on-LAN		
Audio	Interface	Line-Out, Mic-in		
I/O	Serial Ports	Standard type: 4 x RS-232/422/485, 1 x COM1, and 1 x COM2 with 5V/12V power, supports auto-flow control (ARK-5261S-J0A1E) Isolation type: 4 x RS-422/485 with 15Kv ESD protection, 2Kv surge protection, and 2Kv electrical isolation (ARK-5261I-J0A1E)		
	USB	6 (1 x USB 3.0, 4 x USB 2.0, 1 x internal USB 2.0 type A)		
	PS/2 Port	1 supports PS/2 mouse and keyboard		
	Parallel Port	D-sub 25-pin connector		
	Digital I/O	8-bit digital IO (DB9 connector)		
Other	Watchdog Timer	255-level timer intervals, setup via software		
Storage	HDD/SSD	2 x 2.5" SATA HDD/SSD bays (9.5 mm height)		
	mSATA	1 x mSATA or SATAII		
Expansion	PCI/PCIe	2 x PCI, 1 x PCIe x1 (AKR-5261S-J0A1E and ARK-5261I-J0A1E) 3 x PCI, 1 x full-size mini PCIe (ARK-5261P-J0A1E) Supports 15W max. power and 99 x 186 mm max. dimensions (W x L) for PC expansion board		
Software	OS Support	Microsoft Windows 7/8.1/Embedded and Linux Fedora 19		
Power	Type	ATX / AT		
	Input Voltage	9 ~ 30 V_{DC}		
	Minimum Voltage	9V @ 6.6A ~ 30V @ 2A		
	Power Adapter	AC-to-DC, 65 W DC19 V/3.4 A		
Power Consumption	Idle	9.9 W (with Intel® Celeron® J1900, 2.0 GHz processor, memory, and SATA HDD)		
	Maximum	12.9 W (with Intel® Celeron® J1900, 2.0 GHz processor, memory, and SATA HDD)		
Mechanical	Construction	Aluminum housing		
	Mount Options	Desk/wall mounting		
	Dimensions (W x H x D)	137 x 189 x 221 mm (5.39" x 7.44" x 8.70")		
	Weight	4.2 kg (9.24 lbs)		
Environment	Temperature	Operating (with 2 x industrial SSDs without PC expansion boards)	Operating (with 1 x 2.5" HDD or mSATA without PC expansion boards)	Non-operating
		-20 ~ 60 °C with 0.7m/sec air flow	0 ~ 40 °C with 0.7m/sec air flow	- 40 ~ 85 °C (-40 ~185 °F)
	Storage Temperature	- 40 ~ 85 °C (-40 ~185 °F)		
	Relative Humidity	95% @ 40 °C (non-condensing)		
	Vibration	With 2.5" HDD: 1 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis With SSD disk: 5 Grms, IEC 60068-2-64, random, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis		
Certifications	EMC	CE/FCC, CCC, BSMI		
	Safety	CCC, BSMI		

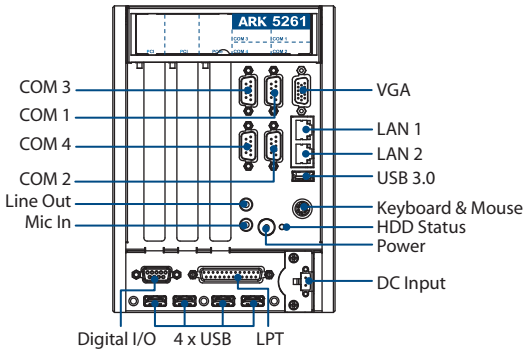
Dimensions

Unit: mm

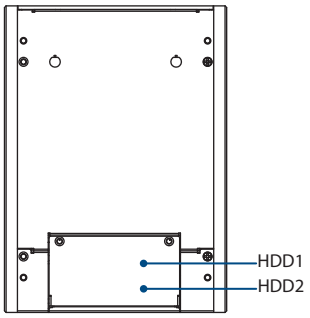




Front View



Rear View



Ordering Information

Part Number	VGA	USB	GbE	RS-232	RS-422/485	PS/2	PCIe	PCI	Power
ARK-5261S-J0A1E	1	1 USB 3.0, 5 USB 2.0	2	4	4	1	1 x PCIe x1	2	9 ~ 30V$_{DC}$
ARK-5261P-J0A1E	1	1 USB 3.0, 4 USB 2.0	2	4	4	1	1 x Mini PCIe	3	9 ~ 30V$_{DC}$
ARK-5261I-J0A1E	1	1 USB 3.0, 5 USB 2.0	2	4	4	1	1 x PCIe x1	2	9 ~ 30V$_{DC}$

Packing List

Part Number	Description	Quantity
ARK-5261	ARK-5261 Unit	1
2061526100	Driver/utility CD	1
2001526110	ARK-5261 startup manual (Eng+CN)	1
1960049826N001	Upper mount bracket	1
1960049827N001	Lower mount bracket	1
1990000505	Shock-proof rubber boot	3
2001526120	ARK-5261 startup manual (TC)	1

Embedded OS

Part Number	Description
2070013108	WE8S ARK-5261 x64 V6.5.2 10MUI; SAP image
2070013109	WES7P ARK-5261 x64 V.5.6.6 10MUI ;SAP image

Optional Accessories

Part Number	Description
1700021831-01	DP to DVI-D cable with BKT
PCA-TPM-00A1E	TPM module
96PSA-A120W24T2	Adaptor 100 ~ 240V$_{AC}$ 120W 24V
96PSA-A65W19P2-2	Adaptor 100 ~ 240V$_{AC}$ 65W 19V without PFC
1702002600	Power cord UL/CSA (USA) 3P, 125V, 10A, 1.83 M, 180 D (for 120W)
1700001524	Power cord UL 3P, 125V, 10A, 1.80 cm (for 165W)
1700022940-01	Power cord (PSE) 3P, 125V, 7A, 3 M, DAC-ST01 (for 120W)
1700021376-01	Power cord (PSE) 3P, 125V, 7A, 250 cm, IEC60320-C5 (for 65W)
1702002605	Power cord (EU) 2P, 220V, 10A/16A, 1.83 M, 90 D (for 120W)
170203183C	Power cord (EU) 3P, (WS-010+WS-083), 1.83 M (for 165W)

6

Slot SBC & Passive Backplanes

Selection Guide		*6-2*
Extension Modules for Slot SBCs		*6-11*
PICMG 1.3 System Host Boards		
PCE-5128	LGA1150 Intel® Core™i7/i5/i3/Pentium® SHB DDR3/SATA 3.0/USB3.0/Dual GbE/3 Displays	*6-12*
PCE-5029	LGA1151 6th and 7th Generation Intel® Core™ i7/i5/i3/Pentium/Celeron System Host Board with DDR4, SATA 3.0, USB 3.0, Dual GbE, and Dual Displays	*6-14*
PCE-5129	LGA1151 6th and 7th Generation Intel® Core™ i7/i5/i3/Pentium/Celeron System Host Board with DDR4, SATA 3.0, USB 3.0, M.2, Dual GbE, and Triple Displays	*6-16*
PCE-7128	LGA1150 Intel® Xeon®/Core™i3/Pentium® SHB DDR3/SATA 3.0/USB3.0/Dual GbE /3 Displays	*6-18*
PCE-7129	6th Generation Intel® Xeon®/Core™ i7/i5/i3/Pentium® LGA1151 System Host Board with DDR4, SATA 3.0, USB 3.0, M.2, Dual GbE, and Triple Displays	*6-20*
PCE-9228	Dual LGA 2011-R3 Intel Xeon® E5-2600v3 SHB Server Board with C612, DDR4/ SATA3.0/USB3.0/Dual Gb	*6-22*
PICMG 1.0 System Host Boards		
PCA-6011	LGA775 Intel® Core™2 Quad SBC with VGA/DVI/Dual GbE LAN	*6-24*
PCA-6028	LGA1150 Intel® Core™ i7/i5/i3/Pentium SBC with VGA/DVI/Dual GbE LAN	*6-26*
Half-Sized System Host Boards		
PCE-3028	LGA 1150 4th Generation Intel® Core™ i7/i5/i3 Half-size SHB with PCIe/VGA/ DVI/Dual GbE LAN	*6-28*
PCE-3029	LGA 1151 6th and 7th Gen Intel® Core™ i7/i5/i3 Half-size SHB with PCIe 3.0/ Dual Independent Display/Dual GbE LAN/SATA III/m-SATA/ USB 3.0	*6-30*
PCE-4128	LGA 1150 4th Gen Intel® Xeon® and Core™ i7/i5/i3 Half-size SHB with PCIe 3.0/ Triple independent display/Dual GbE LAN/SATA 3.0/m-SATA/ USB 3.0	*6-32*
PCE-4129	LGA 1151 6th and 7th Gen Intel® Xeon® and Core™ i7/i5/i3 Half-size SHB with PCIe 3.0/Triple Independent Display/Dual GbE LAN/SATA III/m-SATA/ USB 3.0	*6-34*
PCI-7032	Intel® Celeron J1900/N2930 PCI Half-size SBC with DDR3L 1333/Dual GbE/m-SATA/4 RS-232/422/485	*6-36*
PCA-6742	Advantech EVA-X4300 ISA Half-size SBC with VGA/LCD/LAN/CFC/USB and PC/104	*6-38*
PCA-6743	DM&P Vortex86DX ISA Half-size SBC with VGA/TTL or LVDS/LAN/USB/PC/104/ CFC/COM	*6-40*
PCA-6763	AMD T40E/T16R ISA Half-size SBC with Dual Independent Display/Dual GbE/ SATA/USB/m-SATA/COM/LPT	*6-42*
Passive Backplanes		
PICMG1.3 Full-Size SHB Backplanes		*6-44*
PICMG1.0 Full-Size SBC Backplanes		*6-49*
Half-Size SBC Backplanes		*6-53*

To view all of Advantech's Slot SBC & Passive Backplanes, please visit www.advantech.com/products.



PICMG 1.3 System Host Boards





Model Name		LGA1150 PICMG 1.3 SHB	LGA1151 PICMG 1.3 SHB	LGA1151 PICMG 1.3 SHB
		PCE-5128	PCE-5029	PCE-5129
Processor System	CPU	Intel® Core™ i7/Core™ i5/Core™ i3 LGA1150 Processors	Intel® Core™ i7/Core™ i5/ Core™ i3 LGA1151 Processors	Intel® Core™ i7/Core™ i5/Core™ i3 LGA1151 Processors
	Max. Speed	3.1 GHz	3.4 GHz	3.4 GHz
	Cache	Up to 8 MB (Depends on CPU)	Up to 8 MB (Depends on CPU)	Up to 8 MB (Depends on CPU)
	Chipset	Intel® Q87	Intel® H110	Intel Q170
	BIOS	AMI 128 Mbit SPI Flash	AMI 128 Mbit SPI Flash	AMI 128 Mbit SPI Flash
Backplane Bus	PCIe	PICMG1.3: One x16 & Four x1	PICMG1.3: One x16 & Four x1	PICMG1.3: One x16 & Four x1
	PCI (32bit/33 MHz)	4	4	4
Memory	Technology	Dual-channel (Non-ECC) DDR3 1333/1600	Dual-channels (Non-ECC) DDR4 1866/2133	Dual-channels (Non-ECC) DDR4 1866/2133
	Max. Capacity	16 GB	32 GB	32 GB
	Socket	240-pin DIMM x 2	2 x 288-pin DIMM	2 x 288-pin DIMM
Graphics	Controller	Chipset integrated Intel® HD Graphics	Chipset integrated Intel® HD Graphics	Chipset integrated Intel® HD Graphics
	VRAM	Shared system memory is subject to OS	Shared system memory is subject to OS	Shared system memory is subject to OS
	Video Out	VGA/DVI-D/DVI-D (Optional DVI-D cable)	G2: VGA+DP/DVI (Optional DVI-D/DP cable) VG: VGA	VGA+DP/DVI-D+DP/DVI-D
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	LAN1/LAN2 Controller	Intel® I217LM/I211AT	LAN1: I219-V LAN2: I211-AT (G2 only)	Intel I219LM/I211
	Connector	RJ45 X 2	G2: 2 VG: 1	RJ45 x 2
	Disable in BIOS	Yes	Yes	Yes
SATA	Max. Date Transfer Rate	600 MB/s SATA3.0	600 MB/s SATA3.0	600 MB/s SATA3.0
	Channel	6 x SATA3.0	4 x SATA3.0	5 x SATA3.0
	S/W Raid	0, 1, 5, 10	-	0, 1, 5, 10
Rear I/O	VGA	1	1	1
	Ethernet	2	G2: 2 VG: 1	2
	USB2.0		-	0
	USB3.0	1	G2: 1 VG: -	1
	PS/2	1	1	1
	Serial		G2: - VG: 1	-
Internal I/O	USB 2.0	9 USB 2.0 (Pin-Header x 4 + USB Type A x 1 + 4 on backplane)	7 USB 2.0 (Pin-header x 2+USB Type A x 1+ 4 on backplane)	7 USB2.0 (Pin-header x 2+USB Type A x 1+ 4 on backplane)
	USB 3.0	2 USB3.0 (Pin-Header)	2 USB3.0 (Pin header)	4 USB3.0 (Pin header)
	SATA	6	4	5
	M.2 (2280 Type M)	-	-	1 (Shared w/ SATA0 port)
	Serial	2 RS-232(Pin-Header)	G2: 2 VG: 1	2 RS-232(Pin-Header)
	Parallel	1(SPP/EPP/ECP)	1	1
	PS/2	1	1	1
	OBS(Onboard Security Hardware Monitor)	Yes	Yes	Yes
Watchdog Timer	Output	System reset	System reset	System reset
	Interval	Programable, 1~255 sec/min	Programable, 1~255 sec	Programable, 1~255 sec/min
Miscellaneous	Advantech Audio Module	PCA-AUDIO-HDA1E	PCA-AUDIO-HDB1E	PCA-AUDIO-HDB1E
	Advantech SNMP-1000	Yes	No	Yes
	Advantech SAB-2000	Yes	G2: Yes VG: -	Yes
	Advantech IPMI Module	-	-	-
	AMT	Yes	-	Yes
Page		6-12	6-14	6-16







LGA1150 PICMG 1.3 SHB	LGA1151 PICMG 1.3 SHB	LGA2011 PICMG 1.3 SHB
PCE-7128	PCE-7129	PCE-9228
Intel® Xeon® and Core™ i7/Core™ i5/Core™ i3 LGA1150 Processors	Intel® Xeon and Core™ i7/Core™ i5/Core™ i3 LGA1151 Processors	Intel Xeon E5-2600 v3 series LGA2011 Processors
3.5 GHz	3.6 GHz	2.5 GHz
Up to 8 MB (Depends on CPU)	Up to 8 MB (Depends on CPU)	Up to 30 MB (Depends on CPU)
Intel® C226	Intel C236	Intel C612
AMI 128 Mbit SPI Flash	AMI 128 Mbit SPI Flash	AMI 128 Mbit SPI Flash
One x16/ Two x8 & Four x1	PICMG1.3: One x16 / Two x8 & Four x1	PICMG1.3: One x16/ Two x8 & Four x1 Expansion (ODM optional): 64 lanes
4	4	4
Dual-channel (ECC) DDR3 1333/1600	Dual-channels (ECC) DDR4 1600/1866/2133	Quard-channels ECC-Register DDR4 1600/1866/2133
16 GB	32 GB	256 GB
240-pins DIMM x 2	2 x 288-pins DIMM	288-pins DIMM x 8
Chipset integrated Intel® HD Graphics	Chipset integrated Intel® HD Graphics	AST1400/AST2400
Shared system memory is subject to OS	Shared system memory is subject to OS	DDR3 64MB
VGA/DVI-D/DVI-D (Optional DVI-D cable)	VGA+DP/DVI-D+DP/DVI-D	VGA
10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
Intel® I217LM/I210AT	Intel I219LM/I210AT	Intel I210AT/I210AT
RJ45 x 2	RJ45 x 2	RJ45 x 2
Yes	Yes	Lan1: No; Lan2: Yes
600 MB/s SATA3.0	600 MB/s SATA3.0	600 MB/s SATA3.0
6 x SATA3.0	5 x SATA3.0	8 x SATA3.0
0, 1, 5, 10	0, 1, 5, 10	0, 1, 5, 10
1	1	1
2	2	3(IPMI occupy 1 LAN)
	0	2
1	1	2
1	1	1
-	-	-
9 USB 2.0 (Pin-Header x 4 + USB Type A x 1 + 4 on backplane)	7 USB2.0 (Pin-header x 2+USB Type A x 1+ 4 on backplane)	4 USB 2.0 (On backplane)
2 USB3.0 (Pin-Header)	4 USB3.0 (Pin header)	2 USB3.0 (Pin-Header)
6	5	8
	1 (Shared w/ SATA0 port)	
2 RS-232(Pin-Header)	2 RS-232(Pin-Header)	1 RS-232(Pin-Header)
1(SPP/EPP/ECP)	1	-
1	1	-
Yes	Yes	Yes
System reset	System reset	System reset
Programable, 1~255 sec/min	Programable, 1~255 sec/min	Programable, 1~255 sec/min
PCA-AUDIO-HDA1E	PCA-AUDIO-HDB1E	PCA-AUDIO-HDA1E
Yes	Yes	Yes
Yes	Yes	Yes
Yes	-	Yes
Yes	Yes	-
6-18	6-20	6-22

PICMG 1.0 Single Board Computers





Model Name		Core™ 2 Quad PICMG 1.0 SBC	LGA1150 PICMG 1.0 SBC
		PCA-6011	PCA-6028
Processor System	CPU	Intel® Core™ 2 Quad/Core™ 2 Duo/ Pentium dual-Core™/Celeron LGA775 processors	Intel Core i7/i5/i3/Pentium LGA 1150 Processors
	Max. Speed	3.16 GHz	3.2GHz
	Max. L2 Cache	Up to 12 MB (Depend on CPU)	Up to 8MB
	Chipset	Intel® G41 + ICH7 (VG version only) Intel® G41 + ICH7R (G2 version only)	Intel H81
	BIOS	AMI 16 Mb SPI Flash	AMI 128Mbit SPI Flash
	FSB	1333/1066/800 MHz	-
Bus	PCI	32-bit/33 MHz PCI	32 bit/33 MHz PCI
	ISA	HISA (ISA High Drive)	HISA (ISA High Driver)
Graphics	Controller	Chipset integrated Intel® Graphics Media Accelerator X4500	Chipset integrated Intel HD Graphics
	VRAM	Shared with system memory up to 352 MB	Shared system memory is subject to OS
	LCD/DVI	DVI (Optional)	DVI (G2 version only)
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel® 82583V LAN2: Intel® 82583V	LAN 1: Intel I217V LAN 2: Intel I211 (Only in G2 Sku)
	Connector	RJ-45 x 2	RJ45 x 1 (VG sku); RJ45 x 2 (G2 sku)
	Disabled in BIOS	Yes	Yes
Memory	Technology	Dual-channel DDR3 1066/800 MHz	Dual channel (Non-ECC) DDR3 1333/1600 MHz
	Max. Capacity	8 GB	16 GB (8 GB per DIMM)
	Socket	240-pin DIMM x 2	DDR3 240-pin DIMM x 2
SATA	Max. Data Transfer Rate	300 MB/s	600 MB/s
	Channel	4	4 (1x SATA2.0, 2x SATA3.0, 1x mSATA)
	RAID	0, 1, 5, 10 (G2 version only)	-
EIDE	Mode	ATA 100/66/33	-
	Channel	1 (Max. two devices)	-
I/O Interface	USB	8 (USB 2.0, for VG version) 7 (USB 2.0, for G2 version)	Up to 8 x USB2.0 (6x pin header, 1x type A, 1x rear in G2 sku only) 2x USB3.0 (Pin header)
	Serial	2 (RS-232)	2 RS-232 (Pin-Header)
	Parallel	1 (SPP/EPP/ECP)	1
	FDD	1	-
	PS/2	1	1
	LAN	1 (for VG version) 2 (for G2 version)	1 (for VG version) 2 (for G2 version)
	OBS (Hardware Monitor)	Yes	Yes
Watchdog Timer	Output	System reset	System reset
	Interval	Programmable, 1~255 sec	Programmable, 1~255 sec
Miscellaneous	Audio	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E
	Advantech SNMP-1000-B	Yes	Yes
	Advantech SAB-2000	Yes	Yes
	Solid State Disk	(Optional)	mSATA
Page		6-24	6-26

Half-Size Single Board Computers





Specifications		PCIe Half-Size SBC	
		PCE-3026	PCE-3028
Processor System	CPU	Intel® Core™ i7/i5/i3/Pentium/Celeron LGA1155 processor	Intel Core i7/i5/i3/Pentium LGA 1150 Processor
	Speed	up to 3.4 GHz	Up to 3.5 GHz
	L2 Cache	up to 8 MB	Up to 8MB
	Chipset	Intel® H61	Intel H81
	BIOS	AMI 64 Mbit SPI Flash	AMI 128 Mbit SPI Flash
	FSB	-	-
Bus	PCIe	One PCIe x16, Four PCIe x1	One PCIex16, Four PCIex1
	PCI	-	-
	ISA	-	-
Graphics	Controller	Chipset integrated graphics with Intel® HD	Chipset integrated graphics with Intel HD
	VRAM	Shared with system memory is subject to OS	Shared with system memory is subject to OS
	Video output	D-sub VGA port, DVI	D-sub VGA port, DVI
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel® 82579V LAN2: Intel® 82583V	LAN1: Intel® I217V LAN2: Intel® I211AT
	Connector	RJ-45 x 2	RJ-45 x2
	Disabled in BIOS	Yes	Yes
Memory	Technology	Dual-Chnnel DDR3 1066/1333 MHz	Dual-channel DDR3 1066/1333/1600 MHz
	Max. Capacity	16 GB	16 GB
	Socket	204-pin SODIMM x 2	204-pin SODIMM x2
SATA	Max. Data Transfer Rate	300 MB/s	600 MB/s, 300 MB/s
	Channel	3	4
	RAID	-	-
EIDE	Mode	-	-
	Channel	-	-
I/O Interface	USB	8 USB 2.0	2 USB 3.0 + 8 USB 2.0
	Serial	2 x RS-232 Optional: 4 x RS-422/485 w/Auto-flow or 4 RS-232 by COM module	2 x RS-232 Optional: 4x RS-422/485 w/Auto-flow or 4 x RS-232 by COM module
	Parallel	1	1
	FDD	-	-
	PS/2	1	1
	LAN	2	2
	OBS (Onboard Security Hardware Monitor)	-	-
Watchdog Timer	Output	System reset	System reset
	Interval	Programmable 1-255 sec/min	Programmable 1-255 sec
Miscellaneous	Audio	PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E
	Advantech SNMP-1000	-	-
	IPMI	-	-
	Solid State Disk	-	-
Page		online	6-28

Half-Size Single Board Computers







Specifications		PCIe Half-Size SBC		PCI Half-Size SBC
		PCE-3029	PCE-4129	PCI-7032
Processor System	CPU	Intel Core i7/i5/i3/Pentium LGA 1151 Processor	Intel Xeon E3-1200v5 series, Core i7/i5/ i3 LGA1151 processors	Intel Celeron J1900/N2930
	Speed	Up to 3.7 GHz	Up to 3.7 GHz	2.00/1.83 GHz
	L2 Cache	Up to 8 MB	Up to 8 MB	2MB/2MB
	Chipset	Intel H110	Intel C236	Intel Celeron J1900/N2930 SOC
	BIOS	AMI 128 Mbit SPI Flash	AMI 128 Mbit SPI Flash	AMI 64 Mbit SPI Flash
	FSB	-	-	-
Bus	PCIe	One PCIe x16, Four PCIe x1	One PCIe x16 or Two PCIe x8, Four PCIe x1	One PCIe x 1 (F SKU) Only
	PCI	-	-	32-bit/33 MHz PCI
	ISA	-	-	-
Graphics	Controller	Chipset integrated graphics with Intel HD	Chipset integrated graphics with Intel HD	Chipset integrated graphics with Intel® HD
	VRAM	Shared with system memory is subject to OS	Shared with system memory is subject to OS	Shared with system memory is subject to OS
	Video output	VGA, DVI, DP	VGA, DVI, DP	D-sub VGA port, 48-bit LVDS, DVI
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	LAN1: Intel® I219V LAN2: Intel® I211AT	LAN1: Intel® I219LM LAN2: Intel® I210AT	LAN1: Intel® I211 LAN2: Intel® I211
	Connector	RJ-45 x2	RJ-45 x2	RJ-45 x 2
	Disabled in BIOS	Yes	Yes	Yes
Memory	Technology	Dual-channel DDR4 1866/2133 MHz	Dual channel DDR4 ECC 1866/2133 MHz (ECC function enable depends on processor support)	Dual-Chnnel DDR3L 1333
	Max. Capacity	32 GB	32GB	8GB (for G2/F SKU) 4GB (for VG SKU)
	Socket	260-pin SODIMM x2	260-pin SO-DIMM X2	204-pin SODIMM x 2 (for G2/F SKU) 204-pin SODIMM x 1 (for VG SKU)
SATA	Max. Data Transfer Rate	600MB/s	600MB/s	300 MB/s
	Channel	4	4	2 (SATA 2 can change mSATA)
	RAID	-	0,1,5,10	-
EIDE	Mode	-	-	-
	Channel	-	-	-
I/O Interface	USB	3 USB 3.0 + 7 USB 2.0	3 USB 3.0 + 7 USB 2.0	1 USB 3.0 + 6 USB 2.0 (for G2/F SKU) 1 USB 3.0 + 5 USB 2.0 (for VG SKU)
	Serial	2 x RS-232 Optional: 4x RS-422/485 w/Auto-flow or 4 x RS-232 by COM module	2 x RS-232 Optional: 4x RS-422/485 w/auto-flow or 4 x RS232 by COM module	4 x RS-232/422/485 (for G2/F SKU) 2 x RS-232/422/485 (for VG SKU) Optional: 4 x RS-422/485 w/Auto-flow or 4 RS-232 by COM module
	Parallel	1	1	1
	FDD	-	-	-
	PS/2	1	1	1
	LAN	2	2	2 (for G2/F SKU) 1 (for VG SKU)
	OBS (Onboard Security Hardware Monitor)	Yes	Yes	Yes (G2 SKU only)
Watchdog Timer	Output	System reset	System reset	System reset
	Interval	Programmable 1-255 sec	Programmable 1-255 sec	Programmable, 1~255 sec/min
Miscellaneous	Audio	PCA-AUDIO-HDB1E	PCA-AUDIO-HDA1E	PCA-AUDIO-HDB1E
	Advantech SNMP-1000	-	-	-
	IPMI	-	-	-
	Solid State Disk	mSATA x 1	mSATA x 1	mSATA x 1
Page		6-30	6-34	6-36






ISA Half-Size SBC			
PCA-6782	PCA-6763	PCA-6742	PCA-6743
Intel® Atom™ D525/N455	AMD G-Series APU T16R	Advantech EVA-X4300	DM&P Vortex86DX
D525 1.8 GHz/N455 1.66 GHz	615 MHz	300 MHz	800 MHz
512 KB (N455)/1 MB (D525)	512 KB	L1 Cache 32 KB	256 KB
Intel® Atom™ D525/N455+ICH8M	AMD T16R+A55E	Advantech EVA-X4300	DM&P Vortex86DX
AMI 16 Mbit SPI Flash	AMI 64 Mbit SPI Flash	Award integrated 256 KB ROM in EVA-X4300	Award integrated 256 KB ROM in Vortex86DX
-	-	-	-
-	-	-	-
-	-	-	-
16-bit ISA Bus	16-bit ISA Bus	8/16-bit 8 MHz ISA	16-bit ISA Bus
Embedded Gen3.5+ GFX Core™ technology	Radeon HD 6250	SMI 712 graphic controller	SMI 712 graphic controller
Shared with system memory up to 224 MB	Shared with system memory up to 384MB	4 MB display memory	4 MB display memory
D-sub VGA port, 18 bit LVDS	D-sub VGA port, LVDS (48-bit for G2 SKU, 18-bit for VG SKU), DVI	D-Sub VGA port, 18/24 bit TTL or 18/24 bit LVDS (optional)	D-Sub VGA port, up to 24 bit TTL or 18 bit LVDS (optional)
10/100/1000 Mbps	10/100/1000 Mbps	10/100 Mbps	10/100 Mbps
Intel® 82567V	LAN1: Intel® I211 LAN2: Intel® I211	Realtek RTL8100C (VE)	LAN on Vortex86DX
RJ-45 x 1	RJ-45 x 2	RJ-45 x 1	RJ-45 x 1
Yes	Yes	Yes	Yes
Single-Channel DDR2 667 MHz (for PCA-6782N) Single-Channel DDR2 667/800 MHz (for PCA-6782D)	Onboard 1GB DDR3 1066 MHz SODIMM DDR3 1066 MHz up to 4GB	Default onboard DDR 2 166MHz	Default onboard DDR2 (for VE SKU) Default onboard DDR2 (for F SKU)
2 GB	5GB	64 MB	256 MB (for VE SKU) 512 MB (for F SKU)
200-pin SODIMM x 1	204-pin SODIMM x 1	-	-
300 MB/s	300 MB/s	-	150 MB/s
3	2 (SATA 2 can change mSATA)	-	1 (for F SKU)
-	-	-	-
ATA 100/66/33	-	UDMA 100	UDMA 100
1 (Max. 2 devices)	-	1 (Max. 2 devices)	1 (Max. 2 devices)
8 USB 2.0	7 USB 2.0 (for G2 SKU) 6 USB 2.0 (for VG SKU)	4 USB 2.0	4 USB 2.0
2 x RS-232 Optional: 4 x RS-422/485 w/Auto-flow by COM module	2 x RS-232 Optional: 4 x RS-422/485 w/Auto-flow by COM module	1 x RS-232/422/485 3 x RS-232	F SKU: 2 x RS-232/422/485 & 2 x RS-232 VE SKU: 2 x RS-232
1	1	1	1
1	1	-	1
1	1	1	1
1	2 (for G2/F SKU) 1 (for VG SKU	1 (VE)	1
-	-	-	-
System reset	System reset	System reset/IRQ11	System reset/IRQ11
Programmable, 1~255 sec/min	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min	Programmable, 1~255 sec/min
PCA-AUDIO-HDA1E	PCA-AUDIO-HDA1E	-	-
-	-	-	-
-	-	-	-
CompactFlash Type I/II	mSATA x 1	CompactFlash Type I/II	CompactFlash Type I/II
online	6-42	6-38	6-40

PICMG1.3 Full-Size SHB Backplanes

Server Grade: Compatible with PCE-7000 Series CPU Boards

Category	Model Name	PCIe				PCI-X			PCI
		x16	x8	x4	x1	64/66	64/100	64/133	32/33
2U Butterfly BP	PCE-7B06V-04A1E	-	1	-	-	-	-	-	4
8 slots BP	PCE-7B08-04A1E	-	2	1	-	-	-	-	4
14 slots BP	PCE-7B09R-04A1E	-	1	3	-	-	-	-	4
	PCE-7B10-04A1E	-		5	-	-	-	-	4
	PCE-7B13-64C1E	-	2	-	-	4	2	-	4
	PCE-7B13-07A1E	-	2	3	-	-	-	-	7
	PCE-7B13D-04A1E	-	1, 2	-	-	-	-	-	4
20 slots BP	PCE-7B17-00A1E	-	5	11	-	-	-	-	-

Category	Model Name	Wallmount/Desktop Chassis			
		IPC-6025	IPC-6606	IPC-6806(W)	IPC-6608
2U Butterfly BP	PCE-7B06V-04A1E	-	-	-	-
8 slots BP	PCE-7B08-04A1E	-	-	-	V
14 slots BP	PCE-7B09R-04A1E	-	-	-	-
	PCE-7B10-04A1E	-	-	-	-
	PCE-7B13-64C1E	-	-	-	-
	PCE-7B13-07A1E	-	-	-	-
	PCE-7B13D-04A1E	-	-	-	-
20 slots BP	PCE-7B17-00A1E	-	-	-	-

Category	Model Name	Rackmount Chassis													
		ACP-1010	ACP-1320	ACP-2000EBP	IPC-602EBP	IPC-510	IPC-610	IPC-611	ACP-4000	ACP-4010	ACP-4320	ACP-4340	ACP-4360	IPC-623	IPC-622
		2-slot / 1U		6-slot / 2U		15-slot / 4U								20-slot/ 4U	20-slot/ 6U
2U Butterfly BP	PCE-7B06V-04A1E	-	-	V	V	-	-	-	-	-	-		-	-	-
8 slots BP	PCE-7B08-04A1E	-	-	-	-	-	-	-	-	-	-		-	-	-
14 slots BP	PCE-7B09R-04A1E	-	-	-	-	V	V	V	V	V	V	V	V	-	-
	PCE-7B10-04A1E	-	-	-	-	V	V	V	V	V	V	V	V	-	-
	PCE-7B13-64C1E	-	-	-	-	V	V	V	V	V	V	V	V	-	-
	PCE-7B13-07A1E	-	-	-	-	V	V	V	V	V	V	V	V	-	-
	PCE-7B13D-04A1E	-	-	-	-	-	-	-	-	V	-	-	-	-	-
20 slots BP	PCE-7B17-00A1E	-	-	-	-	-	-	-	-	-	-	-	-	V	V

Desktop: Compatible with PCE-5000 Series CPU Boards

Category	Model Name	PCIe				PCI-X			PCI
		x16	x8	x4	x1	64/66	64/100	64/133	32/33
1U Butterfly BP	PCE-5B03V-01A1E	1	-	-	-	-	-	-	1
	PCE-5B03V-00A1E	1		1	-	-	-	-	-
2U Butterfly BP	PCE-5B05V-30B1E	1	-	-	-	-	2	1	-
	PCE-5B06V-00A1E	1	-	-	4	-	-	-	-
	PCE-5B06V-04A1E	1	-	-	-	-	-	-	4
5 slot BP	PCE-5B04-20B1E	1	-	-	-	-	-	2	-
	PCE-5B05-02A1E	1	-	1	-	-	-	-	2
	PCE-5B05-03A1E	1	-	-	-	-	-	-	3
	PCE-5B05-04A1E	-	-	-	-	-	-	-	4
6 slot BP	PCE-5B06-00A1E	1	-	-	4	-	-	-	-
	PCE-5B06-03A1E	1	-	1	-	-	-	-	3
	PCE-5B06-04A1E	1	-	-	-	-	-	-	4
8 slot BP	PCE-5B07-04A1E	1	-	1	-	-	-	-	4
	PCE-5B08-02A1E	1	-	-	4	-	-	-	2
10 slot BP	PCE-5B09-04A1E	1	-	3	-	-	-	-	4
	PCE-5B09-06A1E	1	-	1	-	-	-	-	6
14 slot BP	PCE-5B10-04A1E	1	-	-	4	-	-	-	4
	PCE-5B12-07A1E	1	-	3	-	-	-	-	7
	PCE-5B12-64C1E	1	-	-	-	4	2	-	4
	PCE-5B13-08A1E	1	-	-	3	-	-	-	8
	PCE-5B12D-04A1E	1	-	-	-	-	-	-	4
20 slot BP	PCE-5B12-00A1E	10	-	1	-	-	-	-	-
	PCE-5B16Q-02A1E	1	-	-	-	-	-	-	2
	PCE-5B18-88B1E	1	-	-	-	8	-	-	8
	PCE-5B19-00A1E	17	-	1	-	-	-	-	-

Category	Model Name	Wallmount/Desktop Chassis					
		IPC-6025	IPC-6606	IPC-6806	IPC-6806W	IPC-6608	IPC-7132
1U Butterfly BP	PCE-5B03V-01A1E	-	-	-	-	-	-
	PCE-5B03V-00A1E	-	-	-	-	-	-
2U Butterfly BP	PCE-5B05V-30B1E	-	-	-	-	-	-
	PCE-5B06V-00A1E	-	-	-	-	-	-
	PCE-5B06V-04A1E	-	-	-	-	-	-
5 slot BP	PCE-5B04-20B1E	V	-	-	-	-	-
	PCE-5B05-02A1E	V	-	-	-	-	-
	PCE-5B05-03A1E	V	-	-	-	-	-
	PCE-5B05-04A1E	V	-	-	-	-	-
6 slot BP	PCE-5B06-00A1E	-	V	-	V	-	-
	PCE-5B06-03A1E	-	V	-	V	-	-
	PCE-5B06-04A1E	-	V	-	V	-	-
8 slot BP	PCE-5B07-04A1E	-	-	-	-	V	-
	PCE-5B08-02A1E	-	-	-	-	V	-
10 slot BP	PCE-5B09-04A1E	-	-	-	-	-	V
	PCE-5B09-06A1E	-	-	-	-	-	V
14 slot BP	PCE-5B10-04A1E	-	-	-	-	-	-
	PCE-5B12-07A1E	-	-	-	-	-	-
	PCE-5B12-64C1E	-	-	-	-	-	-
	PCE-5B13-08A1E	-	-	-	-	-	-
	PCE-5B12D-04A1E	-	-	-	-	-	-
20 slot BP	PCE-5B12-00A1E	-	-	-	-	-	-
	PCE-5B16Q-02A1E	-	-	-	-	-	-
	PCE-5B18-88B1E	-	-	-	-	-	-
	PCE-5B19-00A1E	-	-	-	-	-	-

PCI/ISA Backplanes

Selection Guide

Yes: supported/- : not supported/Δ : optional

Category	Model Name	Slot per segment					Segment	AT	ATX	1U Chassis		2U Chassis		4U Chassis		
		ISA	PCI	PICMG	PICMG/PCI	ISA/PCI				ACP-1010	ACP-1320	ACP-2000	IPC-602	IPC-510	IPC-610	IPC-611
										2-slot	2-slot	6-slot	6-slot	15-slot	15-slot	15-slot
1U Butterfly BP	PCA-6103P2V-0A2E*	-	2	1	-	-	1	-	Yes	Yes	Yes	-	-	-	-	-
2U Butterfly BP	PCA-6105P4V-0B3E*	-	4	1	-	-	1	-	Yes	-	-	Yes	Yes	-	-	-
	PCA-6106P3V-0B2E*	1	3	2	-	-	1	Yes	Yes	-	-	Yes	Yes	-	-	-
5 Slot BP	PCA-6105P3-5A1E	1	2	1	-	1	1	-	Yes	-	-	-	-	-	-	-
6/8 Slot BP	PCA-6106P4-0A2E	-	4	2	-	-	1	Yes	Yes	-	-	-	-	-	-	-
	PCA-6106P3-0D2E	2	2	1	1	-	1	Yes	Yes	-	-	-	-	-	-	-
	PCA-6108P6-0C1E	1	5	1	1	-	1	Yes	Yes	-	-	-	-	-	-	-
	PCA-6108P4-0C2E	3	3	1	1	-	1	Yes	Yes	-	-	-	-	-	-	-
	PCA-6108-0B2E	8	-	-	-	-	1	Yes	Yes	-	-	-	-	Yes	Yes	Yes
14/15 Slot BP	PCA-6114P12-0B3E	1	11	1	1	-	1	Yes	Yes	-	-	-	-	Yes	Yes	Yes
	PCA-6114P10-0B2E	2	10	2	-	-	1	Yes	Yes	-	-	-	-	Yes	Yes	Yes
	PCA-6114P7-0E1E	4	6	3	-	1	1	Yes	Yes	-	-	-	-	Yes	Yes	Yes
	PCA-6114P4-0C2E	8	4	2	-	-	1	Yes	Yes	-	-	-	-	Yes	Yes	Yes
	PCA-6113P4R-0C2E	7	4	2	-	-	1	Yes	Yes	-	-	-	-	Yes	Yes	Yes
	PCA-6114-0B2E	14	-	-	-	-	1	Yes	Yes	-	-	-	-	-	-	-
	PCA-6113DP4-0A2E	1	3,4	1,2	1,0	-	2	Yes	Yes	-	-	-	-	-	-	-
20 Slot BP	PCA-6120P18-0A2E	1	17	1	1	-	1	Yes	Δ	-	-	-	-	-	-	-
	PCA-6120P4-0B2E	14	4	2	-	-	1	Yes	Δ	-	-	-	-	-	-	-
	PCA-6120P12-0A2E	7	11	1	1	-	1	Yes	Δ	-	-	-	-	-	-	-
	PCA-6119P7-0C1E	10	7	2	-	-	1	Yes	Δ	-	-	-	-	-	-	-
	PCA-6120Q-0B2E	5	-	-	-	-	4	Yes	Δ	-	-	-	-	-	-	-

Category	Model Name	4U Chassis						6U Chassis	Wallmount/Desktop Chassis				Cage
		ACP-4000	ACP-4010	ACP-4320	ACP-4340	ACP-4360	IPC-623	IPC-622	IPC-6608	IPC-6606	IPC-6806/ IPC-6806W	IPC-6025	IPC-6006
		15-slot	15-slot	15-slot	15-slot	15-slot	20-slot	20-slot	8-slot	6-slot	6-slot	5-slot	6-slot
1U Butterfly BP	PCA-6103P2V-0A2E*	-	-	-	-	-	-	-	-	-	-	-	-
2U Butterfly BP	PCA-6105P4V-0B3E*	-	-	-	-	-	-	-	-	-	-	-	-
	PCA-6106P3V-0B2E*	-	-	-	-	-	-	-	-	-	-	-	-
5 Slot BP	PCA-6105P3-5A1E	-	-	-	-	-	-	-	-	-	-	Yes	-
6/8 Slot BP	PCA-6106P4-0A2E	-	-	-	-	-	-	-	-	Yes	Yes	-	Yes
	PCA-6106P3-0D2E	-	-	-	-	-	-	-	-	Yes	Yes	-	Yes
	PCA-6108P6-0C1E	-	-	-	-	-	-	-	Yes	-	-	-	-
	PCA-6108P4-0C2E	-	-	-	-	-	-	-	Yes	-	-	-	-
14/15 Slot BP	PCA-6114P12-0B3E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-
	PCA-6114P10-0B2E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-
	PCA-6114P7-0E1E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-
	PCA-6114P4-0C2E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-
	PCA-6113P4R-0C2E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-
	PCA-6114-0B2E	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-	-
	PCA-6113DP4-0A2E	-	Yes	-	-	-	-	-	-	-	-	-	
20 Slot BP	PCA-6120P18-0A2E	-	-	-	-	-	Yes	Yes	-	-	-	-	-
	PCA-6120P4-0B2E	-	-	-	-	-	Yes	Yes	-	-	-	-	-
	PCA-6119P7-0C1E	-	-	-	-	-	Yes	Yes	-	-	-	-	-
	PCA-6119P7-0B3E	-	-	-	-	-	Yes	Yes	-	-	-	-	-
	PCA-6120Q-0B2E	-	-	-	-	-	Yes	Yes	-	-	-	-	-

Remarks:
* : only Compatible with Advantech's 1U/2U chassis

Backplanes Compatible with Half-Size SBCs

Selection Guide

Yes : supported/- : not supported

Interface	Category	Model Name	Slots per segment							Segment
			ISA	PCI	PCIe x16	PCIe x 8	PCIe x4	PCIe x1	PICMG	
Pure ISA Backplane	-	PCA-6104-0C2E	3	-	-	-	-	-	1	1
	6-slot	PCA-6106-0B2E	5	-	-	-	-	-	1	1
	-	PCA-6108-0B2E *	7	-	-	-	-	-	1	1
	8-slot	PCA-6108E-0C2E	7	-	-	-	-	-	1	1
Pure PCI Backplane	-	PCA-6104P4-0B2E	-	3	-	-	-	-	1	1
	6-slot	PCA-6105P5-0B2E	-	4	-	-	-	-	1	1
	8-slot	PCA-6108P8-0A2E	-	7	-	-	-	-	1	1
PCI/PCIe Backplane	1U	PCI-7103P1V-01A1E	-	1	-	-	1	-	1	1
PICMG1.3 Half-Size Backplanes	6-slot	PCE-3B03-00A1E	-	-	1	-	1	-	1	1
	6-slot	PCE-3B06-00A1E	-	-	1	-	-	4	1	1
	6-slot	PCE-3B06-03A1E	-	3	1	-	-	1	1	1
	6-slot	PCE-3B06-02A1E	-	2	1	-	-	2	1	1
	3-slot	PCE-3B03A-00A1E	-	-	1	-	1	-	1	1
	3-slot	PCE-3B03-01A1E	-	1	1	-	-	-	1	1
	14-slot	PCE-3B12-08A1E	-	8	1	-	-	2	1	1
	14-slot	PCE-4B13-08A1E	-	8	-	2	-	2	1	1
	14-slot	PCE-4B12-03A1E	-	3	-	1	4	3	1	1
	14-slot	PCE-4B13-00A1E	-	-	-	1	11	-	-	-

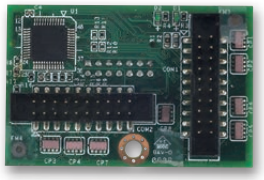
Interface	Model Name	AT	ATX	IPC-120	ACP-4020	ACP-4D00	IPC-6806S*	IPC-6006S	IPC-3026	IPC-3012
				Rackmount	Rackmount	Rackmount	Wallmount	Wallmount	Wallmount	Wallmount
				3-slot	14-slot	6-slot	6-slot	6-slot	6-slot	3-slot
Pure ISA Backplane	PCA-6104-0C2E	Yes	Yes	-	-	-	-	-	-	-
	PCA-6106-0B2E	Yes	Yes	-	-	-	Yes	Yes	Yes	-
	PCA-6108-0B2E	Yes	Yes	-	-	-	-	-	-	-
	PCA-6108E-0C2E	Yes	Yes	-	-	-	-	-	-	-
Pure PCI Backplane	PCA-6104P4-0B2E	Yes	Yes	-	-	-	-	-	-	-
	PCA-6105P5-0B2E	Yes	Yes	-	-	Yes	Yes	Yes	Yes	-
	PCA-6108P8-0A2E	Yes	Yes	-	-	-	-	-	-	-
PCI/PCIe Backplane	PCI-7103P1V-01A1E	-	Yes	Yes	-	-	-	-	-	-
Half-Size Backplanes	PCE-3B03-00A1E	-	Yes	-	-	Yes	Yes	-	Yes	-
	PCE-3B06-00A1E	-	Yes	-	-	Yes	Yes	-	Yes	-
	PCE-3B06-03A1E	-	Yes	-	-	Yes	Yes	-	Yes	-
	PCE-3B06-02A1E	-	Yes	-	-	Yes	Yes	-	Yes	-
	PCE-3B03A-00A1E	-	Yes	-	-	-	-	-	-	Yes
	PCE-3B03-01A1E	-	Yes	-	-	-	-	-	-	Yes
	PCE-3B12-08A1E	-	Yes	-	Yes	-	-	-	-	-
	PCE-4B13-08A1E	-	Yes	-	Yes	-	-	-	-	-
	PCE-4B12-03A1E	-	Yes	-	Yes	-	-	-	-	-
	PCE-4B13-00A1E	-	Yes	-	Yes	-	-	-	-	-

Extension Modules for Slot SBCs



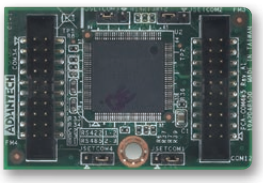
PCA-AUDIO-HDA1E

- 7.1 Channel HD Audio Extension Module
- Line-in, Mic-in, Lin-out, Front-out, Speaker-out, Rear-out, Subcen-out, Side-out
- Dimensions (L x H) : 47.5 x 80.74 mm (1.87" x 3.17")



PCA-COM232-00A1E

- 4 RS-232 series ports extension module by LPC connector on CPU card.
- Dimensions (L x H) : 31.5 x 48 mm (1.24" x 1.88")



PCA-COM485-00A1E

- 4 RS-422/485 series ports extension module by LPC connector on CPU card.
- With Auto-flow control function
- Dimensions (L x H) : 31.5 x 48 mm (1.24" x 1.88")



PCE-SA01-00A1E

- I/O extension stack board
- 1 DP, 2 USB 3.0, MIC-in, LINE-out
- Dimensions (L x H) : 68 x 125 mm (2.67" x 4.92")
- Supports Model: PCE-3029, PCE-4128, PCE-4129



PCA-5650-00A1E

- 2 VGA output Mini PCI Express Graphic card
- GPU: Silicon Motion SM750
- VGA output: 1920 x 1080, up to 75Hz vertical rate
- 16 Mb of embedded DDR memory



PCA-TPM-00A1E

- Trusted platform module compliant with TCG 1.2 specification and TCG software stack 1.2 via LPC connector on CPU card
- Hardware based data protection solution for storage device encryption and decryption
- Dimensions (L x H) : 31.5 x 30.5 mm (1.24" x 1.2")



IPMI-1000-00A1E

- IPMI2.0 Server-grade remote control solution
- OS independent hardware-based solution
- Real-time and centralized management
- KVM over IP remote control function
- User friendly UI and utility
- Supports Model: PCE-5126WG2, PCE-7127, PCE-5128

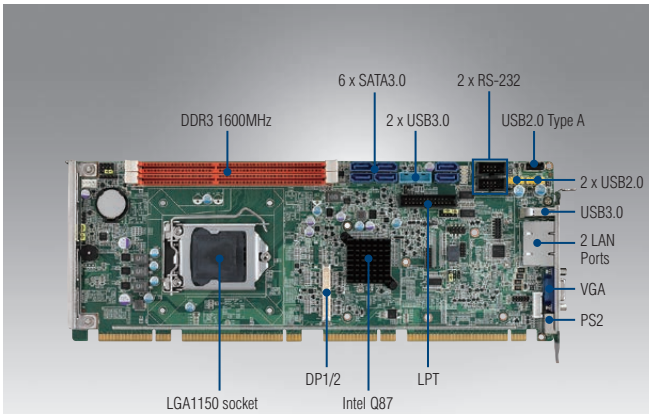


PCA-TPM-00B1E

- Trusted platform module compliant with TCG 2.0 specification and TCG software stack 2.0 via LPC connector on CPU card
- Hardware based data protection solution for storage device encryption and decryption
- Dimensions (L x H) : 31.5 x 30.5 mm (1.24" x 1.2")

PCE-5128

LGA1150 Intel® Core™i7/i5/i3/Pentium® SHB DDR3/SATA 3.0/USB3.0/Dual GbE/ 3 Displays



Features

- Supports Intel® Core™ i7/i5/i3 LGA1150 processors with Q87
- Dual Channel (Non-ECC) DDR3 1333/1600 up to 16 GB
- Supports PCIE 3.0, USB 3.0, SATA3.0, SW Raid 0, 1, 5, 10
- Supports CRT and 2 x DP/DVI-D (optional) display
- Supports out-of-band remote management with AMT9.0
- Supports Advantech TPM module (LPC I/O)
- Supports SUSIAccess and Embedded Software APIs

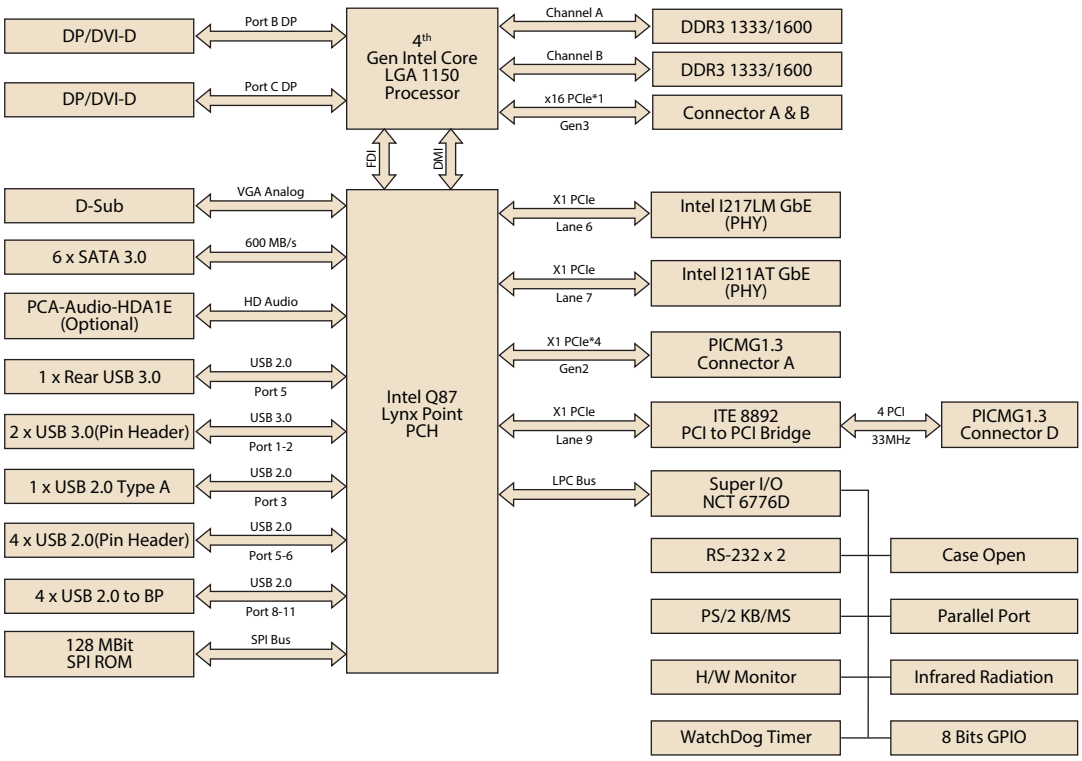
Quiet

CE FCC

Specifications

Processor System	**Haswell refresh CPUs are supported from BIOS V2.xx**								
	CPU	i7-4790S	i5-4590S	i5-4590T	i3-4360	i3-4350T	i3-4340TE		
	Base Frequency	3.2GHz	3.0GHz	2.0GHZ	3.7GHz	3.1GHz	2.6GHz		
	L3 Cache	8MB	6MB	6MB	4MB	4MB	4MB		
	Haswell CPUs are supported by both BIOS V1.xx and V2.xx								
	CPU	i7-4770S	i7-4770TE	i5-4570S	i5-4570TE	i3-4330	i3-4330TE	G3420	G3320TE
	Base Frequency	3.1GHz	2.3GHz	2.9GHz	2.7GHz	3.5GHz	2.4GHz	3.2GHz	2.3GHz
	L3 Cache	8MB	8M	6MB	4MB	3MB	3MB	3MB	3MB
	SKU/Chipset	Intel Q87							
	BIOS	AMI 128Mbit SPI Flash							
Bus	PCI-Express	One x16 plus four x1 to backplane							
	PCI	Four 32-bit 33 MHz PCI Masters to backplane							
Memory	Technology	Dual channel (Non-ECC) DDR3 1333/1600 UDIMM							
	Max. Cap.	16 GB (8 GB per DIMM)							
	Socket	DDR3 240-pin DIMM x 2							
Graphics	Controller	Chipset integrated Intel HD Graphics							
	VRAM	Shared system memory is subject to OS							
	CRT	Supports resolution up to 1920 x 2000 pixel at 60Hz							
	DVI-D	Supports resolution up to 1920 x 1200 pixel at 60Hz							
	Triple Display	CRT+DP/DVI-D+DP/DVI-D							
Ethernet	Interface	10/100/1000 Mbps							
	Controller	LAN 1: Intel I217LM LAN 2: Intel I211AT							
	Connector with LED	RJ-45 x 2							
SATA	S/W Raid 0, 1, 5, 10	SATA 3.0 x 6 (600 MB/sec)							
Rear I/O	USB 3.0	1							
	Ethernet	2							
	VGA	1							
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)							
Internal Connector	USB	Night USB2.0 (Pin-header*4+USB Type A*1+ 4 on backplane); Two USB3.0 (Pin header)							
	SATA	6							
	DP/DVI-D	2 (Pin header)							
	COM	2							
	Parallel	1							
	IrDA	1							
	GPIO	8-bit							
Watchdog Timer	Output	System reset							
	Interval	Programmable 1-255 sec							
Miscellaneous	Audio	Intel High Definition audio interface (required an audio extension module P/N: PCA-AUDIO-HDA1E)							
Power Requirement	Test Environment	Core i7-4770S DDR3 1600 8GB x 2							
	Voltage	+12V	+5V	+3.3V	+5Vsb	-12V	-5V		
	Current	4.02A	1.36A	0.81A	0.09A	0A	0A		
Environment		Operating				Non-operating			
	Temperature/Humidity	0 ~ 60 °C (32~140 °F); Depends on CPU frequency and cooler solution Operating humidity: 40 °C @ 85% RH Non-Condensing				-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing			
Physical	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")							

Block Diagram



Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DP/ DVI-D	COM	SATA III	USB 2.0	USB 3.0	S/W Raid	AMT
PCE-5128G2-00A1E	Q87	Non-ECC	PCE-5BXX	2	Yes	2*	2	6	10	3	Yes	Yes

Note: Both DP and DVI-D cable are optional.

Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1700022749-11	Serial ATA HDD power cable	x1
1701260305	COM + printer ports cable kit	x1
1700060202	Keyboard and mouse Y-cable	x1
1700008461	4-port USB cable kit	x1
9689000068	Jumper package	x1
2190000902	Warranty Card	x1
2006512800	Startup manual	x1
2066512802	Utility CD	x1

Optional Accessories

Part Number	Description
1960047831N001	PCE-5128 optimized CPU Cooler (2U)
PCA-AUDIO-HDA1E	Audio module
PCA-TPM-00A1E	TPM module(Trust Platform management)
PCA-COM232-00A1E	4 Ports RS-232 Module by LPC
PCA-COM485-00A1E	4 Ports RS-485/422 Module by LPC
1700020277-01	2 ports USB 3.0 cable W/ BKT(30cm)
1700021831-01	DP to DVI-D cable w/ BKT
PCE-DP10-00A1E	DP to DP cable w/ BKT

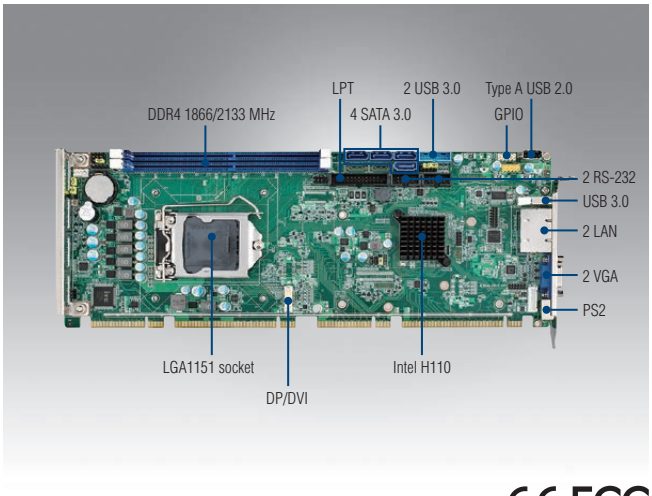
I/O View



PCE-5128G2-00A1E

PCE-5029

LGA1151 6th and 7th Generation Intel® Core™ i7/i5/i3/Pentium/Celeron System Host Board with DDR4, SATA 3.0, USB 3.0, Dual GbE, and Dual Displays



CE FCC

Features

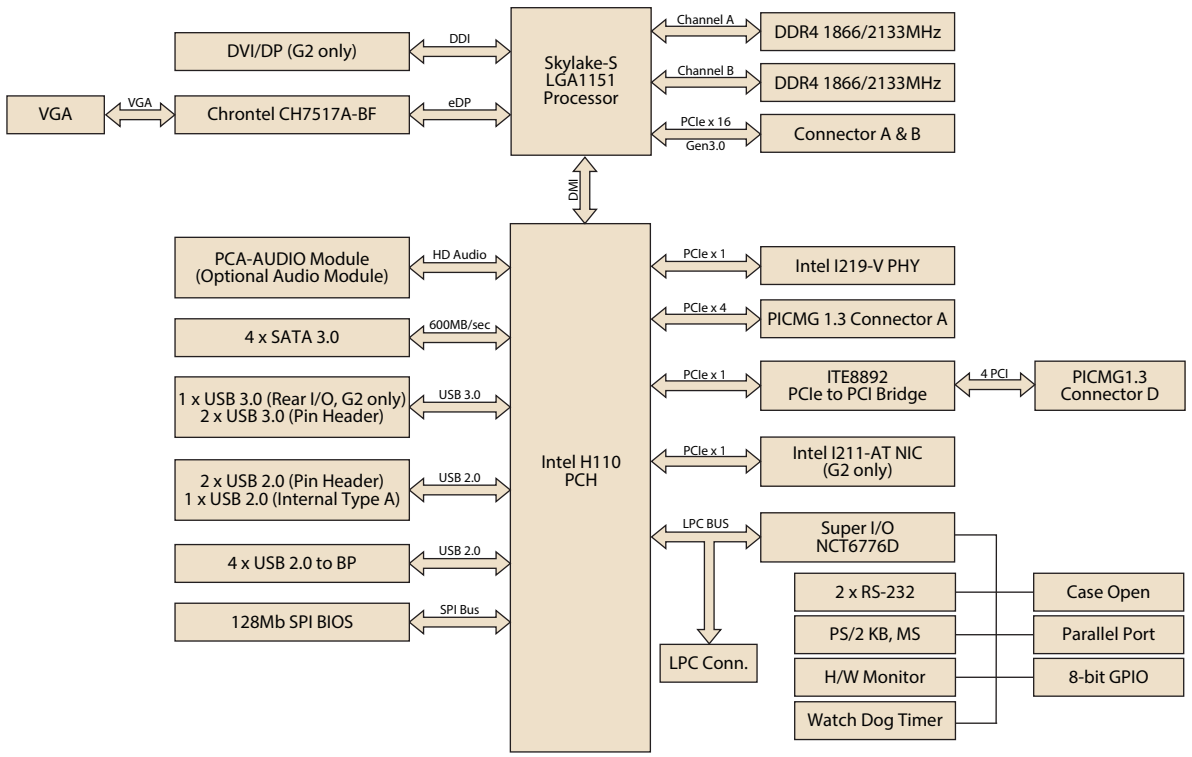
- Intel® Core™ i7/i5/i3 LGA1151 processor with H110 chipset
- Up to 32 GB of dual-channel (non-ECC) DDR4 1866/2133 MHz
- PCIe 3.0, USB 3.0, and SATA 3.0 slots
- Supports CRT and DVI-D/DP display (with optional cable)
- Supports Advantech's LPC modules, SUSIAccess, and embedded software APIs

Note 1: Intel 7th generation processors only support Windows 10 (64-bit).

Specifications

Processor System	CPU	i7-7700	i7-7700T	i7-6700	i7-6700TE	i5-7500	i5-7500T	i5-6500	i5-6500TE	i3-7101E	i3-7101TE	i3-6100	i3-6100TE	G4400	G4400TE	G3900	G3900TE
	Speed	3.6GHz	2.9GHz	3.4 GHz	2.4 GHz	3.4GHz	2.7GHz	3.2 GHz	2.3 GHz	3.9GHz	3.4GHz	3.7 GHz	2.7 GHz	3.3 GHz	2.9 GHz	2.8 GHz	2.6 GHz
	Cache	8MB	8MB	8 MB	8 MB	6MB	6MB	6 MB	6 MB	3MB	3MB	4 MB	4 MB	3 MB	3 MB	2 MB	2 MB
	Socket	LGA 1151															
	Chipset	Intel H110															
	BIOS	AMI 128Mbit SPI Flash															
Bus	PCI-Express	1 x PCIe x16 and 1 x PCIe x4 to backplane															
	PCI	4 x PCI master to backplane, 32-bit, 33 MHz															
Memory	Technology	Dual-channel (non-ECC) U-DIMM DDR4 1866/2133 MHz															
	Max. Capacity	32 GB (16 GB per DIMM)															
	Socket	2 x DDR4 288-pin DIMM															
Graphics	Controller	Chipset integrated with Intel® HD Graphics															
	VRAM	Shared system memory is subject to OS															
	CRT	Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz															
	DVI-D	Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz															
	Display Port	Supports resolutions of up to 1920 x 1080 pixel @ 60 Hz															
	Dual Display	CRT+DP/CRT+DVI															
Ethernet	Interface	10/100/1000 Mbps															
	Controller	LAN 1: Intel® I219-V LAN 2: Intel® I211-AT															
	Connector with LED	RJ45 x 2															
Rear I/O	USB 3.0	1 (G2 SKU)															
	Ethernet	1 (VG SKU); 2 (G2 SKU)															
	VGA	1															
	Serial	1 (VG SKU)															
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)															
Internal Connector	USB	7 x USB 2.0 (pin header*2 + USB Type A*1 + 4 on backplane) 2 x USB 3.0 (pin header)															
	SATA	4															
	DP/DVI-D	1 (Pin header)															
	COM	2 (G2 SKU) 1 (VG SKU)															
	Parallel	1															
	GPIO	8 bits															
Watchdog Timer	Output	System reset															
	Interval	Programmable 1-255 sec															
Miscellaneous	Audio	Intel® High Definition audio interface (requires audio extension module PCA-AUDIO-HDB1E)															
Power Requirement	Test Environment	i7-6700, 3.4 GHz, 65 W, with 2 x 8-GB DDR4 2133															
	Voltage	+12V		+5V		+3.3V		+5Vsb									
	Current	2.64A		1.23A		0.19A		0.09A									
Environment		Operating								Non-operating							
	Temperature	0 ~ 60 °C (dependent on CPU and cooler solution)								-40 ~ 85 °C							
	Humidity	40 °C @ 85% relative humidity (non-condensing)								60 °C @ 95% relative humidity (non-condensing)							
Physical	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")															

Block Diagram



Ordering Information

Part Number	Chipset	Memory	Backplane	Display	USB 3.0	USB 2.0	COM	GbE LAN	AMT	SATA	SW RAID	Intelligent System Module Support
PCE-5029G2-00A1E	H110	Non-ECC	PCE-5BXX	VGA + DVI/DP*	3	7	2	2	No	4	No	Yes
PCE-5029VG-00A1E	H110	Non-ECC	PCE-5BXX	VGA	2	7	2	1	No	4	No	No

*Note: DP cable (P/N: PCE-DP10-00A1E) and DVI-D

Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1700022749-11	Serial ATA HDD power cable	x1
1701260305	COM + printer ports cable kit	x1
1700060202	Keyboard and mouse Y-cable	x1
1700002204	2-port USB cable kit	x1
9689000068	Jumper package	x1
2190000902	Warranty card	x1
2001512910	Startup manual	x1
2061512900	Utility CD	x1

Optional Accessories

Part Number	Description
1700020277-01	2-port USB 3.0 cable w/ BKT (30 cm)
1700002204	2-port USB 2.0 cable w/ BKT (27 cm)
1700021831-01	DP to DVI-D cable w/ BKT for G2 SKU
1701090401	Single COM cable (40 cm)
1701092300	Dual COM cable (28.5 cm)
1960052651N021	CPU cooler for 2U, 4U, and wallmount chassis
1960049408N001	CPU cooler for 1U chassis
PCA-TPM-00A1E	TPM module
PCA-COM485-00A1E	4-port RS-422/485 LPC module
PCA-COM232-00A1E	4-port RS-232 LPC module
PCE-DP10-00A1E	DP redriver board (25 cm) for G2 SKU
PCA-AUDIO-HDB1E	Extension module for HD audio
PCA-TPM-00B1E	TPM 2.0 Module

I/O View



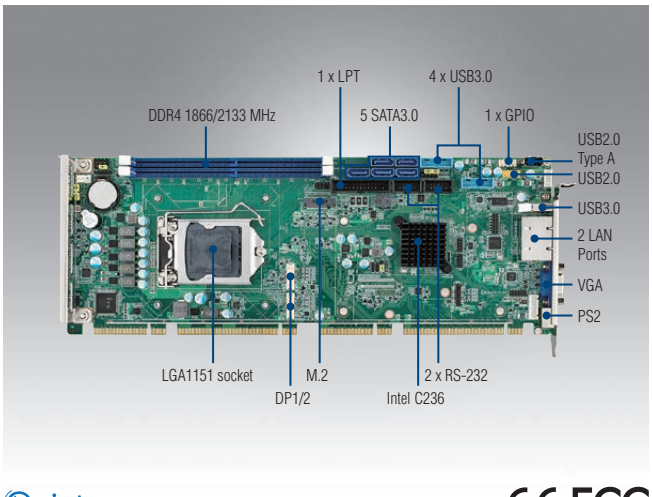
PCE-5029G2-00A1E



PCE-5029VG-00A1E

PCE-5129

LGA1151 6th and 7th Generation Intel® Core™ i7/i5/i3/Pentium/Celeron System Host Board with DDR4, SATA 3.0, USB 3.0, M.2, Dual GbE, and Triple Displays



Features

- Intel® Core™ i7/i5/i3 LGA1151 processor with Q170 chipset
- Up to 32 GB of dual-channel (non-ECC) DDR4 1866/2133 MHz
- PCIe 3.0, M.2, USB 3.0, SATA 3.0, and SW Raid 0, 1, 5, 10
- Supports out-of-band remote management with AMT 11.0
- Supports Advantech's LPC modules, SUSIAccess, and embedded software APIs

Note 1: Intel 7th generation processors only support Windows 10 (64-bit).

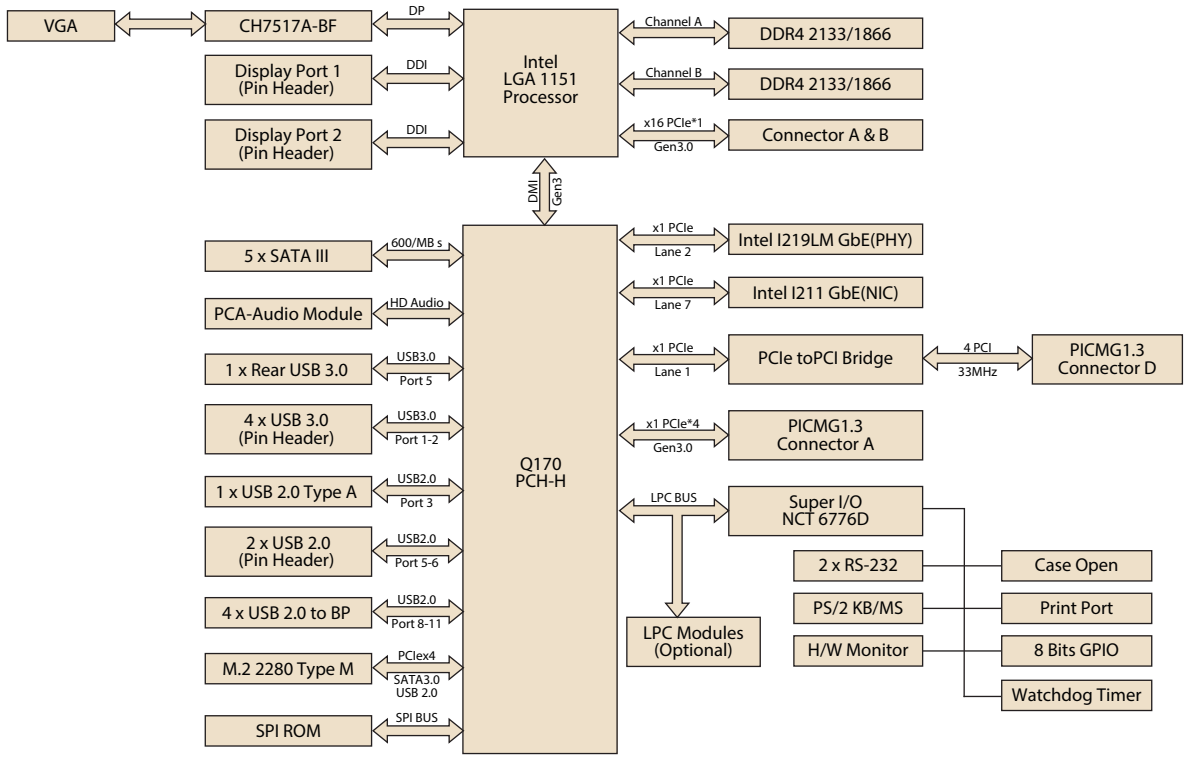
Quiet

CE FCC

Specifications

Processor System	CPU	i7-7700	i7-7700T	i7-6700	i7-6700TE	i5-7500	i5-7500T	i5-6500	i5-6500TE	i3-7101E	i3-7101TE	i3-6100	i3-6100TE	G4400	G4400TE	G3900	G3900TE
	Speed	3.6GHz	2.9GHz	3.4GHz	2.4GHz	3.4GHz	2.7GHz	3.2GHz	2.3GHz	3.9GHz	3.4GHz	3.7GHz	2.7GHz	3.3GHz	2.9GHz	2.8GHz	2.6GHz
	L3 Cache	8MB	8MB	8MB	8MB	6MB	6MB	6MB	6MB	3MB	3MB	4MB	4MB	3MB	3MB	2MB	2MB
	Socket	LGA1151															
	Chipset	Q170															
	BIOS	AMI 128 Mbit SPI															
Bus	PCI-Express	1 x PCIe x16 and 1 x PCIe x4 to backplane															
	PCI	4 x PCI master to backplane, 32-bit, 33 MHz															
Memory	Technology	Dual-channel (non-ECC) U-DIMM DDR4 1866/2133 MHz (supports x8 DDR4 1024 M)															
	Max. Capacity	32 GB (16 GB per DIMM)															
	Socket	2 x DDR4 288-pin DIMM															
Graphics	Controller	Chipset integrated with Intel® HD Graphics															
	VRAM	Shared system memory is subject to OS															
	CRT	Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz															
	DVI-D	Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz															
	Display Port	Supports resolutions of up to 1920 x 1080 pixel @ 60 Hz															
	Triple Display	CRT+DP/DVI-D+DP/DVI-D															
Ethernet	Interface	10/100/1000 Mbps															
	Controller	LAN 1: Intel® I219-LM LAN 2: Intel® I211															
	Connector with LED	2 x RJ45															
Rear I/O	USB 3.0	1															
	Ethernet	2															
	VGA	1															
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)															
Internal Connector	USB	7 x USB 2.0 (pin header*2 + USB Type A*1 + 4 on backplane) 4 x USB 3.0 (pin header)															
	SATA (SW Raid 0,1,5,10)	5															
	M.2 (2280 Type M)	1 (supports SATA 3.0 or PCIe x4)															
	DP/DVI-D	2 (Pin header)															
	COM	2															
	Parallel	1															
	IrDA	1															
	GPIO	8bit															
Watchdog Timer	Output	System reset															
	Interval	Programmable 1-255 sec															
Miscellaneous	Audio	Intel® High Definition audio interface (requires audio extension module PCA-AUDIO-HDB1E)															
Power Requirement	Test Environment	i7-6700, 3.4 GHz, 65 W, with 2 x 8-GB DDR4 2133															
	Voltage	+12V		+5V		+3.3V		+5Vsb									
	Current	2.64A		1.23A		0.19A		0.09A									
Environment		Operating						Non-Operating									
	Temperature	0 ~ 60 °C (dependent on CPU and cooler solution)						-40 ~ 85 °C									
	Humidity	40 °C @ 85% relative humidity (non-condensing)						60 °C @ 95% relative humidity (non-condensing)									
Physical	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")															

Block Diagram



Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DP/DVI-D	COM	SATA III	M.2	USB 2.0	USB 3.0	S/W Raid	AMT
PCE-5129G2-00A1E	Q170	Non-ECC	PCE-5BXX	2	Yes	2*	2	5	1	7	5	Yes	Yes

Note: DP/DVI-D cable is optional

Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1700022749-11	Serial ATA HDD power cable	x1
1701260305	COM + printer ports cable kit	x1
1700060202	Keyboard and mouse Y-cable	x1
1700002204	2-port USB cable kit	x1
9689000068	Jumper package	x1
2190000902	Warranty card	x1
2001512910	Startup manual	x1
2061512900	Utility CD	x1

Optional Accessories

Part Number	Description
1960052651N021	2U CPU cooler (PWM ran)
1960049408N001	CPU cooler for 1U chassis
PCA-AUDIO-HDB1E	Audio module
PCA-TPM-00A1E	TPM module
PCA-COM232-00A1E	4-port RS-232 LPC module
PCA-COM485-00A1E	4-port RS-422/485 LPC module
1700020277-01	2-port USB 3.0 cable w/ BKT (30 cm)
1700021831-01	DP to DVI-D cable w/ BKT
PCE-DP10-00A1E	DP to DP cable w/ BKT
PCA-TPM-00B1E	TPM 2.0 Module

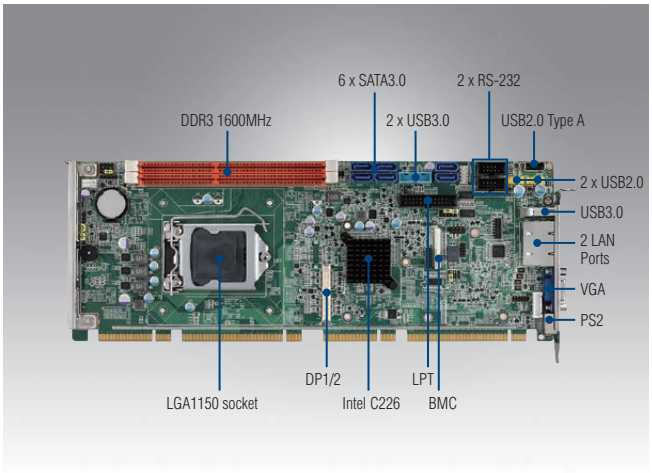
I/O View



PCE-5129G2-00A1E

PCE-7128

LGA1150 Intel® Xeon®/Core™i3/ Pentium® SHB DDR3/SATA 3.0/USB3.0/ Dual GbE /3 Displays



Features

- Supports Intel® Xeon® E3 1200v3 series, Core™ i7/i5/i3 LGA1150 processors with C226
- Dual Channel (ECC/Non-ECC) DDR3 1333/1600 up to 16 GB
- Supports PCIE 3.0, USB 3.0, SATA3.0, SW Raid 0, 1, 5, 10
- Supports CRT and 2 x DP/DVI-D (optional) display
- Supports out-of-band remote management with AMT9.0 and IPMI
- Supports Advantech TPM module (LPC I/O)
- Supports SUSIAccess and Embedded Software APIs

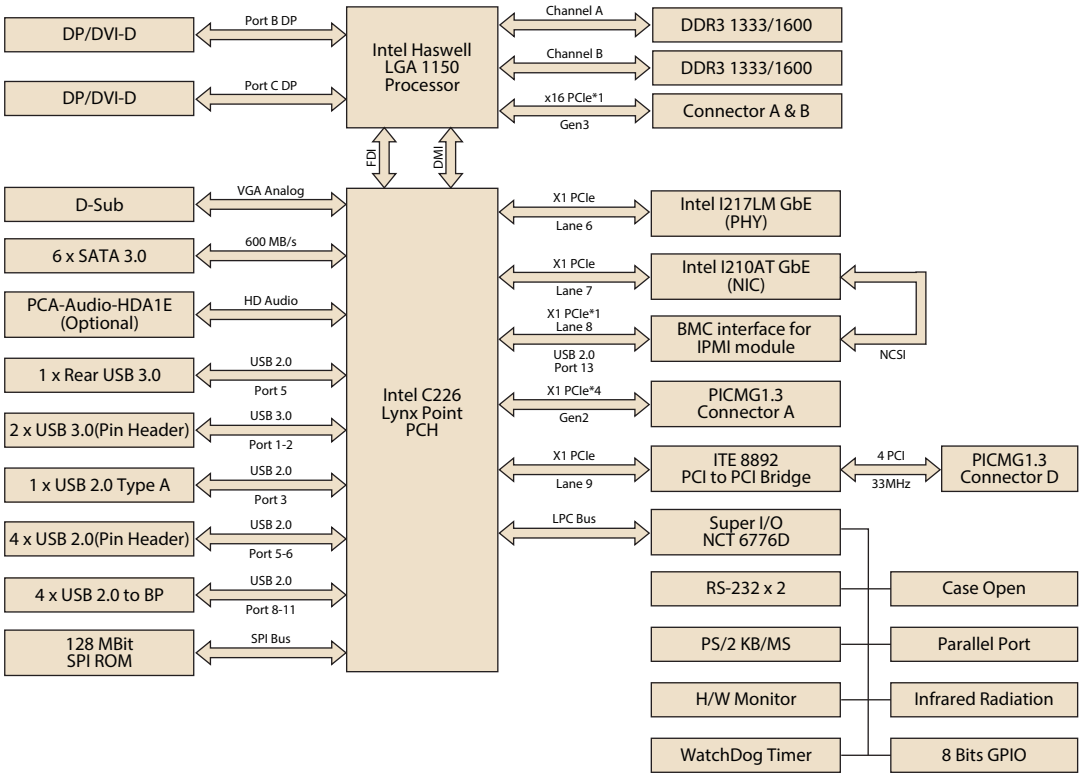
Quiet

CE FCC

Specifications

Processor System	**Haswell refresh CPUs are supported from BIOS V2.xx**											
	CPU	i7-4790S	i5-4590S	i5-4590T	i3-4360	i3-4350T	i3-4340TE					
	Base Frequency	3.2GHz	3.0GHz	2.0GHZ	3.7GHz	3.1GHz	2.6GHz					
	L3 Cache	8MB	6MB	6MB	4MB	4MB	4MB					
	Haswell CPUs are supported by both BIOS V1.xx and V2.xx											
	CPU	E3-1275v3	E3-1225v3	E3-1268v3	i7-4770S	i7-4770TE	i5-4570S	i5-4570TE	i3-4330	i3-4330TE	G4320	G4320TE
	Base Frequency	3.5GHz	3.2GHz	2.3GHz	3.1GHz	2.3GHz	2.9GHz	2.7GHz	3.5GHz	2.4GHz	3.2GHz	2.3GHz
	L3 Cache	8MB	8MB	8MB	8MB	8M	6MB	4MB	3M	3M	3MB	3MB
	ECC Memory Supported	Yes	Yes	Yes	N/A	N/A	N/A	Yes	Yes	Yes	Yes	Yes
	SKU/Chipset	Intel C226										
	BIOS	AMI 128Mbit SPI Flash										
Bus	PCI-Express	One x16 or Two x8 plus four x1 to backplane										
	PCI	Four 32-bit 33 MHz PCI Masters to backplane										
Memory	Technology	Dual channel (ECC/Non-ECC) DDR3 1333/1600 UDIMM (Note: Please select Intel ECC supported processor to enable ECC function)										
	Max. Cap.	16 GB (8 GB per DIMM)										
	Socket	DDR3 240-pin DIMM x 2										
Graphics	Controller	Chipset integrated Intel HD Graphics										
	VRAM	Shared system memory is subject to OS										
	CRT	Supports resolution up to 1920 x 2000 pixel at 60Hz										
	DVI-D	Supports resolution up to 1920 x 1200 pixel at 60Hz										
	Triple Display	CRT+DP/DVI-D+DP/DVI-D										
Ethernet	Interface	10/100/1000 Mbps										
	Controller	LAN 1: Intel I217LM LAN 2: Intel I210AT										
	Connector with LED	RJ45 x 2										
SATA	S/W Raid 0, 1, 5, 10	SATA 3.0 x 6 (600 MB/sec)										
Rear I/O	USB 3.0	1										
	Ethernet	2										
	VGA	1										
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)										
Internal Connector	USB	Night USB2.0 (Pin-header*4+USB Type A*1+ 4 on backplane); Two USB3.0 (Pin header)										
	SATA	6										
	DP/DVI-D	2 (Pin header)										
	COM	2										
	Parallel	1										
	IrDA	1										
	GPIO	8bit										
Watchdog Timer	Output	System reset										
	Interval	Programmable 1-255 sec										
Miscellaneous	Audio	Intel High Definition audio interface (required an audio extension module P/N: PCA-AUDIO-HDA1E)										
Power Requirement	Test environment	Core i7-4770S DDR3 1600 8GB x 2										
	Voltage	+12V	+5V	+3.3V	+5Vsb	-12V	-5V					
	Current	4.02A	1.36A	0.81A	0.09A	0A	0A					
Environment		Operating				Non-operating						
	Temperature/Humidity	0 ~ 60 °C (32~140 °F); Depends on CPU frequency and cooler solution Operating humidity: 40 °C @ 85% RH Non-Condensing				-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing						
Physical	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")										

Block Diagram



Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DP/ DVI-D	COM	SATA III	USB 2.0	USB 3.0	S/W Raid	AMT	IPMI
PCE-7128G2-00A1E	C226	ECC	PCE-5BXX PCE-7BXX	2	Yes	2*	2	6	10	3	Yes	Yes	Yes

Note: Both DP and DVI-D cable are optional.

Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1700022749-11	Serial ATA HDD power cable	x1
1701260305	COM + printer ports cable kit	x1
1700060202	Keyboard and mouse Y-cable	x1
1700008461	4-port USB cable kit	x1
9689000068	Jumper package	x1
2190000902	Warranty Card	x1
2006512800	Startup manual	x1
2066512802	Utility CD	x1

Optional Accessories

Part Number	Description
1960047831N001	PCE-7128 optimized CPU Cooler (2U)
PCA-AUDIO-HDA1E	Audio module
PCA-TPM-00A1E	TPM module (Trust Platform management)
PCA-COM232-00A1E	4 Ports RS-232 Module by LPC
PCA-COM485-00A1E	4 Ports RS-485/422 Module by LPC
IPMI-1000-00A1E	IPMI2.0 module(Remote control management)
1700020277-01	2 ports USB 3.0 cable W/ BKT(30cm)
1700021831-01	DP to DVI-D cable w/ BKT
PCE-DP10-00A1E	DP to DP cable w/ BKT

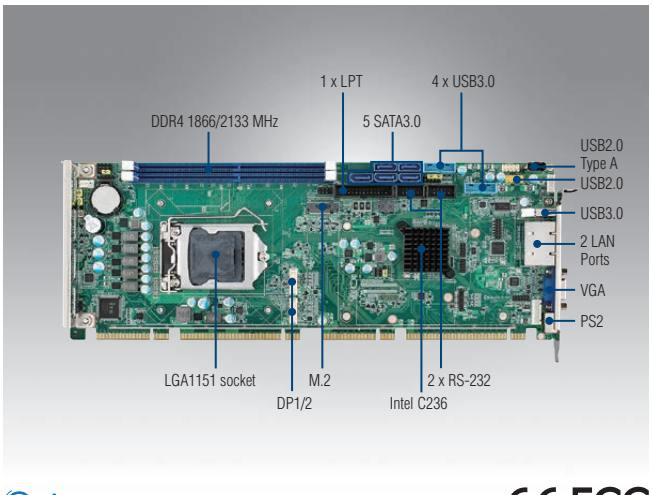
I/O View



PCE-7128G2-00A1E

PCE-7129

LGA1151 6th and 7th Generation Intel® Xeon®/Core™ i7/i5/i3/Pentium® LGA1151 System Host Board with DDR4, SATA 3.0, USB 3.0, M.2, Dual GbE, and Triple Displays



Features

- Intel® Xeon® E3-1200v5/Core™ i7/i5/i3 LGA1151 processor with C236 chipset
- Up to 32 GB of dual-channel (non-ECC) DDR4 1866/2133 MHz
- PCIe 3.0, M.2, USB 3.0, SATA 3.0, and SW Raid 0, 1, 5, 10
- Supports CRT and 2 x DVI-D/DP display (with optional cable)
- Supports out-of-band remote management with AMT 11.0
- Supports Advantech's LPC modules, SUSIAccess, and embedded software APIs

Note: Intel 7th generation processors only support Windows 10 (64-bit)

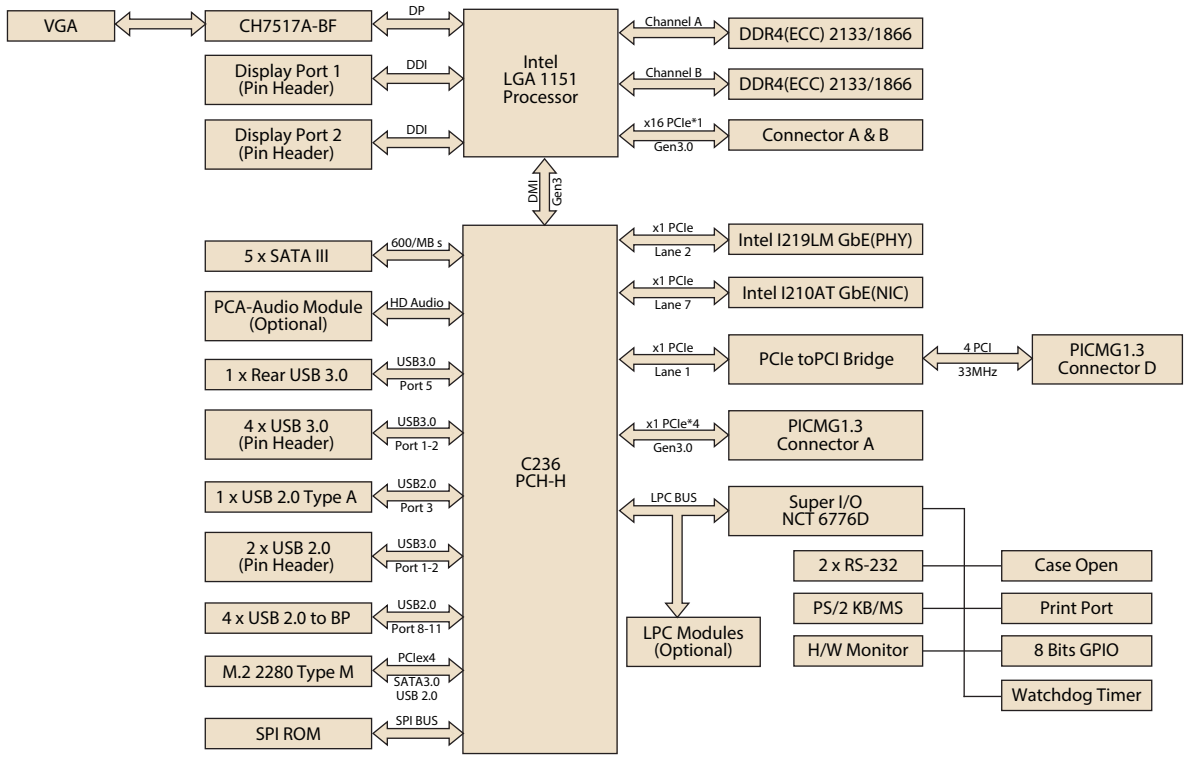
Quiet

CE FCC

Specifications

Processor System	CPU	E3-1275v6	E3-1275v5	E3-1225v5	E3-1268Lv5	i7-7700	i7-7700T	i7-6700	i7-6700TE	i5-7500	i5-7500T	i5-6500	i5-6500TE	i3-7101E	i3-7101TE	i3-6100	i3-6100TE	G4400	G4400TE	G3900	G3900TE
	Base Frequency	3.8 GHz	3.6GHz	3.3GHz	2.4GHz	3.6 GHz	2.9 GHz	3.4GHz	2.4GHz	3.4 GHz	2.7 GHz	3.2GHz	2.3GHz	3.9 GHz	3.4 GHz	3.7GHz	2.7GHz	3.3GHz	2.9GHz	2.8GHz	2.6GHz
	L3 Cache	8 MB	8MB	6MB	8MB	8MB	8 MB	8MB	8MB	6 MB	6 MB	6MB	6MB	3 MB	3 MB	4MB	4MB	3MB	3MB	2MB	2MB
	SKU/Chipset	Intel® C236																			
	BIOS	AMI® SPI Flash 128 Mbit																			
Bus	PCI-Express	1 x PCIe x16/2 x PCIe x8 and 1 x PCIe x4 to backplane																			
	PCI	4 x PCI master to backplane, 32-bit, 33 MHz																			
Memory	Technology	Dual-channel (non-ECC) U-DIMM DDR4 1866/2133 MHz (supports x8 DDR4 1024 M) (Note: Intel ECC-supported processor must be selected to enable ECC function)																			
	Max. Capacity	32 GB (16 GB per DIMM)																			
	Socket	2 x DDR4 288-pin DIMM																			
Graphics	Controller	Chipset integrated with Intel® HD Graphics																			
	VRAM	Shared system memory is subject to OS																			
	CRT	Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz																			
	DVI-D	Supports resolutions of up to 1920 x 1200 pixel @ 60 MHz																			
	Display Port	Supports resolutions of up to 1920 x 1080 pixel @ 60 Hz																			
	Triple Display	CRT+DP/DVI-D+DP/DVI-D																			
Ethernet	Interface	10/100/1000 Mbps																			
	Controller	LAN 1: Intel® I219-LM LAN 2: Intel® I210-AT																			
	Connector with LED	2 x RJ45																			
Rear I/O	USB 3.0	1																			
	Ethernet	2																			
	VGA	1																			
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)																			
Internal Connector	USB	7 x USB 2.0 (pin header*2 + USB Type A*1 + 4 on backplane) 4 x USB 3.0 (pin header)																			
	SATA (SW Raid 0,1,5,10)	5																			
	M.2 (2280 Type M)	1 (supports SATA 3.0 or PCIe x4)																			
	DP/DVI-D	2 (Pin header)																			
	COM	2																			
	Parallel	1																			
	IrDA	1																			
	GPIO	8bit																			
Watchdog Timer	Output	System reset																			
	Interval	Programmable 1-255 sec																			
Miscellaneous	Audio	Intel® High Definition audio interface (requires audio extension module PCA-AUDIO-HDB1E)																			
Power Requirement	Test Environment	i7-6700, 3.4 GHz, 65 W, with 2 x 8-GB DDR4 2133																			
	Voltage	+12V			+5V				+3.3V				+5Vsb								
	Current	2.64A			1.23A				0.19A				0.09A								
Environment		Operating														Non-Operating					
	Temperature	0 ~ 60 °C (dependent on CPU and cooler solution)														-40 ~ 85 °C					
	Humidity	40 °C @ 85% relative humidity (non-condensing)														60 °C @ 95% relative humidity (non-condensing)					
Physical	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")																			

Block Diagram



Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DP/DVI-D	COM	SATA III	M.2	USB 2.0	USB 3.0	S/W Raid	AMT
PCE-7129G2-00A1E	C236	ECC/Non-ECC	PCE-5BXX PCE-7BXX	2	Yes	2*	2	5	1	7	5	Yes	Yes

Note: DP/DVI-D cable is optional

Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1700022749-11	Serial ATA HDD power cable	x1
1701260305	COM + printer ports cable kit	x1
1700060202	Keyboard and mouse Y-cable	x1
1700002204	2-port USB cable kit	x1
9689000068	Jumper package	x1
2190000902	Warranty card	x1
2001512910	Startup manual	x1
2061512900	Utility CD	x1

Optional Accessories

Part Number	Description
1960052651N021	2U CPU cooler (PWM fan)
1960049408N001	CPU cooler for 1U chassis
PCA-AUDIO-HDB1E	Audio module
PCA-TPM-00A1E	TPM 1.2 module
PCA-COM232-00A1E	4-port RS-232 LPC module
PCA-COM485-00A1E	4-port RS-422/485 LPC module
1700020277-01	2-port USB 3.0 cable w/ BKT (30 cm)
1700021831-01	DP to DVI-D cable w/ BKT
PCE-DP10-00A1E	DP to DP cable w/ BKT
PCA-TPM-00B1E	TPM 2.0 module

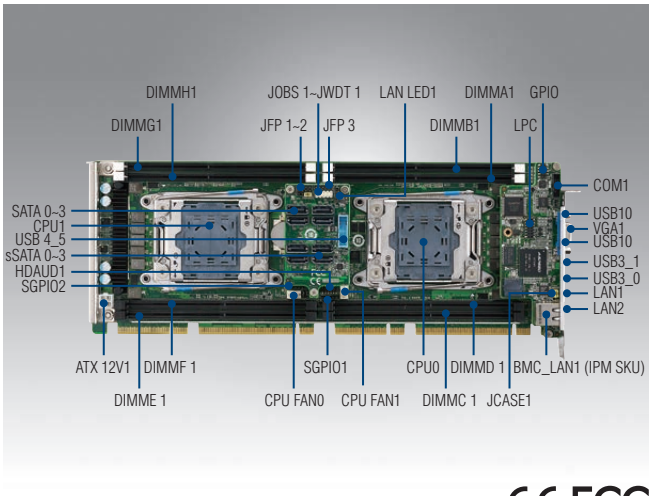
I/O View



PCE-7129G2-00A1E

PCE-9228

Dual LGA 2011-R3 Intel Xeon® E5-2600v3 SHB Server Board with C612, DDR4/SATA3.0/USB3.0/Dual GbE



CE FCC

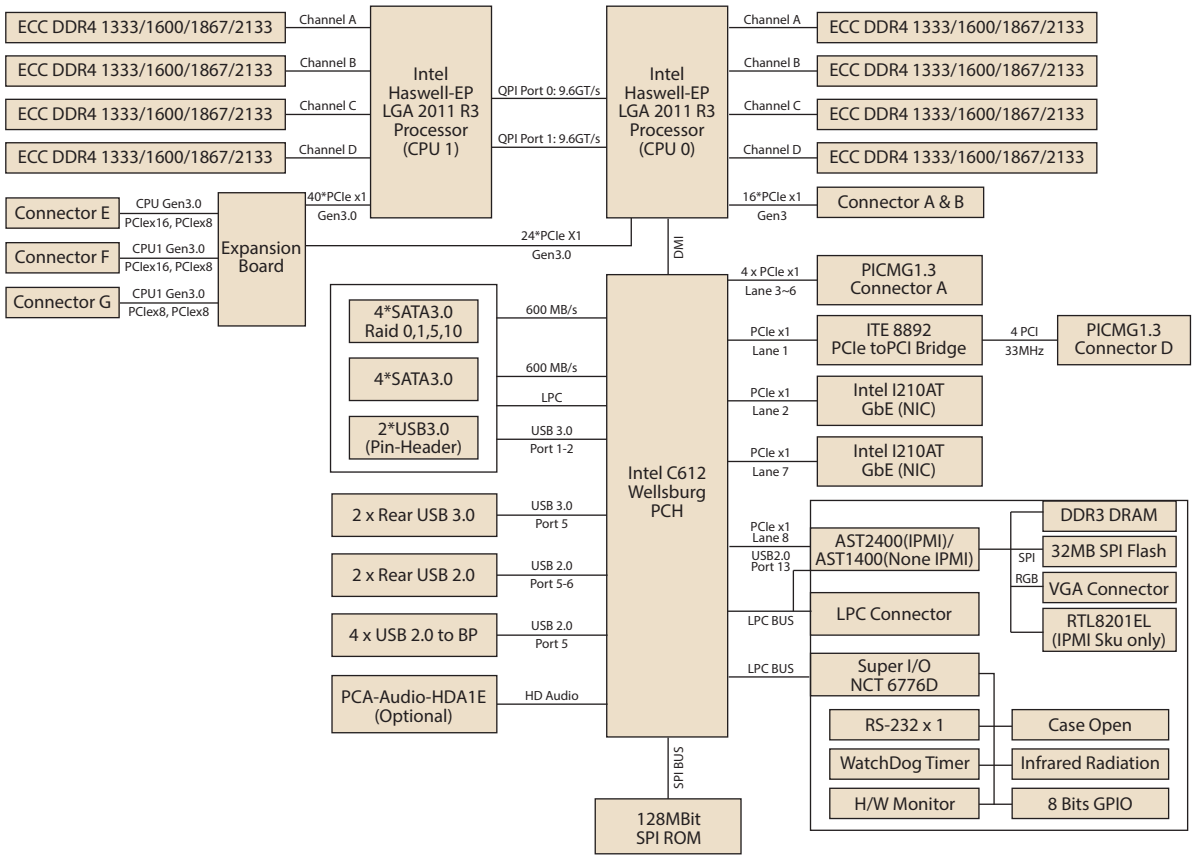
Features

- Supports Dual Intel Xeon E5-2600v3 series processors with C612
- Supports DDR4 2133MHz RDIMM up to 256GB
- Supports PCIe3.0,USB3.0,SW raid 0, 1, 5, 10
- Supports out-of-band remote management with IPMI
- 0 ~ 40 °C ambient operation temperature range

Specifications

Processor System	Socket	Intel LGA 2011-R3				
	CPU type	Intel Xeon E5-2600(v3) dual processor (TDP up to 120W per CPU)				
Core Logic	Chipset	Intel C612 chipset				
Memory	Total slots	8 (Quad Channel)				
	Capacity	Maximum 256 GB ECC RDIMM				
	Memory type	DDR4 ECC-REG 2133/1866/1600/1333 MHz DIMM				
	Memory size	1 GB, 2 GB, 4 GB, 8 GB, 16 GB, 32 GB				
Bus	PCI-Express	PICMG1.3: One PCIe x16 or Two PCIe x8, PCIe x4 from PCH				
	PCI	Four PCI 32bit/33MHz				
Graphics	VGA	Aspeed AST2400/1400 64 MB				
Storage	SATA controller	8 SATA 3.0 ports support software raid 0, 1, 5, 10				
Networking	GbE LAN	2 x Intel I210AT				
Onboard I/O Connectors	USB connector	2 USB 3.0 ports in one pin header				
	CPU Fan header	2 x 4pin				
	GPIO	1				
	LAN LED	1				
	Audio Header	1				
	Serial port header	1 (Pin header 2.0 pitch)				
Rear I/O Connectors	External USB port	4 (2*USB2.0 + 2*USB3.0)				
	VGA port	1				
	RJ-45	3 (1 port dedicated for IPMI function)				
Management Solution	Software	SUSIAccess				
	Out of band remote management	IPMI (PCE-9228G2I sku only)				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Power Requirement	Power On	3.3V	5V	12V	5Vsb	-12V
	E5-2680v3 x2 DDR4 RDIMM 16GB x8	2.61A	1.07A	26.73A	0.07A	0.01A
Environment		Operating			Non-operating	
	Temperature	0 ~ 40 °C, depends on CPU speed and cooler solution			-40 ~ 85 °C	
	Humidity	10% ~ 95%			10% ~ 95% (Non condensing)	
Physical Characteristics	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")				

Block Diagram



Ordering Information

Part Number	Chipset	Memory	GbE LAN	IPMI	VGA Chip
PCE-9228G2-00A1E	C612	DDR4 RDIMM	2	-	AST 1400
PCE-9228G2I-00A1E	C612	DDR4 RDIMM	2	Yes	AST 2400

Note: "I" sku features a dedicated LAN for IPMI function only.

Packing List

Part Number	Description	Quantity
2066922800	Driver CD	x 1
2006922810	Startup manual	x 1
1700003194	SATA data cables	x 2
1703150102	SATA power cables	x 1

Optional Accessories

Part Number	Description
PCA-AUDIO-HDA1E	HD Audio-card
PCA-TPM-00A1E	TPM Module
1960063011N011	Cooler IGA-2011 narrow cooler 107 x 70 x 64 for 4U chassis (120W; Puller fan)
1700020277-01	2 ports USB3.0 cable w/ BKT(30cm)
1700100250	COM port cable w/o bracket
PCA-COM232-00A1E	4 ports RS-232 module
PCA-COM485-00A1E	4 ports RS-422/485 module

I/O View



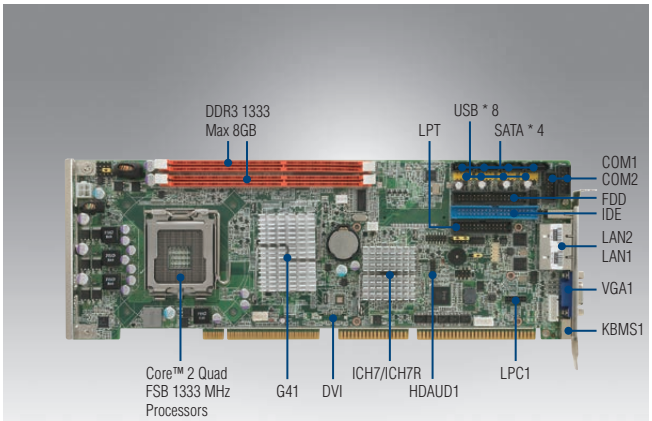
PCE-9228G2I-00A1E



PCE-9228G2-00A1E

PCA-6011

LGA775 Intel® Core™2 Quad SBC with VGA/DVI/Dual GbE LAN



Features

- Compliant with PICMG 1.0
- Supports LGA 775 Intel® Core™2 Quad FSB 1333 MHz processors
- Supports Dual Channel DDR3 1333 SDRAM up to 8 GB
- Dual GbE LAN via two PCIe x1 lane
- 2 COM ports, 4 SATA ports, 8 USB ports
- Dual display with VGA and DVI-D (G2 only)

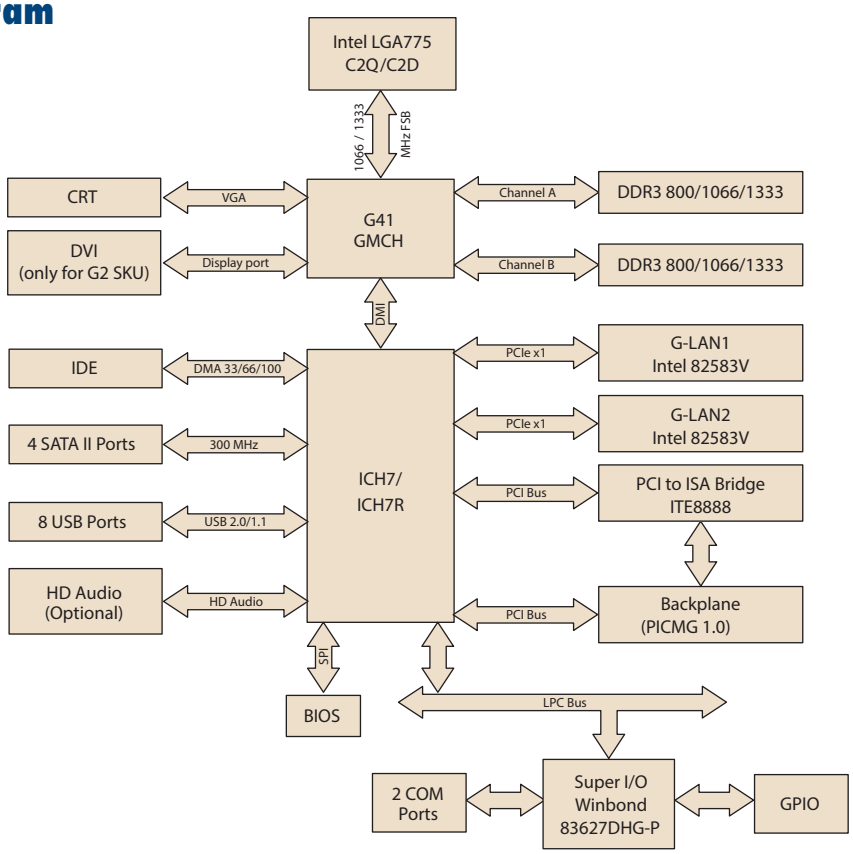
Quiet

CE FCC

Specifications

Processor System	CPU (45nm/65nm)	Intel Core 2 Quad	Intel Core 2 Duo	Intel Pentium	Intel Celeron	
	Max Speed	Q9650 3.0 GHz	E8500 3.16 GHz	E6500 2.93 GHz	E1500 2.2 GHz	
	L2 Cache	12 MB	6 M	8 M	512 KB	
	Chipset	Intel G41 + ICH7/ICH7R (only for G2 SKU)				
	BIOS	AMI 16 Mb SPI Flash				
	FSB	800/1066/1333 MHz				
Bus	PCI	32 bit/33 MHz PCI				
	ISA	HISA (ISA High Driver)				
Memory	Technology	Dual-channel DDR3 800/1066/1333 DIMMs				
	Max. Cap.	8 GB				
	Socket	240-pin DIMM x 2				
Graphics	Controller	Intel Graphics Media Accelerator X4500				
	VRAM	Shared with system memory up to 352 MB				
	Video Output	15-Pin VGA D-sub Connector x1/DVI connector x1 (only for G2 SKU)				
Ethernet	Interface	10/100/1000 Mbps				
	Controller	Intel 82583 V				
	Connector	RJ-45 with LED Connector x 2 (G2 SKU), x1 (VG SKU)				
SATA	Bandwidth	300 MB/s				
	Channel	4 ports				
	RAID	0, 1, 5, 10 (only for G2 SKU)				
EIDE	Mode	ATA 100/66/33				
	Channel	1 (Supports up to 2 IDE devices; Master device is alternative for CF socket)				
	CF	(Optional)				
I/O Interface	USB 2.0	8 ports by pin header(VG SKU); 6 ports by pin header/1 port on bracket I/O (G2 SKU)				
	Serial	2 RS-232 on board pin-headers, plus for ports of RS-485 with auto-flow control by module (optional, Advantech P/N: PCA-COM485-00A1E)				
	Parallel	1 (EPP/ECP/SPP)				
	FDD	1				
	PS/2	1 (for mouse and keyboard, Y cable is included in the package)				
Watchdog Timer	Output	System reset				
	Interval	Programmable, 1~255 sec				
Miscellaneous	Audio Output	Intel High Definition audio interface (requires an audio extension module P/N: PCA-AUDIO-HDA1E)				
Power Requirement	CPU	Configuration1: Core 2 Quad Q9400 (3.0 G, 95 W) + DDR3 1066 2 G x2				
	Voltage	+12 V	+5 V	+3.3 V	+5 VSB	-12 V	-5 V
	Curent	5.14 A	4.04 A	0 A	0.17 A	0 A	0 A
	CPU	Configuration 2: Core2 Duo E8400 (3.0G, 65W) + DDR3 1066 2 GB x2					
	Voltage	+12 V	+5 V	+3.3 V	+5 VSB	-12 V	-5 V
	Curent	3.63 A	3.4 A	0 A	0.15 A	0 A	0 A
Environment		Operating			Non-Operating		
	Temperature	0 ~ 60 °C (32 ~ 140 °F) (operating humidity: 40 °C @ 85% RH Non-Condensing)			-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing		
Physical	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")					

Block Diagram



Ordering Information

Part Number	LAN	VGA	COM	SATA	S/W RAID	USB	DVI	CF
PCA-6011VG-00A1E	Single GbE	Yes	2	4	-	8	No (Optional)	No (Optional)
PCA-6011G2-00A1E	Dual GbE	Yes	2	4	Yes	7	Yes	No (Optional)

Packing List

Part Number	Description	Quantity
1701400452	IDE HDD cable	x 1
1700008461-11	USB cable with 4 ports	x 1
1700022749	Serial ATA HDD power cable	x 1
1700003194	Serial ATA HDD data cable	x 2
1700060202	Y-cable for PS/2 mouse & keyboard	x 1
1701260305	Printer + COM cable	x 1
9689000068	Jumper pack	x 1
2190000902	Warranty card	x 1
2002601110	Startup manual	x 1
2062601100	Utility CD	x 1

Optional Accessories

Part Number	Description
1750000332	LGA 775 CPU cooler for 115 W TDP CPUs
PCA-AUDIO-HDA1E	Audio extension module
1701090401	Single COM cable kit
PCA-COM485-00A1E	4 x 422/485 COM module
1700008822-11	DVI-D cable

I/O View



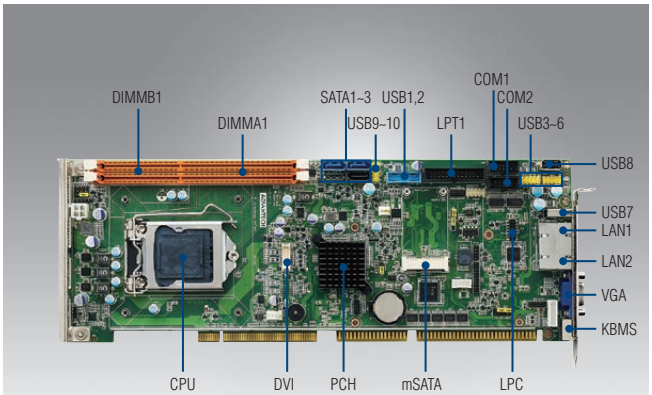
PCA-6011G2-00A1E



PCA-6011VG-00A1E

PCA-6028

LGA1150 Intel® Core™ i7/i5/i3/Pentium SBC with VGA/DVI/Dual GbE LAN



Features

- Supports Intel® Core™ i7/i5/i3/Pentium LGA1150 processors with H81
- Dual Channel (Non-ECC) DDR3 1333/1600 up to 16 GB
- Supports USB 3.0, SATA3.0
- Dual display with VGA and DVI-D (optional)
- Supports Advantech LPC modules.
- Supports SUSIAccess and Embedded Software APIs

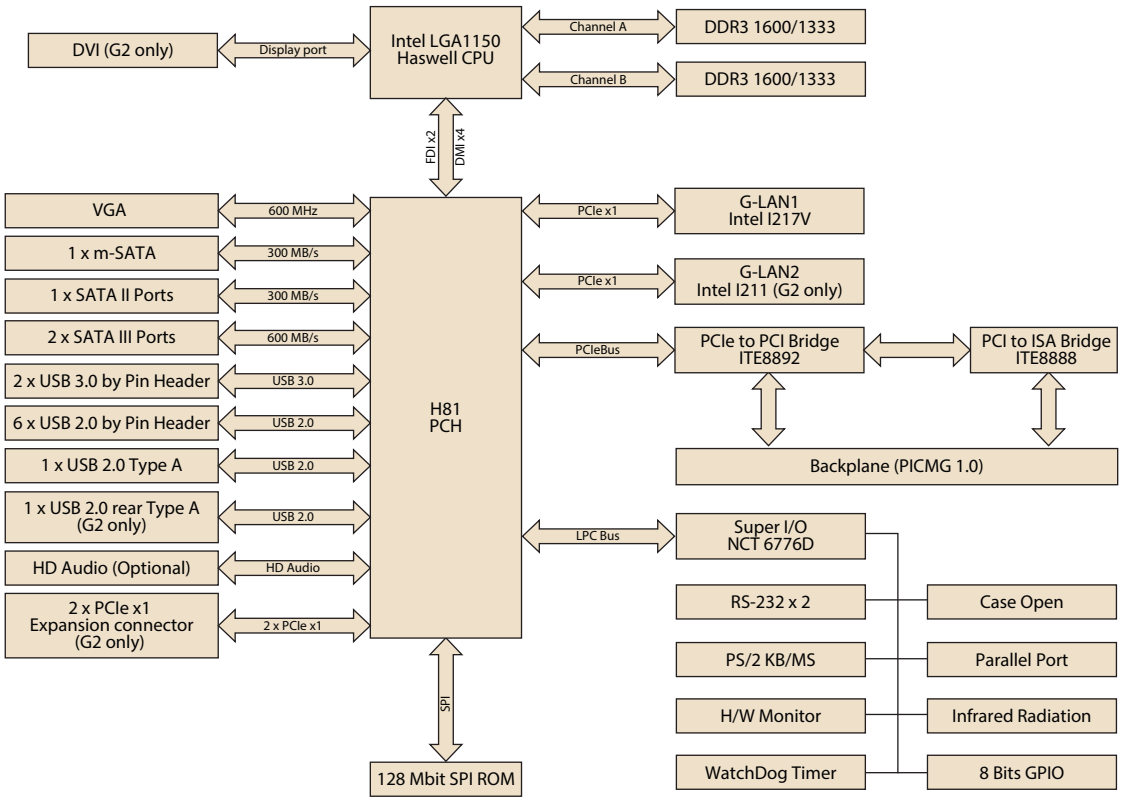
Quiet

CE FCC

Specifications

Processor System	**Haswell refresh CPUs are supported from BIOS V2.xx**								
	CPU	i7-4790S	i5-4590S	i5-4590T	i3-4360	i3-4350T	i3-4340TE		
	Base Frequency	3.2GHz	3.0GHz	2.0GHZ	3.7GHz	3.1GHz	2.6GHz		
	L3 Cache	8MB	6MB	6MB	4MB	4MB	4MB		
	Haswell CPUs are supported by both BIOS V1.xx and V2.xx								
	CPU	i7-4770S	i7-4770TE	i5-4570S	i5-4570TE	i3-4330	i3-4330TE	G3420	G3320TE
	Base Frequency	3.1GHz	2.3GHz	2.9GHz	2.7GHz	3.5GHz	2.4GHz	3.2GHz	2.3GHz
	L3 Cache	8MB	8M	6MB	4MB	4MB	3MB	3MB	3MB
	SKU/Chipset	Intel H81							
	BIOS	AMI 128Mbit SPI Flash							
Bus	ISA	HISA (ISA High Driver)							
	PCI	32 bit/ 33 MHz PCI							
Memory	Technology	Dual channel (Non-ECC) DDR3 1333/1600							
	Max. Cap.	16 GB (8 GB per DIMM)							
	Socket	DDR3 240-pin DIMM x 2							
Graphics	Controller	Chipset integrated Intel HD Graphics							
	VRAM	Shared system memory is subject to OS							
	CRT	Supports resolution up to 2048 x 1536 pixel at 60Hz							
	DVI-D	Supports resolution up to 1920 x 1200 pixel at 60Hz (G2 only)							
Ethernet	Interface	10/100/1000 Mbps							
	Controller	LAN 1: Intel I217V LAN 2: Intel I211 (Only in G2 Sku)							
	Connector with LED	RJ45 x 1 (VG sku); RJ45 x 2(G2 sku)							
SATA	Channel	SATA 3.0 x 2 (600 MB/sec), SATA2.0 x 1 (300MB/sec), mSATA x1 (300 MB/sec)							
Rear I/O	USB 2.0	1 (Only in G2 sku)							
	Ethernet	1 (VG sku); 2 (G2 sku)							
	VGA	1							
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)							
Internal Connector	USB	Up to 8x USB2.0 (6x Pin header, 1x Type A, 1x Rear in G2 sku only) 2x USB3.0 (Pin header)							
	SATA	4(1x SATA2.0, 2x SATA3.0, 1x mSATA)							
	DVI-D	1 (Pin header)							
	COM	2							
	Parallel	1							
	IrDA	1							
	GPIO	8-bit							
Watchdog Timer	Output	System reset							
	Interval	Programmable 1-255 sec							
Miscellaneous	Audio	Intel High Definition audio interface (required an audio extension module P/N: PCA-AUDIO-HDA1E)							
Power Requirement	Test Environment	Core i7-4790S@3.20GHz; 8GB DDR3 1600 2Rx8*2; SATA HDD*1							
	Voltage	+12V	+5V	+3.3V	+5Vsb	-12V	-5V		
	Current	4.94A	1.83A	0A	0.01A	0A	0A		
Environment		Operating				Non-operating			
	Temperature/Humidity	0 ~ 60 °C (32~140 °F); Depends on CPU frequency and cooler solution Operating humidity: 40 °C @ 85% RH Non-Condensing				-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing			
Physical	Dimensions (L x H)	338 x 122 mm (13.3" x 4.8")							

Block Diagram



Ordering Information

Part Number	LAN	VGA	DVI-D	COM	SATA	USB	m-SATA
PCA-6028VG-00A1E	1	Yes	-	2	3 (1 x 2.0 + 2 x 3.0)	9 (2 x 3.0 + 7 x 2.0)	1
PCA-6028G2-00A1E	2	Yes	1*	2	3 (1 x 2.0 + 2 x 3.0)	10 (2 x 3.0 + 8 x 2.0)	1

*Note: Output DVI-D signal only (Required DVI-D cable: 1700021831-01)

Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x2
1700022749-11	Serial ATA HDD power cable	x1
1701260305	COM + printer ports cable kit	x1
1700060202	Keyboard and mouse Y-cable	x1
1700008461-11	4-port USB cable kit	x1
9689000068	Jumper package	x1
2190000902	Warranty Card	x1
-	Startup manual	x1
-	Utility CD	x1

Optional Accessories

Part Number	Description
1701090401	Single COM cable
1701092300	Dual COM cable
1700020277-01	2-port USB 3.0 cable w/ BKT (30cm)
1700021831-01	DP to DVI-D cable w/ BKT (digital signal only)
1960047831N001	PCA-6028 optimized CPU cooler (2U)
PCA-AUDIO-HDA1E	Extension module for 7.1 Channel High Definition Audio
PCA-COM232-00A1E	4 x RS-232 module
PCA-COM485-00A1E	4 x RS-244/485 module
PCA-TPM-00A1E	Trusted platform module compliant with TCG 1.2

I/O View



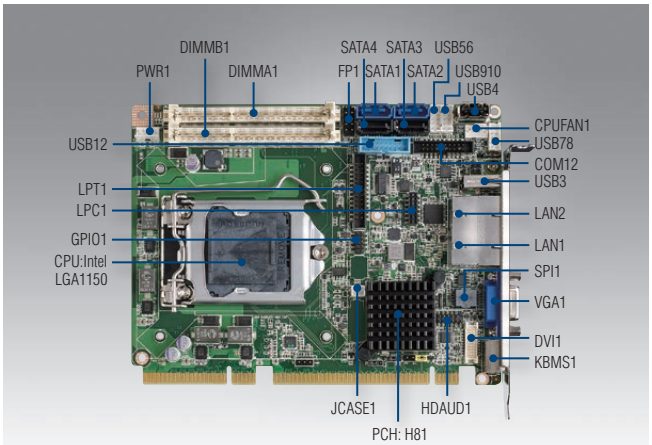
PCA-6028G2-00A1E



PCA-6028VG-00A1E

PCE-3028

LGA 1150 4th Generation Intel® Core™ i7/i5/i3 Half-size SHB with PCIe/VGA/ DVI/Dual GbE LAN



Features

- Complies with PICMG 1.3
- Supports Intel Core i7/i5/i3 LGA1150 processors with H81
- Dual Channel (Non-ECC) DDR3 1066/1333/1600 up to 16 GB
- Supports USB 3.0, SATA3.0
- Supports CRT and DVI-D (optional) display
- Support dual 10/100/1000 Mbps Ethernet
- Supports Advantech TPM module (LPC I/O)
- Supports SUSIAccess and Embedded Software APIs

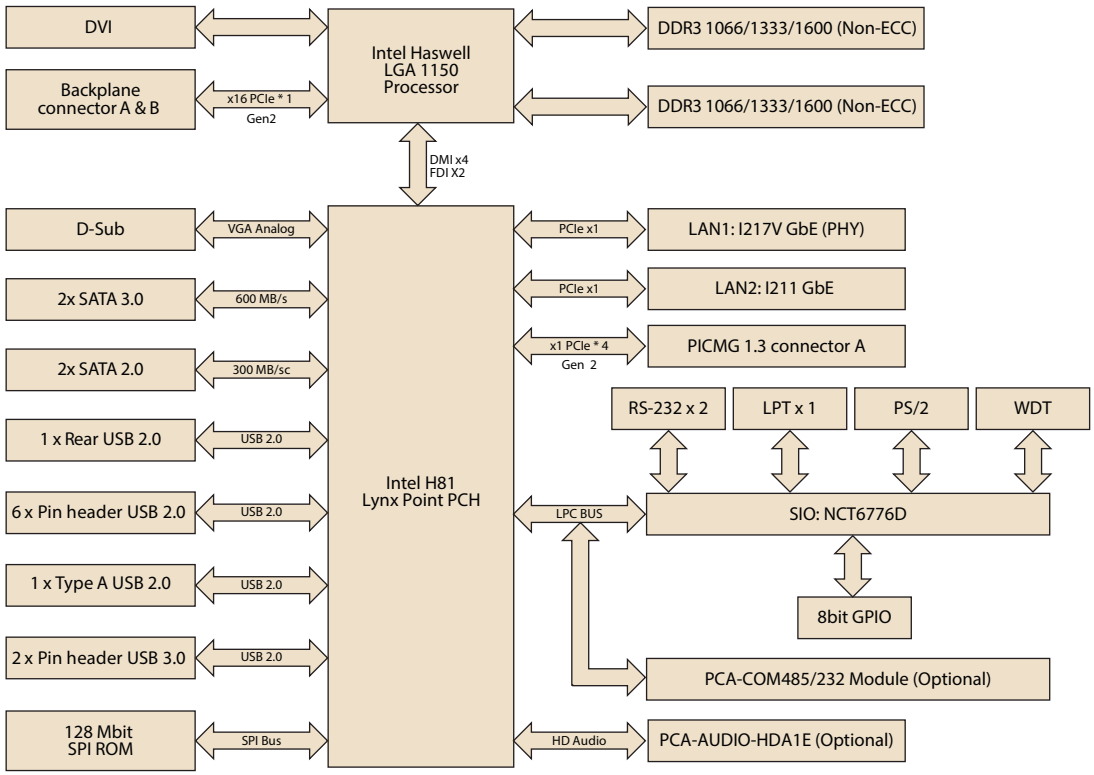
Quiet

CE FCC

Specifications

Processor System	CPU	i7-4790S	i7-4790T	i7-4770S	i7-4770TE	i5-4590S	i5-4590T	i5-4570S	i5-4570TE	i3-4360	i3-4350T	i3-4330	i3-4330TE	G3420	G3320TE	G1820	G1820TE
	Base Frequency	3.2GHz	2.7GHz	3.1GHz	2.3GHz	3.0GHz	2.0GHz	2.9GHz	2.7GHz	3.7GHz	3.1GHz	3.5GHz	2.4GHz	3.2 GHz	2.3 GHz	2.7 GHz	2.2 GHz
	L3 Cache	8MB	8MB	8MB	8MB	6MB	6MB	6MB	4MB	4MB	4MB	4MB	4MB	3MB	3MB	2MB	2MB
	SKU/Chipset	Intel H81															
	BIOS	AMI 128Mbit SPI Flash															
Bus	PCI-Express	One x16 plus four x1 to backplane															
Memory	Technology	Dual channel (Non-ECC) DDR3 1066/1333/1600															
	Max. Cap.	16 GB (8 GB per DIMM)															
	Socket	DDR3 204-pin SO-DIMM x2															
Graphics	Controller	Chipset integrated Intel GT2 4600 or GT1 HD graphics (Depends on CPU support)															
	VRAM	Shared system memory is subject to OS															
	CRT	Supports resolution up to 1920 x 1200 pixel at 60Hz															
	DVI-D	Supports resolution up to 1920 x 1200 pixel at 60Hz															
	Dual Independent Display	VGA+DVI-D															
Ethernet	Interface	10/100/1000 Mbps															
	Controller	LAN 1: Intel I217V LAN 2: Intel I211AT															
	Connector with LED	RJ-45 x 2															
SATA	Max. Data Transfer Rate	SATA 3.0 x 2 (600 MB/sec), SATA 2.0 x 2 (300 MB/sec)															
Rear I/O	USB 2.0	1															
	Ethernet	2															
	VGA	1															
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)															
Internal Connector	USB	Seven USB 2.0 (Pin-header x 6 + USB Type A x 1); Two USB 3.0 (Pin header)															
	SATA	4															
	DVI-D	1															
	COM	2															
	Parallel	1															
	GPIO	8-bit															
Watchdog Timer	Output	System reset															
	Interval	Programmable 1-255 sec															
Miscellaneous	Audio	Intel High Definition audio interface (required an audio extension module P/N: PCA-AUDIO-HDA1E)															
Power Requirement	Test Environment	Intel Core i7-4770S (3.1GHz), DDR3 1600 8GB*2															
	Voltage	12V		5V		3.3V		5VSB		-5V		-12V					
	Current	7.26		1.06		0.42		0		0		0					
Environment		Operating								Non-operating							
	Temperature/Humidity	0 ~ 60 °C (32~140 °F); Depends on CPU frequency and cooler solution Operating humidity: 40 °C @ 85% RH Non-Condensing								-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing							
Physical	Dimensions (L x H)	167.64 x 126.39 mm (6.6" x 4.98")															

Block Diagram



Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DVI-D	COM	SATA III	SATA II	USB 2.0	USB 3.0	S/W Raid	AMT
PCE-3028G2-00A1E	H81	Non-ECC	PCE-3XXX	2	1	1	RS-232 x 2 onboard Optional RS-422/485 x 4 or RS-232 x 4 via module	2	2	8	2	No	No

Note: DVI-D cable is optional

Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x1
1703150102	Serial ATA HDD power cable	x1
1700008762	2-port COM cable	x1
1700002223	1-port LPT cable	x1
1700060202	Keyboard and mouse Y-cable	x1
1700020277-01	2 ports USB 3.0 cable W/BKT	x1
1700014398	4-port USB cable kit	x1
1703040100	Power Converter	x1
9689000002	Jumper package	x1
2190000902	Warranty Card	x1
2006302800	Startup manual	x1
2066302800	Utility CD	x1

Optional Accessories

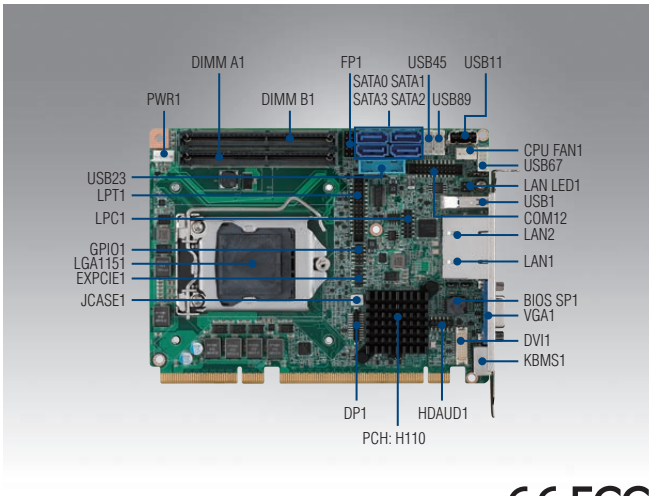
Part Number	Description
PCA-COM485-00A1E	4 x RS-244/485 module
PCA-COM232-00A1E	4 x RS-232 module
PCA-AUDIO-HDA1E	Audio module
PCA-TPM-00A1E	TPM module (Trust Platform management)
1700008822-11	DVI-DVI cable with bracket
1960047831N001	2U cooler for Intel Core i7-4770S, i7-4770TE, i5-4570S, i5-4570TE, i3-4330, i3-4330TE, G3420, G3220TE, G1820, G1820TE
1960053207N001	1.5 U cooler for Intel Core i7-4770S, i7-4770TE, i5-4570S, i5-4570TE, i3-4330, i3-4330TE, G3420, G3220TE, G1820, G1820TE
1960053065N001	1U blower for Intel Core i5-4570S, i5-4570TE, i3-4330, i3-4330TE, G3420, G3220TE, G1820, G1820TE

I/O View



PCE-3029

LGA 1151 6th and 7th Gen Intel® Core™ i7/i5/i3 Half-size SHB with PCIe 3.0/ Dual Independent Display/Dual GbE LAN/ SATA III/m-SATA/ USB 3.0



CE FCC

Features

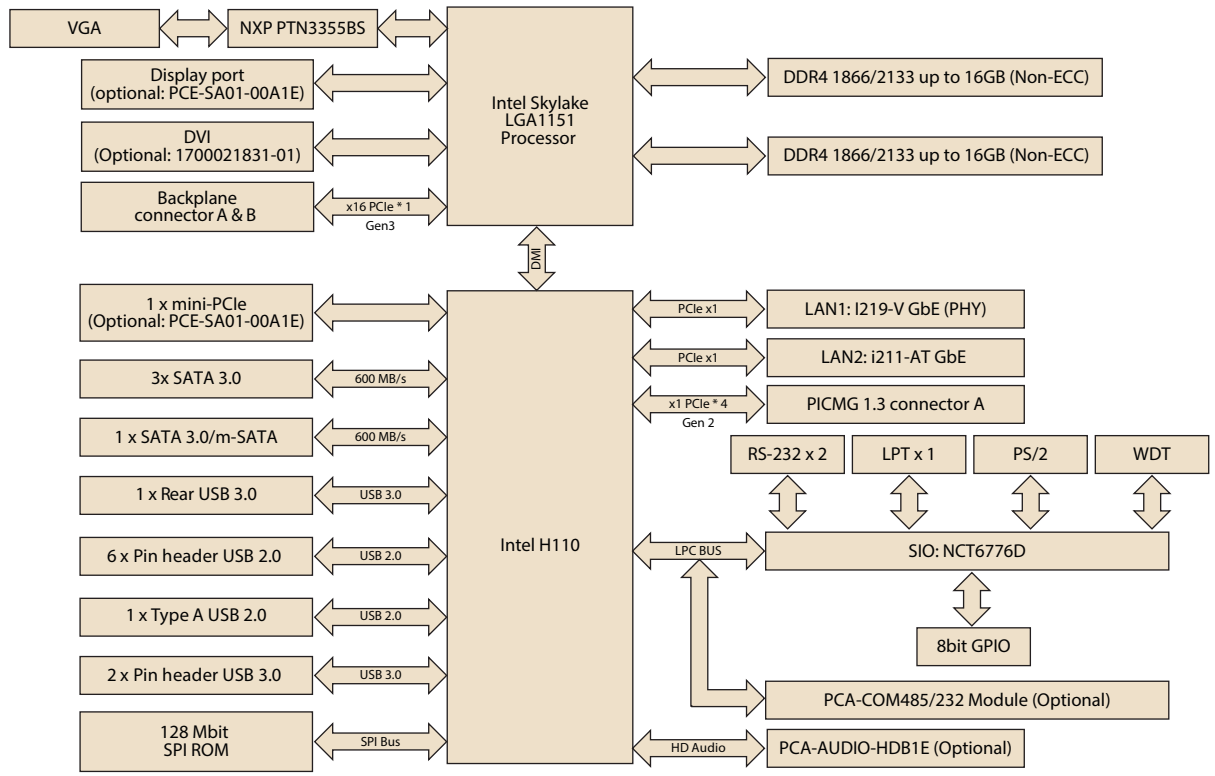
- Complies with PICMG 1.3
- Supports Intel® Core™ i7/i5/i3/Celeron®/Pentium® processor with H110 chipset
- Dual Channel (Non-ECC) DDR4 1866/2133 up to 32 GB
- Supports USB 3.0, SATA III, PCIe 3.0
- Supports CRT and DVI-D/DP (optional) display
- Supports Advantech TPM module (optional)
- Supports SUSIAccess and embedded software APIs

Note: Intel 7th generation processor only support Windows 10 (64-bit)

Specifications

Processor System	CPU	i7-7700	i7-7700T	i7-6700	i7-6700TE	i5-7500	i5-7500T	i5-6500	i5-6500TE	i3-7101E	i3-7101TE	i3-6100	i3-6100TE	G4400	G4400TE	G3900	G3900TE
	Base Frequency	3.6 GHz	2.9 GHz	3.4 GHz	2.4 GHz	3.4 GHz	2.7 GHz	3.2 GHz	2.3 GHz	3.9 GHz	3.4 GHz	3.7 GHz	2.7 GHz	3.3 GHz	2.9 GHz	2.8 GHz	2.6 GHz
	L3 Cache	8 MB	8 MB	8 MB	8 MB	6 MB	6 MB	6 MB	6 MB	3 MB	3MB	4 MB	4 MB	3 MB	3 MB	2 MB	2 MB
	SKU/Chipset	Intel H110															
	BIOS	AMI 128 Mbit SPI Flash															
Bus	PCI-Express	One x16 (Gen 3) plus four x1 (Gen 3) to backplane															
Memory	Technology	Dual channel (Non-ECC) DDR4 1866/2133 up to 32 GB															
	Max. Cap.	32 GB (16 GB per DIMM)															
	Socket	DDR4 260-pin SO-DIMM x2															
Graphics	Controller	Chipset integrated Intel HD Graphics															
	VRAM	Shared system memory is subject to OS															
	CRT	Supports resolution up to 1920 x 1200 pixel at 60Hz															
	Display Port	Supports resolution up to 4096 x 2304 pixel at 60Hz															
	DVI-D	Supports resolution up to 1920 x 1200 pixel at 60Hz															
	Dual Independent Display	VGA+ DVI-D/DP (Optional)															
Ethernet	Interface	10/100/1000 Mbps															
	Controller	LAN 1: Intel I219V LAN 2: Intel I211AT															
	Connector with LED	RJ-45 x 2															
Rear I/O	USB 3.0	1															
	Ethernet	2															
	VGA	1															
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)															
Internal Connector	USB	7 USB 2.0 (Pin-header *6 + USB Type A *1); 2 USB 3.0 (Pin header)															
	SATA/m-SATA	SATA III x4 (600MB/sec) or SATA III x3 (600MB/sec)+m-SATA x1															
	mini-PCIe	(Optional: PCE-SA01-00A1E, PCIe Gen 2.0)															
	DVI-D	1															
	DP	1															
	COM	2 (RS-232)															
	Parallel	1 (SPP/EPP)															
	GPIO	8 bits															
Watchdog Timer	Output	System reset															
	Interval	Programmable 1-255 sec															
Miscellaneous	Audio	Intel High Definition audio interface (required an audio extension module P/N: PCA-AUDIO-HDB1E)															
Power Requirement	Test Environment	Intel Core i7-6700 (3.4GHz), DDR4 2133 8GB *2															
	Voltage	12V		5V		3.3V		5VSB		-12V		-5V					
	Current	4.6		0.01		0.32		0.08		0		0					
Environment		Operating												Non-operating			
	Temperature/Humidity	0 ~ 60 °C (32~140 °F); Depends on CPU frequency and cooler solution Operating humidity: 40 °C @ 85% RH Non-Condensing												-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing			
Physical	Dimensions (L x H)	167.64 x 126.39 mm (6.6" x 4.98")															

Board Diagram



Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DVI-D	DP	COM	SATA III/ m-SATA	mini-PCIe	USB 2.0	USB 3.0	S/W RAID	AMT
PCE-3029G2-00A1E	H110	Non-ECC	PCE-3BXX	2	1	1*	1**	2 RS-232 4 RS-422/485 or 4 RS-232 (optional)***	4/0 3/1	1**	7	3	No	No

* DVI-D cable (1700021831-01) is optional.
** PCE-SA01-00A1E is required.. PCE-SA01-00A1E is compatible with IPC-3026/IPC-6806S/ACP-4D00/ACP-4020, but not compatible with IPC-3012.
***PCA-COM485-00A1E is required for additional 4 RS422/485; PCA-COM232-00A1E is required for additional 4 RS232.

Optional Accessories

Part Number	Description
PCA-COM485-00A1E	4 x RS-422/485 module
PCA-COM232-00A1E	4 x RS-232 module
PCA-AUDIO-HDB1E	Audio module with Realtek ACL892
PCA-TPM-00A1E	TPM 1.2 module
PCA-TPM-00B1E	TPM 2.0 module
PCE-SA01-00A1E	IO extension module
1700021831-01	DP to DVI-D cable w/ BKT
1960052651N021	2U cooler for Intel Core i7-6700, i7-6700TE, i5-6500, i5-6500TE, i3-6100, i3-6100TE, G4400, G4400TE, G3900, G3900TE
1960053207N001	1.5U cooler for Intel Core i7-6700, i7-6700TE, i5-6500, i5-6500TE, i3-6100, i3-6100TE, G4400, G4400TE, G3900, G3900TE
1960053065N001	1U cooler for Intel Core i7-6700TE, i5-6500TE, i3-6100TE, G4400TE, G3900TE

Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x1
1700022749-11	Serial ATA HDD power cable	x1
1700008762	2-port COM cable	x1
1700002223	1-port LPT cable	x1
1700060202	Keyboard and mouse Y-cable	x1
1700020277-01	2 ports USB 3.0 cable W/BKT	x1
1700014398-11	4-port USB cable kit	x1
1703040100	Power Converter	x1
9689000002	Jumper package	x1
2001302910	Startup manual	x1
2061302900	Utility CD	x1

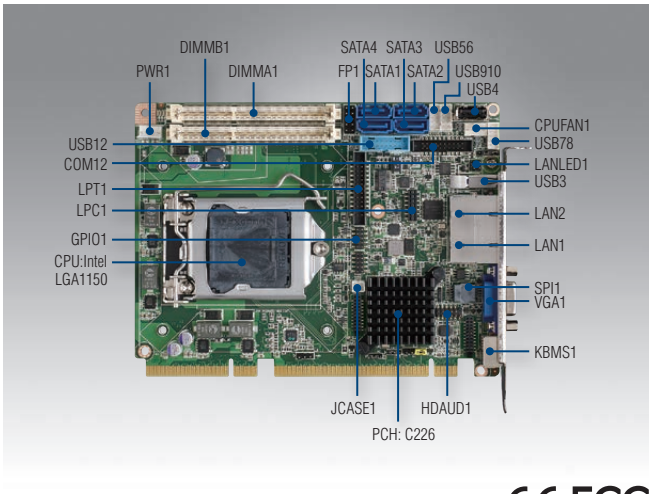
Bracket View



PCE-3029G2-00A1E

PCE-4128

LGA 1150 4th Gen Intel® Xeon® and Core™ i7/i5/i3 Half-size SHB with PCIe 3.0/Triple independent display/Dual GbE LAN/SATA 3.0/m-SATA/ USB 3.0



CE FCC

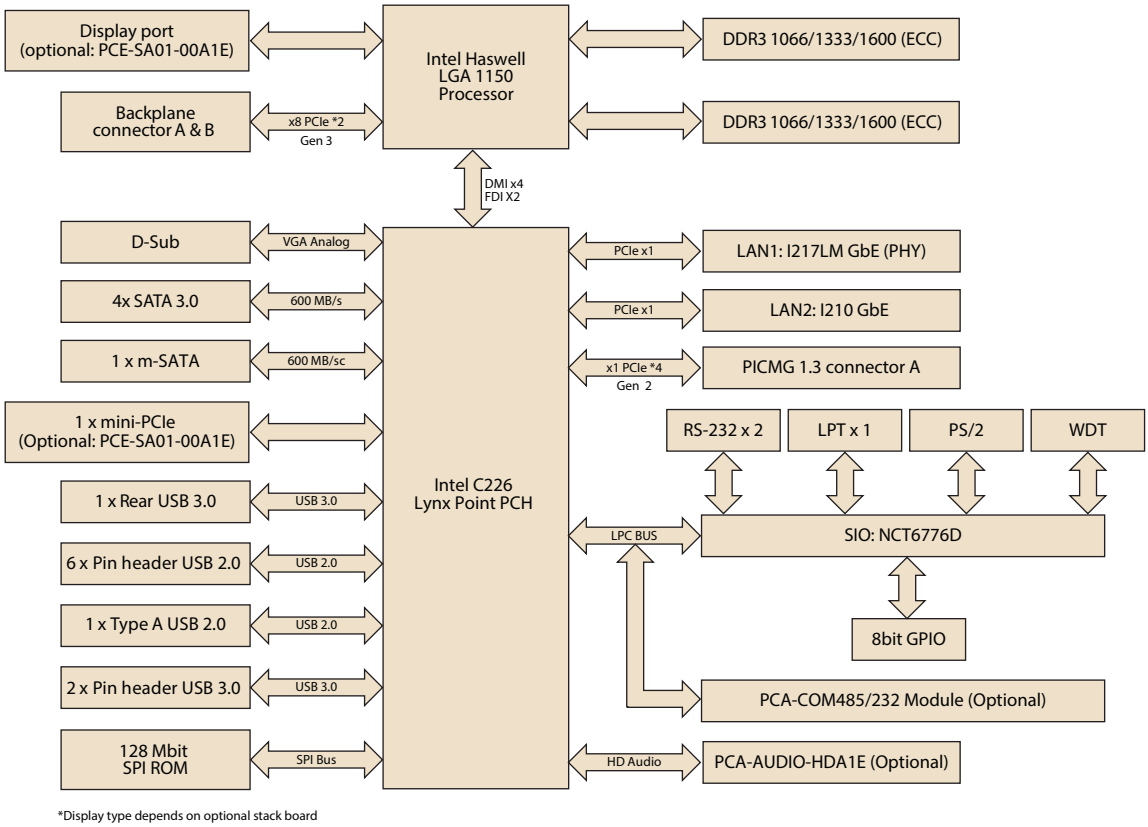
Features

- Complies with PICMG 1.3
- Supports Intel Xeon E3 1200v3 series, Core i7/i5/i3 LGA1150 processors with C226
- Dual Channel DDR3 1066/1333/1600 up to 16 GB
- Supports PCIE 3.0, USB 3.0, SATA3.0, SW Raid 0, 1, 5, 10
- Supports triple displays
- Support dual 10/100/1000 Mbps Ethernet
- Supports out-of-band remote management with AMT9.0
- Supports Advantech TPM module (LPC I/O)
- Supports SUSIAccess and Embedded Software APIs

Specifications

Processor System	CPU	E3-1275v3	E3-1225v3	E3-1268v3	i5-4570TE	i3-4360	i3-4330	i3-4330TE	G3420	G3320TE	G1820	G1820TE
	Base Frequency	3.5GHz	3.2GHz	2.3GHz	2.7GHz		3.5GHz	2.4GHz	3.2 GHz	2.3 GHz	2.7 GHz	2.2 GHz
	L3 Cache	8MB	8MB	8MB	4MB		4MB	4MB	3MB	3MB	2MB	2MB
	SKU/Chipset	Intel C226										
	BIOS	AMI 128Mbit SPI Flash										
Bus	PCI-Express	Two x8 or one x16, plus four x1 to backplane										
Memory	Technology	Dual channel DDR3 ECC 1066/1333/1600 MHz (ECC function enable depends on processor support)										
	Max. Cap.	16 GB (8 GB per DIMM)										
	Socket	DDR3 204-pin SO-DIMM X2										
Graphics	Controller	Chipset integrated Intel GT2 P4600 or GT2 4600 or GT1 HD graphics (Depends on CPU support)										
	VRAM	Shared system memory is subject to OS										
	CRT	Supports resolution up to 1920 x 1200 pixel at 60MHz										
	DP	Supports resolution up to 3840 x 2160 @ 60Hz										
	Triple Display	CRT + DP (Optional: PCE-SA01-00A1E)										
Ethernet	Interface	10/100/1000 Mbps										
	Controller	LAN 1: Intel I217LM LAN 2: Intel I210AT										
	Connector with LED	RJ45 x 2										
Rear I/O	USB 3.0	1										
	Ethernet	2										
	VGA	1										
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)										
Internal Connector	USB	Seven USB2.0 (6 pin headers + 1 USB Type A); Three USB3.0 (1 on rear IO + 2 pin header)										
	SATA 3.0	4 (600 MB/sec, supports S/W RAID 0,1, 5, 10)										
	COM	2										
	Parallel	1										
	GPIO	8 bit										
Watchdog Timer	Output	System reset										
	Interval	Programmable 1-255 sec										
Miscellaneous	Audio	Intel High Definition audio interface (required an audio extension module P/N: PCA-AUDIO-HDA1E)										
Power Requirement	Test environment	Intel Xeon E3-1275 v3 (3.5GHz), DDR3 1600 8GB *2										
	Voltage	12V	5V	3.3V	5VSB		-5V	-12V				
	Current	7.36	0.96	0.83	0.13		0	0				
Environment		Operating						Non-operating				
	Temperature/Humidity	0 ~ 60 °C (32~140 °F); Depends on CPU frequency and cooler solution Operating humidity: 40 °C @ 85% RH Non-Condensing						-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing				
Physical	Dimensions (L x H)	167.64 x 126.39 mm (6.6" x 4.98")										

Board Diagram



*Display type depends on optional stack board

Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DP	COM	SATA III	USB 2.0	USB 3.0	m-SATA	mini-PCIe	S/W Raid	AMT
PCE-4128G2-00A1E	C226	ECC	PCE-3BXX PCE-4BXX	2	1	1*	RS-232 x2 onboard Optional RS-422/485 x4, or RS-232 x4 via module	4	7	3	1	1*	Yes	Yes

*Optional: PCE-SA01-00A1E. PCE-SA01-00A1E is compatible with IPC-3026/IPC-6806S/ACP-4D00/ACP-4020, but not compatible with IPC-3012.

Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x1
1703150102	Serial ATA HDD power cable	x1
1700008762	2-port COM cable	x1
1700002223	1-port LPT cable	x1
1700060202	Keyboard and mouse Y-cable	x1
1700014398	4-port USB cable kit	x1
1700020277-01	2 ports USB3.0 cable W/BKT	x1
1703040100	Power converter	x1
9689000002	Jumper package	x1
2190000902	Warranty Card	x1
2006302800	Startup manual	x1
2066302800	Utility CD	x1

Optional Accessories

Part Number	Description
PCA-COM485-00A1E	4 x RS-244/485 module
PCA-COM232-00A1E	4 x RS-232 module
PCA-AUDIO-HDA1E	Audio module with Realtek ALC-888
PCA-AUDIO-HDB1E	Audio module with Realtek ALC-892
PCA-TPM-00A1E	TPM module (Trust Platform management)
PCE-SA01-00A1E	I/O extension stack board
1960047831N001	2U cooler for Xeon E3-1275v3, E3-1225v3, E3-1268v3, i7-4770S, i7-4770TE, i5-4570S, i5-4570TE, i3-4330, i3-4330TE, G3420, G3220TE, G1820, G1820TE
1960053207N001	1.5U cooler for i7-4770S, i7-4770TE, i5-4570S, i5-4570TE, i3-4330, i3-4330TE, G3420, G3220TE, G1820, G1820TE
1960053065N001	1U blower for i5-4570S, i5-4570TE, i3-4330, i3-4330TE, G3420, G3220TE, G1820, G1820TE

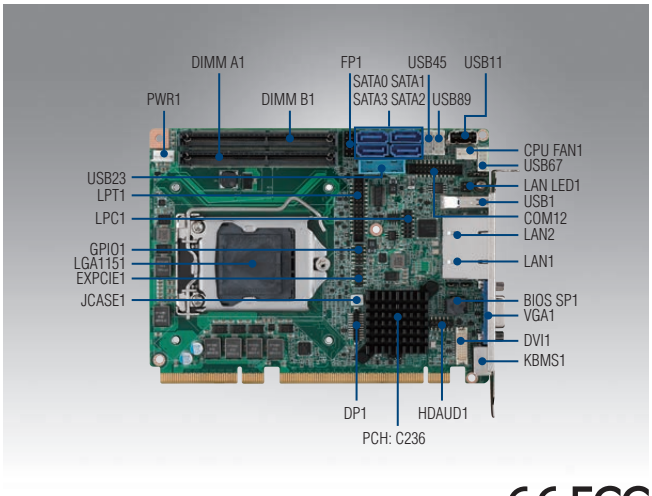
I/O View



PCE-4128G2-00A1E

PCE-4129

LGA 1151 6th and 7th Gen Intel® Xeon® and Core™ i7/i5/i3 Half-size SHB with PCIe 3.0/Triple Independent Display/ Dual GbE LAN/SATA III/m-SATA/ USB 3.0



CE FCC

Features

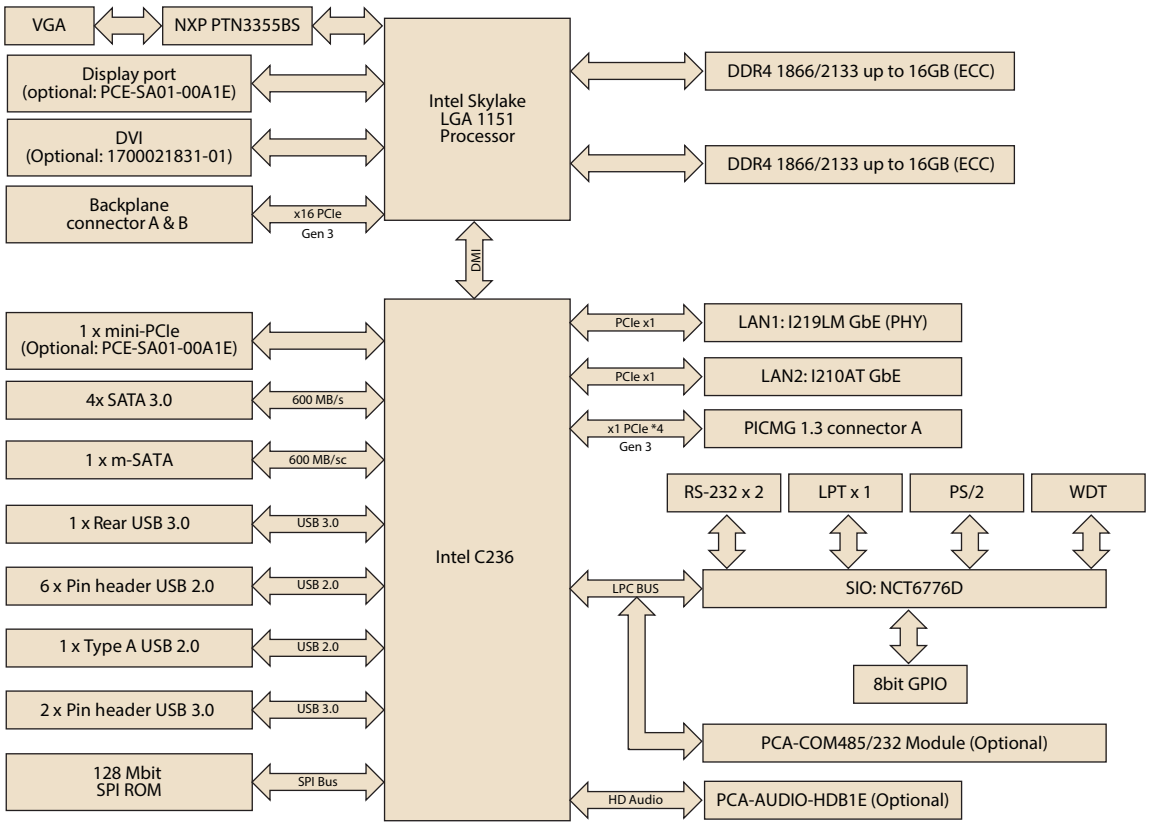
- Complies with PICMG 1.3
- Supports Intel Xeon E3 1200v5 series, Core i7/i5/i3 LGA1151 processors with C236
- Dual Channel DDR4 1866/2133 (ECC) up to 32 GB
- Supports PCIE 3.0, USB 3.0, SATA3.0, SW RAID 0, 1, 5, 10
- Supports triple displays: VGA+DVI-D (optional) + DP (optional)
- Supports out-of-band remote management with AMT9.0
- Supports Advantech TPM module (optional)
- Supports SUSIAccess and embedded software APIs

Note: Intel 7th generation processors only support Windows 10 (64-bit)

Specifications

Processor System	CPU	E3-1275v6	E3-1275v5	E3-1225v5	E3-1268Lv5	i7-7700	i7-7700T	i7-6700	i7-6700TE	i5-7500	i5-7500T	i5-6500	i5-6500TE	i3-7101E	i3-7101TE	i3-6100	i3-6100TE	G4400	G4400TE	G3900	G3900TE
	Base Frequency	3.8 GHz	3.6 GHz	3.3 GHz	2.4 GHz	3.6 GHz	2.9 GHz	3.4 GHz	2.4 GHz	3.4 GHz	2.7 GHz	3.2 GHz	2.3 GHz	3.9 GHz	3.4 GHz	3.7 GHz	2.7 GHz	3.3 GHz	2.9 GHz	2.8 GHz	2.6 GHz
	L3 Cache	8 MB	8 MB	6 MB	8 MB	8MB	8 MB	8 MB	8 MB	6 MB	6 MB	6 MB	6 MB	3 MB	3 MB	4 MB	4 MB	3 MB	3 MB	2 MB	2 MB
	SKU/Chipset	Intel C236																			
	BIOS	AMI 128 Mbit SPI Flash																			
Bus	PCI-Express	Two x8 or one x16, plus four x1 to backplane (PCIe Gen 3.0)																			
Memory	Technology	Dual channel DDR4 ECC 1866/2133 MHz (ECC function enable depends on processor support)																			
	Max. Cap.	32 GB (16 GB per DIMM)																			
	Socket	DDR4 260-pin SO-DIMM X2																			
Graphics	Controller	Chipset integrated Intel HD Graphics																			
	VRAM	Shared system memory is subject to OS																			
	CRT	Supports resolution up to 1920 x 1200 pixel at 60MHz																			
	DVI-D	Supports resolution up to 1920 x 1200 pixel at 60MHz																			
	DP	Supports resolution up to 4096 x 2304 @ 60Hz																			
	Triple Display	CRT + DP (Optional: PCE-SA01-00A1E) + DVI-D (Optional: 1700021831-01)																			
Ethernet	Interface	10/100/1000 Mbps																			
	Controller	LAN 1: Intel I219LM LAN 2: Intel I210AT																			
	Connector with LED	RJ45 x 2																			
Rear I/O	USB 3.0	1																			
	Ethernet	2																			
	VGA	1																			
	PS/2	1 (PS/2 Y cable supports 1 x keyboard and 1 x mouse)																			
Internal Connector	USB	7 USB2.0 (Pin headers*6 + USB Type A*1); 2 USB3.0 (Pin header)																			
	SATA 3.0	4 (600 MB/sec, supports S/W RAID 0,1, 5, 10)																			
	m-SATA	1 (600 MB/sec)																			
	mini-PCIe	1 (Optional: PCE-SA01-00A1E, PCIe Gen 2.0)																			
	COM	2 (RS-232)																			
	Parallel	1 (SPP/EPP)																			
	GPIO	8 bits																			
Watchdog Timer	Output	System reset																			
	Interval	Programmable 1-255 sec																			
Miscellaneous	Audio	Intel High Definition audio interface (requires an audio extension module P/N: PCA-AUDIO-HDB1E)																			
Power Requirement	Test environment	Intel Xeon E3-1225 v5 (3.30GHz), DDR4 2133 8GB *2																			
	Voltage	12V		5V	3.3V			5VSB	-12V			-5V	-5V								
	Current	4.6		0.01	0.32			0.08	0			0	0								
Environment		Operating														Non-operating					
	Temperature/Humidity	0 ~ 60 °C (32~140 °F); depends on CPU frequency and cooler solution Operating humidity: 40 °C @ 85% RH non-condensing														-40 ~ 85 °C and 60 °C @ 95% RH non-condensing					
Physical	Dimensions (L x H)	167.64 x 126.39 mm (6.6" x 4.98")																			

Board Diagram



Ordering Information

Part Number	PCH	Memory	Backplane	LAN	VGA	DVI-D	DP	COM	SATA III	USB 2.0	USB 3.0	m-SATA	mini-PCIe	S/W RAID	AMT
PCE-4129G2-00A1E	C236	ECC/ Non-ECC	PCE-3BXX PCE-4BXX	2	1	1*	1**	2 RS-232 4 RS-422/485 or 4 RS-232 (optional)***	4	7	3	1	1**	Yes	Yes

* DVI-D cable (1700021831-01) is optional.
** PCE-SA01-00A1E is required. PCE-SA01-00A1E is compatible with IPC-3026/IPC-6806S/ACP-4D00/ACP-4020, but not compatible with IPC-3012.
***PCA-COM485-00A1E is required for additional 4 RS422/485; PCA-COM232-00A1E is required for additional 4 RS232.

Optional Accessories

Part Number	Description
PCA-COM485-00A1E	4 x RS-422/485 module
PCA-COM232-00A1E	4 x RS-232 module
PCA-AUDIO-HDB1E	Audio module with Realtek ACL892
PCA-TPM-00A1E	TPM 1.2 module
PCA-TPM-00B1E	TPM 2.0 module
PCE-SA01-00A1E	IO extension module
1700021831-01	DP to DVI-D cable w/ BKT
1960052651N021	2U cooler for Intel Xeon E3-1275v5, E3-1225v5, E3-1268Lv5, i7-6700, i7-6700TE, i5-6500, i5-6500TE, i3-6100, i3-6100TE, G4400, G4400TE, G3900, G3900TE
1960053207N001	1.5U cooler for Intel E3-1268Lv5, i7-6700, i7-6700TE, i5-6500, i5-6500TE, i3-6100, i3-6100TE, G4400, G4400TE, G3900, G3900TE
1960053065N001	1U cooler for Intel E3-1268Lv5, i7-6700TE, i5-6500TE, i3-6100TE, G4400TE, G3900TE

Packing List

Part Number	Description	Quantity
1700003194	Serial ATA HDD data cable	x1
1700022749-11	Serial ATA HDD power cable	x1
1700008762	2-port COM cable	x1
1700002223	1-port LPT cable	x1
1700060202	Keyboard and mouse Y-cable	x1
1700014398-11	4-port USB cable kit	x1
1700020277-01	2 ports USB3.0 cable W/BKT	x1
1703040100	Power converter	x1
9689000002	Jumper package	x1
2001302910	Startup manual	x1
2061302900	Utility CD	x1

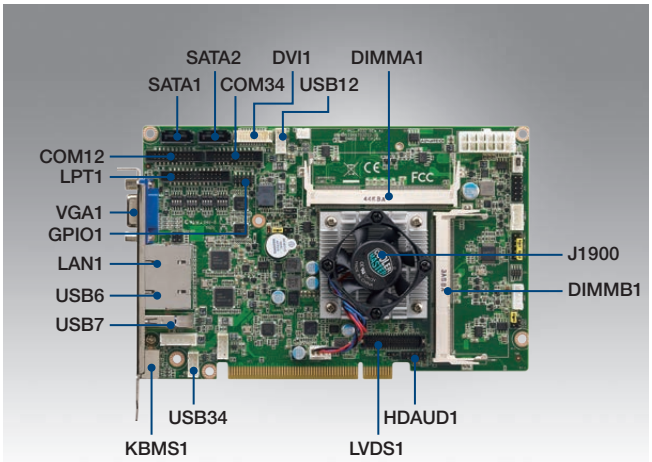
Bracket View



PCE-4129G2-00A1E

PCI-7032

Intel® Celeron J1900/N2930 PCI Half-size SBC with DDR3L 1333/Dual GbE/ m-SATA/4 RS-232/422/485



Features

- Ultra low power Intel® Celeron processor J1900/N2930, VG SKU is fanless design
- Dual channel DDR3L 1066/1333 on 204-pin SO-DIMM socket
- Dual independent display
- Up to 2 GbE LAN
- 2 SATA 2.0 (300 MB/s), one of them can be configured as m-SATA
- Legacy I/O: 4 RS-232/422/485, and 1 LPT support

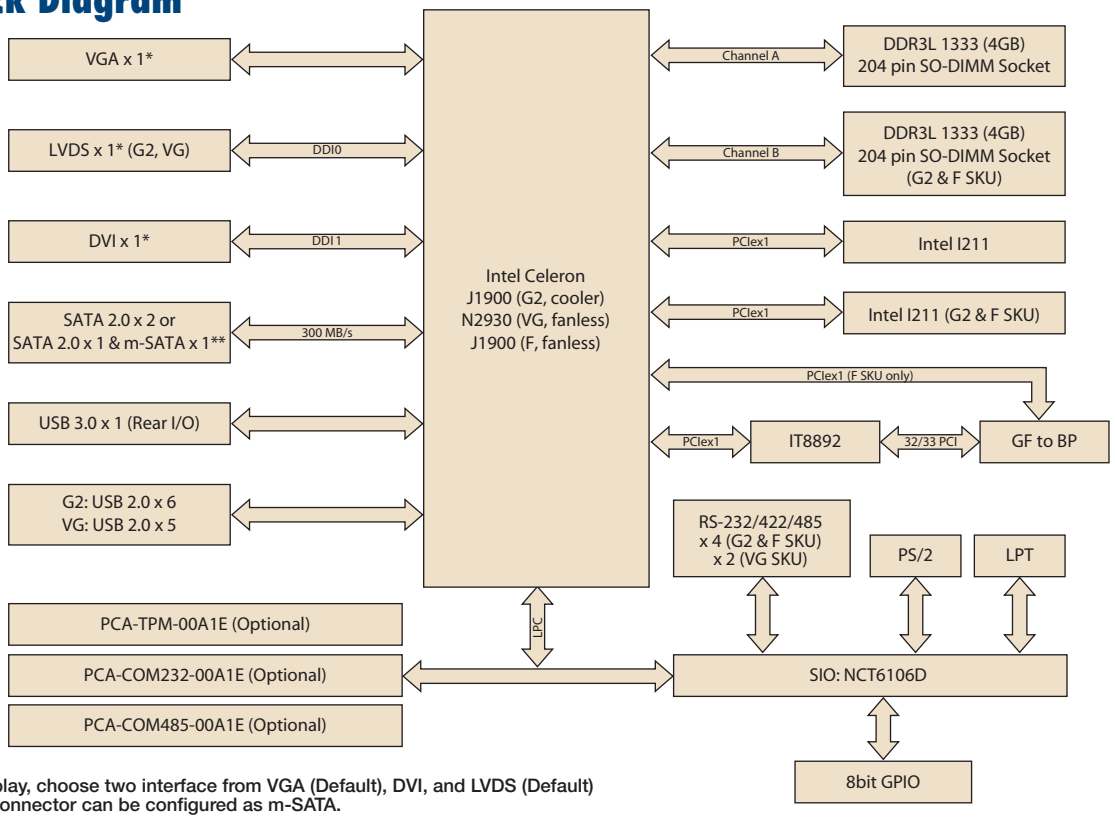
Quiet

CE FCC

Specifications

Processor System	CPU	Intel Celeron N2930		Intel Celeron J1900
	Speed	1.83 GHz		2.0 GHz
	L2 Cache	2 MB		2 MB
	BIOS	AMI 64Mb SPI Flash		
Bus	PCI-Express	PCIe x 1 (F SKU only)		
	PCI	Four 32 bit/33 MHz PCI Masters to Backplane		
Memory	Technology	G2: Dual channel DDR3L-1333 VG: DDR3L-1333 F: Dual channel DDR3L-1333		
	Max. Cap.	8 GB (4GB per DIMM)		
	Socket	DDR3 204-pin SO-DIMM x1 (VG); x2 (G2, F)		
Graphics	Onboard	Chipset integrated Intel® HD Graphics		
	VRAM	Shared system memory. It subjects to the OS.		
	Video Interface	Dual independent display: choosing two interfaces from VGA (default), LVDS (default), and DVI		
	Video Output	VGA: Supports up to 2560 x 1600 @ 60 Hz LVDS: 48 bit (Dual channel 24 bit) LVDS up to 1920 x 1200 @ 60 Hz DVI: Supports up to 2560 x 1600 @ 60 Hz Dual independent display: choosing two interface from VGA (Default), DVI and LVDS (Default)		
Ethernet	Interface	10/100/1000 Mbps		
	Controller	LAN1: Intel I211		
		LAN2: Intel I211 (G2, F)		
	Connector	RJ-45 with LED Connector x 2		
SATA	Max. Transfer Rate	300 MB/s (SATA 2.0)		
	Channel	2 (SATA2 can be configured as m-SATA)		
I/O Interface	USB 2.0	G2: one USB 3.0 (5Gbps, rear I/O), six USB 2.0 (480Mbps, pin-header x6) VG: one USB 3.0 (5Gbps, rear I/O), five USB 2.0 (480Mbps, pin-header x4, rear I/O x1) F: one USB 3.0 (5Gbps, rear I/O), six USB 2.0 (480Mbps, pin-header x6)		
	Serial	Four RS-232/422/485 for G2 & F; Two RS-232/422/485 for VG		
	Parallel	1 (EPP/ECP)		
	PS/2	1 (for mouse and keyboard, a Y cable is included in the package)		
Watchdog Timer	Output	System reset		
	Interval	Programmable, 1~255 sec/min		
Miscellaneous	Audio Output	Intel High Definition audio interface (requires a audio extension module)		
Environment		Operating		Non-Operating
	Temperature	0 ~ 60 °C (32 ~ 140 °F) (operating humidity: 40 °C @ 85% RH Non-Condensing)		-40 ~ 85 °C and 60 °C @ 95% RH Non-Condensing
Power Requirement	Test Environment	Intel Celeron J1900 (2GHz), DDR3L 1333, 4GB SO-DIMM module*2		
	Voltage	12V	5V	5VSB
	Current	0.737A	0.298A	0.044A
Physical	Dimensions (L x H)	185 x 122 mm (7.3" x 4.8")		

Block Diagram



* Dual display, choose two interface from VGA (Default), DVI, and LVDS (Default)
** SATA2 connector can be configured as m-SATA.

Ordering Information

Model Name	SoC	Memory	DIMM Slot	Fanless	USB	COM Port	PCIe x 1	LPT	LAN	VGA	LVDS	DVI	m-SATA	HW Monitor
PCI-7032G2-00A1E	J1900	Dual channel DDR3L-1333 up to 8GB (204-pin SO-DIMM socket x2)	2	No	1 x USB 3.0 6 x USB 2.0	4	No	1	2	Yes	Yes	Yes	Yes	Yes
PCI-7032VG-00A1E	N2930	DDR3L-1333 up to 4GB (204-pin SO-DIMM socket x1)	1	Yes	1 x USB 3.0 5 x USB 2.0	2	No	1	1	Yes	Yes	Yes	Yes	No
PCI-7032F-00A1E	J1900	Dual channel DDR3L-1333 up to 8GB (204-pin SO-DIMM socket x2)	2	Yes	1 x USB 3.0 6 x USB 2.0	4	Yes	1	2	Yes	No	Yes	No	No

*PCI-7032F-00A1E is only compatible with Advantech IPC-120 chassis which has special thermal design and can NOT be used with other enclosures.

Optional Accessories

Part Number	Description
PCA-COM485-00A1E	4x RS-422/485 module
PCA-COM232-00A1E	4 x RS-232 module
PCA-TPM-00A1E	TPM module (Trusted platform management)
1700021831-01	DVI cable
1700000265	12 pin-12 pin ATX power cable kit
1703100261	2-port USB cable kit

Packing List

Part Number	Description	Quantity
1960046526N001	CPU cooler for Celeron J1900 SoC (only available for G2 SKU)	x 1
1700003194	Serial ATA HDD data cable	x 1
1700022749-11	Serial ATA HDD power cable	x 1
1700002223	Printer (parallel) port cable kit	x 1
1700008762	Dual COM ports cable kit	x2 (G2,F) x1 (VG)
1700002343	ATX feature cable	x 1
1700014398-11	4-port USB cable kit	x 1
1700060202	Y cable for PS/2 keyboard and PS/2 mouse	x 1
9689000068	Jumper pack	x 1
2001703200	PCI-7032 startup manual	x 1
2061703200	DVD with driver utility and manual (in PDF format)	x 1

I/O View



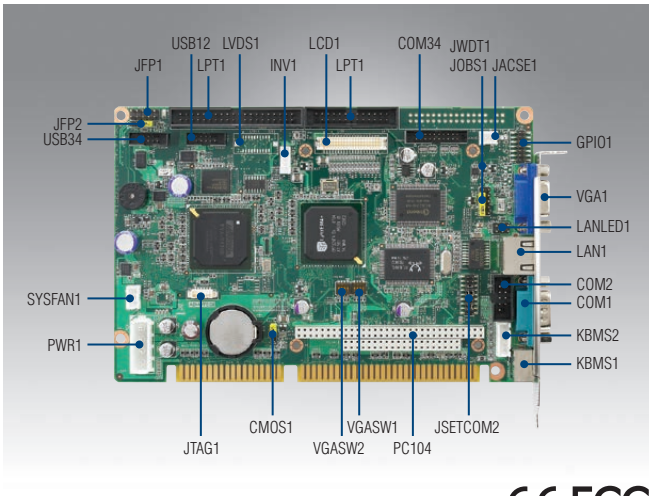
PCI-7032G2-00A1E
PCI-7032F-00A1E



PCI-7032VG-00A1E

PCA-6742

Advantech EVA-X4300 ISA Half-size SBC with VGA/LCD/LAN/CFC/USB and PC/104



CE FCC

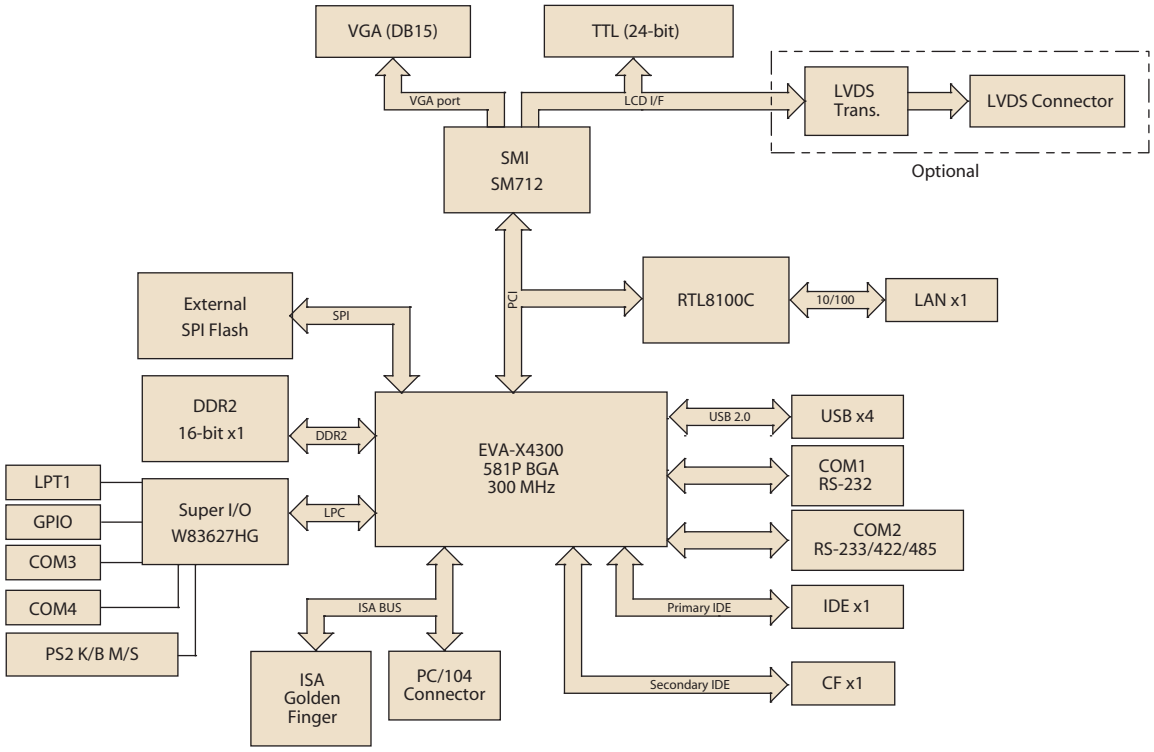
Features

- Low power fanless EVA-X4300
- Onboard 128/64 DDR2 RAM
- 10/100 Mbps Ethernet
- 1024 x 768 @ 18/24-bit TTL/LVDS support

Specifications

Processor System	CPU	Advantech EVA-X4300 up to 300 MHz	
	Max. Speed	300 MHz	
	L1 Cache	32 KB	
	Chipset	Advantech EVA-X4300 up to 300 MHz	
	BIOS	Award integrated 256 KB ROM in Advantech EVA-X4300	
Bus	PCI	32-bit/33 MHz	
	ISA	8/16-bit 8 MHz	
Memory	Technology	Default onboard DDR2 128 MB	
	Socket	-	
Graphics	Controller	Chipset integrated VGA controller VGA mode: SM712 graphics chip supports 1024 x 768 @ 24-bit true color LCD mode: SMI SM712 2D graphics chip supports 1024 x 768 @ 18/24-bit TFT	
	VRAM	4 MB display memory	
	LVDS	Yes (Optional)	
	TTL	Up to 24-bit TTL for TFT LCD	
	Dual Display	Supports CRT+LCD simultaneously display	
Ethernet	Interface	10/100 Mbps	
	Controller	Realtek RTL8100CL	
	Connector	RJ-45 x 1	
EIDE	Mode	PIO 4	
	Channel	1	
SATA (150 MB/s)	Port	-	
I/O Interface	USB	4 ports (USB 2.0 and USB1.1 under DOS)	
	Serial	4 COM (1 x RS-232/422/485 on one 2.54 mm pitch wafer box, 1 x RS-232 on rear I/O, 2 x RS-232 on one 2.0 mm pitch wafer box)	
	Parallel	1 (via super I/O)	
	FDD	-	
	GPIO	8 bit; COMS Level (0 ~ 3.3 V)	
	PS/2	6-pin DIN socket on bracket for PS/2 keyboard and mouse. (via super I/O) 6-pin (2.54 mm) wafer box connector for keyboard only	
Watchdog Timer	Output	System reset/IRQ11	
	Interval	Programmable, 1~255 sec/min	
Miscellaneous	Audio Output	-	
	Solid State Disk	CompactFlash socket (Type I/II), shared with secondary IDE	
Power Requirement	Typical	+5 V @ 1.6 A	
	Max	+5 V @ 2 A	
Environment		Operating	Non-Operating (Storage)
	Temperature	0 ~ 60 °C (32 ~ 140 °F) (operating humidity: 40 °C @ 85% RH Non-Condensing)	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing
Physical	Dimensions (L x H)	185 x 122 mm (7.3" x 4.8")	
OS		DOS, Win CE 5.0	

Block Diagram



Ordering Information

P/N	CPU	LVDS	TTL	USB	GPIO	FE LAN	FDD
PCA-6742LV-00A1E	EVA-X4300	-	-	4	-	-	-
PCA-6742VE-00A1E	EVA-X4300	(Optional)	24-bit	4	1	RTL 8100C	-

Packing List

Part Number	Description	Quantity
1701260305	COM2 + LPT cable	x 1
1700060202	Y-cable for PS/2 Keyboard, PS/2 Mouse	x 1
1701400452	EIDE (HDD) cable	x 1
9689000002	Jumper pack	x 1
1700008887	USB cable with 4 ports (2.0 mm pitch)	x 1
-	Utility CD	x 1
-	Startup manual	x 1

Optional Accessories

Part Number	Description
1703100260	USB cable with 2 ports (2.0 mm pitch)
1700008762	Dual-COM port cable kit for COM 3-4
PCA-SATAP2-00A1E	IDE/SATA Adapter for CPU cards

I/O View



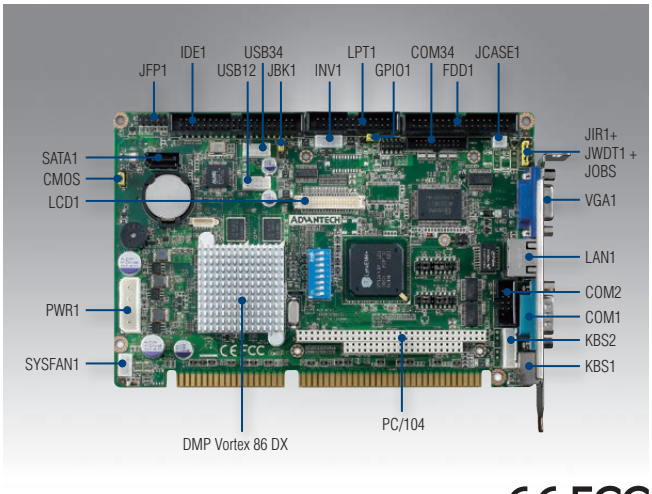
PCA-6742LV-00A1E



PCA-6742VE-00A1E

PCA-6743

DM&P Vortex86DX ISA Half-size SBC with VGA/TTL or LVDS/LAN/USB/PC/104/ CFC/COM



Features

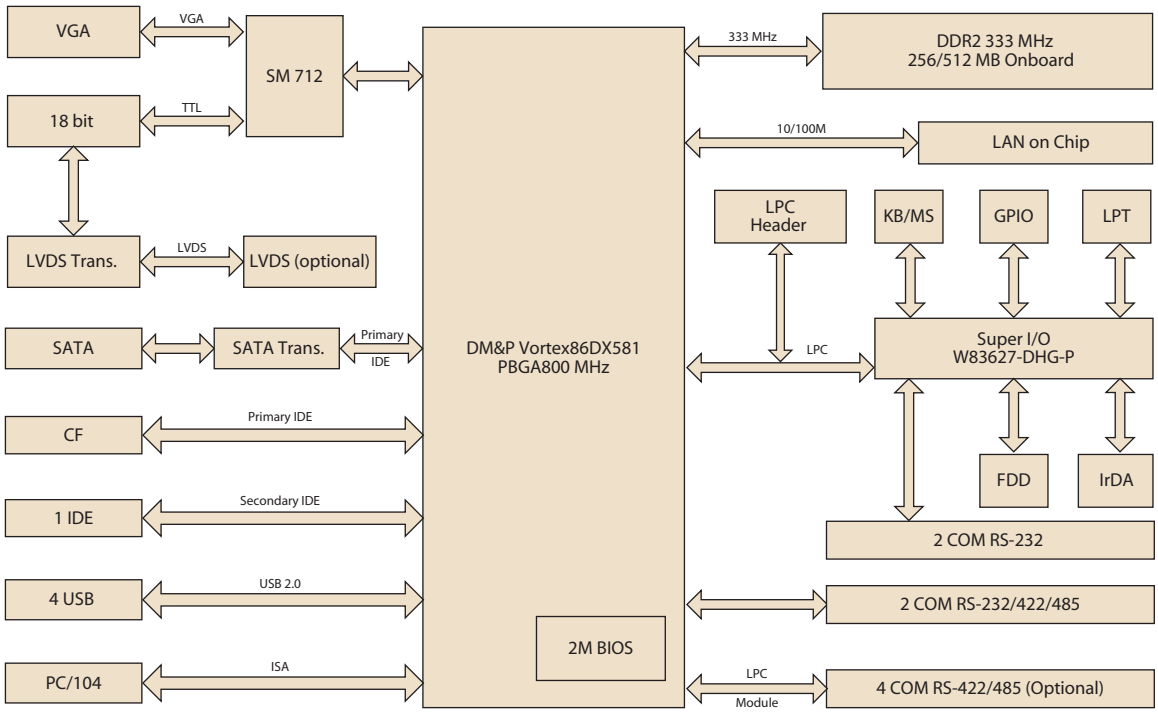
- Ultra low power, fanless DM&P Vortex86DX processor and 512/256 MB onboard DDR2 memory
- VGA+LCD dual video outputs
- FDD/ PC/104/ COM supported
- Optional module for 4 COM485 w/auto-flow control

CE FCC

Specifications

Processor System	CPU	DM&P Vortex86DX	
	Max. Speed	800 MHz	
	L1 Cache	16 KB I/D-Cache	
	L2 Cache	256 KB	
	Chipset	DM&P Vortex86DX	
	BIOS	Award integrated in DM&P Vortex86DX	
Bus	ISA	Full 16-bit ISA Bus signal	
Memory	Technology	Default onboard DDR2 256MB (For VE SKU) Default onboard DDR2 512MB (For F SKU)	
	Socket	-	
Graphics	Controller	Chipset integrated VGA controller VGA mode: SM712 graphics chip supports 1024 x 768 @ 24-bit true color LCD mode: SMI SM712 2D graphics chip supports 1024 x 768 @ 18-bit TFT	
	VRAM	Shared 4 MB	
	LVDS	18 bit LVDS (optional)	
	TTL	Up to 24-bit TTL for TFT LCD	
	Dual Display	Supports VGA+LCD simultaneous display	
Ethernet	Interface	10/100 Mbps	
	Controller	LAN on Vortex86DX	
	Connector	RJ-45 x 1	
EIDE	Mode	UDMA 100	
	Channel	1 (2 IDE devices from secondary IDE)	
SATA (150 MB/s)	Port	1 (F SKU)	
I/O Interface	USB	4 (USB 2.0 ports)	
	Serial	F SKU: 2 RS-232/422/485 (1 Real I/O and 1 Pin header) + 2 RS-232 (with Pin header) VE SKU: 2 RS-232 (1 Real I/O and 1 Pin header) Optional: PCA-COM485; Add 4 RS-422/485 with Auto-Flow Control (Need to check if IRQ is available or not)	
	Parallel	1 (EPP/ECP/SPP)	
	FDD	1	
	GPIO	8-bit 4 in/4 out	
	PS/2	1 (6-pin DIN socket on bracket for PS/2 keyboard and mouse, 6-pin wafer box connector for keyboard only)	
Watchdog Timer	Output	System reset/IRQ11	
	Interval	Programmable, 1~255 sec/min	
Miscellaneous	Audio Output	-	
	Solid State Disk	Compact Flash socket (Type I/II) from primary master	
Power Requirement	Voltage	+12 V	+5 V
	Current	0.04 A	1.44 A
Environment		Operating	Non-Operating
	Temperature	0 ~ 60 °C (32 ~ 140 °F) (operating humidity: 40 °C @ 85% RH Non-Condensing)	-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing
Physical	Dimensions (L x H)	185 x 122 mm (7.3" x 4.8")	

Block Diagram



Ordering Information

P/N	VGA	TTL	LVDS	SATA	COM	PC104	LPT	FDD	Onboard RAM
PCA-6743VE-Q0A2E	1	1	-	-	2 RS-232	-	1	1	256 MB
PCA-6743F-Q0A2E	1	1	-	1	2 RS-232 2 RS-232/422/485	1	1	1	512 MB
PCA-6743F-L0A2E	1	-	1	1	2 RS-232 2 RS-232/422/485	1	1	1	512 MB

Packing List

Part Number	Description	Quantity
1700008762	Dual-COM port cable kit for COM3-4 (2.00 mm) (for F SKU)	x 1
1700014398-11	4-port USB cable kit (2.0 mm pitch)	x 1
1700060202	Y cable for PS/2 keyboard, PS/2 mouse	x 1
1701260305	COM2 (2.54 mm) +LPT (2.54 mm) cable (for F SKU)	x 1
1700003194	SATA HDD data cable	x 1
1700022749-11	SATA HDD power cable	x 1

Optional Accessories

Part Number	Description
PCA-COM485-00A1E	4 x RS-422/485 COM module

* Please check the IRQ resource availability before add on the module.

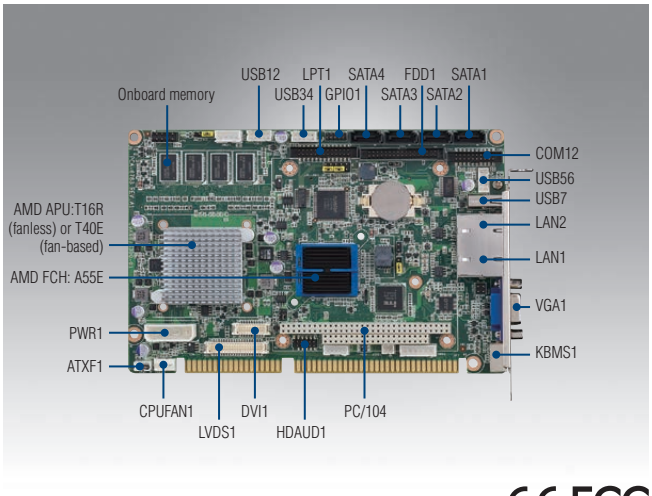
I/O View



PCA-6743VE-Q0A2E
PCA-6743F-Q0A2E
PCA-6743F-L0A2E

PCA-6763

AMD T40E/T16R ISA Half-size SBC with Dual Independent Display/Dual GbE/ SATA/USB/m-SATA/COM/LPT



Features

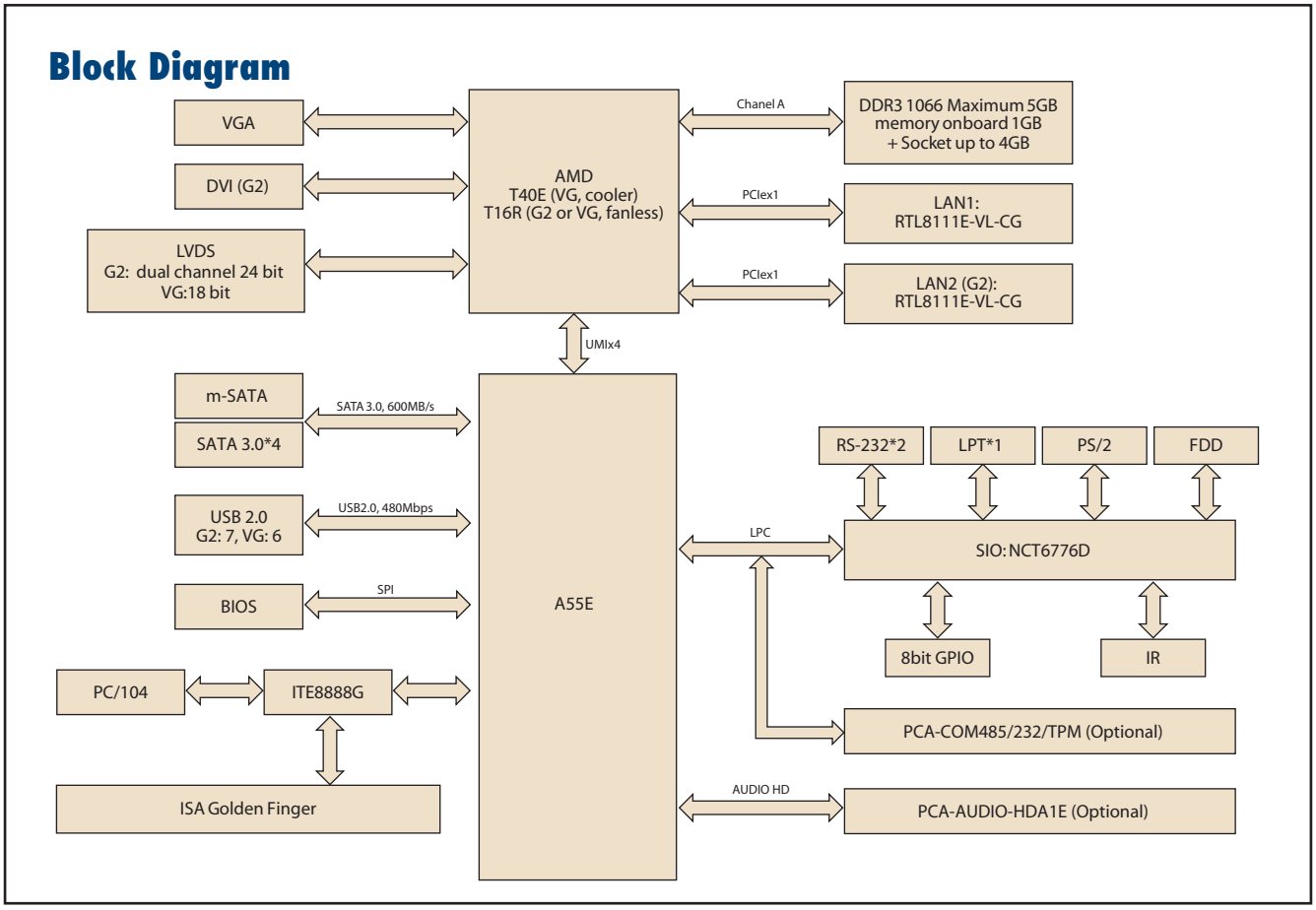
- Ultra low power, AMD dual-core Accelerated Processing Unit T40E or fanless T16R
- DDR3 1066 memory onboard 1GB+ DDR3 1066 SO-DIMM socket 4GB
- Dual independent display
- Up to 2 GbE LAN supported
- Up to 7 USB 2.0 (480 Mbps)
- 4 SATA 3.0 (600 MB/s) and 1 m-SATA (600 MB/s)
- Legacy I/O, such as FDD/ PC/104/ COM/ LPT supported
- Optional module for 4 RS-422/485 or 4 RS-232, TPM and HD audio

CE FCC

Specifications

Processor System	CPU	AMD G-Series APU T16R			AMD G-Series APU T40E		
	Max. Speed	615 MHz			1 GHz		
	L2 Cache	512 KB					
	Chipset	AMD Fusion controller hub A55E					
	BIOS	AMI-EFI 32 Mbit SPI					
Bus	ISA	Full 16-bit ISA Bus signal					
Memory	Technology	DDR3 1066 1GB onboard+ DDR3 1066 up to 4GB on 1 x 204-pin SODIMM socket					
Graphics	Controller	AMD G-Series T16R or T40E (Integrated wtih AMD GPU Radeon HD 6250)					
	VRAM	Optimized shared memory architecture, up to 384 MB of system memory					
	Dual Display	G2: Choosing two interface from VGA (Default), LVDS, and DVI VG: VGA (Default)+LVDS					
	VGA	Up to 1920 x 1200 @ 60Hz					
	LVDS	G2: 48 bit (Dual channel 24 bit) LVDS up to 1920 x 1200 @ 60Hz VG: 18 bit LVDS up to 1024 x 768 @ 60Hz					
	DVI	Up to 1920 x 1200 @ 60Hz					
Ethernet	Interface	10/100/1000 Mbps					
	Controller	LAN1: Realtek RTL8111E-VL-CG LAN2: Realtek RTL8111E-VL-CG					
	Connector	RJ-45 x 2					
I/O Interface	USB	G2: USB2.0 x 7 (1 on bracket, 6 onboard) VG: USB2.0 x 6 (6 onbaord)					
	SATA	SATA 3.0 x 4					
	m-SATA	1					
	AUDIO	HD AUDIO interface*1 for PCA-AUDIO-HDA1E (Optional)					
	Serial	RS-232 x 2 onboard Optional: RS-422/485 x 4 (PCA-COM485-00A1E) or RS-232 x 4 (PCA-COM232-00A1E) on module					
	Parallel	1 (EPP/ECP/SPP)					
	FDD	1					
	GPIO	8 bit					
	PS/2	1 (6-pin DIN socket on bracket for PS/2 keyboard and mouse, 6-pin wafer box connector)					
Watchdog Timer	Output	System reset/IRQ11					
	Interval	Programmable, 1~255 sec/min					
Power Requirement	Test Environment	AMD G-series T40E (1GHz), DDR3 1066 5GB (1GB onboard and 4 GB with DIMM)					
	Voltage	+12V	+5V	+3.3V	+5VSB	-12V	-5V
	Current	0.39A	1.93A	0A	0A	0A	0A
Environment		Operating			Non-Operating		
	Temperature	0 ~ 60 °C (32 ~ 140 °F) (operating humidity: 40 °C @ 85% RH Non-Condensing)			-40 °C ~ 85 °C and 60 °C @ 95% RH Non-Condensing		
Physical	Dimensions (L x H)	185 x 122 mm (7.3" x 4.8")					

Block Diagram



Ordering Information

P/N	APU	GbE LAN	Memory	VGA	DVI	LVDS	USB	SATA	COM	LPT	PC104	FDD	mSATA
PCA-6763G2-00A1E	T16R	2	onboard 1GB+ Socket up to 4GB	1	1	48 bit	7	4	2 RS-232	1	1	1	1
PCA-6763VG-00A1E	T16R	1	onboard 1GB+ Socket up to 4GB	1	-	18 bit	6	4	2 RS-232	1	1	1	1
PCA-6763VG-S0A1E	T40E	1	onboard 1GB+ Socket up to 4GB	1	-	18 bit	6	4	2 RS-232	1	1	1	1

Packing List

Part Number	Description	Quantity
1700008762	Dual-COM port cable kit (for G2 SKU)	x 1
1700014398-11	4-port USB cable kit (2.0 mm pitch)	x 1
1700060202	Y cable for PS/2 keyboard, PS/2 mouse	x 1
1700003194	SATA HDD data cable	x 1
1700022749-11	SATA HDD power cable	x 1
1700002343	ATX feature cable	x1
1700002223	LPT port cable kit (for G2 SKU)	x1
1700008954	LPT+COM cable kit (for VG SKU)	x1
1960046526N001	CPU cooler for AMD T40E APU (only available for PCA-6763VG-S0A1E)	x 1

Optional Accessories

Part Number	Description
PCA-COM485-00A1E	4 x RS-422/485 COM module
PCA-COM232-00A1E	4 x RS-232 COM module
PCA-AUDIO-HDA1E	Extension module for 7.1 channel High Definition audio
PCA-TPM-00A1E	Trusted platform module compliant with TCG 1.2
1700008822	DVI cable
1701340603	FDD cable

I/O View



PCA-6763VG-00A1E
PCA-6763VG-S0A1E



PCA-6763G2-00A1E

PICMG1.3 Full-Size SHB Backplanes

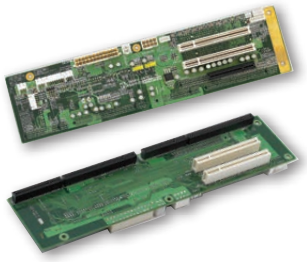
Server Grade Backplanes

Compatible with PCE-7000 Series System Host Board

2U Butterfly Backplanes

PCE-7B06V-04A1E

- 6-slot Butterfly BP for 2U chassis
- Segment: 1
- One CPU card slot
- PCIe slot: One x8
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: ACP-2000EBP and IPC-602EBP



8-slot Wallmount Chassis Backplanes

PCE-7B08-04A1E

- 8-slot BP for 8-slot chassis
- Segment: 1
- One CPU card slot
- PCIe slot: Two x8; One x4
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-6608



14-slot Rackmount Chassis Backplanes

PCE-7B13-64C1E

- 13-slot BP for 14-slot chassis
- Segment: 1
- One CPU card slot
- PCIe slot: Two x8
- PCI-X slot: Two 64/100; Four 64/66
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP-4000, ACP-4010, ACP-4320, ACP-4340, and ACP-4360



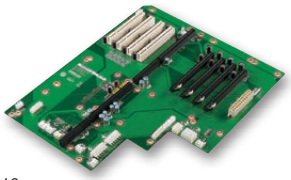
PCE-7B13-07A1E

- 13-slot BP for 14-slot chassis
- Segment: 1
- One CPU card slot
- PCIe slot: Two x8, Three x4
- PCI-X slot: N/A
- PCI slot: Seven 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP-4000, ACP-4010, ACP-4320, ACP-4340, and ACP-4360



14-slot Rackmount Chassis Backplanes

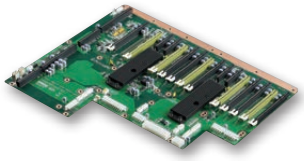
PCE-7B09R-04A1E



- 9-slot BP for 14-slot chassis
- Segment: 1
- One CPU card slot
- PCIe slot: One x8, Three x4
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP- 4000, ACP-4010, ACP-4320, ACP-4340, and ACP-4360

20-slot Rackmount Chassis Backplanes

PCE-7B17-00A1E



- 17 slot BP for 20-slot chassis
- Segments:1
- One CPU card slot
- PCIe slot: five x8, eleven x4
- PCI-X slot: N/A
- PCI slot: N/A
- Compatible with IPC chassis: IPC-623, IPC-622

PCE-7B19-88B1E



- 19-slot BP for 20-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: Two X8
- PCI-X slot: Eight 64/100
- PCI slot: Eight 32/33
- Compatible with IPC chassis: IPC-623, IPC-622

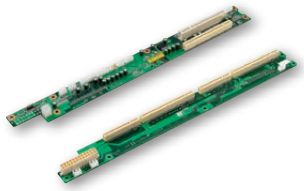
PICMG1.3 Full-Size SHB Backplanes

Mainstream Backplanes

Compatible with PCE-5000 Series System Host Board

1U Butterfly Backplanes

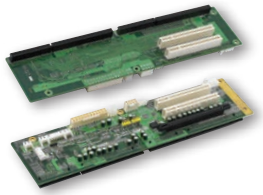
PCE-5B03V-01A1E



- 3-slot Butterfly BP for 1U chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: N/A
- PCI slot: One 32/33
- Compatible with IPC chassis: ACP-1010

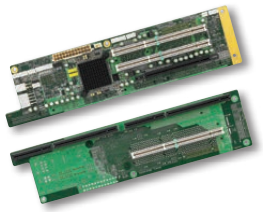
2U Butterfly Backplanes

PCE-5B06V-04A1E



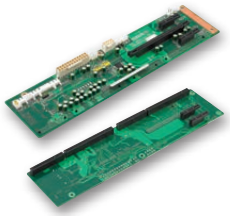
- 6-slot Butterfly BP for 2U chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: ACP-2000EBP and IPC-602EBP

PCE-5B05V-30B1E



- 5-slot Butterfly BP for 2U chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: Two 64/100; one 64/133
- PCI slot: N/A
- Compatible with IPC chassis: ACP-2000EBP and IPC-602EBP

PCE-5B06V-00A1E



- 6-slot Butterfly BP for 2U chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; Four x1
- PCI-X slot: N/A
- PCI slot: N/A
- Compatible with IPC chassis: ACP-2000EBP and IPC-602EBP

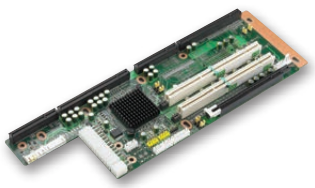
5-slot Wallmount Chassis Backplanes

PCE-5B05-02A1E



- 5-slot BP for 5-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; One x4
- PCI-X slot: N/A
- PCI slot: Two
- Compatible with IPC chassis: IPC-6025

PCE-5B04-20B1E



- 4-slot BP for 5-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: Two 64/100
- PCI slot: N/A
- Compatible with IPC chassis: IPC-6025

PCE-5B05-04A1E



- 5-slot BP for 5-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: N/A
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC-6025

PCE-5B05-03A1E



- 5 slot BP for 5 slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: N/A
- PCI slot: Three PCI 32/33
- Compatible with IPC chassis: IPC-6025

6-slot Wallmount Chassis Backplanes

PCE-5B06-00A1E



- 6-slot BP for 6-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; Four x1
- PCI-X slot: N/A
- PCI slot: N/A
- Compatible with IPC chassis: IPC-6606, and IPC-6806W

PCE-5B06-04A1E



- 6-slot BP for 6-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-6606, and IPC-6806W

PCE-5B06-03A1E



- 6 slot BP for 6 slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; One x4
- PCI-X slot: N/A
- PCI slot: Three PCI 32/33
- Compatible with IPC chassis: IPC-6606, and IPC-6806W

8-slot Wallmount Chassis Backplanes

PCE-5B07-04A1E



- 7-slot BP for 8-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; One x4
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-6608 and IPC-6908

PCE-5B08-02A1E



- 8-slot BP for 8-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; Four x1
- PCI-X slot: N/A
- PCI slot: Two 32/33
- Compatible with IPC chassis: IPC-6608 and IPC-6908

10-slot Wallmount Chassis Backplanes

PCE-5B09-06A1E



- 9-slot BP for 10-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; One x4
- PCI-X slot: N/A
- PCI slot: Six 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, ACP-4000, ACP-4010, ACP-4320, and ACP-4360

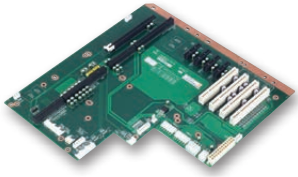
PCE-5B09-04A1E



- 9-slot for 10-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16, three x4
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, ACP-4000, ACP-4010, ACP-4320, and ACP-4360

14-slot Rackmount Chassis Backplanes

PCE-5B10-04A1E



- 10-slot BP for 14-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; Four x1
- PCI-X slot: N/A
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP-4000, ACP-4010, ACP-4320 and ACP-4360

PCE-5B12-64C1E

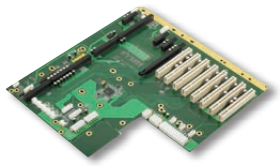


- 12-slot BP for 14-slot Chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: Two 64/100; Four 64/66
- PCI slot: Four 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP-4000, ACP-4010, ACP-4320, and ACP-4360

PICMG1.3 Full-Size SHB Backplanes

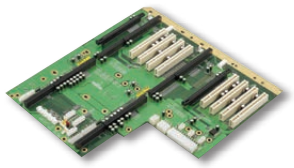
14-slot Rackmount Chassis Backplanes

PCE-5B13-08A1E



- 13-slot BP for 14-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16; Three x1
- PCI-X slot: N/A
- PCI slot: Eight 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP-4000, ACP-4010, ACP-4320, and ACP-4360

PCE-5B12D-04A1E



- 12-slot BP for 14-slot chassis
- Segments: 2
- Each segment:
  One CPU card slot
  PCIe slot: One x16
  PCI-X slot: N/A
  PCI slot: Four 32/33
  Compatible with IPC chassis: ACP-4010

PCE-5B12-07A1E



- 13-slot BP for 14-slot chassis
- Segment: 1
- One CPU card slot
- PCIe slot: One x16, Three x4
- PCI-X slot: 0
- PCI slot: Seven 32/33
- Compatible with IPC chassis: IPC-510, IPC-610, IPC-611, ACP-4000, ACP-4320, ACP-4360, ACP-4010

20-slot Rackmount Chassis Backplanes

PCE-5B18-88B1E



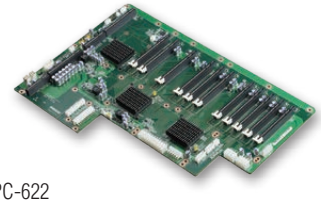
- 18-slot BP for 20-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x16
- PCI-X slot: Eight 64/66
- PCI slot: Eight 32/33
- Compatible with IPC chassis: IPC-623, IPC-622

PCE-5B16Q-02A1E



- 16-slot BP for 20-slot chassis
- Segments: 4
- Each segment:
  One CPU card slot
  PCIe slot: One x16
  PCI-X slot: N/A
  PCI slot: Two 32/33
  Compatible with IPC chassis: IPC-623, IPC-622

PCE-5B12-00A1E



- 12-slot BP for 20-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: Ten x16 and one x4
- PCI-X slot: N/A
- PCI slot: N/A
- Compatible with IPC chassis: IPC-623, IPC-622

PCE-5B19-00A1E



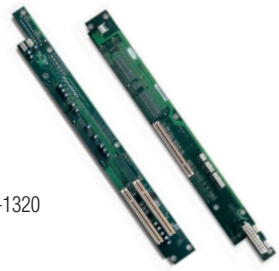
- 19 slot BP for 20-slot chassis
- Segments: 1
- One CPU card slot
- PCIe slot: Seventeen x16 and One x4
- PCI-X slot: N/A
- PCI slot: N/A
- Compatible with IPC chassis: IPC-623, IPC-622

PICMG1.0 Full-Size SBC Backplanes

1U Butterfly Backplanes

PCA-6103P2V-0A2E

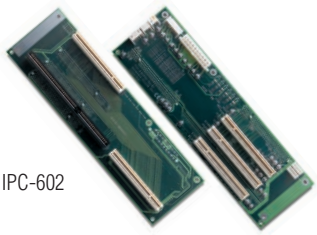
- Segments: 1
- Slots: 2 PCI, 1 CPU
- PCI bus: 32-bit/33 MHz
- Size: 40 x 400 mm (1.57" x 15.75")
- Ordering Information: 989K610303E
- Compatible with IPC chassis: ACP-1010, ACP-1320



2U Butterfly Backplanes

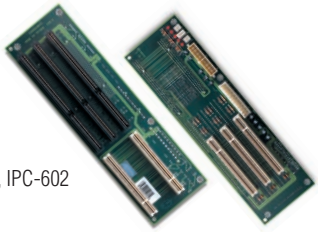
PCA-6105P4V-0B3E

- Segments: 1
- Slots: 4 PCI, 1 PICMG
- PCI bus: 32-bit/33 MHz
- Size: 80 x 260 mm (3.15" x 10.23")
- Ordering Information: 989K610512E
- Compatible with IPC Chassis: ACP-2000, IPC-602



PCA-6106P3V-0B2E

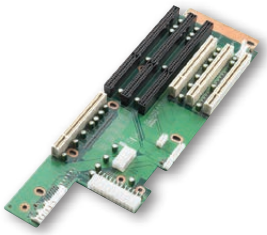
- Segments: 1
- Slots: 1 ISA, 3 PCI, 2 PICMG
- PCI bus: 32-bit/33 MHz
- Size: 80 x 260 mm (3.15" x 10.23")
- Ordering Information: 989K610622E
- Compatible with IPC Chassis: ACP-2000, IPC-602



5-slot PCI/ISA Backplanes

PCA-6105P3-5A1E

- Segments: 1
- Slots: 1 ISA, 2 PCI, 1 PICMG, 1 PCI/ISA
- Size: 106.5 mm x 327.66 mm (4.19" x 12.9")
- Ordering Information: PCA-6105P3-5A1E
- Compatible with IPC Chassis: IPC-6025



PICMG1.0 Full-Size SBC Backplanes

6-slot PCI/ISA Backplanes

PCA-6106P4-0A2E

- Segments: 1
- Slots: 4 PCI, 2 PICMG
- Size: 142 x 270 mm (5.59" x 10.63")
- Ordering Information: PCA-6106P4-0A2E
- Compatible with IPC Chassis: IPC-6806W, IPC-6806, IPC-6606, IPC-6006



PCA-6106P3-0D2E

- Segments: 1
- Slots: 2 ISA, 2 PCI, 1 PICMG/PCI, 1 PICMG
- Size: 142 x 270 mm (5.59" x 10.63")
- Ordering Information: PCA-6106P3-0D2E
- Compatible with IPC Chassis: IPC-6806W, IPC-6806, IPC-6606, IPC-6006



8-slot PCI/ISA Backplanes

PCA-6108P6-0C1E

- Segments: 1
- Slots: 1 ISA, 5 PCI, 1 PICMG/PCI, 1 PICMG
- Size: 180 x 260 mm (7.09" x 10.24")
- PCI bridge: PI7C8152BMAE
- Primary PCI: 3 slots; Secondary PCI: 3 slots
- Ordering Information: PCA-6108P6-0C1E
- Compatible with IPC Chassis: IPC-6608



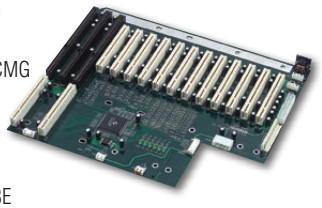
PCA-6108P4-0C2E

- Segments: 1
- Slots: 3 ISA, 3 PCI, 1 PICMG/PCI, 1 PICMG
- Size: 180 x 260 mm (7.09" x 10.24")
- Ordering Information: PCA-6108P4-0C2E
- Compatible with IPC Chassis: IPC-6608



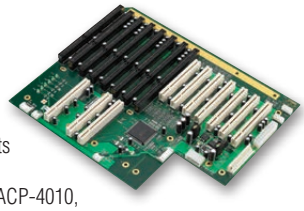
14-slot PCI/ISA Backplanes

PCA-6114P12-0B3E



- Segments: 1
- Slots: 1 ISA, 11 PCI, 1 PICMG/PCI, 1 PICMG
- Size: 315 x 300 mm (12.4" x 11.8")
- PCI bridge: Pericom PI7C8150BMAE
- Primary PCI: 3 slots;
  Secondary PCI: 9 slots
- Ordering Information: PCA-6114P12-0B3E
- Compatible with IPC Chassis: ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-510, IPC-610, IPC-611

PCA-6114P7-0E1E



- Segments: 1
- Slots: 4 ISA, 6 PCI, 3 PICMG, 1 PCI/ISA
- Size: 315 x 260 mm (12.4" x 10.24")
- PCI bridge: PI7C8152BMAE
- Primary PCI: 3 slots; Secondary PCI: 4 slots
- Ordering Information: PCA-6114P7-0E1E
- Compatible with IPC Chassis: ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-510, IPC-610, IPC-611

PCA-6114P4-0C2E



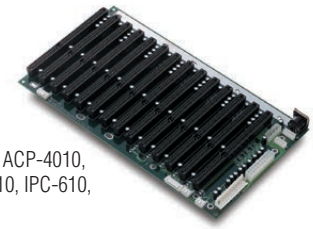
- Segments: 1
- Slots: 8 ISA, 4 PCI, 2 PICMG
- Size: 315 x 260 mm (12.4" x 10.24")
- Ordering Information: PCA-6114P4-0C2E
- Compatible with IPC Chassis: ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-510, IPC-610, IPC-611
- When installing ACP-4320, ACP-4340, ACP-4360 and IPC-510 chassis, a 1U cooler is required

PCA-6113P4R-0C2E



- Segments: 1
- Slots: 7 ISA, 4 PCI, 2 PICMG
- Size: 315 x 260 mm (12.4" x 10.24")
- Ordering Information: PCA-6113P4R-0C2E
- Compatible with IPC Chassis: ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-510, IPC-610, IPC-611

PCA-6114-0B2E



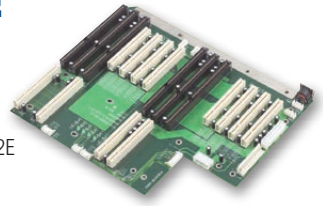
- Segments: 1
- Slots: 14 ISA
- Size: 315 x 175 mm (12.4" x 6.89")
- Ordering Information: PCA-6114-0B2E
- Compatible with IPC Chassis: ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-510, IPC-610, IPC-611

PCA-6114P10-0B2E



- Segments: 1
- Slots: 2 ISA, 10 PCI, 2 PICMG
- Size: 315 x 260 mm (12.4" x 10.24")
- PCI bridge: Pericom PI7C8150BMAE
- Primary PCI: 3 slots;
  Secondary PCI: 7 slots
- Ordering Information: PCA-6114P10-0B2E
- Compatible with IPC Chassis: ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-510, IPC-610, IPC-611

PCA-6113DP4-0A2E

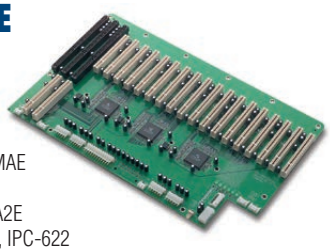


- Segments: 2
- Slots: 2 ISA, 7 PCI, 1 PICMG/ PCI, 3 PICMG
- Size: 315 x 260 mm (12.4" x 10.24")
- Ordering Information: PCA-6113DP4-0A2E
- Compatible with IPC Chassis: Only for ACP-4010
- Compatible with IPC Chassis: ACP-4010

PICMG1.0 Full-Size SBC Backplanes

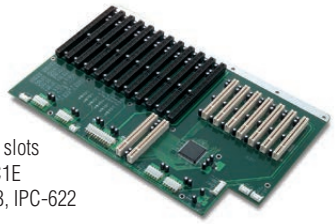
20-slot PCI/ISA Backplanes

PCA-6120P18-0A2E



- Segments: 1
- Slots: 1 ISA, 17 PCI, 1 PICMG/PCI, 1 PICMG
- Size: 417 x 260 mm (16.42" x 10.24")
- PCI bridge: Three Pericom PI7C8150BMAE
- Secondary: 6 slot/6 slot/6 slot
- Ordering Information: PCA-6120P18-0A2E
- Compatible with IPC Chassis : IPC-623, IPC-622

PCA-6119P7-0C1E



- Segments: 1
- Slots: 10 ISA, 7 PCI, 2 PICMG
- Size: 417 x 260 mm (16.42" x 10.24")
- PCI bridge: PI7C8152BMAE
- Primary PCI: 3 slots; Secondary PCI: 4 slots
- Ordering Information: PCA-6119P7-0C1E
- Compatible with IPC Chassis : IPC-623, IPC-622

PCA-6120P12-0A2E



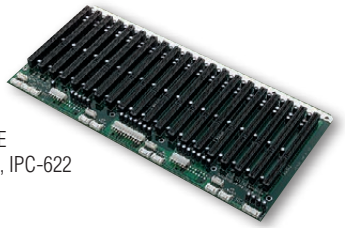
- Segments: 1
- Slots: 7 ISA, 11 PCI, 1 PICMG/PCI, 1 PICMG
- Size: 417 x 260 mm (16.42" x 10.24")
- PCI bridge: Pericom PI7C8150BMAE
- Primary PCI: 3 slots; Secondary PCI: 9 slots
- Ordering Information: PCA-6120P12-0A2E
- Compatible with IPC Chassis : IPC-623, IPC-622

PCA-6120P4-0B2E



- Segment: 1
- Slots: 14 ISA, 4 PCI, 2 PICMG
- Size: 417 x 260 mm (16.42" x 10.24")
- Ordering Information: PCA-6120P4-0B2E
- Compatible with IPC Chassis : IPC-623, IPC-622

PCA-6120Q-0B2E



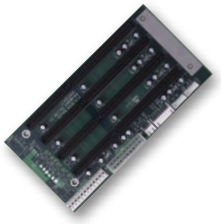
- Segment: 4
- Slots: 5-5-5-5 ISA
- Size: 417 x 200 mm (16.42" x 7.87")
- Ordering Information: PCA-6120Q-0B2E
- Compatible with IPC Chassis : IPC-623, IPC-622

Half-Size SBC Backplanes

ISA Half-size SBC Backplanes

PCA-6104-0C2E

- Segments: 1
- Slots: 4 ISA
- Size: 94.7 x 186 mm (3.7" x 7.3")
- Ordering Information: PCA-6104-0C2E



PCA-6106-0B2E

- Segments: 1
- Slots: 6 ISA
- Size: 142 x 175 mm (5.59" x 6.89")
- Compatible with IPC-6806S, IPC-6006S, IPC-3026
- Ordering Information: PCA-6106-0B2E



PCA-6108E-0C2E

- Segments: 1
- Slots: 8 ISA
- Size: 180 x 190 mm (7.09" x 7.48")
- Compatible with IPC-6908
- Ordering Information: PCA-6108E-0C2E



PCA-6108-0B2E

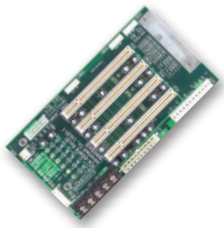
- Segments: 1
- Slots: 8 ISA
- Size: 222 x 171 mm (8.74" x 6.73")
- Only for commercial PC chassis (baby AT size)
- Ordering Information: PCA-6108-0B2E



PCI Half-size SBC Backplanes

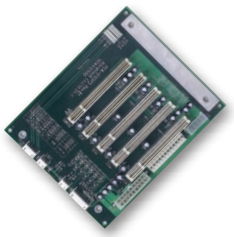
PCA-6104P4-0B2E

- Segments: 1
- Slots: 4 PCI
- Size: 110 x 180 mm (4.3" x 7")
- Ordering Information: PCA-6104P4-0B2E



PCA-6105P5-0B2E

- Segments: 1
- Slots: 5 PCI
- Size: 143 x 155 mm (5.6" x 6")
- Compatible with ACP-4D00, IPC-6806S, IPC-6006S, IPC-3026
- Ordering Information: PCA-6105P5-0B2E



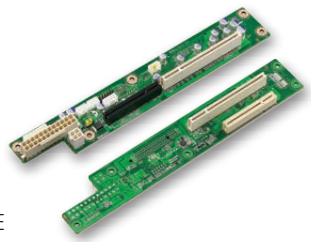
PCA-6108P8-0A2E

- Segments: 1
- Slots: 8 PCI
- Size: 182 x 185 mm (7.2" x 7.3")
- Compatible with IPC-6908
- Ordering Information: PCA-6108P8-0A2E



PCI-7103P1V-01A1E

- Segments: 1
- Slots: 1 PCI, 1 PCIe x 4 (in PCIe x 8 slot)
- Size: 252 x 41 mm (9.9" x 1.6")
- Compatible with IPC-120 chassis
- Compatible with PCI-7031DF and PCI-7032F CPU cards
- Ordering Information: PCI-7103P1V-01A1E



Half-Size SBC Backplanes

PICMG 1.3 Half-size SHB Backplanes

PCE-3B06-00A1E



- 6 slot backplane for 6-slot chassis
- Segments:1
- One CPU card slot
- PCIe slot: One x16, four x1
- Size: 142 x 176 mm (5.59" x 6.92")
- Compatible with ACP-4D00, IPC-6806S, IPC-3026
- Ordering information: PCE-3B06-00A1E

PCE-3B06-03A1E



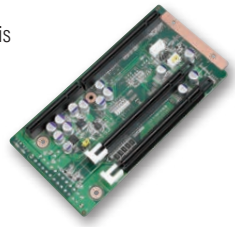
- 6 slot backplane for 6-slot chassis
- Segments:1
- One CPU card slot
- PCIe slot: One x16, One x1
- PCI slot: Three 32/33
- Size: 142 x 176 mm (5.59" x 6.92")
- Compatible with ACP-4D00, IPC-6806S, IPC-3026
- Ordering information: PCE-3B06-03A1E

PCE-3B06-02A1E



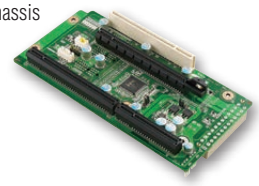
- 6-slot backplane for 6-slot chassis
- Segments:1
- One CPU card slot
- PCIe slot: One x16, Two x1
- PCI slot: Two 32 bit/33MHz
- Size: 142 x 176 mm (5.59" x 6.92")
- Compatible with ACP-4D00, IPC-6806S, IPC-3026
- Ordering information: PCE-3B06-02A1E

PCE-3B03A-00A1E



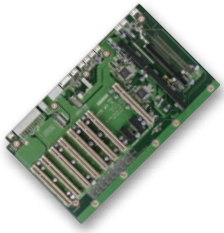
- 3 slot backplane for compact-sized wall-mount chassis
- Segments:1
- One CPU card slot
- PCIe slot: One x16, One x4
- Size: 173 x 86.3 mm (6.81" x 3.39")
- Compatible with IPC-3012
- Ordering information: PCE-3B03A-00A1E

PCE-3B03-01A1E



- 3 slot backplane for compact-sized wall-mount chassis
- Segments:1
- One CPU card slot
- PCIe slot: One x16
- PCI slot: One 32 bit/33MHz
- Size: 173 x 86.3 mm (6.81" x 3.39")
- Compatible with IPC-3012
- Ordering information: PCE-3B03-01A1E

PCE-3B12-08A1E



- 12-slot backplane for 14-slot half-sized chassis
- Segments:1
- One CPU card slot
- PCIe slot: One x16, Two x1
- PCI slot: Eight 32 bit/33MHz
- Size: 315 x 185 mm (12.4" x 7.28")
- Compatible with IPC chassis: ACP-4020
- Ordering information: PCE-3B12-08A1E

PCE-4B13-00A1E



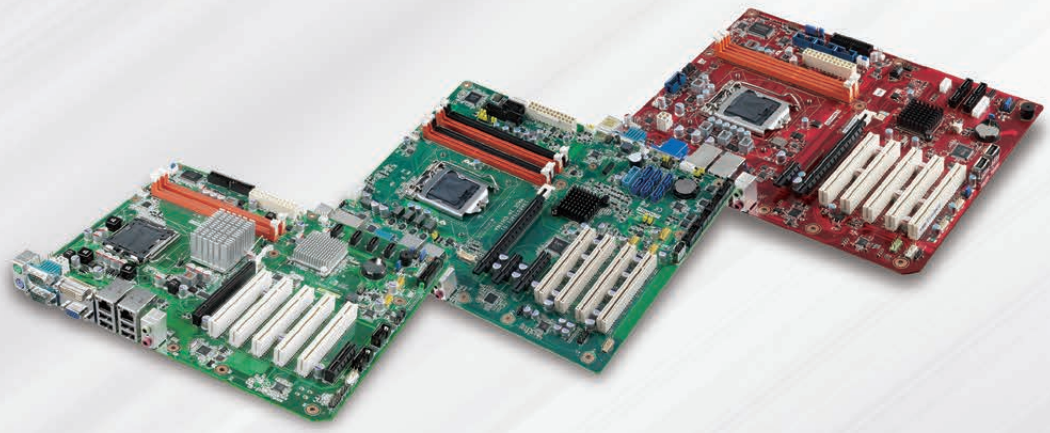
- 13-slot backplane for 14-slot half-sized chassis
- Segments: 1
- One CPU card slot
- PCIe slot: One x8, Eleven x4
- PCI slot: N/A
- Size: 315 x 243.84 mm (12.4" x 9.6")
- Compatible with IPC chassis: ACP-4020
- Ordering information: PCE-4B13-00A1E

7

Industrial Motherboards

Selection Guide		*7-2*
ATX Motherboards		
AIMB-784	LGA1150 4th Generation Intel® Core™ i7/i5/i3/Pentium ATX with DVI/VGA, DDR3, SATA III	*7-4*
AIMB-705	LGA1151 6th/7th Generation Intel® Core™ i7/i5/i3/Pentium/Celeron ATX with DVI/VGA, DDR4, SATA III, USB 3.0 & 6 COMs	*7-6*
AIMB-785	LGA1151 6th/7th Generation Intel® Core™ i7/i5/i3/Pentium/Celeron ATX with Triple Display, DDR4, SATA III	*7-8*
Riser Cards		*7-10*

To view all of Advantech's Industrial Motherboards, please visit www.advantech.com/products.



ATX Motherboards







Model Name		AIMB-767	AIMB-769	AIMB-701
Processor System	CPU	Intel Core 2 Quad/Core 2 Duo/Pentium dual-core/Celeron	Intel Core 2 Quad/Core 2 Duo/Pentium dual-core/Celeron	2nd/3rd Gen Intel Core i7/i5/i3/Pentium
	Socket	LGA775	LGA775	LGA1155
	Max. Speed	3.16 GHz	3.16 GHz	3.4 GHz
	Front Side Bus	1333/1066/800 MHz	1333/1066/800 MHz	-
	Cache	L2: up to 12 MB (depends on CPU)	L2: up to 12 MB (depends on CPU)	L3: up to 8 MB (depends on CPU)
	Chipset	Intel G41 + ICH7R	Intel G41 + ICH7	Intel H61
	BIOS	AMI 16 Mbit, SPI	AMI 16 Mbit, SPI	AMI 64 Mbit SPI
Expansion Slot	PCIe x16	1 (Gen1)	1 (Gen1)	1 (Gen2)
	PCIe x4	1 (Gen1)	-	1 for VG SKU (Gen2)
	PCIe x1	-	1 (Gen1)	1 for G2 SKU (Gen2)
	PCI	5	5	5
Memory	Technology	Dual channel DDR3 800/1066 MHz	Dual channel DDR3 800/1066 MHz	Dual Channel DDR3 1066/1333/1600 (1600 is only supported by Core i7/i5/ i3 3xxx series processors)
	Max. Capacity	8 GB	8 GB	16 GB
	Socket	2 x 240-pin DIMM	2 x 240-pin DIMM	2 x 240-pin DIMM
Graphics	Controller	Intel GMA X4500	Intel GMA X4500	Intel HD Graphics
	VRAM	Shared system memory up to 352 MB	Shared system memory up to 352 MB	1 GB maximum shared memory with 2 GB and above system memory installed
Ethernet	Interface	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
	Controller	Dual Intel 82583V	GbE LAN: Realtek RTL8111DL	GbE LAN1: Intel 82579V, GbE LAN2: Intel 82583V
SATA	Max. Date Transfer Rate	300 MB/s	300 MB/s	300 MB/s
	Channel	4 (SW RAID)	4	4
EIDE	Mode	-	-	-
	Channel	-	-	-
I/O Interface	VGA	1	1	1
	DVI	1	-	1 for G2 version
	USB	8	8	10
	Serial	4	2	6 for G2 version (3 x RS-232, 1 x RS-232/422/485 with auto-flow control)
	Parallel	1	-	1
	FDD	1	1	-
	PS/2	2 (1 x rear I/O and 1 x wafer box)	2 (1 x rear I/O and 1 x wafer box)	2 (1 x rear I/O and 1 x wafer box)
	Ethernet (GbE)	2	1	2 for G2 version; 1 for VG version
	Audio	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out
Watchdog Timer	Output	System reset	System reset	System reset
	Interval	Programmable, 1 ~ 255 sec	Programmable, 1 ~ 255 sec	Programmable 1 ~ 255 sec
Page		online	online	online

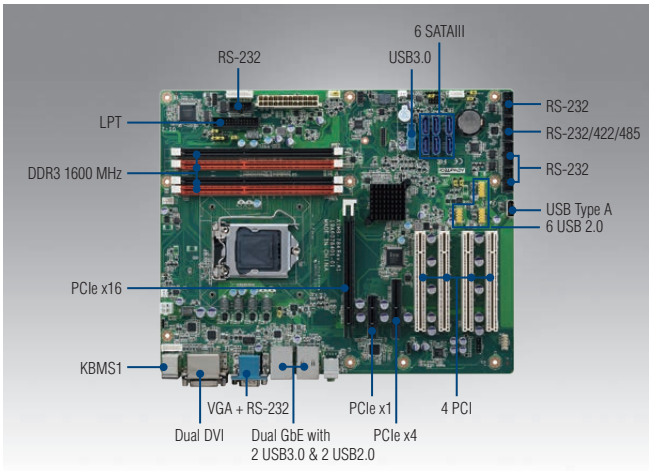





AIMB-782	AIMB-784	AIMB-705	AIMB-785
2nd/3rd Gen Intel Core i7/i5/i3/Pentium	4th Gen Intel Core i7/i5/i3/Pentium	6th/7th Gen Intel Core i7/i5/i3/Pentium	6th/7th Gen Intel Core i7/i5/i3/Pentium
LGA1155	LGA1150	LGA1151	LGA1151
3.4 GHz	3.7 GHz	3.9 GHz	3.9 GHz
-	-	-	-
L3: up to 8 MB (depends on CPU)	L3: up to 8 MB (depends on CPU)	L3: up to 8 MB (depends on CPU)	L3: up to 8 MB (depends on CPU)
Intel Q77	Intel Q87	Intel H110	Intel Q170
AMI 64 Mbit SPI	AMI 128 Mbit SPI	AMI 128 Mbit SPI	AMI 128 Mbit SPI
1 (Gen3)	1 (Gen3)	1 (Gen3)	1 (Gen3)
1 (Gen2)	1 (Gen2)	1 (Gen2)	3 (Gen3)
1 (Gen2)	1 (Gen2)	-	-
4	4	5	3
Dual Channel DDR3 1066/1333/ 1600 MHz	Dual Channel DDR3 1333/1600 MHz	Dual Channel DDR4 1866/2133 MHz	Dual Channel DDR4 1866/2133 MHz
32 GB	32 GB	32 GB	64 GB
4 x 240-pin DIMM	4 x 240-pin DIMM	2 x 288-pin DIMM	4 x 288-pin DIMM
Intel HD Graphics	Intel HD Graphics	Intel HD Graphics	Intel HD Graphics
Shared system memory up to 1 GB	Shared system memory up to 1 GB	Shared system memory is subject to OS	Shared system memory is subject to OS
10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps	10/100/1000 Mbps
GbE LAN1: Intel 82579LM, GbE LAN2: Intel 82583V	GbE LAN1: Intel I217LM, GbE LAN2: Intel I211AT	GbE LAN1: Intel I219V GbE LAN2: Intel I211AT (for G2 version)	GbE LAN1: Intel I219LM, GbE LAN2: Intel I211AT
600 MB/s; 300 MB/s	600 MB/s	600 MB/s	600 MB/s
6 (SW RAID)	6 (SW RAID)	4	6 (SW RAID)
-	-	-	-
-	-	-	-
1	1	1	1
1	2	1(for G2 version)	2
14 (4 USB 3.0 and 10 USB 2.0)	13 (4 USB 3.0 and 9 USB 2.0)	9 (4 USB 3.0 and 5 USB 2.0)	13 (6 USB 3.0 and 7 USB 2.0)
6	6	6 (for G2 version) 2 (for VG version)	6
1	1	1	1
-	-	-	-
2 (1 x keyboard and 1 x mouse)	2 (1 x keyboard and 1 x mouse)	2 (1 x rear I/O and 1 x wafer box)	1 (internal wafer box)
2	2	2 for G2 version; 1 for VG version	2
Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out	Mic-in, Line-out
System reset	System reset	System reset	System reset
Programmable, 1 ~ 255 sec	Programmable, 1 ~ 255 sec	Programmable, 1-255 Sec	Programmable, 1-255 Sec
online	7-4	7-6	7-8

AIMB-784

LGA1150 4th Generation Intel® Core™ i7/i5/i3/Pentium® ATX with DVI/VGA, DDR3, SATA III



Features

- 4th generation Intel® Core™ processor-based platform
- Supports Intel® Core™ i7/i5/i3 processor with Q87 chipset
- Four DIMM sockets support up to 32 GB DDR3 1333/1600
- Supports triple display VGA/2 DVI-D and dual GbE LAN
- Supports SATA RAID 0, 1, 5, 10, USB 3.0
- Supports Intel vPro, iAMT 9.0 & TPM technologies
- Note: PCA-TPM-00A1E module is required to enable Intel vPro and TPM technologies

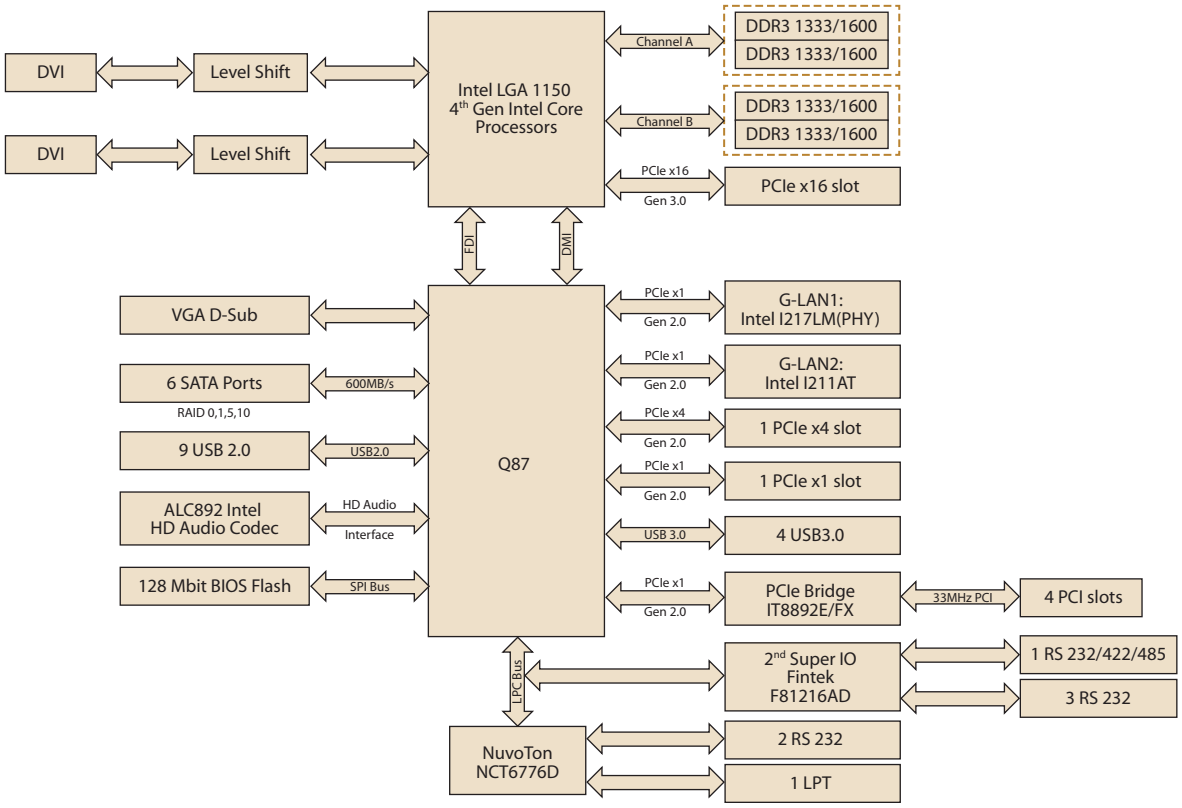
Quiet

CE FCC

Specifications

Processor System	CPU	i7-4790S	i7-4790T	i7-4770S	i7-4770TE	i5-4590S	i5-4590T	i5-4570S	i5-4570TE	i3-4360	i3-4350T	i3-4330	i3-4330TE	G3420	G3320TE	G1820	G1820TE
	Speed	3.2GHz	2.7GHz	3.1GHz	2.3GHz	3.0GHz	2.0GHz	2.9GHz	2.7GHz	3.7GHz	3.1GHz	3.5GHz	2.4GHz	3.2 GHz	2.3 GHz	2.7 GHz	2.2 GHz
	L3 Cache	8MB	8MB	8MB	8MB	6MB	6MB	6MB	4MB	4MB	4MB	4MB	4MB	3MB	3MB	2MB	2MB
	Socket	LGA1150															
	Chipset	Q87															
	BIOS	AMI 128 Mbit SPI															
Expansion Slot	PCI	32-bit/33 MHz, 4 slots															
	PCIe x 1 (Gen2)	500 MB/s per direction, 1 slot															
	PCIe x 4 (Gen2)	2.0 GB/s per direction, 1 slot															
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot															
Memory	Technology	Dual Channel DDR3 1333/1600															
	Max. Capacity	32 GB															
	Socket	4 x 240-pin DIMM															
Graphics	Controller	Intel HD Graphics (Depends on processor)															
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed															
Ethernet	Interface	10/100/1000 Mbps															
	Controller	GbE LAN1: Intel I217LM, GbE LAN2: Intel I211AT															
	Connector	RJ-45 x 2															
SATA	Max Data Transfer Rate	600 MB/s															
	Channel	6															
Rear I/O	VGA	1															
	DVI	2															
	Ethernet	2 (GbE)															
	USB	4 (Two USB 3.0)															
	Audio	2 (Mic-in, Line-out)															
	Serial	1 (RS-232)															
	PS/2	2 (1 x keyboard and 1 x mouse)															
Internal Connectors	USB	9 (Two USB 3.0)															
	Serial	5 (4 x RS-232, 1x RS-232/422/485 with auto-flow control)															
	SATA	6															
	Parallel	1															
	Display Port	-															
	IrDA	-															
	GPIO	-															
Watchdog Timer	Output	System reset															
	Interval	Programmable 1 ~ 255 sec															
Power Requirement	Power On	Intel Core i7-4790S processor; DDR3 8GB x4															
		3.3V		5V			12V			5VSB			-12V				
		1.060		1.554			4.922			0.048			0.044				
Environment		Operating							Non-Operating								
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU speed and cooler solution							-40 ~ 85 °C (-40 ~ 185 °F)								
Physical Characteristics	Dimensions (L x H)	304.8 x 244 mm (12" x 9.6")															

Block Diagram



Ordering Information

Part Number	Chipset	Memory	Display	USB 3.0	USB 2.0	COM	GbE LAN	AMT	SATA III	SW RAID
AIMB-784G2-00A1E	Q87	Non-ECC DDR3	VGA + dual DVI	4	9	6	2	Yes	6	Yes

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	x 2
1700022749-11	SATA power cable	x 2
19Z0000454T000	I/O port bracket	x 1
2006078410	Startup manual	x 1
2066078401	Driver CD	x 1

I/O View



AIMB-784G2-00A1E

Optional Accessories

Part Number	Description
1700002204	Dual port USB 2.0 cable (27 cm) with bracket
1700020277-01	Dual port USB 3.0 Cable with bracket
1960047669N001	CPU cooler for 4U and wallmount chassis
1960047831N001	CPU cooler for 2U and wallmount chassis
1960049408N001	CPU passive heatsink for 1U chassis
1960069682N001	I/O port bracket for 1U chassis
1700020294-01	Printer port cable kit (42 cm)
1701092300	COM port cable kit
PCA-TPM-00A1E	TPM module to enable TPM and vPro technologies

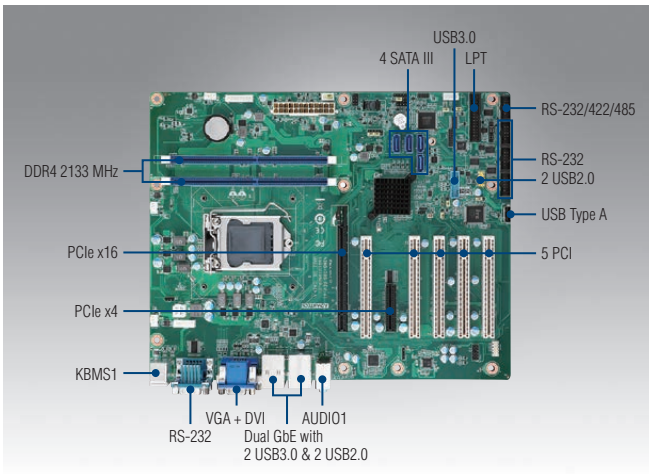
Note: Purchasing AIMB-784's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-784.

Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PCIe x 16 expansion
AIMB-R43PF-21A1E	2U riser card with 1 PCIe x16 & 2 PCI expansion

AIMB-705

LGA1151 6th/7th Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron® ATX with DVI/ VGA, DDR4, SATA III, USB 3.0 & 6 COMs



Features

- Intel® 6th/7th generation Core™ i7/i5/i3/Pentium®/Celeron® processor
- Dual channel (Non-ECC) DDR4 1866/2133 up to 32GB
- Support VGA and DVI display
- Support SATA3.0, USB3.0, dual GbEs
- Support 5 RS-232 and 1 RS-232/422/485 serial ports
- 1 PCIe x16 (Gen3) and 1 PCIe x4 (Gen2), and 5 PCI expansion slots

Note: Intel 7th generation processors only support Windows 10 (64-bit).

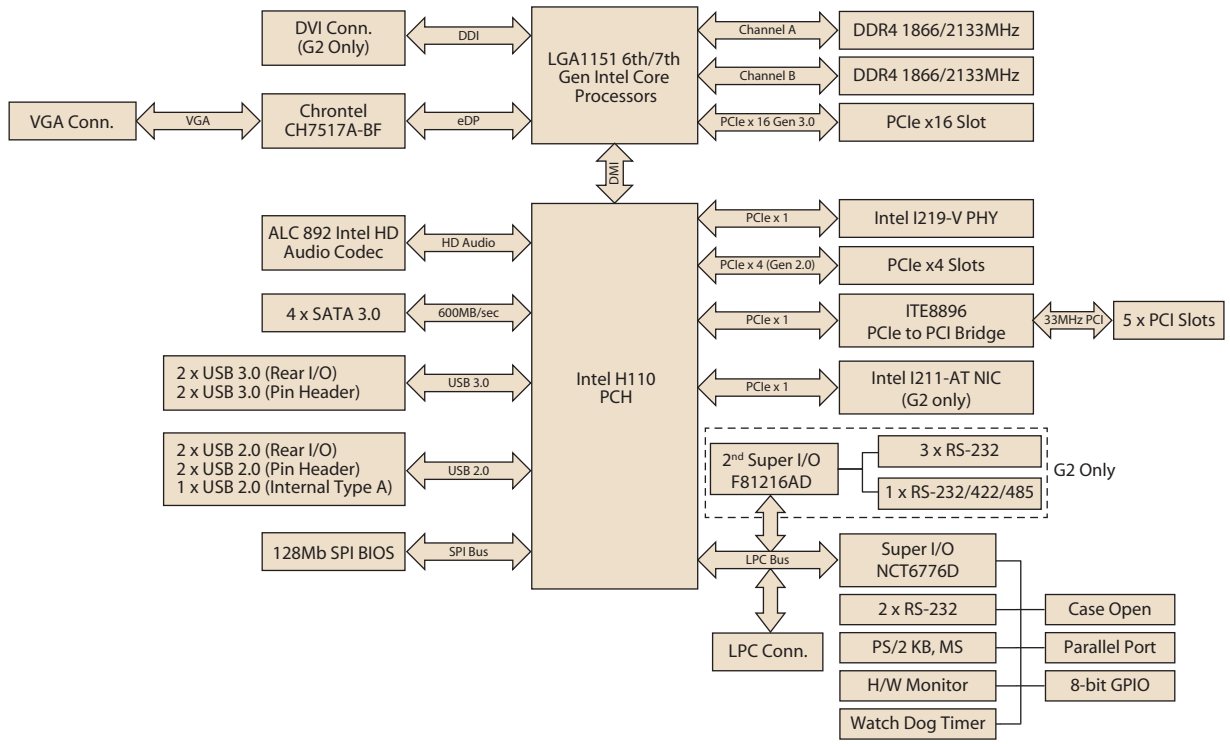
Quiet

CE FCC

Specifications

Processor System	CPU	i7-7700	i7-7700T	i7-6700	i7-6700TE	i5-7500	i5-7500T	i5-6500	i5-6500TE	i3-7101E	i3-7101TE	i3-6100	i3-6100TE	G4400	G4400TE	G3900	G3900TE
	Speed	3.6GHz	2.9GHz	3.4 GHz	2.4 GHz	3.4GHz	2.7GHz	3.2 GHz	2.3 GHz	3.9GHz	3.4GHz	3.7 GHz	2.7 GHz	3.3 GHz	2.9 GHz	2.8 GHz	2.6 GHz
	Cache	8MB	8MB	8 MB	8 MB	6MB	6MB	6 MB	6 MB	3MB	3MB	4 MB	4 MB	3 MB	3 MB	2 MB	2 MB
	Socket	LGA 1151															
	Chipset	Intel H110															
	BIOS	AMI 128Mbit SPI Flash															
Expansion Slot	PCI	32-bit/33 MHz, 5 slots															
	PCIe x4 (Gen2)	2 GB/s per direction, 1 slot															
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot															
Memory	Technology	Dual Channel(Non-ECC) DDR4 1866/2133 MHz															
	Max Capacity	32 GB (16 GB per DIMM)															
	Sockets	DDR4 288-pin DIMM x2															
Graphics	Controller	Chipset integrated Intel HD Graphics															
	VRAM	Shared system memory is subject to OS															
Ethernet	Interface	10/100/1000 Mbps															
	Controller	GbE LAN1: Intel I219-V, GbE LAN2: Intel I211-AT															
	Connector	RJ-45 x2															
SATA	Max Data Transfer Rate	600 MB/s															
	Channel	4															
Rear I/O	VGA	1 (Resolution up to 1920 x 1200 @ 60Hz)															
	DVI	1 for G2 version (Resolution up to 1920 x 1200 @ 60Hz)															
	Ethernet	2 for G2 version; 1 for VG version															
	USB	4 (USB3.0 x2, USB2.0 x2)															
	Audio	Line-out, Mic-in															
	Serial	2															
	PS/2	2 (1 x keyboard and 1 x mouse)															
Internal Connectors	USB	1 (Type A); 2 (USB2.0, Pin-header); 2 (USB3.0, Box-header)															
	Serial	4 for G2 version (3 x RS-232, box-header; 1 x RS-232/422/485 with auto-flow control, box-header)															
	Parallel	1															
	GPIO	8 bits															
Watchdog Timer	Output	System reset															
	Interval	Programmable 1 - 255 sec															
Power Requirement	Test Environment	Intel Core i7-6700 3.4GHz; DDR4 2133 8GB x 2															
	Voltage	3.3V		5V			12V			5Vsb			-5V			-12V	
	Current	0.49A		3.13A			7.88A			0.08A			0.07A			0.07A	
Environment		Operating								Non-Operating							
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU speed and cooler solution								-40 ~ 85 °C (-40 ~ 185 °F)							
	Humidity	40 °C @ 95% RH Non-condensing								60 °C @ 95% RH Non-condensing							
Physical Characteristics	Dimensions (L x H)	304.8 x 244 mm (12" x 9.6")															

Block Diagram



Ordering Information

Part Number	Chipset	Memory	Display	USB 3.0	USB 2.0	COM	GbE LAN	AMT	SATA	SW RAID	Intelligent System Module Support
AIMB-705G2-00A1E	H110	Non-ECC	VGA + DVI	4	5	6	2	No	4	No	No
AIMB-705VG-00A1E	H110	Non-ECC	VGA	4	5	2	1	No	4	No	No

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	x2
1700022749-11	SATA power cable	x1
1960050472T000	I/O port bracket	x1
2001070511	Startup manual	x1
2061070501	Driver CD	x1

I/O View



AIMB-705G2-00A1E



AIMB-705VG-00A1E

Optional Accessories

Part Number	Description
1701090401	Single COM cable(40 cm)
1701092300	Dual COM cable(28.5 cm)
1700020294-01	Printer port cable kit(42 cm)
1700020277-01	2-port USB 3.0 cable w/ BKT(30 cm)
1700002204	2-port USB 2.0 cable w/ BKT(27 cm)
1960052651N021	CPU cooler for 2U, 4U, and wallmount chassis
1960049408N001	CPU cooler for 1U chassis
1960055954T000	IO bracket for 1U chassis
PCA-COM232-00A1E	4-port RS-232 LPC module
PCA-TPM-00A1E	TPM module (for BIOS V1.XX)
PCA-TPM-00B1E	TPM2.0 module (for BIOS V2.XX)

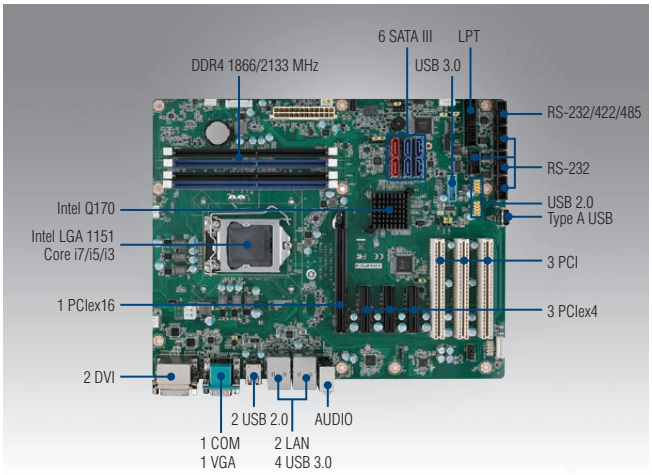
Note: Purchasing AIMB-705's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-705.

Riser Card

Part Number	Description
AIMB-RP10P-01A1E	1U riser card providing 1 PCI slot
AIMB-RP30P-03A1E	2U riser card providing 3 PCI slots
AIMB-RP3PF-21A1E	2U riser card providing 1 PCIe x 16 and 2 PCI slots

AIMB-785

LGA1151 6th/7th Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron® ATX with Triple Display, DDR4, SATA III



Features

- Supports Intel® 6th/7th Core™ i7/i5/i3/Pentium®/Celeron® processor with Q170 chipset
- Four DIMM sockets support up to 64 GB DDR4 1866/2133
- Supports triple display VGA/2 DVI-D and dual GbE LAN
- Supports SATA RAID 0, 1, 5, 10, USB 3.0
- Supports Intel vPro, AMT 11.0 & TPM technologies

Note 1: TPM module is required to enable Intel vPro and TPM technologies.

Note 2: Intel 7th generation processors only support Windows 10 (64-bit).

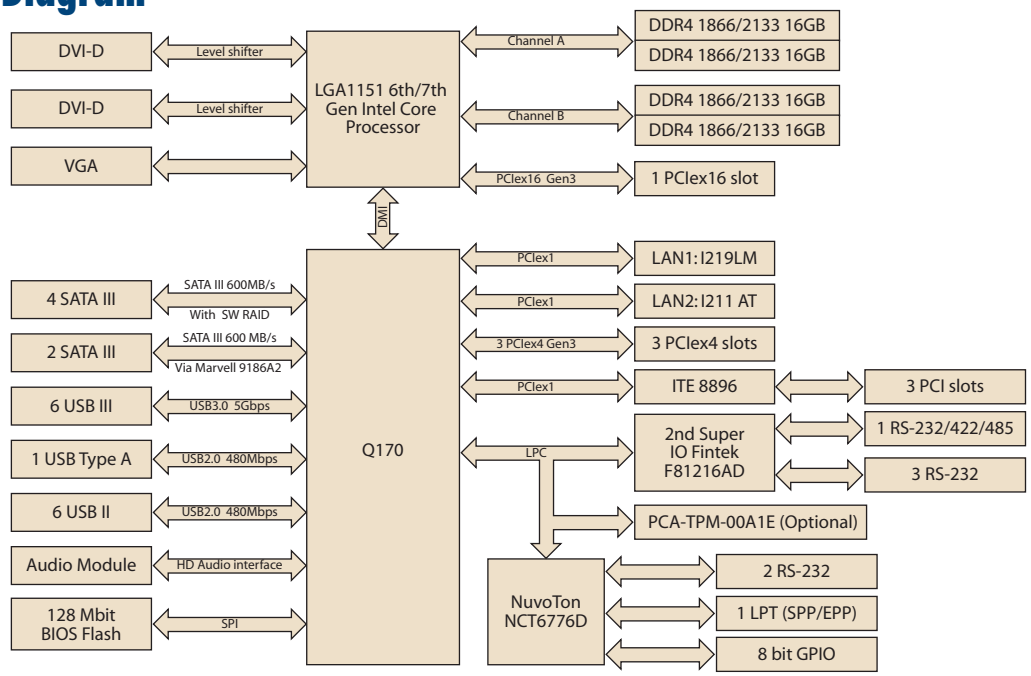
Quiet

CE FCC

Specifications

Processor System	CPU	i7-7700	i7-7700T	i7-6700	i7-6700TE	i5-7500	i5-7500T	i5-6500	i5-6500TE	i3-7101E	i3-7101TE	i3-6100	i3-6100TE	G4400	G4400TE	G3900	G3900TE
	Speed	3.6GHz	2.9GHz	3.4GHz	2.4GHz	3.4GHz	2.7GHz	3.2GHz	2.3GHz	3.9GHz	3.4GHz	3.7GHz	2.7GHz	3.3GHz	2.9GHz	2.8GHz	2.6GHz
	L3 Cache	8MB	8MB	8MB	8MB	6MB	6MB	6MB	6MB	3MB	3MB	4MB	4MB	3MB	3MB	2MB	2MB
	Socket	LGA1151															
	Chipset	Q170															
	BIOS	AMI 128 Mbit SPI															
Expansion Slot	PCI	32-bit/33 MHz, 3 slots															
	PCIe x 4 (Gen3)	4 GB/s per direction, 3 slots															
	PCIe x16 (Gen3)	16 GB/s per direction, 1 slot															
Memory	Technology	Dual Channel DDR4 1866/2133															
	Max. Capacity	64 GB															
	Socket	4 x 288-pin DIMM															
Graphics	Controller	Intel HD Graphics															
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed															
Ethernet	Interface	10/100/1000 Mbps															
	Controller	GbE LAN1: Intel I219LM, GbE LAN2: Intel I211AT															
	Connector	RJ-45 x 2															
SATA	Max Data Transfer Rate	600 MB/s															
	Channel	6 (4 from Intel® Q170 and 2 from Marvell 9186A2)															
	RAID	0,1,5,10 (4 SATAIII ports from Intel®)															
Rear I/O	VGA	1 (Up to 1920x1200@60Hz)															
	DVI-D	2 (Up to 1920x1200@60Hz)															
	Ethernet	2															
	USB	6 (USB3.0 x 4, USB2.0 x 2)															
	Audio	2 (Mic-in, Line-out)															
	Serial	1 (RS-232)															
	PS/2	N/A															
Internal Connectors	USB	7 (USB 3.0 with wafer box x 2, USB 2.0 with wafer box x 4, USB 2.0 with type A connector x 1)															
	Serial	5 (4 x RS-232, 1 x RS-232/422/485)															
	SATA	6															
	Parallel	1 (SPP/EPP)															
	Display Port	N/A															
	IrDA	N/A															
	GPIO	8-bit															
	PS/2 KB/Mouse	1 (Optional PS/2 KB/Mouse Cable is required)															
Watchdog Timer	Output	System reset															
	Interval	Programmable 1 ~ 255 sec															
Power Requirement	Power On	Intel Core i7-6700 3.4GHz; DDR4 2133 8GB x 4															
	Voltage	+12V		+5V		+3.3V		+5Vsb				-12V		-5V			
	Current	6.78A		1.38A		1.35A		0.12A				0.05A		0.05A			
Environment		Operating												Non-Operating			
	Temperature	0 ~ 60 °C (32 ~ 140 °F), depends on CPU speed and cooler solution												-40 ~ 85 °C (-40 ~ 185 °F)			
Physical Characteristics	Dimensions (L x H)	304.8 x 244 mm (12" x 9.6")															

Block Diagram



Ordering Information

Part Number	Chipset	Memory	Display	USB 3.0	USB 2.0	COM	GbE LAN	AMT	SATA III	SW RAID
AIMB-785G2-00A1E	Q170	Non-ECC DDR4 1866/2133 up to 64GB	VGA + dual DVI	6	7	6	2	Yes	6	Yes

Note: SATA0 and SATA1(red SATA ports) don't support RAID function.

Packing List

Part Number	Description	Quantity
1700003194	SATA HDD cable	x 2
1700022749-11	SATA power cable	x 2
19Z0000884T000	I/O port bracket	x 1
2006078511	Startup manual	x 1
2066078502	Driver CD	x 1

I/O View



AIMB-785G2-00A1E

Optional Accessories

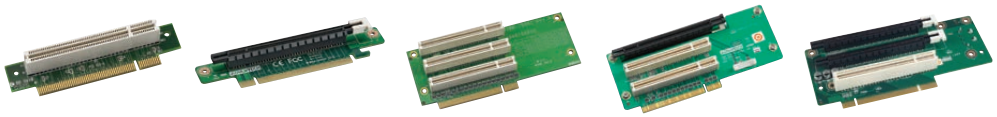
Part Number	Description
1700002204	Dual port USB 2.0 cable (27 cm) with bracket
1700020277-01	Dual port USB 3.0 Cable with bracket
1960052651N021	CPU Cooler for 2U, 4U and wallmount chassis
1960049408N001	CPU cooler for 1U Rackmount chassis
1960069666N101	IO bracket for 1U chassis
1700020294-01	Printer port cable kit (42 cm)
1701092300	COM port cable kit
1700019268-11	PS/2 KB/Mouse Cable
1960063434N000	IO Bracket for PS/2 KB/Mouse Cable
PCA-TPM-00A1E	TPM module to enable TPM and vPro technologies (for BIOS V1.XX)
PCA-TPM-00B1E	TPM2.0 module to enable TPM and vPro technologies (for BIOS V2.XX)

Note: Purchasing AIMB-785's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with AIMB-785.

Riser Card

Part Number	Description
AIMB-RF10F-01A1E	1U riser card with 1 PCIex16 expansion
AIMB-R4104-01A1E	1U riser card with 1 PCIex4 expansion
AIMB-R430P-03A2E	2U riser card with 3 PCI expansion
AIMB-R431F-21A1E	2U riser card with 1 PCIex16 & 1 PCIex1 expansion
AIMB-R43PF-21A1E	2U riser card with 1 PCIex16 & 2 PCI expansion
AIMB-R4301-03A1E	2U riser card with 1 PCIex1 expansion

Riser Cards



Selection Guide

Model Name		AIMB-RP10P-01A1E	AIMB-RF10F-01A1E	AIMB-RP30P-03A1E	AIMB-RP3PF-21A1E	AIMB-RP3P8-12A1E
Interface		PCI	PCIe x 16	PCI	PCIe x16/PCI	PCIe x16/PCI
Expansion Slots		1 PCI	1 PCIe x 16	3 PCI	1 PCIe x16 + 2 PCI	2 PCIe x8 + 1 PCI
Chassis	1U	Yes	Yes	-	-	-
	2U	-	-	Yes	Yes	Yes
ATX	AIMB-785	-	Yes	-	-	-
	AIMB-784	-	Yes	-	-	-
	AIMB-782	-	-	-	-	-
	AIMB-781	-	Yes	-	-	-
	AIMB-780	Yes	Yes	Yes	Yes	Yes (WG2 Only)*
	AIMB-705	Yes	-	Yes	Yes	-
	AIMB-701	-	Yes	-	-	-
	AIMB-769	-	Yes	-	-	-
	AIMB-767	Yes	Yes	Yes	Yes	-
	AIMB-766	Yes	-	Yes	Yes	-
	AIMB-763	-	Yes	-	Yes	-

*Note: AIMB-RP3P8-12A1E is not compatible with ACP-2010MB/2320MB, IPC-603MB chassis unless riser card bracket is changed to P/N: 1950014302N001.



Selection Guide

Model Name		AIMB-R4104-01A1E	AIMB-R430P-03A2E	AIMB-R4301-03A1E	AIMB-R431F-21A1E	AIMB-R43PF-21A1E
Interface		PCIe x4	PCIe x4	PCIe x4	PCIe x16/PCIe x4	PCIe x16/PCIe x4
Expansion Slots		1 PCIe x4	3 PCI	3 PCIe x1	1 PCIe x16 + 2 PCIe x1	1 PCIe x16 + 2 PCI
Chassis	1U	Yes	-	-	-	-
	2U	-	Yes	Yes	Yes	Yes
ATX	AIMB-785	Yes	Yes	△	□	Yes
	AIMB-784	-	-	-	□	Yes
	AIMB-782	-	Yes	-	□	Yes
	AIMB-781	Yes	Yes	Yes	Yes	Yes
	AIMB-780	-	-	-	-	-
	AIMB-701	Yes	Yes	△	-	-
	AIMB-769	Yes	Yes	△	-	-
	AIMB-767	-	-	-	-	-
	AIMB-766	-	-	-	-	-
	AIMB-763	-	-	-	-	-

Yes: Fully compatible
□: Only the PCIe x 16 and PCIe x1 (bottom slot) connectors work.
△: Only one PCIe x1 connector works (bottom slot).

8

Industrial Chassis

Selection Guide		*8-2*
Wallmount		
ARK-6610/6620	Compact Chassis for Mini-ITX Motherboard	*8-6*
IPC-3012	Compact Chassis for PICMG 1.3 Half Size SHB	*8-8*
IPC-3026	Quiet Compact Chassis for Half Size SHB/SBC	*8-10*
IPC-6806	6-Slot Desktop/Wallmount Compact Chassis for Full-/Half-size Slot SBC	*8-12*
IPC-6806S-D	6-Slot Desktop/Wallmount Compact Chassis for Half-size Slot SBC	*8-14*
IPC-6606/6608	6/8-Slot Desktop/Wallmount Chassis	*8-16*
IPC-7132	Cost-effective Wallmount Chassis for ATX/mATX Motherboard	*8-18*
IPC-7220	Desktop/wallmount Chassis for ATX/mATX Motherboard	*8-20*
IPC-5120/7120	Desktop/Wallmount Chassis with front I/O Interfaces for ATX/mATX Motherboard	*8-22*
IPC-6025	5-Slot Desktop/Wallmount Chassis with Scalability as 5U Quad-System Solution	*8-24*
IPC-5122	Desktop/Wallmount Chassis for MicroATX Motherboard	*8-26*
IPC-7130/7130L	Desktop/Wallmount Chassis for ATX/MicroATX Motherboard with Dual Hot-Swap 3.5" Drive Bays	*8-28*
1U Rackmount Chassis		
ACP-1010	1U Rackmount Chassis for Full-size SHB/SBC or ATX/MicroATX Motherboard	*8-30*
2U Rackmount Chassis		
IPC-603	2U 3-Slot Rackmount Chassis for ATX/MicroATX Motherboard with Front I/O	*8-32*
ACP-2000/IPC-602	2U 6-Slot Rackmount Chassis with Front USB and PS/2 Interfaces	*8-34*
ACP-2010/2320	2U Rackmount Chassis for ATX/ MicroATX Motherboard with Low-Profile Rear Bracket Option	*8-36*
ACP-2020	2U Rackmount Short Depth Chassis for ATX and mATX Motherboard	*8-38*
4U Rackmount Chassis		
IPC-510	Economical 4U Rackmount Chassis with Front-Accessible USB and PS/2 Interfaces	*8-40*
IPC-610-L/IPC-611	4U 15-Slot Rackmount Chassis with Front-Accessible Fan	*8-42*
IPC-610-H	4U Rackmount Chassis with Visual Alarm Notification	*8-44*
IPC-631	4U Front I/O Short Depth Rackmount Chassis for ATX/MicroATX Motherboard	*8-46*
ACP-4020	348mm Depth 4U Rackmount Chassis for Half-size SBC or ATX Motherboard	*8-48*
ACP-4D00	Dual-Node 350mm Depth 4U Chassis for Half-size Slot SBC	*8-50*
ACP-4000	Quiet 4U Rackmount Chassis with Visual & Audible Alarm Notification	*8-52*
ACP-4010	Quiet 4U Rackmount Chassis for ATX/CEB/EEB Motherboard or Full-size SHB/SBC with Dual System Support	*8-54*
ACP-4320	Quiet 4U Rackmount Chassis with Dual Hot-Swap SAS/SATA HDD Trays	*8-56*
ACP-4340	4U Rackmount Chassis for Full-size SHB/SBC or ATX/MicroATX Motherboard with 4 Hot Swap Drive Trays	*8-58*
IPC-623	4U 20-Slot Rackmount Chassis with Multi-System and Front-Accessible Redundant Power Supply	*8-60*
6U Rackmount Chassis		
IPC-622	6U 20-Slot Rack-mount Short Depth Chassis with Redundant Power Supply	*8-62*

To view all of Advantech's Industrial Chassis, please visit www.advantech.com/products.



Industrial Computer Chassis







Model Name			ARK-6610 / ARK-6620	IPC-3012	IPC-3026	IPC-6806S	IPC-6806S-D
Form Factor Support			Mini ITX	PICMG 1.3 Half-size SBC	PICMG 1.0/1.3 Half-size SBC	PICMG 1.0/1.3 Half-size SBC	PICMG 1.0/1.3 Half-size SBC
Drive Bay	Slim Optical Drive		1 / -	-	-	-	1
	2.5"		-	2	-	-	1 (hot-swap)
	3.5"	External	-	-	1	1	-
		Internal	1 / 1	-	-	1	1
	5.25"		-	-	-	-	-
Front I/O	USB		Front I/O chassis	2	2	2	2
	PS/2			-	-	-	-
Cooling	No. of Fans		1 / 2	2	1	1	1
	CFM		52.5 / 27.7	27	44.6	53	53
Power Supply	AC		180W Flex ATX	250W Flex ATX	150W Flex ATX	250W Flex ATX	250W Flex ATX
	AC Redundant		-	-	-	-	-
	DC		-	-	-	-	-
No. of Slots for add-on cards			1 / 0	2	4	4	4
No. of Full-size Cards			-	-	-	-	-
Passive Backplane Options	PICMG 1.0		-	-	Yes	Yes	Yes
	PICMG 1.3		-	Yes	Yes	Yes	Yes
Intelligent System Module			-	-	Yes	-	-
Dimensions (W x H x D)	mm		250 x 156 x253/ 272 x 88 x 232	232 x 90 x 232	150 x 222 x 270	191 x 178 x 290	191 x 178 x 290
	inch		9.8 x 6.1 x 10/ 10.7 x 3.5 x 9.1	9.13 x 3.54 x 9.13	5.9 x 8.74 x 10.63	7.5 x 7.01 x 11.42	7.5 x 7.01 x 11.42
Weight	kg		4.76 / 3.49	3.24	4.4	5.6	5.6
	lb		10.47 / 7.68	7.14	9.7	12.3	12.3
Page			8-6	8-8	8-10	8-12	8-14










IPC-6806/6806W	IPC-6606/6608	IPC-7132	IPC-5120/7120	IPC-6025	IPC-5122	IPC-7130 / IPC-7130L	IPC-7220
PICMG 1.0 Full-size SBC / PICMG 1.0/1.3 Full-size SBC	PICMG 1.0/1.3 Full-size SBC	ATX / Micro ATX	Micro ATX / ATX	PICMG 1.0/1.3 Full-size SBC	Micro ATX	ATX / Micro ATX	ATX / Micro ATX
-	-	-	- / -	-	1	-	-
-	-	-	-	-	-	-	-
1 / 1	1 / 1	1	1 / 1	1	1	2 (hot-swap) / 2	1
1 / 1	1 / 1	2	1 / 1	1	1	1 / 1	1
0 / 1	1 / 2	1	1 / 1	-	-	1 / 1	2
2 / 2	2 / 2	2	Front I/O chassis	2	2	2 / 2	2
- / -	- / -	-	-	-	-	-	-
1 / 1	1 / 1	1	1 + 1	1	1	1 + 1	1
53 / 58	53 / 85	85	85 / 10	46.6	85	73.8 / 21.2	85
250W Flex ATX 350W Flex ATX	250W PS/2 300W PS/2 400W PS/2	300W PS/2 400W PS/2	250W Flex ATX 350W Flex ATX	270W Flex ATX 400W Flex ATX	300W PS/2 400W PS/2	300W PS/2 400W PS/2 500W PS/2	300W PS/2 400W PS/2
-	-	-	-	-	-	350W Mini RPS 500W Mini RPS	350W Mini RPS 500W Mini RPS
-	-	-	-	-	-	-	-
5 / 5	5 / 7	7	4 / 7	4	4	7	7
6 / 6	6 / 8	7	-	5	-	7	7
Yes	Yes	-	-	Yes	-	-	-
- / Yes	Yes	Yes	-	Yes	-	-	-
-	-	-	-	Yes	Yes	Yes / -	Yes
166 x 178 x 398/ 198 x 221 x 398	173 x 254 x 396/ 173 x 315 x 410	200 x 330 x 430	320 x 164 x 316.5/ 380 x 164 x 316.5	111 x 212 x 420	157 x 360 x 340	200 x 320 x 480	200 x 320 x 480
6.54 x 7.01 x 15.67/ 7.8 x 8.7 x 15.67	6.8 x 10 x 15.6 / 6.8 x 12.4 x 16.1	7.9 x 13 x 16.9	12.6 x 6.5 x 12.5/ 15 x 6.5 x 12.5	4.4 x 8.3 x 16.5	6.2 x 14.2 x 13.4	7.9 x 12.6 x 18.9	7.9 x 12.6 x 18.9
6.3 / 8	9 / 11	9.96	6.54 / 7.01	4.7	6.5	12.8	14
13.9 / 17.6	19.8 / 24.2	21.93	14.42 / 15.45	10.3	14.3	28.2	30.8
8-12	8-16	8-18	8-22	8-24	8-26	8-28	8-20

Industrial Computer Chassis

NEW NEW



Model Name			1U Rackmount	2U Rackmount				4U Rackmount		
			ACP-1010	IPC-603	ACP-2000/ IPC-602	ACP-2010/2320	ACP-2020	IPC-510	IPC-610-L/ IPC-611	IPC-631
Form Factor Support			PICMG 1.0/1.3 Full-Size SBC ATX/MicroATX	ATX/MicroATX	PICMG 1.0/1.3 Full-Size SBC	ATX/MicroATX	ATX / MicroATX	PICMG1.0/1.3 Full size SBC ATX/Micro-ATX	PICMG1.0/1.3 Full size SBC ATX/Micro-ATX	ATX/Micro-ATX
Drive Bay	Slim Optical Drive		1	1	1 / -	-/1	1	-	-	1
	2.5"		1 x 3.5" or 2 x 2.5"	-	-	-	2 external (optional hot-swap module) 2 internal	-	-	4 (2 external optional hot-swap)
	3.5"	Hot-swap	-	-	-	- / 2 (SATA)	-	-	-	-
		External	1	-	2 / 1	1 / -	-	1	1	-
		Internal	1 x 3.5" or 2 x 2.5"	1	- / 1	2	-	1	-	-
	5.25"		-	-	- / 1	1 / -	-	3	3	-
Front I/O	USB		2	Front I/O chassis	2	2	2 (USB 3.0)	2	2	Front I/O chassis
	PS/2		-		1	1	-	1	-	
Cooling	No. of Fans		2 (MB), 4 (BP)	2	2	2 / 3	1	1	1	2
	CFM		2 x 24 (MB) / 3 x 24 + 1 x 15 (BP)	2 x 47	2 x 47/ 2 x 40	2 x 47/ 2 x 47 + 1 x 28	41	77	85	2 x 82
Power Supply	AC		250W Flex ATX 300W Flex ATX	350W Flex ATX	250W PS/2 300W PS/2 400W PS/2 500W PS/2	250W Flex ATX 300W Flex ATX	350W Flex ATX	250W PS/2 300W PS/2 400W PS/2	250W PS/2 300W PS/2	500W PS/2
	AC Redundant		-	-	300W 1+1 RPS / -	250W 1+1	500W 2U redundant	-	350W Mini RPS 500W Mini RPS	500W Mini RPS
	DC		-	-	300W 48V	-	-	-	-	-
No. of Slots			MB: 1 BP: 3	3	6 / 6	3 / 3	7	14	15	7
No. of Full-size Cards[Note]			MB: 0 BP: 2	0	4 / 4	3 / 3	7	8	11	0
Passive Backplane Options	PICMG 1.0		Yes	-	Yes	-	-	Yes	Yes	-
	PICMG 1.3		Yes	-	Yes	-	-	Yes	Yes	-
Intelligent System Module			-	-	Yes (ACP-2000)	Yes	Yes	-	-	-
Dimensions (W x H x D)	mm		480 x 44 x 497	482 x 88 x 308	482 x 88 x 451	482 x 88 x 480	482 x 177 x 348	482 x 177 x 446	482 x 177 x 480	482 x 177 x 348
	inch		19 x 1.7 x 19.6	19 x 3.46 x 12.1	19 x 3.5 x 17.8	19 x 3.5 x 18.9	19 x 7.0 x 13.7	19 x 7 x 17.6	19 x 7 x 18.9	19 x 7.0 x 13.7
Weight	kg		8	6.4	11.5/11.3	10.7/11.7	8	10.7	14.5	8
	lb		17.6	14.1	25.3/24.9	23.5/25.7	17.6 lb	23.5	31.9	17.6
Page			8-30	8-32	8-34	8-36	8-38	8-40	8-42	8-46

Note: Depending on system configuration. Board component or CPU cooler mechanical interference might reduce supported full-size card number.











4U Rackmount								6U Rackmount
IPC-610-H	ACP-4020	ACP-4D00	ACP-4000	ACP-4010/ACP-4320	ACP-4340	ACP-4360	IPC-623	IPC-622
PICMG1.0/1.3 Full size SBC ATX/Micro-ATX	PICMG1.3 Half-size SBC ATX/Micro-ATX	PICMG 1.3/PCI Half-size SBC	PICMG1.0/1.3 Full-size SBC ATX/Micro-ATX	PICMG1.0/1.3 Full-size SBC ATX/Micro-ATX	PICMG1.0/1.3 Full size SBC ATX/Micro-ATX	PICMG1.0/1.3 Full size SBC ATX/Micro-ATX	PICMG 1.0/1.3 Full size SBC	PICMG 1.0/1.3 Full size SBC
-	1	-	-	-	1	1	-	-
-	1 (Internal)	-	-	-	1 (Internal)	-	-	-
-	-		-	- / 2 (SATA)	4 (SATA)	6 (SATA)	-	-
1	2	1 / each node	1	1 / -	-	1	1	-
-	-	-	-	1 / -	-	-	1	2
3	-	-	3	2	-	-	3	4
2	2 (USB 3.0)	2 (USB 2.0) + 2 (USB 3.0) / each node	2	4 / 2	2 (USB 3.0)	2	-	2
1	-	-	1	-	-	-	-	-
2	2	1 / each node	2	2 / 2	2	3	3	4
2 x 85	2 x 53	1 x 58 per node	2 x 85	2 x 85/ 1 x 74 + 1 x 28	1 x 74 + 1 x 56	1 x 114 + 2 x 47	3 x 114	4 x 58
300W PS/2 400W PS/2 500W PS/2	300W PS/2 400W PS/2 500W PS/2	250W Flex ATX 300W Flex ATX	300W PS/2 400W PS/2 500W PS/2	300W PS/2 400W PS/2 500W PS/2	400W PS/2 500W PS/2 700W PS/2	400W PS/2 500W PS/2 700W PS/2	400W 500W	400W PS/2 500W PS/2 700W PS/2
350W Mini RPS 500W Mini RPS	-	-	350W Mini RPS 500W Mini RPS	350W Mini RPS 500W Mini RPS 750W Mini RPS	500W Mini RPS	350W Mini RPS 500W Mini RPS	570W 2+1	500W Mini RPS 750W Mini RPS
300W 48V	300W 48V	-	300W 48V	-	-	-	-	-
15	15	6 / each node	15	15 / 15	15	15	20	20
11	0	0	11	15 / 10	11	8	20	20
Yes	-	Yes (PCI BP only)	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
-	Yes	Yes	Yes	Yes	Yes	Yes	-	Yes
482 x 177 x 479	482 x 177 x 348	430 x 177 x 350	482 x 177 x 479	482 x 177 x 479	482 x 177 x 478	482 x 177 x 501	482 x 177 x 657	482 x 266 x 464
19 x 7 x 18.9	19 x 7.0 x 13.7	19 x 7.0 x 13.8	19 x 7 x 18.9	19 x 7 x 18.9	19 x 7.0 x 18.8	19 x 7.0 x 19.8	19 x 7 x 26	19 x 10.5 x 18.3
15	8.5	15	15.2	16.6/17.6	12.5	19	26	30
33	18.7	33	33.5	36.5/38.7	27.5	41.8	57	66
8-44	8-48	8-50	8-52	8-54/8-56	8-58	online	8-60	8-62

Note: Depending on system configuration. Board component or CPU cooler mechanical interference might reduce supported full-size card number.

ARK-6610/6620

Compact Chassis for Mini-ITX Motherboard



CE FCC

Features

- ARK-6610 with one front I/O expansion slot
- Various cut-outs for COM/DVI/LVDS,USB,S/C-video
- Shockproof drive bay for slim ODD and 3.5" HDD
- Bottom door to access CF card or Mini-PCIe card
- Supports 180W Flex ATX power supply

Specifications

		ARK-6610	ARK-6620
Disk Drive Bay	Slim Optical Drive	1	-
	3.5" (internal)	1	1
I/O Interface	COM	5	2
	USB	2	-
	DVI/LVDS	2	1
	S/C-Video	1	1
	WLAN Antenna	1	1
Cooling	Fan	1 (9 cm / 52.5 CFM)	2 (6 cm / 27.7 CFM, each)
	Air Filter	Yes	Yes
Miscellaneous	LED Indicators	Power, HDD, temperature	Power, HDD, temperature
	Control	Power switch	Power switch
Environment		Operating	Non-operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85%, 40 °C, non-condensing	10 ~ 95%, @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	250 x 156 x 253 mm (9.8" x 6.1" x 10")	272 x 88 x 232 mm (10.7" x 3.5" x 9.1")
	Weight	4.76 kg (10.47 lb)	3.49 kg (7.68 lb)

Front View

ARK-6610

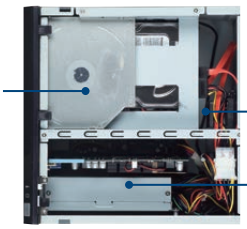


ARK-6620



Inside View

ARK-6610



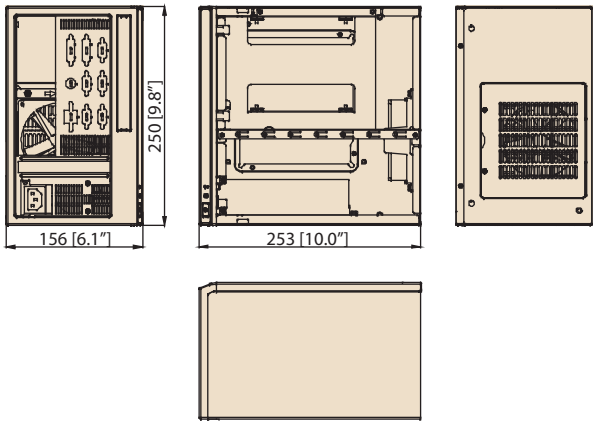
ARK-6620



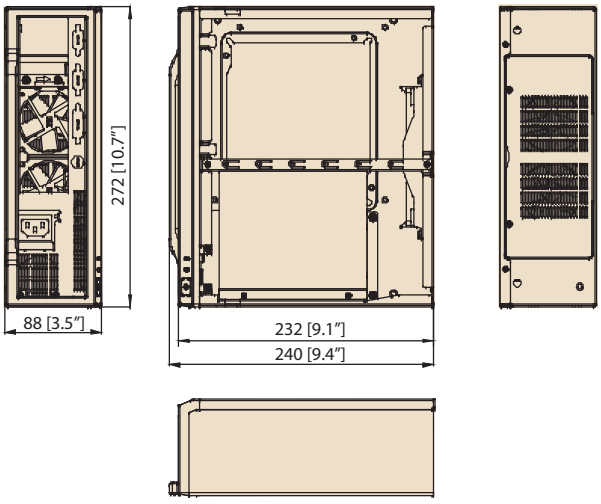
Dimensions

Unit: mm [inch]

ARK-6610

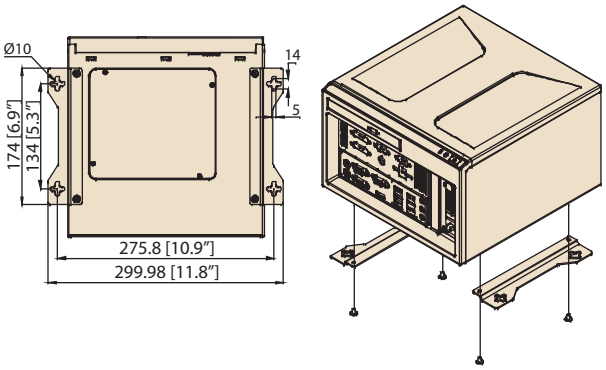


ARK-6620

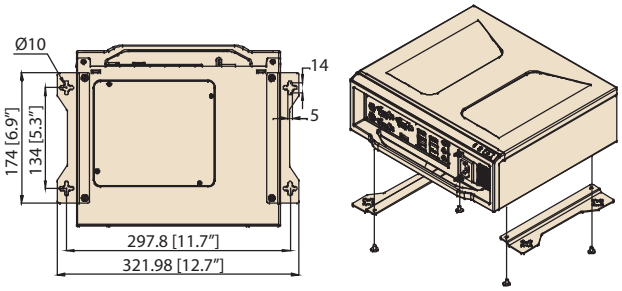


Installation

ARK-6610



ARK-6620



Chassis Ordering Information

Part Number	Power Supply	Power supply Wattage	Support Mini ITX MB type
AC power Mini ITX motherboard			
ARK-6610-18ZBE	96PS-A180WFX	180W	AC power Mini ITX MB
ARK-6620-18ZBE	96PS-A180WFX	180W	AC power Mini ITX MB
DC Power Mini ITX motherboard (AIMB-201DS / 212 / 213 / 214 / 215 / 223 / 224 / 225 / 230)			
ARK-6610-00XBE	-	-	DC power Mini ITX MB

* For ARK-6620 chassis, the only optional cooler for Intel Corei CPU is 1960053065N001, 1U blower. and TDP Max.84W.

Optional Accessories

Part Number	Description
1960053065N001	1U blower for LGA1155/1150/1151
1750002561	52.5 CFM, 92 x 92 x 25.4 mm system cooling fan (For ARK-6610)
1750006419	27.7 CFM, system cooling fan 60 x 60 x 13 mm (For ARK-6620)
98R2662001E	VESA mounting kit for ARK-6620
1960014495N001	PSU cover for DC Motherboard configuration

IPC-3012

Compact Chassis for PICMG 1.3 Half Size SHB



CE FCC

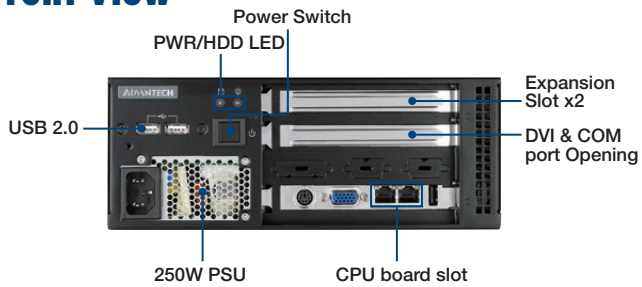
Features

- Compact chassis with two front expansion slots
- Shockproof drive bay for two 2.5" HDDs
- Equipped with 80 plus FLEX 250W power supply
- Thumb-screw for top cover easy opening
- Built-in Intrusion switch function
- Bidirectional to mount chassis on wall or workbench

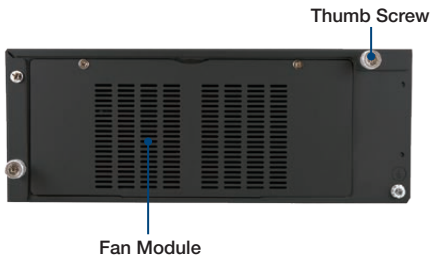
Specifications

Disk Drive Bay		External	Internal
	2.5"	-	2
Cooling	Fan	2 (6 cm/27 CFM)	
	Air Filters	Yes	
Front I/O interface	USB	2	
Miscellaneous	LED Indicators	Power, HDD	
	Control	Power Switch	
System Monitoring		Chassis intrusion switch	
Environment		Operating	Non-operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85 % @ 40 °C, non-condensing	10 ~ 95 % @ 40 °C, non-condensing
	Vibration (5-500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	232 x 90 x 232 mm (9.13" x 3.54" x 9.13")	
	Weight	3.24 kg (7.14 lb)	

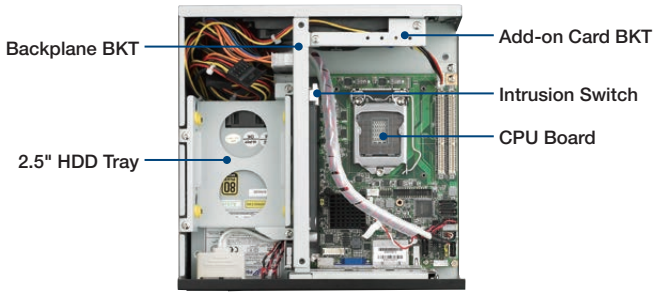
Front View



Rear View

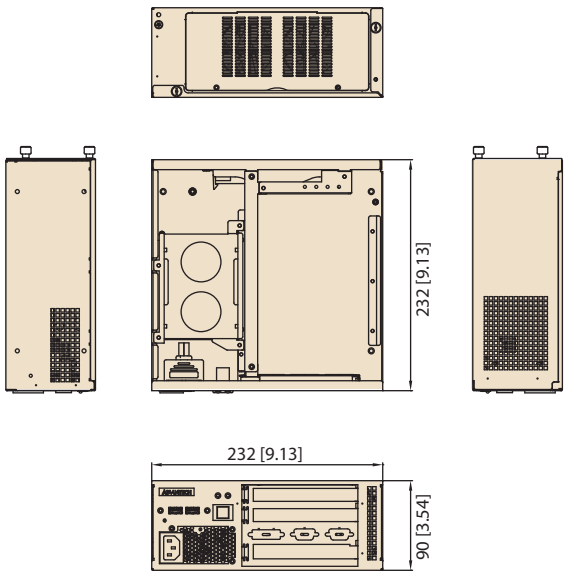


Inside View



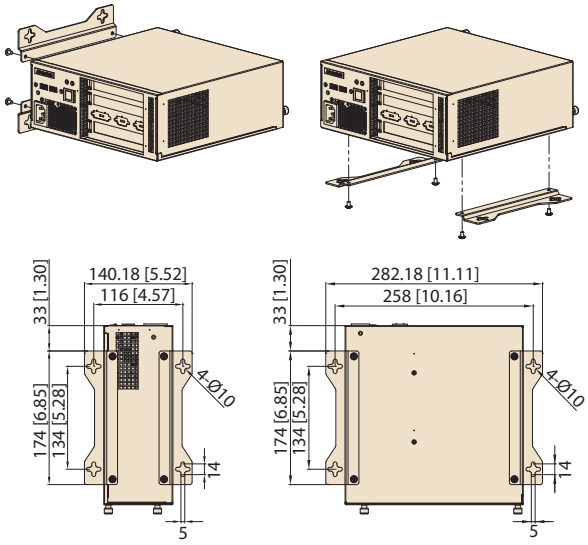
Dimensions

Unit: mm [inch]



Installation

Unit: mm [inch]



Ordering Information

Part Number	Description
IPC-3012-25ZE	With 250W Power supply 96PS-A250WFX-2, with ATX switch

Backplane Options

Part Number	Description
PCE-3B03A-00A1E	3 Slots PICMG1.3BP, PCIe x16*1, PCIe x4*1
PCE-3B03-01A1E	3 Slots PICMG1.3BP, PCIe x16*1, 32-Bit/33 MHz PCI*1

Optional Accessories

Part Number	Description
1750006419	27.72 CFM, system fan 60 x 60 x 13 mm
1990005760T00B	Filter cover
1960053207N001	1.5U CPU cooler for one add-on card applied
1960053065N001	1U CPU cooler for two add-on cards applied

IPC-3026

Quiet Compact Chassis for Half-size SHB/SBC



Features

- Supports 6-slot PICMG 1.3/1.0 backplane
- Shockproof drive bay for one 3.5" HDD
- Supports two 2.5" HDDs by hot-swap tray
- LED indicators for system fault detection
- Lockable front door prevents unauthorized access
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

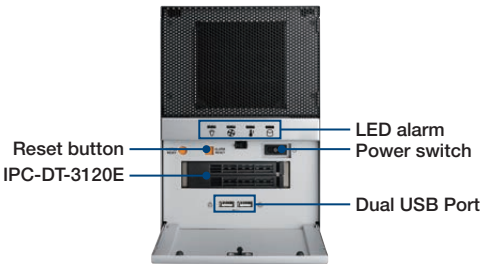
Quiet

CE FCC

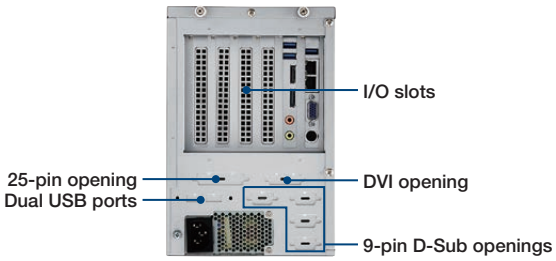
Specifications

Disk Drive Bay		External	Internal
	3.5"	1	-
Cooling	Fan	1 (9 cm 44.6 CFM)	
	Air Filters	Yes	
I/O Interface	USB	2 (Front accessible)	
Miscellaneous	LED Indicators	Power, HDD, Temp, Fan	
	Front Panel	Reset button, Power switch	
	Rear Panel	Reserved four 9-pin D-Sub openings, 25-pin opening, DVI opening, dual USB ports	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment		Operating	Non-operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5-500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	150 x 222 x 270 mm (5.9" x 8.74" x 10.63")	
	Weight	4.4 kg (9.7 lb)	

Front View

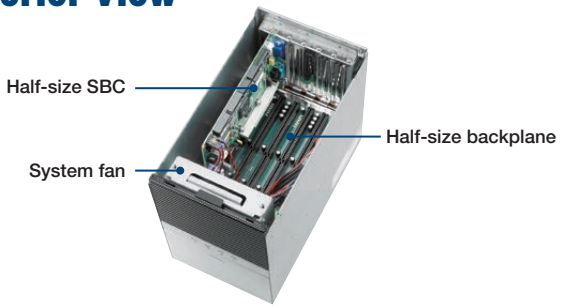


Rear View



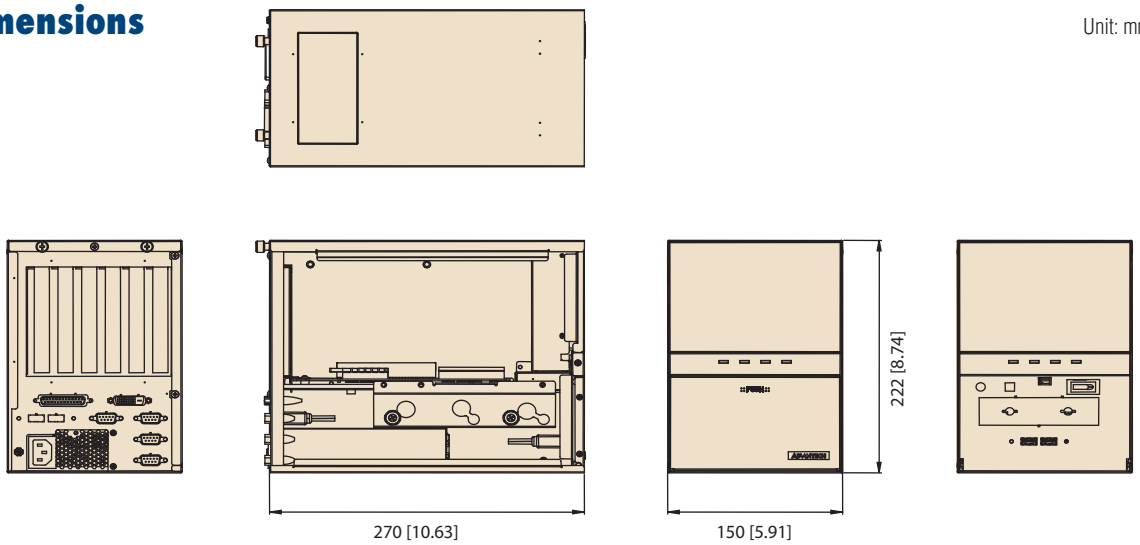
Note: Hot swap drive bay module should be bought separately.

Interior View

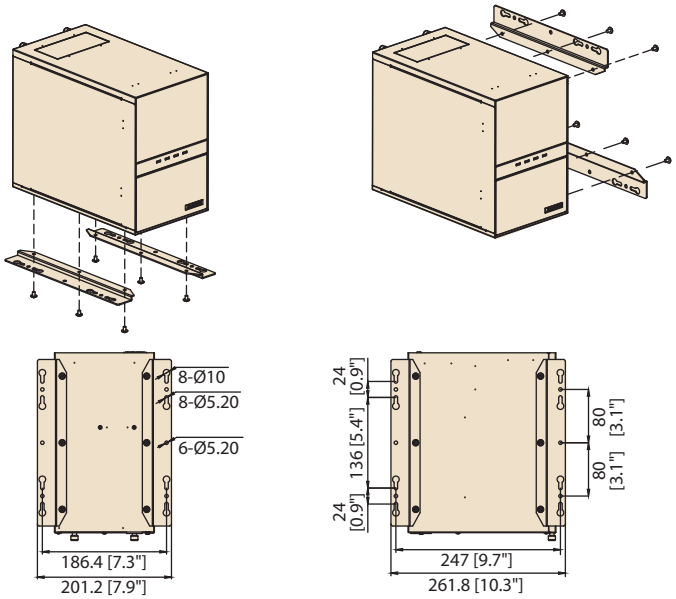


Dimensions

Unit: mm [inch]



Installation



Ordering Information

Part Number	Power Supply	Wattage	Type	Input
IPC-3026BP-15ZE	96PS-A150WFX-1	150W	Single	AC 100 ~ 240 V (full range)

Optional Accessories

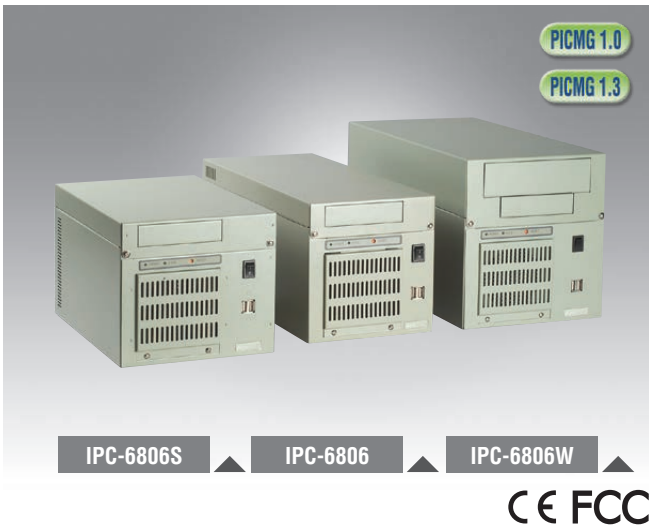
Ordering P/N	Description
IPC-DT-3120E	Mobile rack for dual 2.5" SATA HDDs with a 3.5" drive bay occupancy

Backplane Options

Part Number	ISA	PCI	PCIex16	PCIex8	PCIex4	PCIex1	PICMG
PICMG 1.0							
PCA-6106-0B2E	5	-	-	-	-	-	1
PCA-6105P5-0B2E	-	4	-	-	-	1	
PICMG 1.3							
PCE-3B03-00A1E	-	-	1	-	1	-	1
PCE-3B06-00A1E	-	-	1	-	-	4	1
PCE-3B06-02A1E	-	2	1	-	-	2	1
PCE-3B06-03A1E	-	3	1	-	-	1	1

IPC-6806

6-Slot Desktop/Wallmount Compact Chassis for Full-/Half-size Slot SBC



CE FCC

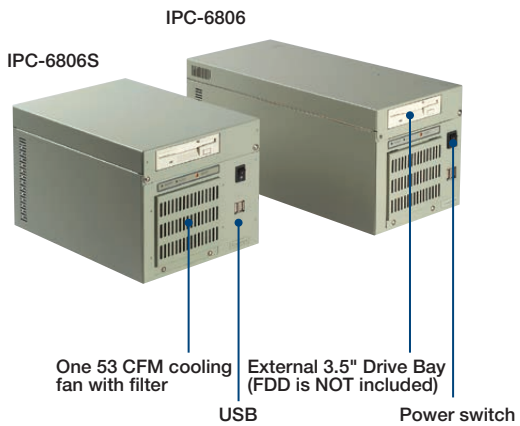
Features

- Three models with different sizes to support various industrial applications
  - IPC-6806S supports 6-slot PICMG 1.0/1.3 backplane
  - IPC-6806 supports 6-slot PICMG 1.0 backplane
  - IPC-6806W supports 6-slot PICMG 1.0/1.3 backplane
- Supports 6-slot backplanes
- Streamlined filtered airflow

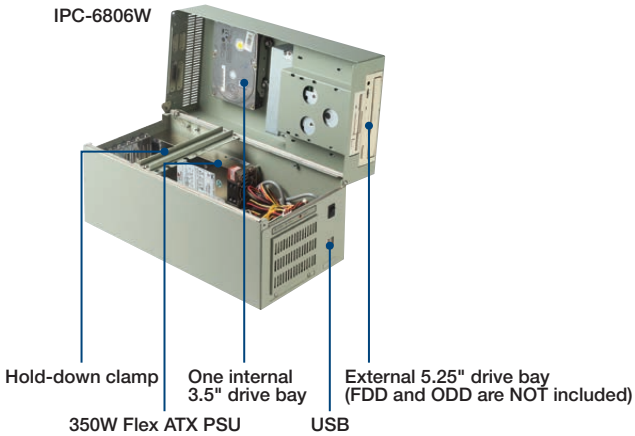
Specifications

Model Name		IPC-6806S	IPC-6806	IPC-6806W
CPU Card Form Factor		Half-size PICMG 1.0/1.3	Full-size PICMG 1.0	Full-size PICMG 1.0/1.3
Drive Bay	5.25"	-	-	1
	External 3.5"	1 (no support for IPC-DT-3120E)	1	1
	Internal 3.5"	1	1	1
Cooling	Fan	1 (9cm / 53 CFM)	1 (9cm / 53 CFM)	1 (9cm / 58 CFM)
	Air Filter	Yes	Yes	Yes
Front I/O Interface	USB 2.0	2	2	2
Miscellaneous	LED Indicators	Power and HDD		
	Control	Power switch and system reset buttons		
Environment		Operating	Non-Operating	
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)	
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing	
	Vibration (5 ~ 500 Hz)	0.5 Grms	2 G	
	Shock	10 G (with 11 ms duration, half sine wave)		
Physical Characteristics	Dimensions (W x H x D)	191 x 178 x 290 mm (7.5" x 7.01" x 11.42")	166 x 178 x 398 mm (6.54" x 7.01" x 15.67")	198 x 221 x 398 mm (7.8" x 8.7" x 15.67")
	Weight	5.6 kg (12.3 lb)	6.3 kg (13.9 lb)	8 kg (17.6 lb)

Front View



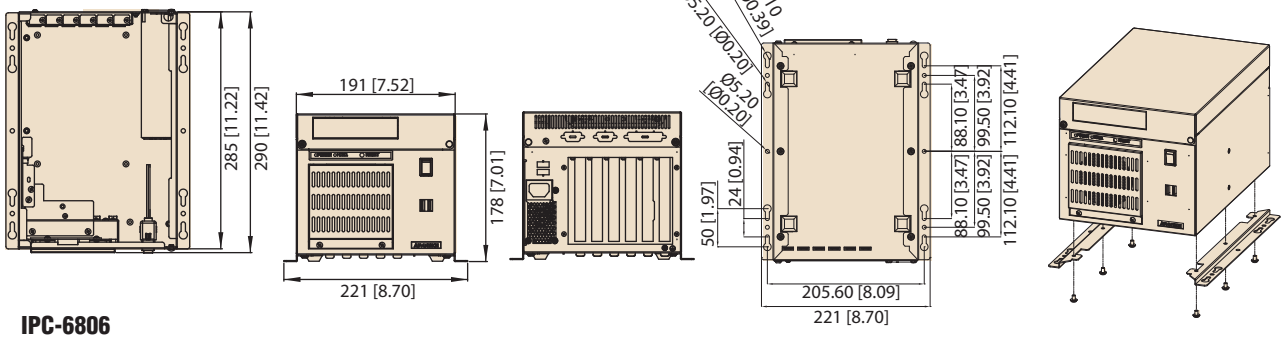
Inside View



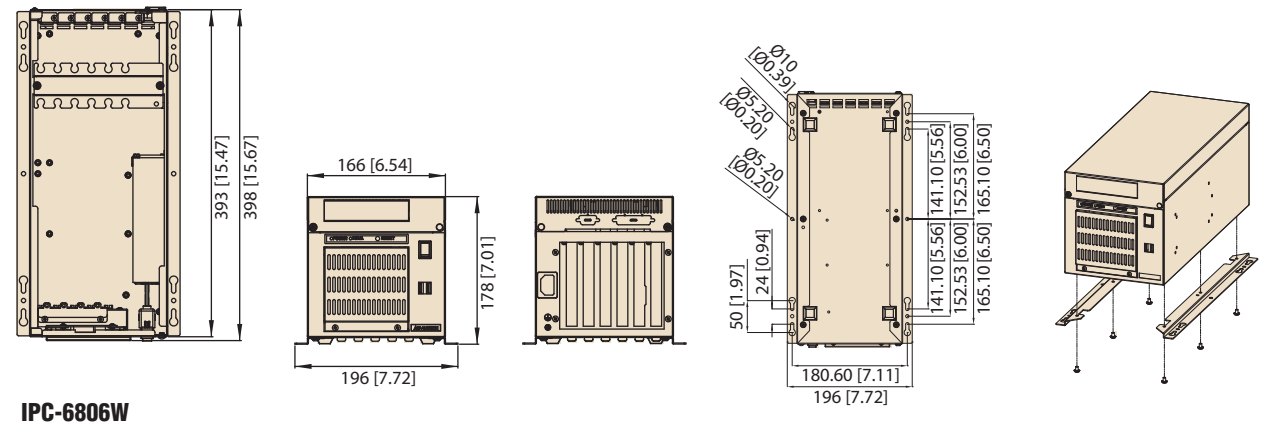
Dimensions

Unit: mm [inch]

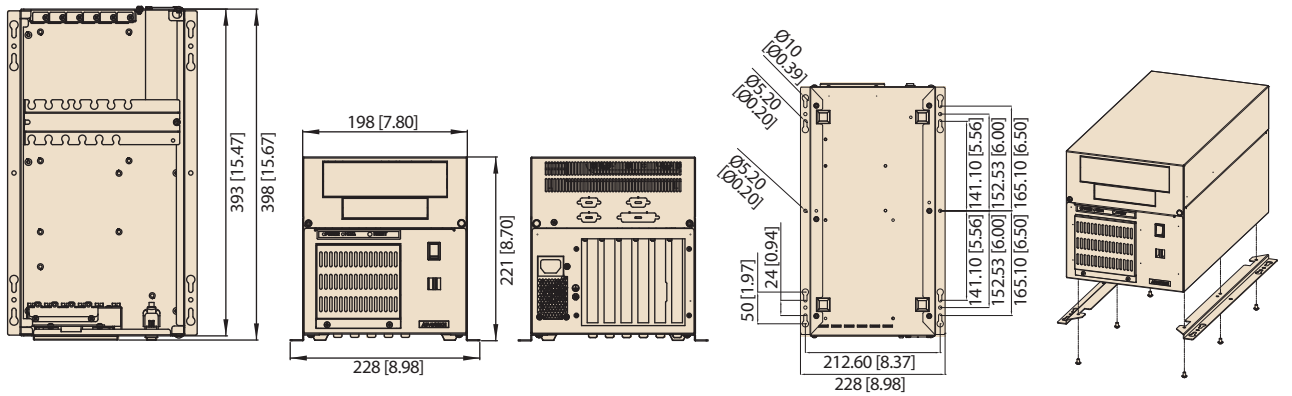
IPC-6806S



IPC-6806



IPC-6806W



Installation

Ordering Information

Part Number	Color	CPU Card Form Factor	Power Supply Wattage	Switch
IPC-6806S Series				
IPC-6806S-25CE	Gray	PICMG 1.0 Half-size	250W	AT
IPC-6806 Series				
IPC-6806-25DE	Gray	PICMG 1.0 Full-size	250W	ATX
IPC-6806W Series				
IPC-6806W-35CE	Gray	PICMG 1.0/1.3 Full-size	350W	AT

IPC-6806S-D

6-Slot Desktop/Wallmount Compact Chassis for Half-size Slot SBC



CE FCC

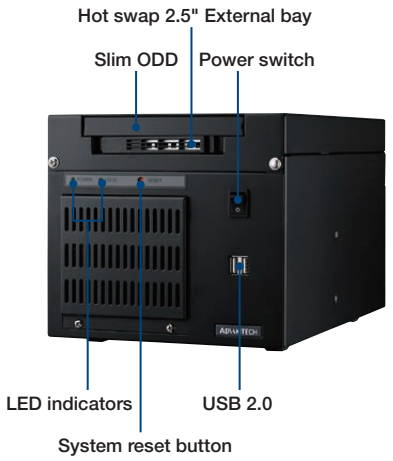
Features

- One Hot-swap 2.5" drive bay
- Two front-accessible USB 2.0 ports
- Supports 6-slot PICMG 1.3/1.0 backplane
- Easily maintained system fan and filter

Specifications

Model Name		IPC-6806S	
CPU Card Form Factor		Half-size	
Drive Bay	External Slim ODD port	1	
	Internal 3.5"	1	
	Hot-Swap drive bay	1 (only for HDD thickness with 9.6 mm / SAS not supported)	
Cooling	Fan	1 (9cm / 53 CFM)	
	Air Filter	Yes	
Front I/O Interface	USB 2.0	2	
Miscellaneous	LED Indicators	Power and HDD	
	Control	Power switch and system reset buttons	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	0.5 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	191 x 178 x 290 mm (7.5" x 7.01" x 11.42")	
	Weight	5.6 kg (12.3 lb)	

Front View

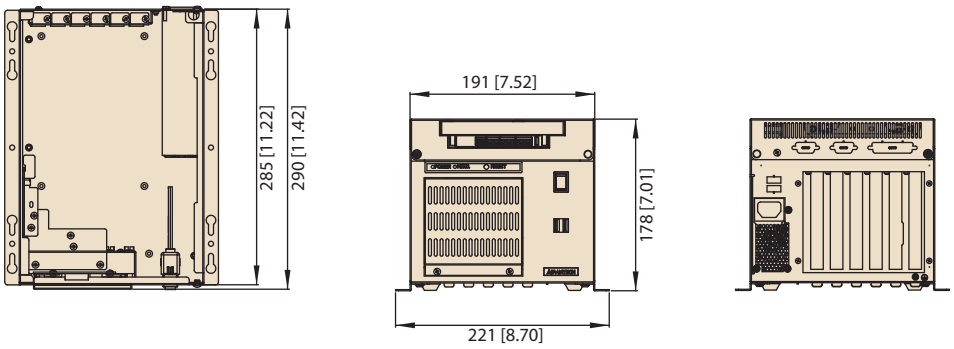


Inside View



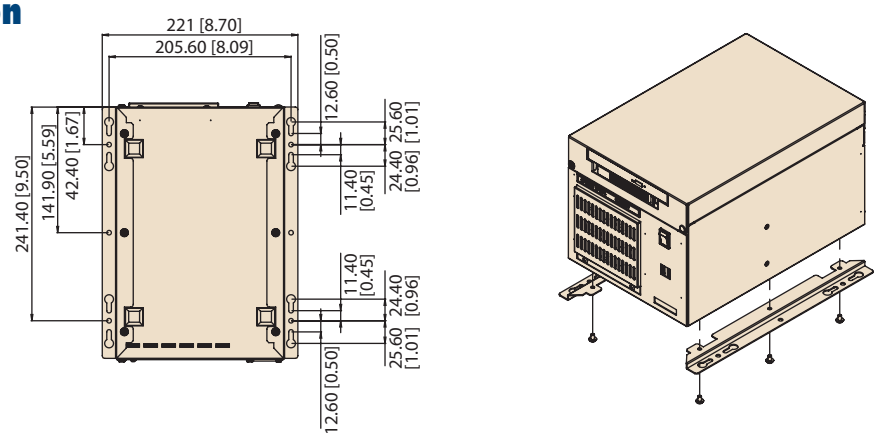
Dimensions

Unit: mm [inch]



Installation

Unit: mm [inch]



Ordering Information

Part Number	Color	CPU Card Form Factor	Power Supply Wattage	Backplane	Switch
IPC-6806S-25DE	Black	Half-size	250W	-	AT

IPC-6606/6608

6/8-Slot Desktop/Wallmount Chassis



CE FCC

Features

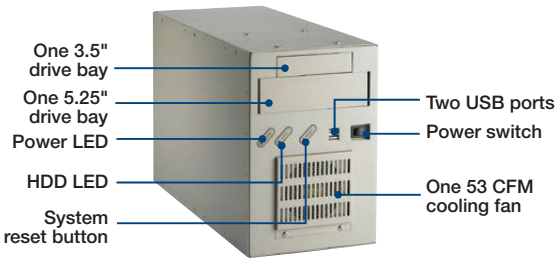
- Supports 6/8-slot PICMG 1.0 / PICMG 1.3 backplane
- Shockproof drive bay for 5.25" ODD and 3.5" HDD
- Two front access USB ports
- Bidirectional to mount chassis on wall or workbench
- Easily-maintained system fan and filter

Specifications

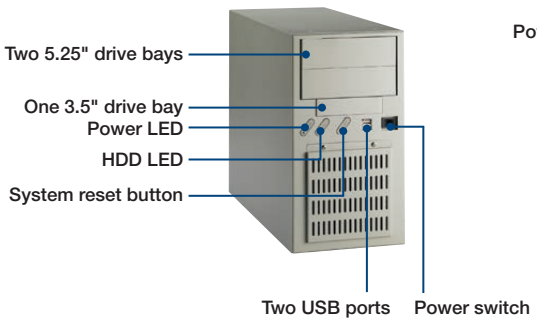
Model Name		IPC-6606	IPC-6608
Drive Bay	5.25"	1	2
	3.5"	2 (1 front-accessible, 1 internal)	1
Front I/O Interface	USB 2.0	2	2
Cooling	Fan	1 (9 cm / 53 CFM)	1 (12 cm / 85 CFM)
	Air Filter	Yes	
Miscellaneous	LED Indicators	Power and HDD	
	Control	Power switch and reset button	
Environment		Operating	
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	
	Humidity	10 ~ 85% @ 40 °C, non-condensing	
Physical Characteristics	Dimensions (W x H x D)	173 x 254 x 396 mm (6.8" x 10" x 15.6")	173 x 315 x 410 mm (6.8" x 12.4" x 16.1")
	Weight	9 kg (19.8 lb)	11 kg (24.2 lb)

Front View

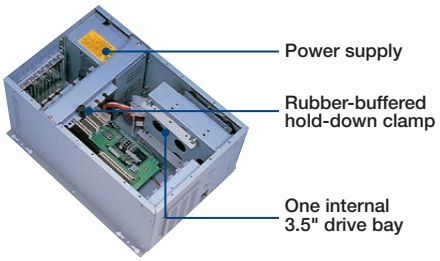
IPC-6606

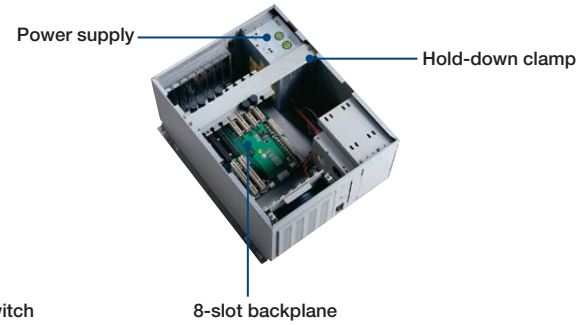


IPC-6608



Inside View

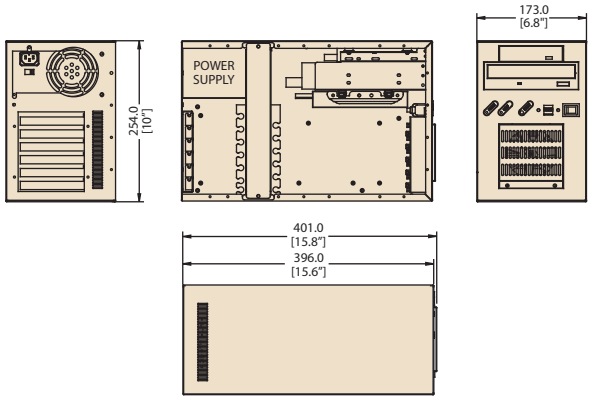




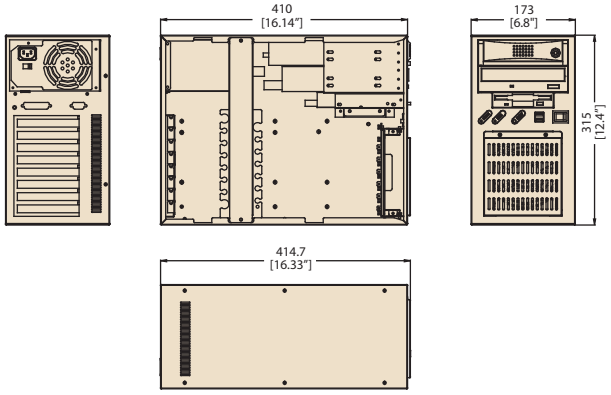
Dimensions

Unit: mm [inch]

IPC-6606



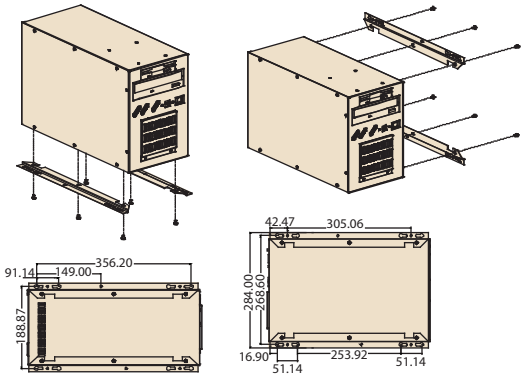
IPC-6608



Installation

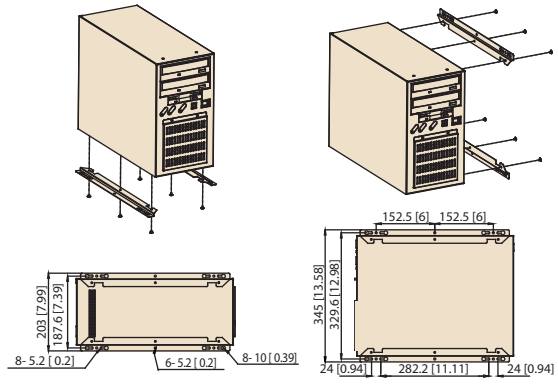
Unit: mm [inch]

IPC-6606



Bidirectional mounting

IPC-6608



Ordering Information

Part Number	Power Supply	Wattage	Backplane	Switch
IPC-6606				
IPC-6606BP-25BE	PS8-250ATX-ZE	250W	-	AT
IPC-6606BP-30CE	PS8-300ATX-ZBE	300W	-	ATX
IPC-6606P3-25BE	PS8-250ATX-ZE	250W	PCA-6106P3-0D2E	AT
IPC-6606P3-30CE	PS8-300ATX-ZBE	300W	PCA-6106P3-0D2E	ATX
IPC-6608				
IPC-6608BP-25BE	PS8-250ATX-ZE	250W		ATX
IPC-6608BP-30CE	PS8-300ATX-ZBE	300W		ATX

Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays

IPC-7132

Cost-effective Wallmount Chassis for ATX/mATX Motherboard



CE FCC

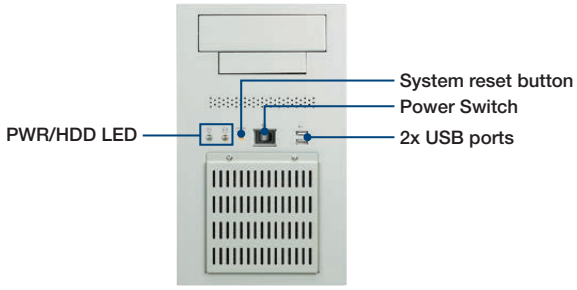
Features

- Supports ATX/mATX M/B
- Shockproof drive bay for one 5.25" ODD and three 3.5" HDDs
- Thumb-screw for top cover easy opening
- Bidirectional option to mount chassis on wall or workbench
- Two front access USB ports

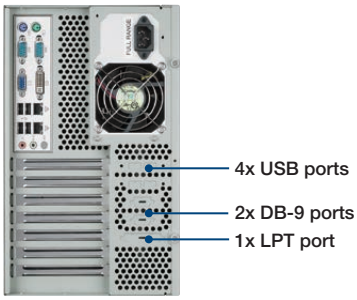
Specifications

Disk Drive Bay		External	Internal
	3.5"	1	2
	5.25"	1	-
Cooling	Fan	1 (12 cm/85 CFM)	
	Air Filters	Yes	
Front I/O interface	USB 2.0	2	
Miscellaneous	LED Indicators	Power, HDD	
	Control	Power Switch, System Reset Button	
	Rear panel	4x USB, 2x DB-9, 1x LPT port	
Environment		Operating	Non-operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85 % @ 40 °C, non-condensing	10 ~ 95 % @ 40 °C, non-condensing
	Vibration (5-500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	200 x 330 x 430 mm (7.9" x 13" x 16.9")	
	Weight	9.96 kg (21.93 lb)	

Front View



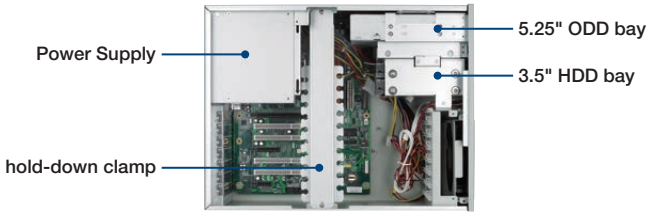
Rear View





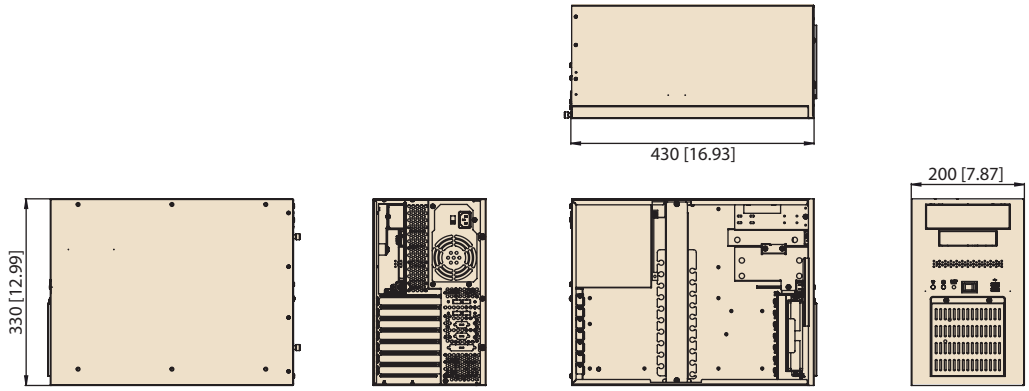
Easy-to-maintain cooling fan

Inside View



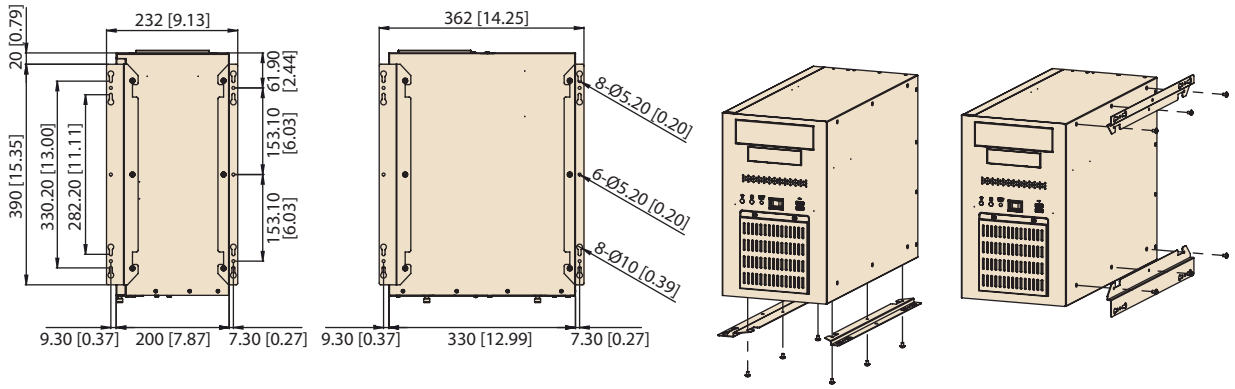
Dimensions

Unit: mm [inch]



Installation

Unit: mm [inch]



Ordering Information

Model Name	Power Supply	Wattage	Switch Type
IPC-7132MB-25ZE	PS8-250ATX-ZE	250W	ATX
IPC-7132MB-30ZE	PS8-300ATX-ZBE	300W	ATX
IPC-7132MB-40ZE	PS8-400ATX-ZE	400W	ATX

Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile HDD tray for dual 2.5" SATA HDDs
1750006427	87.87 CFM, system fan 120 x 120 x 25.0 mm

IPC-7220

Desktop/wallmount Chassis for ATX/mATX Motherboard



Features

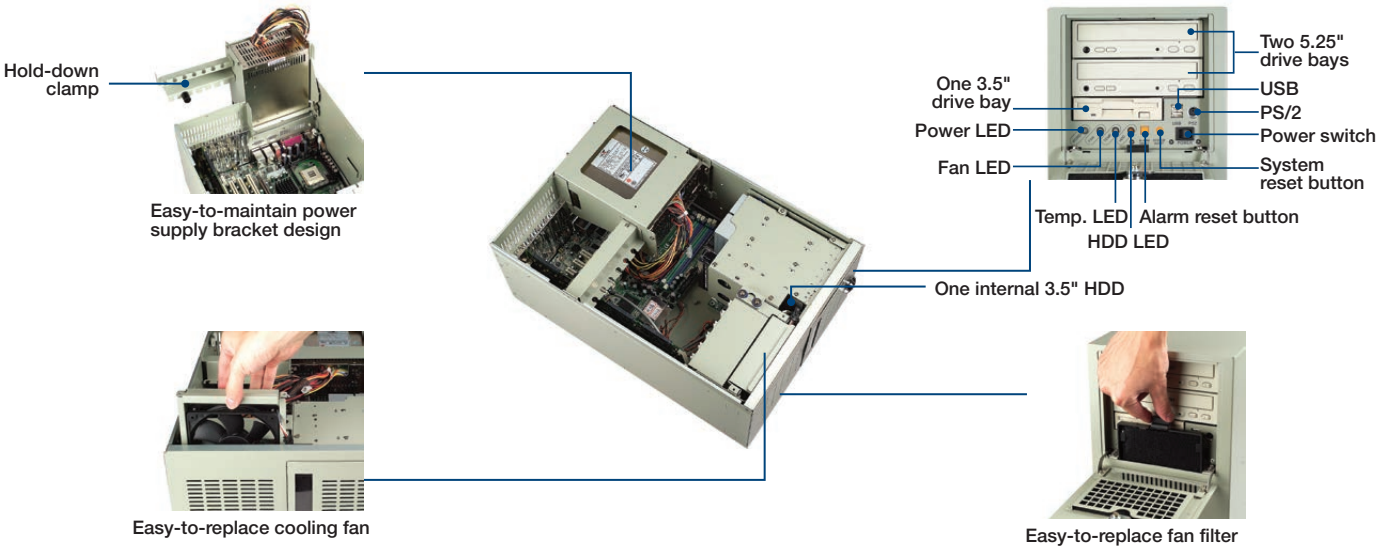
- Two 5.25" and two 3.5" shock-resistant drive bays
- Lockable front door to prevent unauthorized access
- LED indicators and alarm notification for system fault detection
- Easy-to-maintain system fan and air filter
- Low noise system fan
- Built-in Intelligent System Module enables whole system fan control and remote manageability

Quiet

CE FCC

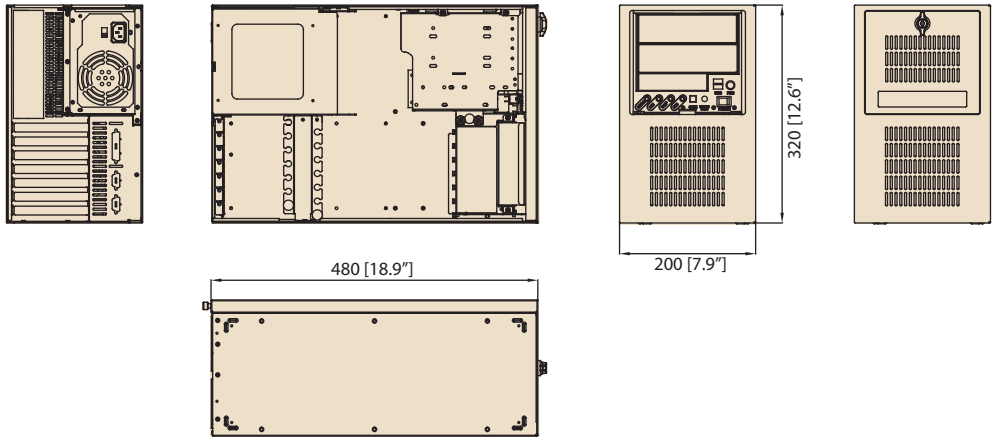
Specifications

Drive Bay		External	Internal
	5.25"	2	-
	3.5"	1	1
Cooling	Fan	1 (12 cm / 85 CFM)	
	Air Filters	2 (one 7 x 12 cm and one 12 x 12 cm)	
	Smart Fan	System fan speed referring to chassis thermal sensor, or CPU temperature (Available with selected Advantech MBs/CPU cards)	
Front I/O Interface	USB 2.0	2	
	PS/2	PS/2 keyboard and mouse, or PS/2 keyboard depends on the enclosed motherboard	
Miscellaneous	LED Indicators	Power, HDD, temperature and fan	
	Control	Power switch, system reset and alarm reset buttons	
	Rear Panel	Reserved Two 9-pin D-Sub openings, one LPT opening	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environmental		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	200 x 320 x 480 mm (7.9" x 12.6" x 18.9")	
	Weight	14 kg (30.8 lb)	



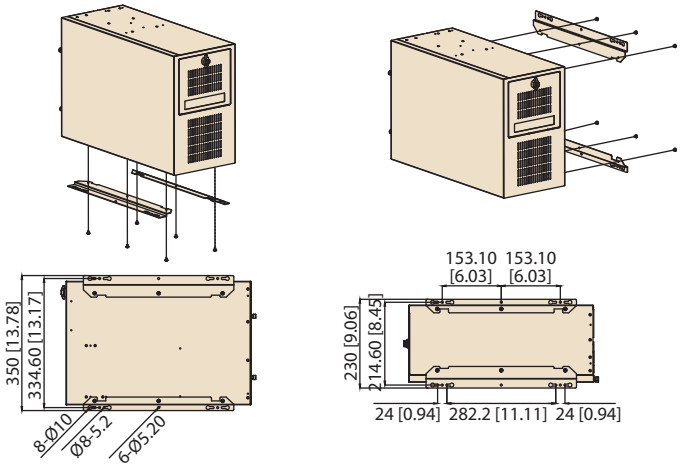
Dimensions

Unit: mm [inch]



Installation

Unit: mm [inch]



Ordering Information

Part number	Power Supply	Wattage	Switch Type
IPC-7220-30BE	PS8-300ATX-ZBE	300W	ATX
IPC-7220-40BE	PS8-400ATX-ZE	400W	ATX

Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 2.5" or 3.5" SATA HDD trays

IPC-5120/7120

Desktop/Wallmount Chassis with front I/O Interfaces for ATX/mATX Motherboard



CE FCC

Features

- With front I/O interface and four to seven expansion slots
- Shockproof drive bay for one 5.25" ODD and two 3.5" HDDs
- LED indicators for power status and HDD activity
- Supports four to seven half-size add-on cards
- Suitable foam factor : IPC-5120 for Micro-ATX MB , IPC-7120 for ATX MB

Specifications

Drive Bay		External	Internal
	5.25"	1	-
	3.5"	1	1
Cooling	Fans	1 (12 cm / 85 CFM) + 1 (4 cm / 10 CFM)	
	Air Filter	Yes	
Miscellaneous	LED Indicators	Power status and HDD activity	
	Control	Power switch and system reset button	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	IPC-5120: 320 x 164 x 316.5 mm (12.6" x 6.5" x 12.5") IPC-7120: 380 x 164 x 316.5 mm (15" x 6.5" x 12.5")	
	Weight	IPC-5120: 6.54 kg (14.42 lb) IPC-7120: 7.01 kg (15.45 lb)	

Front View

IPC-5120



IPC-7120



Inside View



Easy-to-maintain fan filter



Shock-resistant drive bay for holding an internal 3.5" HDD



Plug ring-lock securely fastens the power cord

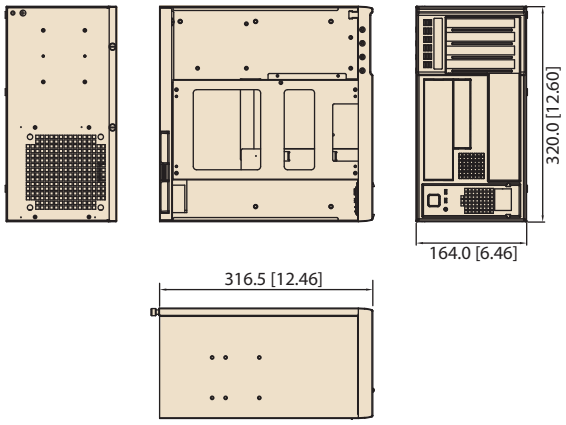


User-friendly mechanical design for installing an add-on card

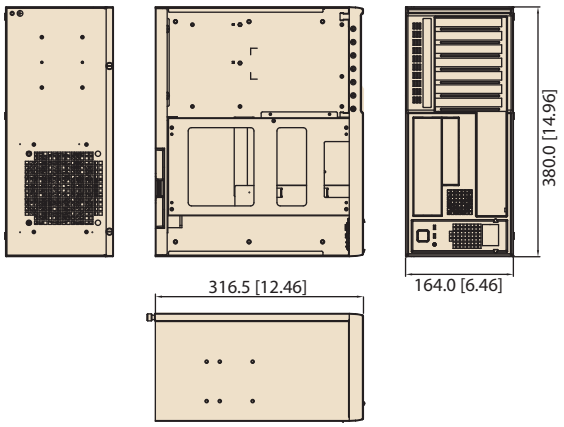
Dimensions

Unit: mm [inch]

IPC-5120



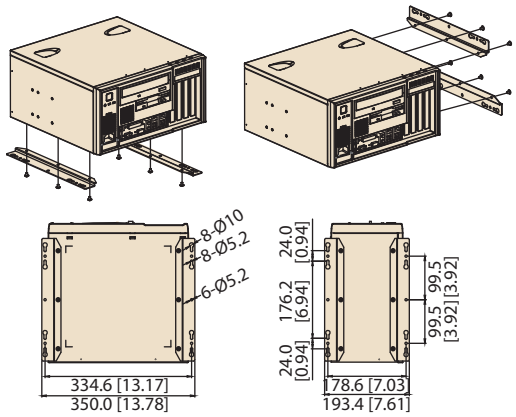
IPC-7120



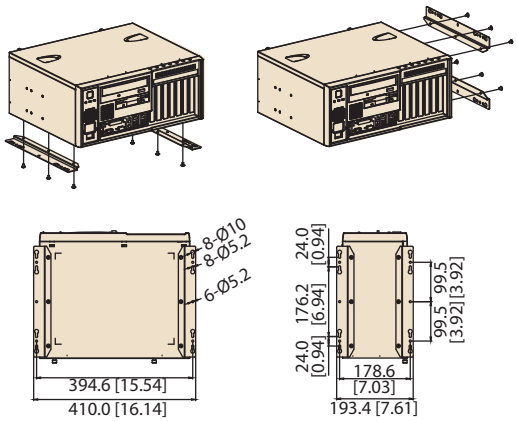
Installation

Unit: mm [inch]

IPC-5120



IPC-7120



Ordering Information

Part Number	Power Supply	Wattage	Switch
IPC-5120 Series			
IPC-5120-25CE	PS8-250FATX-XE	250W	ATX
IPC-5120-35CE	PS8-350FATX-XE	350W	ATX
IPC-7120 Series			
IPC-7120-25CE	PS8-250FATX-XE	250W	ATX
IPC-7120-35CE	PS8-350FATX-XE	350W	ATX

Power Supply Specification

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-250FATX-XE	Bronze	250W	Single	AC 100~240V (full range)
PS8-350FATX-XE	Bronze	350W	Single	AC 100~240V (full range)

IPC-6025

5-Slot Desktop/Wallmount Chassis with Scalability as 5U Quad-System Solution



TAIWAN EXCELLENCE 2012 Quiet

CE FCC

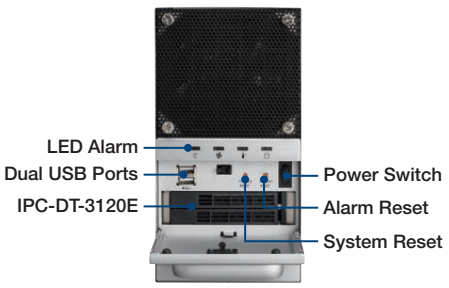
Features

- Front handle for easy withdraw in rackmount carrier
- Lockable front door prevents unauthorized access
- Shockproof drive bay for two 3.5" HDDs
- LED indicators for system fault detection
- Optional rackmount carrier for quad-system solution
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

Specifications

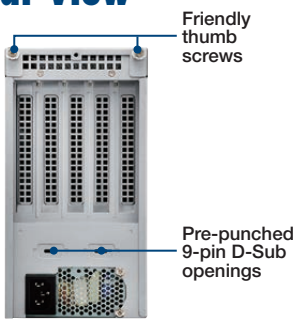
Drive Bay		External	Internal
	3.5"	1	1
Cooling	Fan	1 (9 cm / 46.6 CFM)	
	Air Filters	Yes	
Front I/O Interface	USB 2.0	2	
Miscellaneous	LED Indicators	Power, fan, temperature, HDD	
	Control	Power switch and system reset buttons	
	Rear Panel	Reserved Two 9-pin D-Sub openings	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment		Operating	Non-operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	111 x 212 x 420 mm (4.4" x 8.3" x 16.5")	
	Weight	4.7 kg (10.3 lb)	

Front View



Note: Hot swap drive bay module should be bought separately.

Rear View

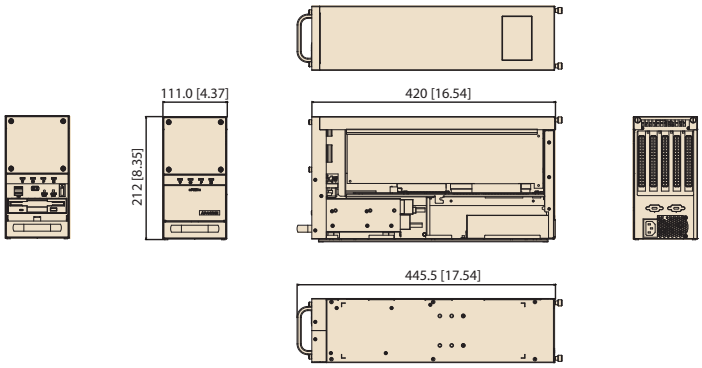




4 IPC-6025 combined as a 5U quad-system rackmount IPC

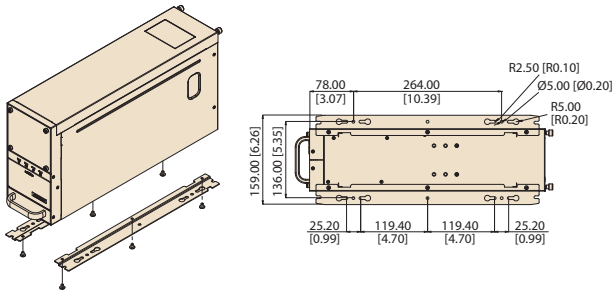
Dimensions

Unit: mm [inch]



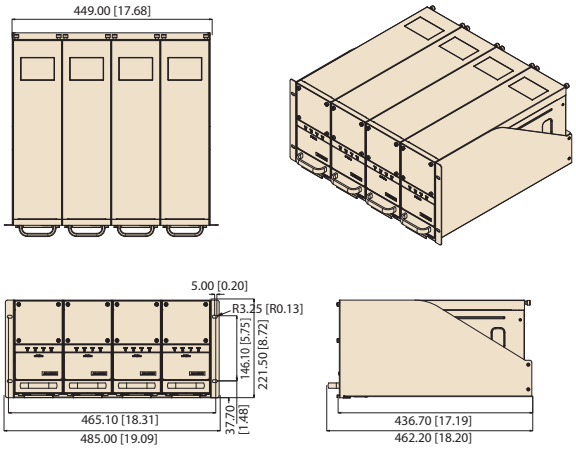
Installation

Single System



Quad System

Unit: mm [inch]



Ordering Information

Part number	Power Supply	80 Plus Grade	Wattage	Type	Input	Switch type
IPC-6025BP-27ZE	96PS-A270WFX	White	270W	Single	AC 100 ~ 240V (Full Range)	AT Switch
IPC-6025BP-40ZE	96PS-A400WFX-2	Gold	400W	Single	AC 100 ~ 240V (Full Range)	AT Switch

Optional Accessories

Ordering P/N	Description
9892602501E	Rackmount carrier for Quad System solution
IPC-DT-3120E	Mobile rack for dual 2.5" SATA HDDs

Backplane Options

Model	PICMG 1.3/1.0	PCIe	PCI-X	PCI	ISA	PCI/ISA
PCE-5000 Series						
PCE-5B04-20B1E	PICMG 1.3	1 (PCIe x 16)	2	-	-	-
PCE-5B05-02A1E	PICMG 1.3	1 (PCIe x 16) 1 (PCIe x 4)	-	2	-	-
PCE-5B05-03A1E	PICMG 1.3	1 (PCIe x 16)	-	3	-	-
PICMG 1.0						
PCA-6105P3-5A1E	PICMG 1.0	-	-	2	1	1

IPC-5122

Desktop/Wallmount Chassis for MicroATX Motherboard



Features

- Shockproof drive bay for slim ODD and 3.5" or 2.5" HDD
- Lockable front door prevents unauthorized access
- LED indicators for system fault detection
- Easy-to-maintain system fan and reusable air filter
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

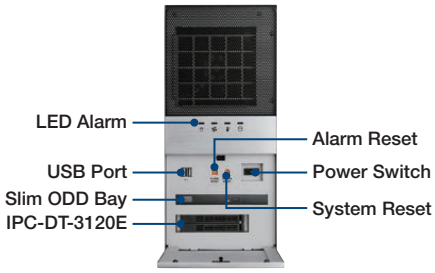
Quiet

CE FCC

Specifications

Drive Bay		External	Internal
	Slim Optical Drive	1	-
	3.5"	1	1
Cooling	Fan	1 (12 cm / 85 CFM)	
	Air Filter	Yes	
Front I/O Interface	USB 2.0	2 (Front accessible)	
Miscellaneous	LED Indicators	Power, HDD, fan and temperature	
	Control	Power switch, alarm reset and system reset buttons	
	Rear Panel	Six 9-pin D-Sub openings	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	157 x 360 x 340 mm (6.2" x 14.2" x 13.4")	
	Weight	6.5 kg (14.3 lb)	

Front View



Inside View



Rear View



Note: Hot swap drive bay module and Slim ODD should be bought separately.



Easy-open door

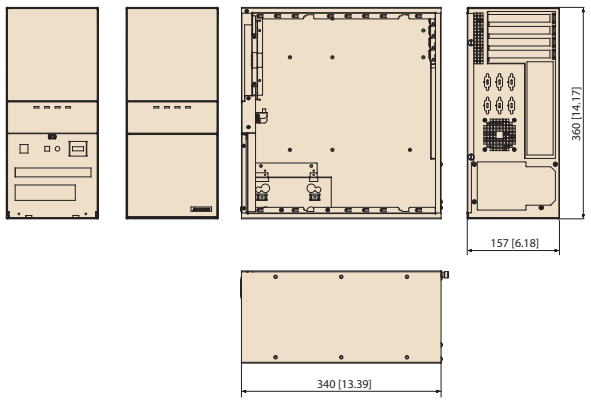




Gently press the hook to pull the air filter out

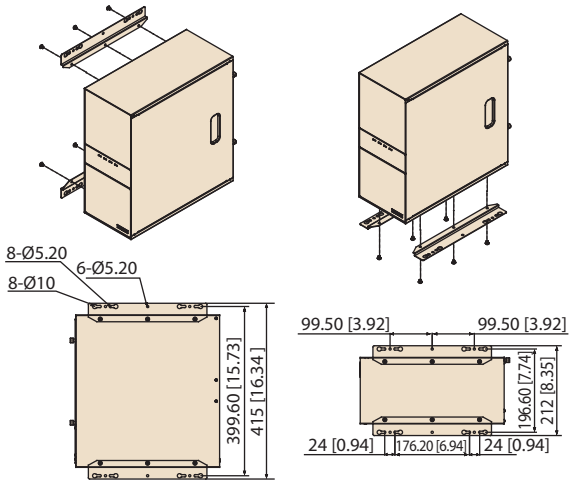
Dimensions

Unit: mm [inch]



Installation

Unit: mm [inch]



Ordering Information

Part Number	Description
IPC-5122-00XE	Without power supply, with ATX switch

Power Supply Options

(For detailed power supply specs, please refer to Chapter 13)

Part number	80 Plus Grade	Wattage	Type	Input
PS8-300ATX-ZBE	Bronze	300W	Single	AC 100~240V (full-range)
PS8-400ATX-ZE	Bronze	400W	Single	AC 100~240V (full-range)

Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays

IPC-7130/7130L

Desktop/Wallmount Chassis for ATX/MicroATX Motherboard with Dual Hot-Swap 3.5" Drive Bays



Features

- Shockproof drive bays - One 5.25", one internal 3.5", and two hot-swap 3.5" trays for IPC-7130 / two 3.5" HDD device trays for IPC-7130L
- Lockable front door prevents unauthorized access
- LED indicators for system fault detection
- Bidirectional to mount chassis on the wall or workbench
- Built-in Intelligent System Module enabling whole system fan control and remote manageability (IPC-7130)

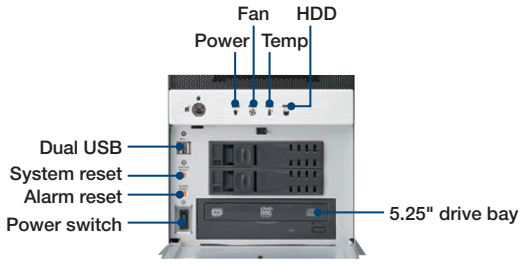
Quiet

CE FCC

Specifications

Disk Drive Bay		External	Internal
	5.25"	1/1	-/-
	3.5"	-/2	1/1
	Hot-Swap	2/- (SATA)	-
Cooling	Fan	1 (12 cm/73.8 CFM) + 1 (6 cm/21.2 CFM) / 1 (12 cm/73.8 CFM)	
	Air Filters	Yes	
I/O Interface	USB 2.0	2 (Front accessible)	
Miscellaneous		IPC-7130	IPC-730L
	LED indicators	Power, fan, temperature, HDD	Power, HDD
	Control	Power, Alarm reset, System reset	Power, System reset
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.) (This feature only enabled in IPC-7130)		
Environment		Operating	Non-operating
	Temperature	0 ~ 40 °C (32 ~ 122 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85 % @ 40 °C, non-condensing	10 ~ 95 % @ 40 °C, non-condensing
	Vibration (5-500 Hz)	0.5 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	200 x 320 x 480 mm (7.9" x 12.6" x 18.9")	
	Weight	12.8 kg (28.2 lb)	

Front View



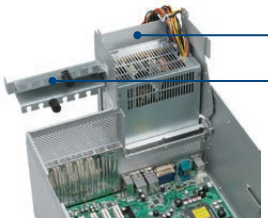
IPC-7130



IPC-7130L

Inside View



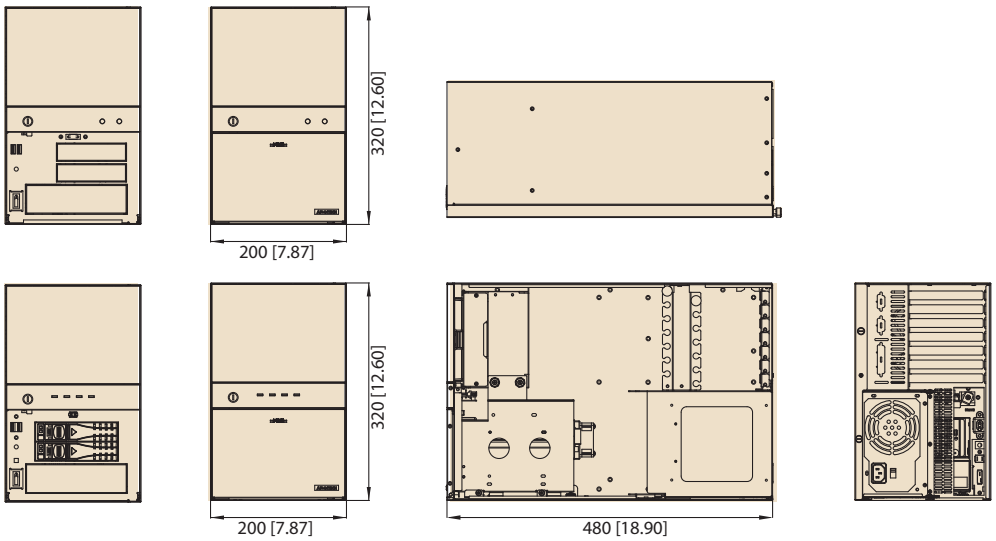




Easy-to-maintain reusable fan filter

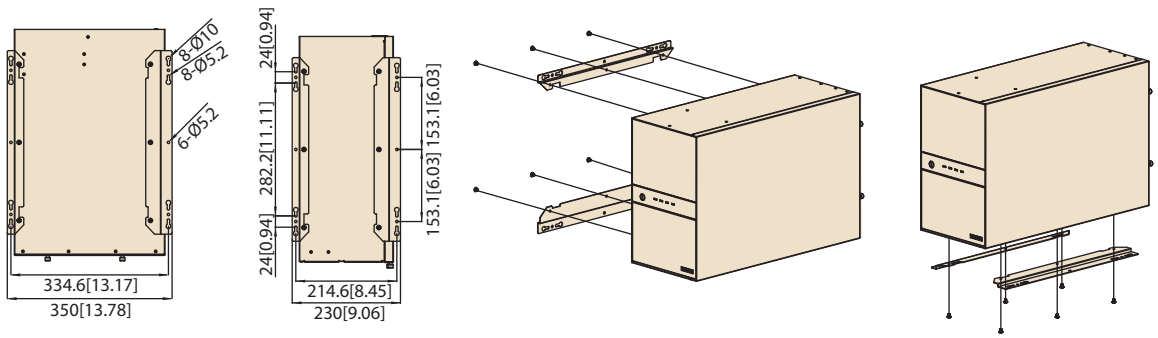
Dimensions

Unit: mm [inch]



Installation

Unit: mm [inch]



Ordering Information

Part number	Power supply	Switch type
IPC-7130 series		
IPC-7130-00XE	NA	ATX
IPC-7130-50ZE	PS8-500ATX-ZE	ATX
IPC-7130L series		
IPC-7130L-00XE	NA	ATX
IPC-7130L-30ZE	PS8-300ATX-ZBE	ATX

Power Supply Options

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-300ATX-ZBE	Bronze	300W	Single	AC 100 ~ 240V (full range)
PS8-400ATX-ZE	Bronze	400W	Single	AC 100 ~ 240V (full range)
RPS8-350ATX-XE	Gold	350W	1+1 Redundant	AC 100 ~ 240V (full range)
RPS8-500ATX-XE	Bronze	500W	1+1 Redundant	AC 100 ~ 240V (full range)

Optional Accssories

Part Number	Description
1750006045	73.84 CFM, System fan 120 x 120 x 25 mm
1750006376	21.22 CFM, HDD fan 60 x 60 x 13 mm

ACP-1010

1U Rackmount Chassis for Full-size SHB/SBC or ATX/MicroATX Motherboard



CE FCC

Features

- Supports full-size SHB/SBC or ATX/MicroATX motherboards
- LED indicators for power, HDD, temperature, fan, LAN1 and LAN2
- Supports up to 2 expansion slots in BP version, and 1 expansion slot via riser card in MB version
- Supports both 250W/350W Flex ATX/PFC power supplies

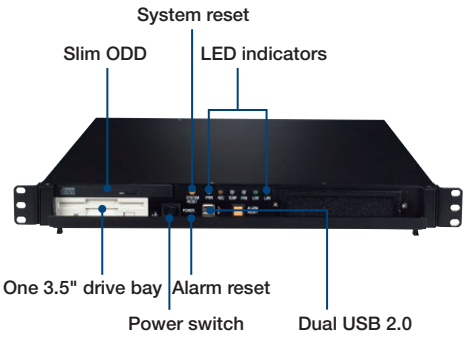
Specifications

Driver bay		External	Internal
	Slim Optical Disk Drive	1	-
	3.5"	1	1*
	2.5"	-	2*
Cooling	Fan	BP: 4 (4 cm/24 CFM x 3 + 15 CFM x 1) MB: 2 (4 cm/24 CFM each)	
Front I/O Interface	USB 2.0	2	
Miscellaneous	Notification LEDs	System: Power, HDD, Temperature, Fan, LAN1 and LAN2	
	Control	Power switch, system reset & alarm reset button	
	Rear panel	One 9-pin D-Sub opening	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	0.5 Grms	2 Grms
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	480 x 44 x 497 mm (19" x 1.7" x 19.6")	
	Weight	8 kg (17.6 lb)	

* Internal driver bay can choose 1 x 3.5" or 2 x 2.5"

* ACP-1010 supports up to CPU 65W under 35 °C for thermal concern.

Front View



Back View



ACP-1010BP

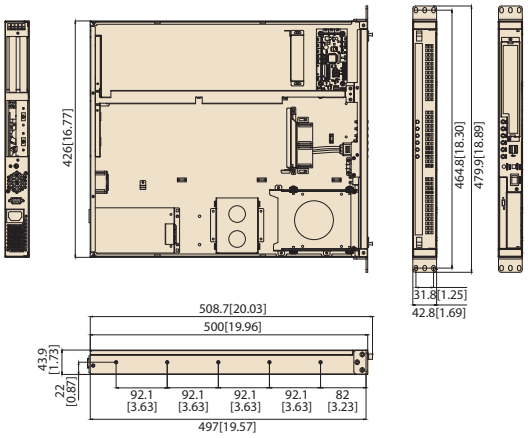


ACP-1010MB

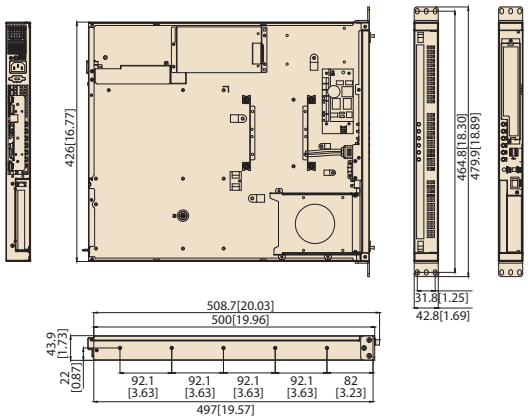
Dimensions

Unit: mm [inch]

ACP-1010BP



ACP-1010MB



Ordering Information

Part Number	Description
Backplane Version	
ACP-1010BP-00BE	BP version W/O PSU
Motherboard Version	
ACP-1010MB-00BE	MB version W/O PSU

*ACP-1010MB does not support AIMB-763, 542, 562 and 564 because the height of the audio connector is over 1U.

Power Supply Options

(For detailed power supply specs, please refer to Chapter 13)

Part Number	80 Plus Bronze	Wattage	Type	Input
PS8-250FATX-XE	Bronze	250W	Single	AC 100 ~ 240 V (full range)
PS8-350FATX-XE	Bronze	350W	Single	AC 100 ~ 240 V (full range)

Spare Parts

Part Name	Description
2130007889S000	Filter 170 x 32 x 5 mm for ACP-1010

Optional Accessories

Part Name	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
I/O shield	
1960055954T000	I/O shield for AIMB-701/781/782/581
1960048353T000	I/O shield for AIMB-767/769/780/566/580

Backplane Options

Part Name	Slot	CPU Card
PICMG 1.3		
PCE-5B03V-01A1E	One CPU, one PCIe x16, one PCI (32-bit/33MHz)	PCE-5000 Series
PCE-5B03V-00A1E	One CPU, one PCIe x16, one PCIe x4	
PCE-7B03V-01A1E	One CPU, one PCIe x8, one PCI	PCE-7000 Series
PCE-7B03V-00A1E	One CPU, two PCIe x8	
PICMG 1.0		
989K610302E (PCA-6103P2V-0A2E)	One CPU,2 PCI (320bit/33MHz)	PICMG 1.0 Full-Size SBC

IPC-603

2U 3-Slot Rackmount Chassis for ATX/ MicroATX Motherboard with Front I/O



CE FCC

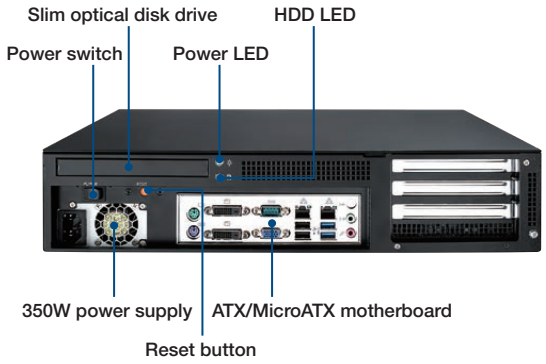
Features

- Front I/O, short depth 2U chassis (308 mm)
- Shockproof drive for slim ODD and one 3.5" HDD
- Equipped with 350W single power supply
- Easy-to-replace air filters

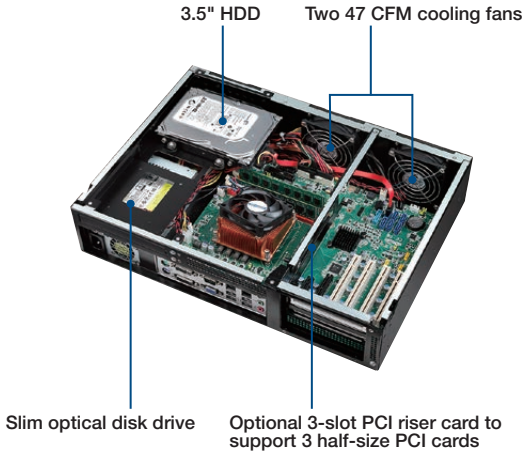
Specifications

Drive Bay		External	Internal
	Slim Optical Disk Drive	1	-
	3.5"	-	1
Cooling	Fan	2 (8 cm/47 CFM each)	
	Air Filters	3 (85 x 80 mm)	
Miscellaneous	Notification LEDs	Power & HDD activity	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 88 x 308 mm (19" x 3.46" x 12.1")	
	Weight	6.4 kg (14.1 lb)	

Front View

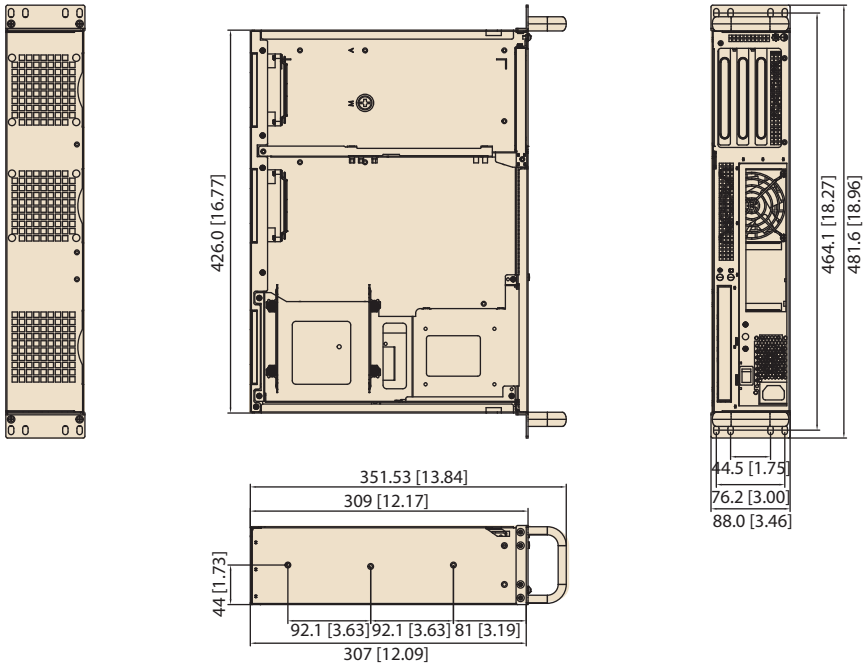


Inside View



Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Power Supply	Wattage	Type	Input
IPC-603MB-35BE	PS8-350FATX-XE	350W	Single	AC 100 ~ 240 V full range

Optional Accessories

Part Number	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)

Spare Parts

Part Number	Description
2130004795S000	Fan filter 80 x 85 x 5 mm

ACP-2000/ IPC-602

2U 6-Slot Rackmount Chassis with Front USB and PS/2 Interfaces



CE FCC

Features

- 2U rackmount chassis supports up to 6 cards
- Butterfly backplane design
- Front-accessible USB and PS/2 connectors
- 250W / 300W AC ATX and DC power supply options
- Two 40 CFM cooling fans with air filter
- Lockable front door prevents unauthorized access

Features with ACP-2000 only:

- System alarm notification by front LED indicators
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

Specifications

Drive Bay		External	Internal
	Slim Optical Disk Drive	1/-	-
	3.5"	2/1	-/1
	5.25"	-/1	-
Cooling	Fan	2 (8 cm / 47 CFM each) / 2 (8 cm / 40 CFM each)	
	Air Filter	Yes	
Front I/O Interface	USB	2	
	PS/2	1	
Miscellaneous	LED Indicators	Power and HDD activity; fan and temperature for ACP-2000 only	
	Rear Panel	One 9-pin D-Sub opening	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.) (This feature only enabled in ACP-2000)		
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	0.5 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 88 x 451 mm (19" x 3.5" x 17.8")	
	Weight	11.5 kg (25.3 lb) / 11.3 kg (24.9 lb)	

Front View

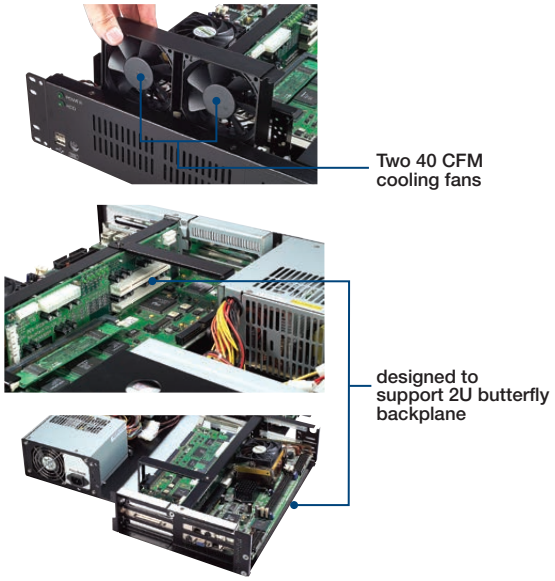
IPC-602



ACP-2000



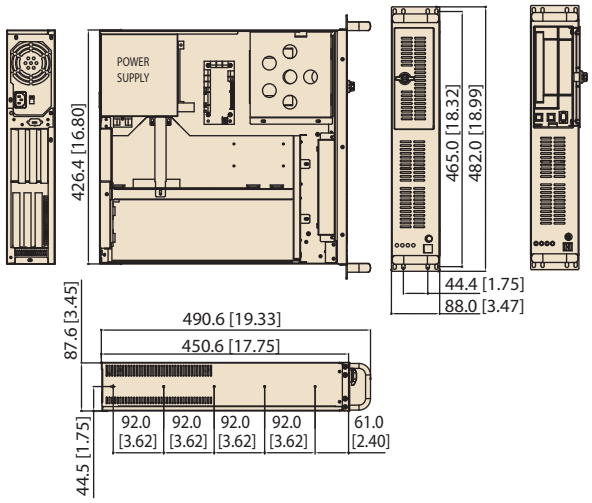
Inside View



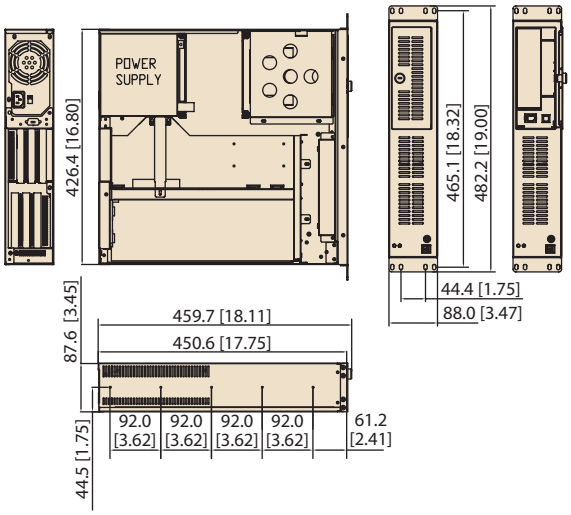
Dimensions

Unit: mm [inch]

ACP-2000



IPC-602



Ordering Information

Part Number	Power Supply	Backplane
PICMG 1.0		
ACP-2000P4-00BE	Without power supply, with ATX switch	989K610512E (PCA-6105P4V)
PICMG 1.3		
ACP-2000EBP-00BE	Without power supply, with ATX switch	-
IPC-602EBP-00XBE	Without power supply, with ATX switch	-

Power Supply Options

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-300ATX-ZBE	Bronze	300W	Single	AC 100 ~ 240 V (full range)
PS8-400ATX-ZE	Bronze	400W	Single	AC 100 ~ 240 V (full range)
PS-300ATX-DC48E	-	300W	Single	DC -48 V
RPS-300ATX-ZE (ACP-2000 only)	-	300W	(1+1) Redundant	AC 100 ~ 240 V (full range)

Optional Accessories

Part Number	Description
1950000869N002	P4 card cage
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays

Spare Parts

Part Number	Description
2130006189S000	Filter behind the door 156 x 45 x 5 mm
1990001949	Filter in the front of the fans 165 x 58 mm

ACP-2010/2320

2U Rackmount Chassis for ATX/ MicroATX Motherboard with Low-Profile Rear Bracket Option



CE FCC

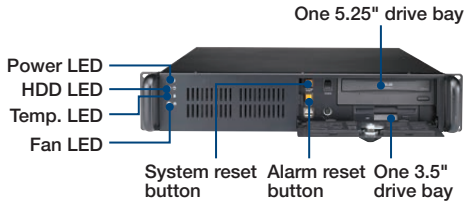
Features

- LED indicators and audible alarm notification for system fault detection
- ACP-2010: One 5.25" and three 3.5 shock-resistant drive bays
- ACP-2320: One Slim optical disk drive, two internal 3.5" drives and dual how-swap SATA HDD trays
- Various riser card options to support three full-size PCI or PCIe cards for expansion
- Supports 250W /350W single power supply, or 250W redundant power supply
- Reusable and washable air filters
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

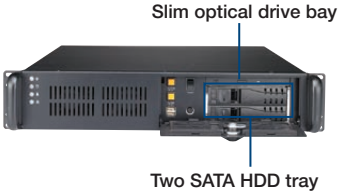
Specifications

Drive Bay		External	Internal
	Slim Optical Disk Drive	- / 1	-
	5.25"	1 / 0	-
	3.5"	1 / 2	2 / 2
	Hot Swap	- / 2 (Compatible with 3.5" or 2.5" devices)	-
Cooling	Fan	2 (8 cm /47 CFM each) / 2 (8 cm /47 CFM each) + 1 (6 cm /28 CFM) for SATA storage unit	
	Air Filters	Yes	
	Smart Fan	System fan speed referring to chassis thermal sensor, or CPU temperature (Available with selected Advantech MBs/CPU cards)	
Front I/O Interface	USB 2.0	2	
	PS/2	1	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan	
	Rear Panel	Two 9-pin D-Sub openings	
Intelligent System Module Remote Monitoring	CPU/system fan speed, CPU/system temperature, motherboard voltage (only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with your local Advantech rep. for detailed information.)		
Environment		Operating	Non-operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 88 x 480 mm (19" x 3.46" x 18.9")	
	Weight	10.7 kg (23.5 lb) / 11.7 kg (25.7 lb)	

Front View



ACP-2010

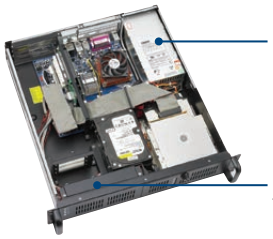


ACP-2320

Inside View



ACP-2010



ACP-2320

Rear View



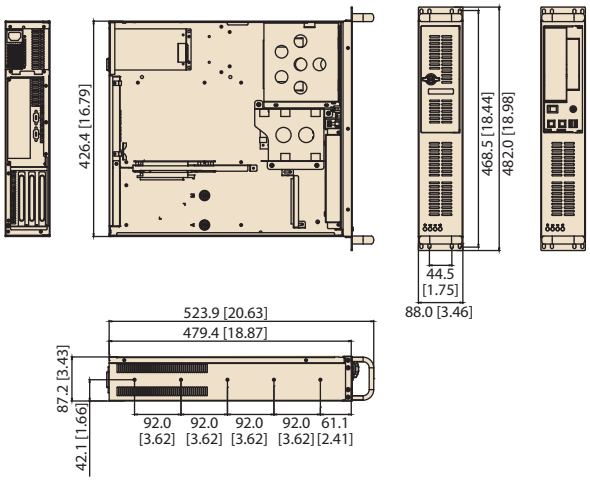
Rear I/O bracket for low profile add-on cards



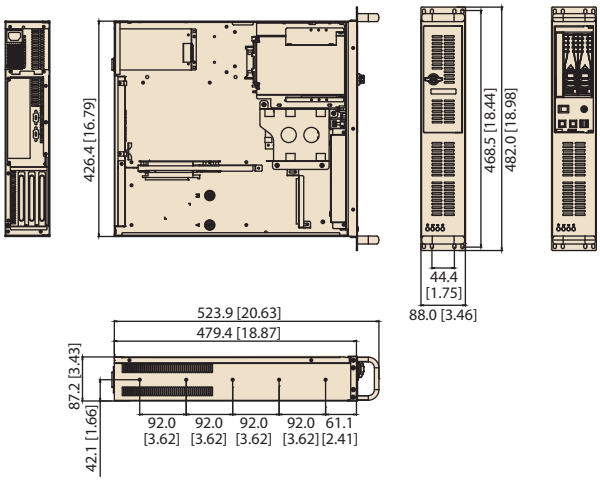
Dimensions

Unit: mm [inch]

ACP-2010



ACP-2320



Ordering Information

Part Number	Power Supply	Wattage	Switch type
ACP-2010MB-35CE	PS8-350FATX-XE	350W	ATX
ACP-2320MB-25CE	PS8-250FATX-XE	250W	ATX
ACP-2320MB-35CE	PS8-350FATX-XE	350W	ATX

Spare Parts

Part Number	Description
9662132020E	Black mobile HDD tray
1990007986S000	Filter behind the door 156 x 45 x 5 mm
1990001949	Filter in the front of the fans 168 x 58 mm

Optional Accessories

Part Number	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays
Rear I/O panel kit for low-profile add-on cards	
1939000361	Screws (should purchase 7 pcs)
1960034816N000	I/O bracket (should purchase 7 pcs)
1960019475T201	Rear panel for low-profile

ACP-2020

2U Rackmount Short Depth Chassis for ATX and mATX Motherboard



CE FCC

Features

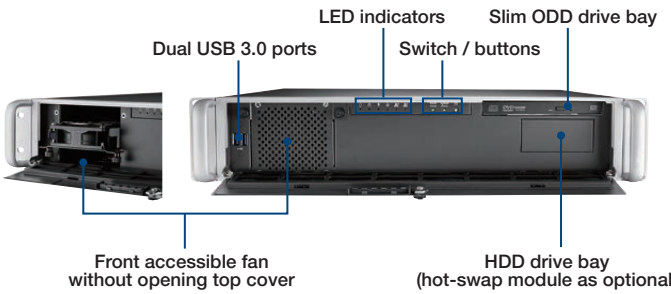
- 398 mm short depth 2U rackmount chassis
- Supports ATX and mATX form factor single processor motherboard
- Two Internal 2.5" drive bay and two "hot-swap or external" drive bay
- Supports 80 Plus single 350W or 500W redundant power supply
- Front-accessible system fan without opening top cover for easy maintenance
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

Specifications

		External	Internal
Drive Bay	Slim Optical Drive	1	-
	2.5"	2 (hot-swap tray module as optional)*	2
Cooling	Fan	1 (8 cm/41CFM)	
	Air Filter	Yes	
Front I/O Interface	USB 3.0*	2	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, LAN1, and LAN2	
	Rear Panel	Two 9-pin D-Sub	
Intelligent System Module Remote Monitoring	CPU/System fan speed, CPU/System temperature, motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enabled these functions, check with Advantech local rep. for detailed information.)		
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 88 x 398 mm (18.96" x 3.46" x 15.67")	
	Weight	8.6 kg (18.96 lbs)	

The USB 3.0 ports do not operate if the motherboard has no on-board USB 3.0 box header.
* ACP-2020 2.5" drive bay, both default internal and hot-swap tray module support 2.5" HDD with thickness less than 14.7mm.
* The hot-swap module only accepts 2.5" SATA HDD/SSD

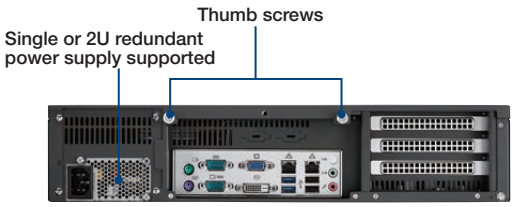
Front View





Optional SATA hot-swap tray module 98R1310010E

Rear View

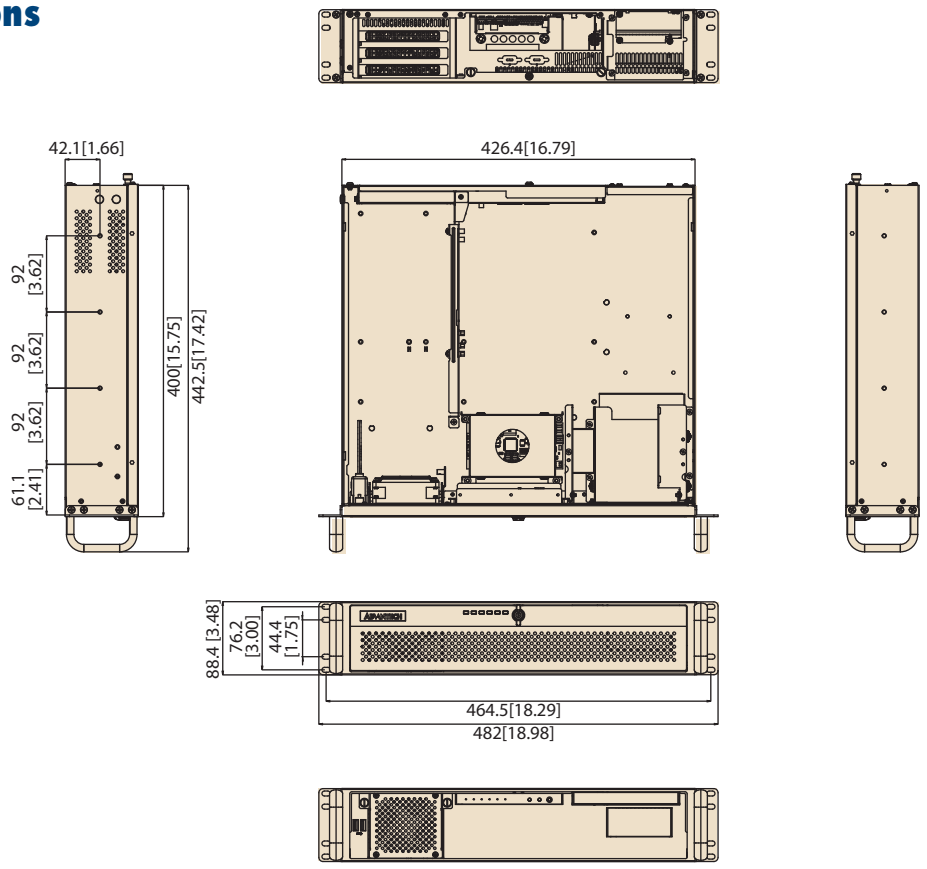


Top view



Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Power supply	80 Plus grade	Power supply type	Wattage	Switch
ACP-2020MB-35ZE	PS8-350FATX-XE	Bronze	Single	350W	ATX
ACP-2020MB-50RE	RPS8-500U2-XE	Bronze	1+1 redundant	500W	ATX

Suggest using CPU cooler 1960052651N021, max. CPU TDP 84W with no add-on card configuration.

Optional Accessories

Part Number	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
1990021407T000	Door filter
98R1310010E	2.5" SATA Hot-swap module

IPC-510

Economical 4U Rackmount Chassis with Front-Accessible USB and PS/2 Interfaces



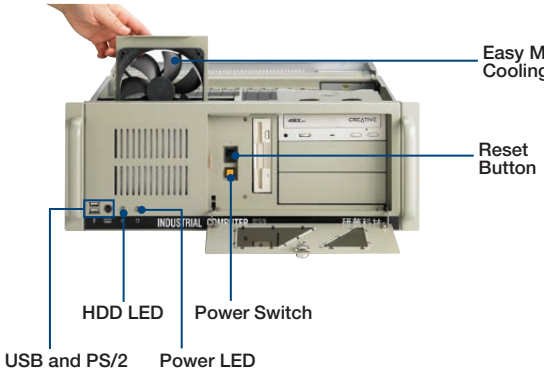
CE FCC

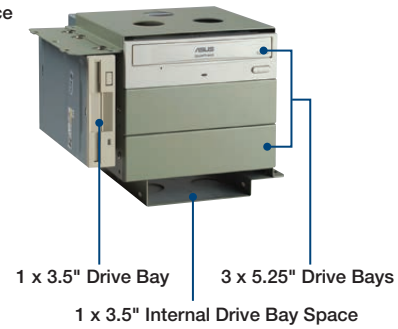
Features

- Most cost-effective rackmount chassis
- Supports PS/2 single power supply
- Easy-to-install front-accessible drive bays hold 3 x 5.25" and 2 x 3.5" drives (1 x front-accessible and 1 x internal)
- Front-accessible USB and PS/2 interfaces

Specifications

Drive Bay		External	Internal
	5.25"	3	-
	3.5"	1	1
Cooling	Fan	1 (12 cm/77 CFM)	
	Air Filter	Yes	
Front I/O	USB	2	
	PS/2	1	
Miscellaneous	LED Indicators	Power and HDD activity	
	Rear Panel	Backplane version: 2 x 9-pin D-Sub openings Motherboard version: 1 x 9-pin D-Sub and 1 x 68-pin SCSI openings	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	481 x 175 x 446 mm (19 x 7 x 17.6")	
	Weight	10.7 kg (23.5 lb)	







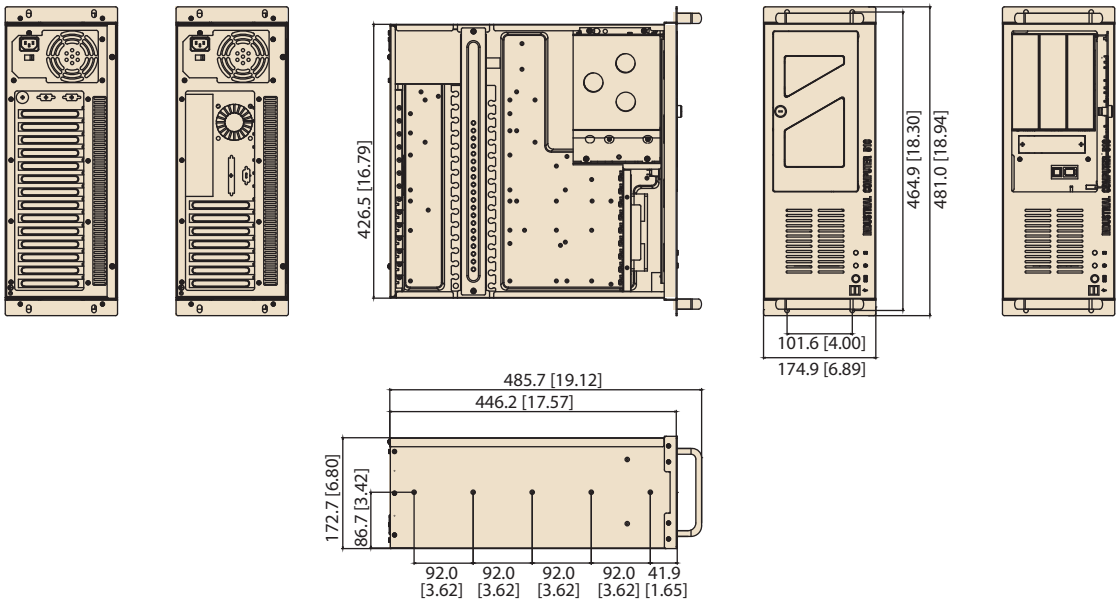
Motherboard
(fits 450 mm/17.7" depth)



Black Version

Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Color	Power Supply	Wattage	Switch Type
Backplane Version				
IPC-510BP-30CE	Beige	PS8-300ATX-ZBE	300W	ATX
IPC-510BP-30ZCE	Black	PS8-300ATX-ZBE	300W	ATX
IPC-510BP-40ZCE	Black	PS8-400ATX-ZE	400W	ATX
Motherboard Version				
IPC-510MB-30CE	Beige	PS8-300ATX-ZBE	300W	ATX
IPC-510MB-40CE	Beige	PS8-400ATX-ZE	400W	ATX
IPC-510MB-30ZCE	Black	PS8-300ATX-ZBE	300W	ATX
IPC-510MB-40ZCE	Black	PS8-400ATX-ZE	400W	ATX

Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting one 3.5" drive bay into two 2.5" SATA HDD trays
IPC-DT-5230E	Mobile rack for converting two 5.25" drive bays into three 3.5" SATA HDD trays

Spare Parts

Part Number	Description
2130018002T000	Fan filter 120 x 100 x 15 mm

IPC-610-L/ IPC-611

4U 15-Slot Rackmount Chassis with Front-Accessible Fan



IPC-610-L

CE FCC

Features

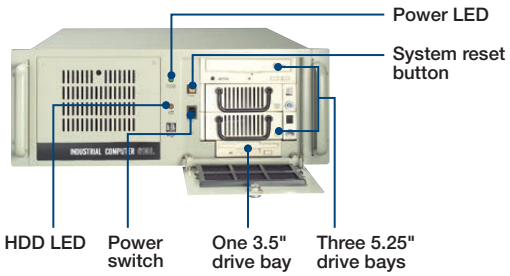
- Supports an ATX motherboard or a backplane with up to 15 slots
- Shock-resistant disk drive bay design holds up to three 5.25" and one 3.5" disk drives
- Special hold-down clamp design with rubber cushions protects the cards from shocks and vibrations
- Power and HDD activity notification improves system availability
- Front-accessible air filter for easy system maintenance
- Lockable front door prevents unauthorized access

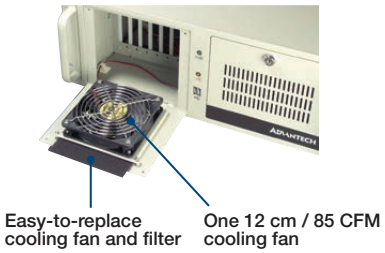
Specifications

Drive Bay		External	
	3.5"	1	
	5.25"	3	
Cooling	Fan	1 (12 cm / 85 CFM)	
	Air Filter	Yes	
Miscellaneous	LED Indicators	Power and HDD activity	
	Control	Power switch and system reset button	
	Rear Panel	Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub & one 25-pin D-sub openings	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85 % @ 40 °C, non-condensing	10 ~ 95 % @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, 1/2 sine wave)	
Physical Characteristics	Color / Logo	IPC-610-L: Beige / Advantech Logo IPC-611: Black / No Logo	
	Dimensions (W x H x D)	482 x 177 x 479 mm (19" x 7" x 18.9")	
	Weight	14.5 kg (31.9 lb) / 14.2 kg (31.2 lb)	

Front View

IPC-610-L



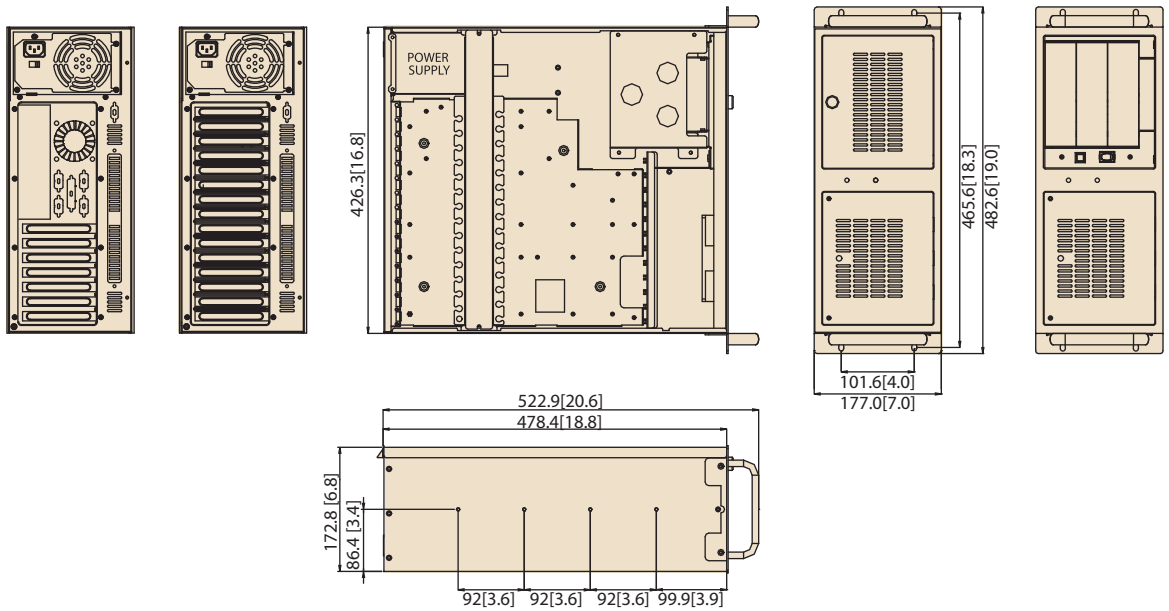


IPC-611



Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Power Supply	Wattage	Switch type
Backplane Version			
IPC-610BP-00LBE	-	-	ATX
IPC-610BP-50LBE	PS8-500ATX-ZE	500W	ATX
IPC-611BP-00XBE	-	-	ATX
Motherboard Version			
IPC-610MB-00LBE	-	-	ATX
IPC-610MB-40LBE	PS8-400ATX-ZE	400W	ATX
IPC-611MB-00XBE	-	-	ATX

Optional Accessories

Part Number	Description
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays

Spare Parts

Part Number	Description
2130006149S000	Fan filter 127 x 127 x 5 mm
2130004802S000	Door filter 142 x 97 x 5 mm

Power Supply Options

(For detailed power supply specs, please refer to Chapter 13)

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-250ATX-ZE	Bronze	250W	Single	AC 100 ~ 240 (full range)
PS8-300ATX-ZBE	Bronze	300W	Single	AC 100 ~ 240 (full range)
PS8-400ATX-ZE	Bronze	400W	Single	AC 100 ~ 240 (full range)
PS8-500ATX-ZE	Bronze	500W	Single	AC 100 ~ 240 (full range)
RPS8-350ATX-XE	Gold	350W	1+1 Redundant	AC 100 ~ 240 (full range)
RPS8-500ATX-XE	Bronze	500W	1+1 Redundant	AC 100 ~ 240 (full range)

IPC-610-H

4U Rackmount Chassis with Visual Alarm Notification



CE FCC

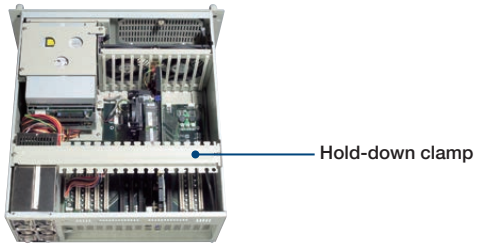
Features

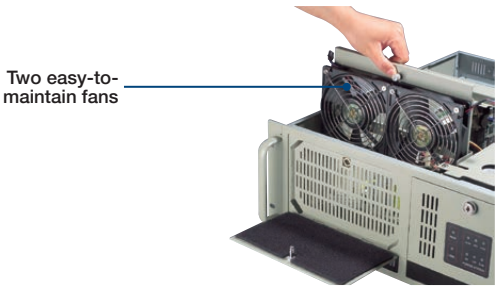
- 4U rackmount chassis supports up to 15 add-on cards
- Shock-resistant disk drive bay design holds up to three 5.25" and one 3.5" disk drives
- Front accessible USB & PS/2 interfaces for easy data transfer
- Dual front-accessible filtered cooling fans provide optimized and streamlined airflow
- Front LEDs indicate power status, and HDD activity
- Lockable front door prevents unauthorized access
- Supports 80 plus single power supply or redundant power supply up to 500W

Specifications

Drive Bay		External	
	3.5"	1	
	5.25"	3	
Cooling	Fan	2 (12 cm / 85 CFM each)	
	Air Filter	Yes	
Front I/O Interface	USB	2	
	PS/2	1	
Miscellaneous	LED Indicators	Power, HDD, and power voltage status	
	Rear Panel	Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub & one 25-pin D-sub openings	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 177 x 479 mm (19" x 7" x 18.9")	
	Weight	15 kg (33 lb)	

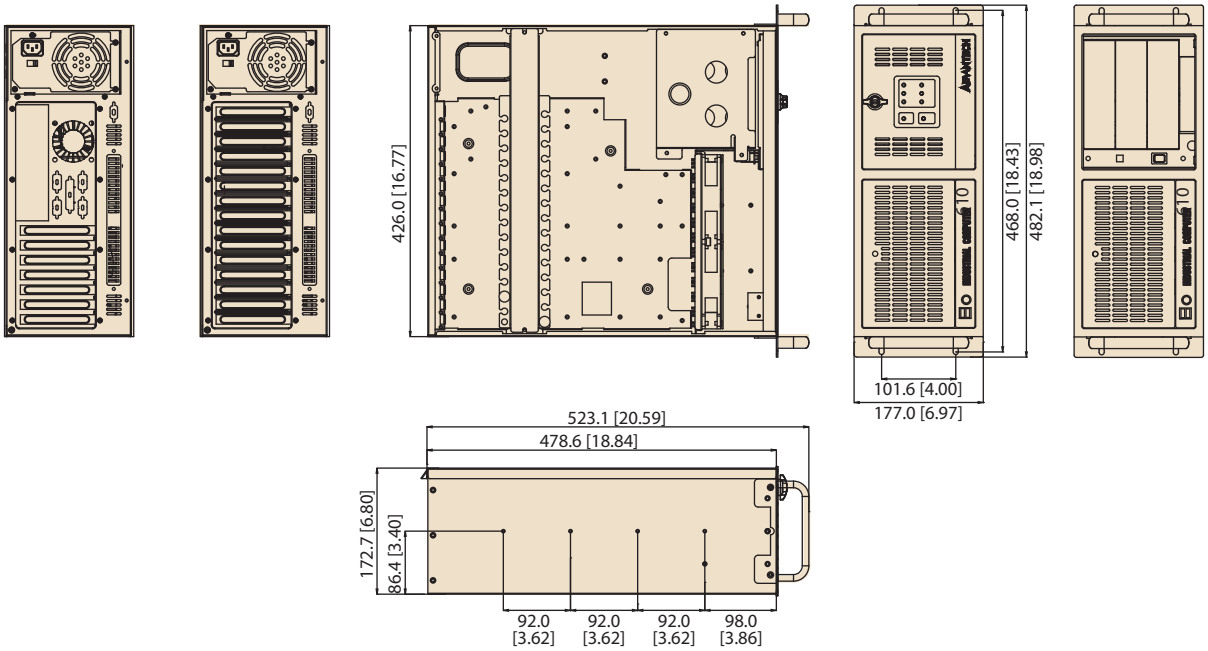






Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Power Supply	Switch Type
Backplane Version		
IPC-610BP-30HBE	PS8-300ATX-ZBE	ATX
IPC-610BP-40HBE	PS8-400ATX-ZE	ATX
IPC-610BP-50HBE	PS8-500ATX-ZE	ATX
Motherboard Version		
IPC-610MB-30HBE	PS8-300ATX-ZBE	ATX
IPC-610MB-40HBE	PS8-400ATX-ZE	ATX
IPC-610MB-50HBE	PS8-500ATX-ZE	ATX

Optional Accessories

Part Number	Description
1700006916	ATX 24P/20P + 4P + 15P 60cm (connecting from power supply to LED board)
1700006917	Two Mini DIN (connect to MB) / 6P (connect to front I/O board) PS2 KB/Mouse cable
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays

* If users use AIMB-763 or 3rd party motherboard, they need to purchase 1700006915 or 1700006916 for the front voltage LEDs to function normally. And they also need to purchase 1700006917 to make front PS/2 function normally.

Spare Parts

Part Number	Description
2130006147S000	Door filter 97.6 x 36.6 x 5 mm
2130004803S000	Fan filter 115 x 195 x 5 mm

IPC-631

4U Front I/O Short Depth Rackmount Chassis for ATX/MicroATX Motherboard



CE FCC

Features

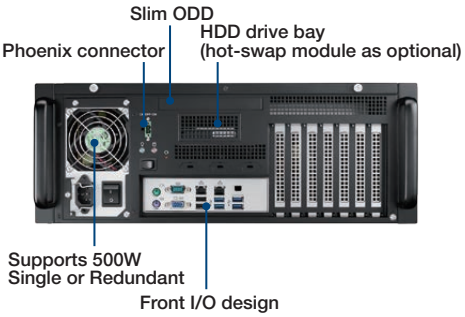
- All I/O ports, buttons, LEDs, drive bays, AC inlet located on the front side
- 350mm short depth
- Supports ATX/Micro ATX MB with CPU TDP up to 120W
- Built-in 500W single or redundant power supply
- Optional module for dual hot-swap 2.5" drive bays for RAID 0, 1
- PWM controlled smart fan generating low noise

Specifications

		External	Internal
Drive Bay	Slim Optical Drive Bay	1	-
	2.5"	2 (hot-swap tray module as optional)*	2
Cooling	Fan	2 (12cm/82 CFM)	
	Air Filter	Yes	
Front I/O Interface	Phoenix front PW-ON	1	
Miscellaneous	COM	3	
	LED Indicators	Power, HDD	
	Control	Power switch, System reset	
System Monitoring		Chassis intrusion switch	
		Operating	Non-Operating
Environment	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 177 x 348 mm (19" x 7.0" x 13.7")	
	Weight	8 kg (17.6 lb)	

* IPC-631 2.5" drive bay, both default internal and hot-swap tray module, support 2.5" HDD with thickness less than 14.7mm.
* The hot-swap module only accepts 2.5" SATA HDD/SSD

Front View



Inside View



Rear View



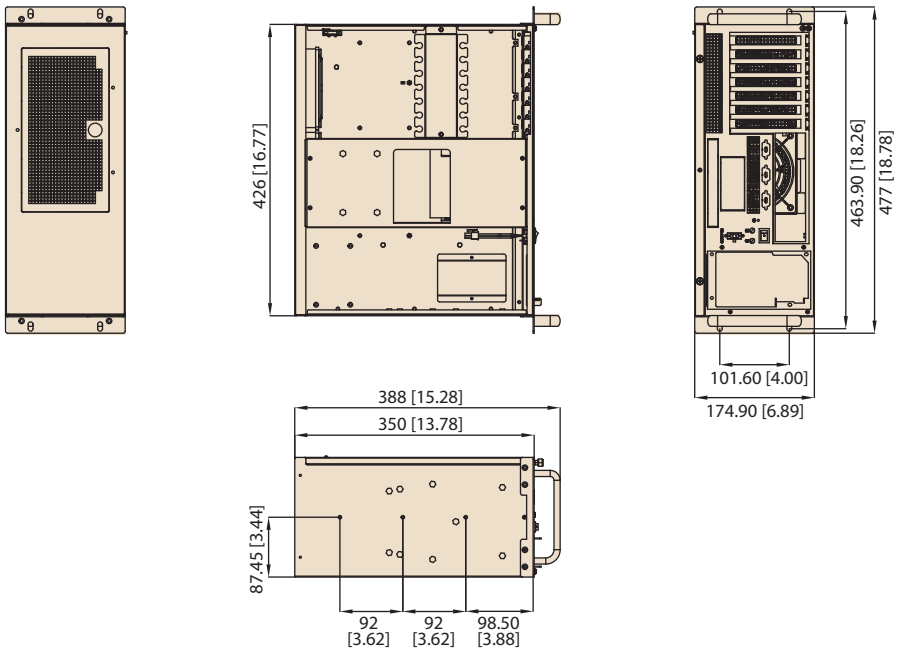
Easy Maintenance Fan Filter (Dual 12cm Fans Inside)



Optional SATA hot-swap tray module 98R1310010E

Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Power supply P/N	80 Plus grade	Power supply type	Wattage	Switch type
IPC-631MB-50ZE	PS8-500ATX-ZE	Bronze	Single	500W	ATX
IPC-631MB-50RE	RPS8-500ATX-XE	Bronze	1+1 redundant	500W	ATX

Optional Accessories

Part Number	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
98R1310010E	2.5" SATA Hot-swap module
2130017444T000	Door filter

ACP-4020

348mm Depth 4U Rackmount Chassis for Half-size SBC or ATX Motherboard



Features

- 4U rackmount chassis, only 348 mm depth
- Supports 14-slot BP for half-size SBC or ATX/MicroATX motherboard
- Shock-resistant disk drive bay holds one internal 2.5", and two front-accessible 3.5" drives, plus one slim optical disk drive
- Dual front USB 3.0 ports
- Front-accessible system fan without opening top cover for easy maintenance
- LED indicators and alarm notification for system fault detection
- Smart fan speed control
- Built-in Intrusion switch function
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

Quiet

CE FCC

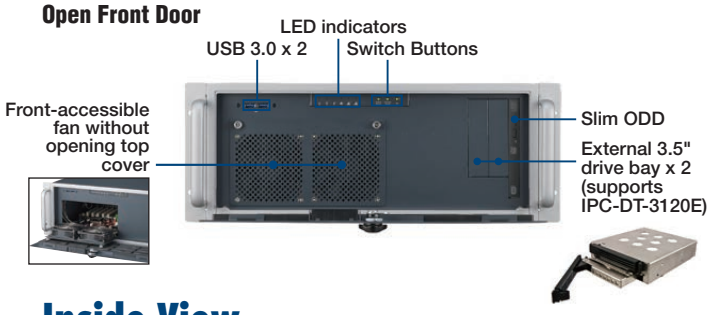
Specifications

		External	Internal
Drive Bay	Slim ODD	1	-
	3.5"	2	-
	2.5"	-	1
Cooling	Fan	2 (9 cm / 53 CFM)	
	Air Filter	Yes	
Front I/O Interface	USB 3.0*	2	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, LAN1, and LAN2	
	Rear Panel	Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub and one 25-pin D-Sub openings	
System Monitoring		Chassis intrusion switch	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 177 x 348 mm (19" x 7.0" x 13.7")	
	Weight	8.5 kg (18.7 lb)	

The USB 3.0 ports do not operate if the motherboard has no on-board USB 3.0 box header.

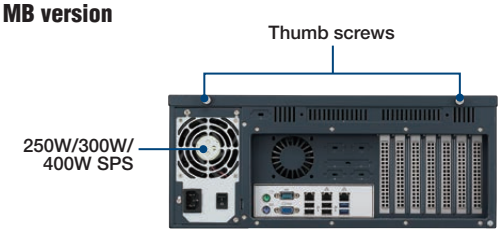
Front View

Open Front Door

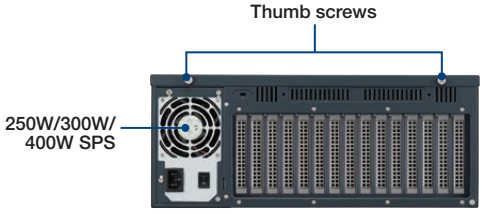


Rear View

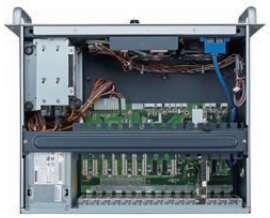
MB version



BP version

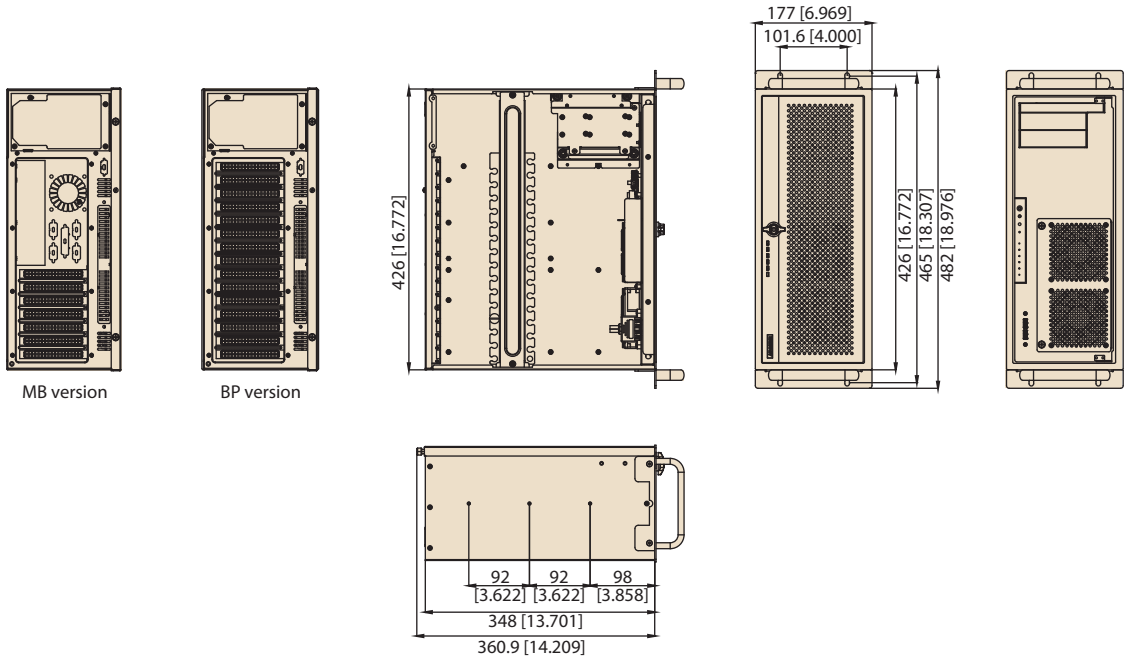


Inside View



Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Power Supply	Wattage	Switch type
Backplane Version			
ACP-4020BP-25ZE	PS8-250ATX-ZE	250W	ATX
ACP-4020BP-30ZE	PS8-300ATX-ZBE	300W	ATX
ACP-4020BP-40ZE	PS8-400ATX-ZE	400W	ATX
Mother board Version			
ACP-4020MB-25ZE	PS8-250ATX-ZE	250W	ATX
ACP-4020MB-30ZE	PS8-300ATX-ZBE	300W	ATX
ACP-4020MB-40ZE	PS8-400ATX-ZE	400W	ATX

Optional Accessories

Part Number	Description
IPC-DT-3120E	Drive bay module converting 1 3.5" to 2 hot-swap 2.5"
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)

Supported Backplanes

Part Number	Description
PCE-3B12-08	PICMG 1.3 BP with 1 PCIe x 16, 2 PCIe x 1, 8 PCI slots (for PCE-3028 & PCE-4128)
PCE-4B13-08	PICMG 1.3 BP with 2 PCIe x 8, 2 PCIe x 1, 8 PCI slots (only for PCE-4128)

Spare Parts

Part number	PCI	PCIex16	PCIex8	PCIex4	PCIex1
PICMG 1.3 backplane					
PCE-3B12-08	8	1	-	-	2
PCE-4B13-08	8	-	2	-	2
PCE-4B12-03	3	-	1	4	3
PCE-4B13-00	-	-	1	11	-

ACP-4D00

Dual-Node 350mm Depth 4U Chassis for Half-size Slot SBC



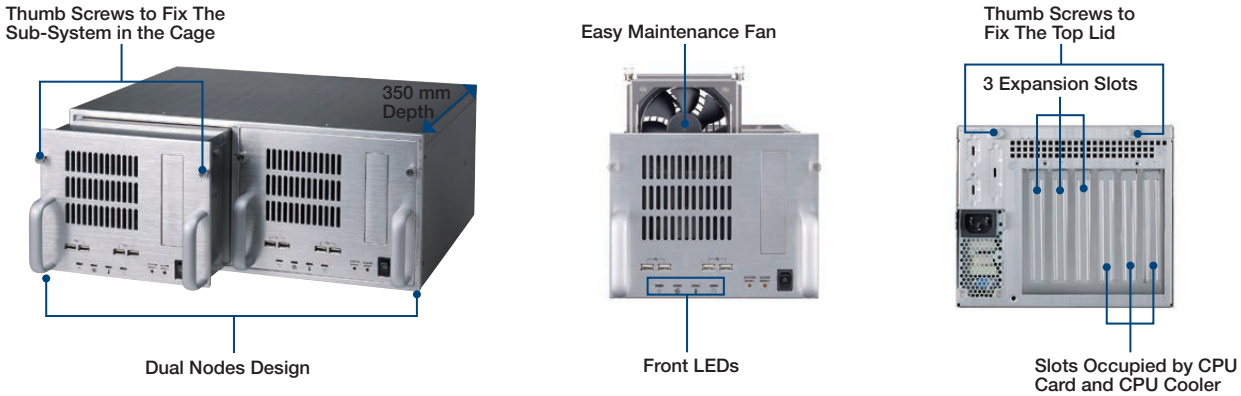
Features

- Dual nodes, 350mm depth design for easy maintenance and space saving
- Supports PICMG 1.3 or PCI half-size slot SBC
- Supports 6-slot backplane, 3 available slots per node
- Supports two front USB 3.0 ports each node
- Supports 250W or 350W Flex ATX PSUs

Specifications (Each Node)

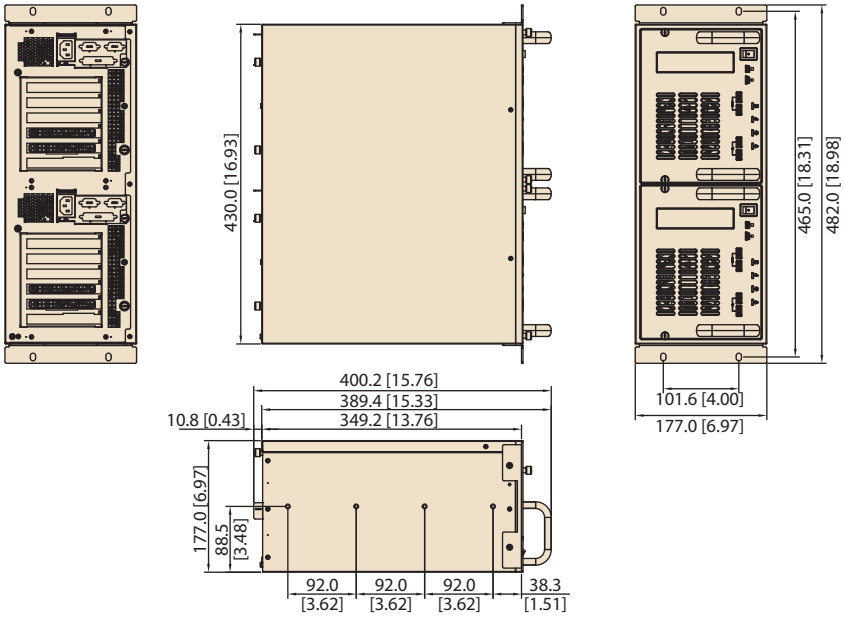
Drive Bay		External	Internal
	3.5"	1	-
Cooling	Fan	1 (9 cm / 58 CFM)	
	Air Filter	Yes	
Front I/O Interface	USB 2.0	2	
	USB 3.0	2	
Miscellaneous	LED Indicators	Power On/Off, HDD Action, Fan Status, Temperature Status	
	Front Buttons	System Reset, Alarm Reset, Power Switch	
	Real Panel	2 COM/VGA, 1 PRT Semi-Piercing Openings	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 Grms
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	430 x 177 x 350 mm (19" x 7" x 13.8")	
	Weight	15.0 kg	

Front and Back Views



Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Description
ACP-4D00BP-00XE	4U dual node chassis without BP, power supply

Power Supply Options

Part Number	80 Plus Grade	Specifications	
		Wattage	Input
PS8-250FATX-XE	80 Plus Bronze	250W	AC 100 ~ 240 V (full range)
PS8-350FATX-XE	80 Plus Bronze	350W	AC 100 ~ 240 V (full range)

Optional Accessories

Part Number	Description
1960053207N001	1.5U CPU cooler for 3 available expansion slots
IPC-DT-3120E	Drive bay module converting 1 3.5" to 2 hot-swap 2.5"
989K008734	Bracket to fix two 2.5" devices in a 3.5" drive bay
9680006905	Slide rail for ACP-4D00

* The 1.5U CPU cooler 1960053207N001 is for LGA 1155/1150 socket CPUs, it is thin enough to leave 3 available expansion slots on the backplane.

Supported Backplanes

Part Number	CPU Card Slot	PCIe Slot	PCI
PCE-3B03-00A1E	PICMG 1.3	1 PCIe x 16 1 PCIe x 4	-
PCE-3B06-00A1E	PICMG 1.3	1 PCIe x 16 4 PCIe x 1	-
PCE-3B06-03A1E	PICMG 1.3	1 PCIe x 16 1 PCIe x 1	3
PCA-6105P5-0B2E	PCI	-	4

ACP-4000

Quiet 4U Rackmount Chassis with Visual & Audible Alarm Notification



Features

- Supports either an ATX motherboard or PICMG backplane with up to 15 slots
- Shock-resistant disk drive bay design holds up to three 5.25" and one 3.5" disk drives
- LED indicators and alarm notification for system fault detection
- Low noise system fans
- Built-in Intelligent System Module enables whole system fan control and remote manageability

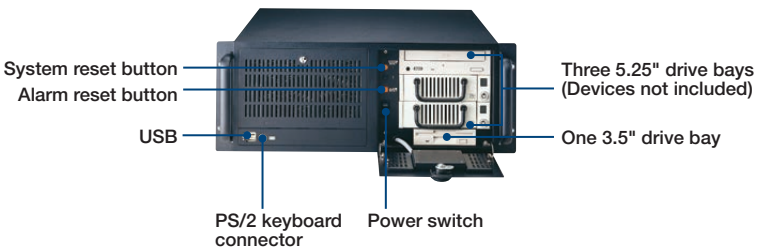
Quiet

CE FCC

Specifications

Drive Bay		External	
	3.5"	1	
	5.25"	3	
Cooling	Fan	2 (12 cm / 85 CFM each)	
	Air Filter	Yes	
Front I/O Interface	USB 2.0	2	
	PS/2	1	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, and power voltage status	
	Rear Panel	Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub & one 25-pin D-Sub openings	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 177 x 479 mm (19" x 7" x 18.9")	
	Weight	15.2 kg (33.5 lb)	

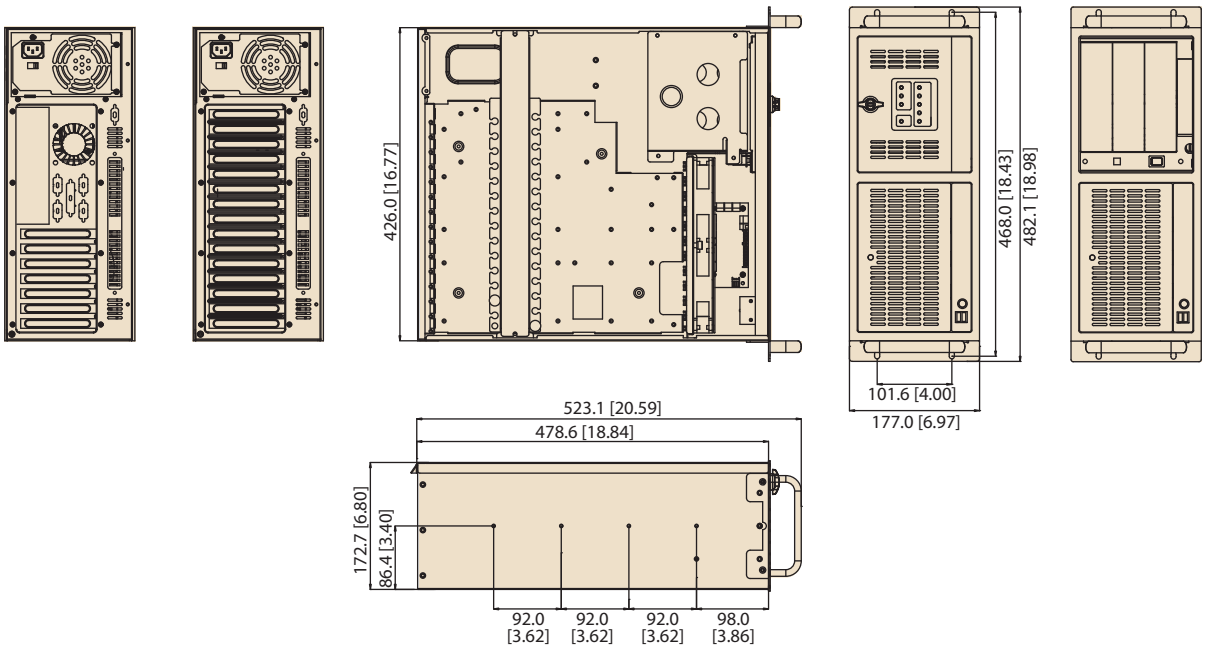
Front View





Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Power Supply	Wattage	Switch type
Backplane Version			
ACP-4000BP-30CE	PS8-300ATX-ZBE	300W	ATX
ACP-4000BP-40CE	PS8-400ATX-ZE	400W	ATX
ACP-4000BP-50CE	PS8-500ATX-ZE	500W	ATX
Mother board Version			
ACP-4000MB-30CE	PS8-300ATX-ZBE	300W	ATX
ACP-4000MB-40CE	PS8-400ATX-ZE	400W	ATX
ACP-4000MB-50CE	PS8-500ATX-ZE	500W	ATX
ACP-4000MB-50RCE	RPS8-500ATX-XE	500W (1+1) redundant	ATX

Optional Accessories

Part Number	Description
1700006915	ATX 24P/20P + 4P + 8P 60cm cable (connecting from power supply to alarm board)
1700006917	Two Mini DIN (connect to MB) / 6P (connect to front I/O board) PS2 KB/Mouse cable
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays

* If users use AIMB-763 or 3rd party motherboard, they need to purchase 1700006915 or 1700006916 for the front voltage LEDs to function normally. And they also need to purchase 1700006917 to make front PS/2 function normally.

* If users use ASMB-822, they need to purchase 1700006915 for the front voltage LEDs to function normally.

Spare Parts

Part Number	Description
2130006147S000	Door filter 97.6 x 36.6 x 5 mm
2130004803S000	Fan filter 115 x 195 x 5 mm

ACP-4010

Quiet 4U Rackmount Chassis for ATX/CEB/EEB Motherboard or Full-size SHB/SBC with Dual System Support



Features

- Supports either an ATX/CEB/EEB single/dual processors motherboard or a PICMG backplane with up to 15 slots
- Supports one or two systems in a single chassis
- Shock-resistant disk drive bay design holds up to two 5.25" and two 3.5" disk drives
- LED indicators and alarm notification for system fault detection
- Low noise system fans
- Built-in Intelligent System Module enables whole system fan control and remote manageability

Quiet

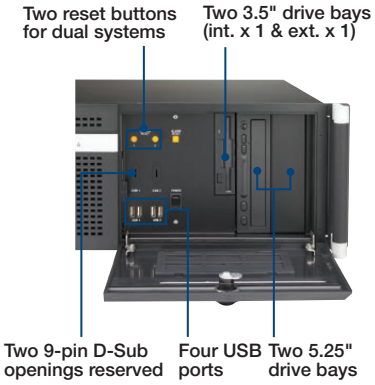
CE FCC

Specifications

Drive Bay		External	Internal
	5.25"	2	-
	3.5"	1	1
Cooling	Fan	2 (12 cm /85 CFM each)	
	Air Filter	Yes	
Front I/O Interface	USB 2.0	4	
	9-pin D-Sub	2 (Reserved)	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, LAN1, and LAN2	
	Rear Panel	Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub and one 25-pin D-sub openings	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 177 x 479 mm (19" x 7.0" x 18.9")	
	Weight	16.6 kg (36.5 lb)	

*Installation of all 15 full-size cards will sacrifice the two 3.5"disk drive bays.
*While an EEB motherboard is installed in the chassis, only one 3.5" and two 5.25" disk drive bays are available.

Front View

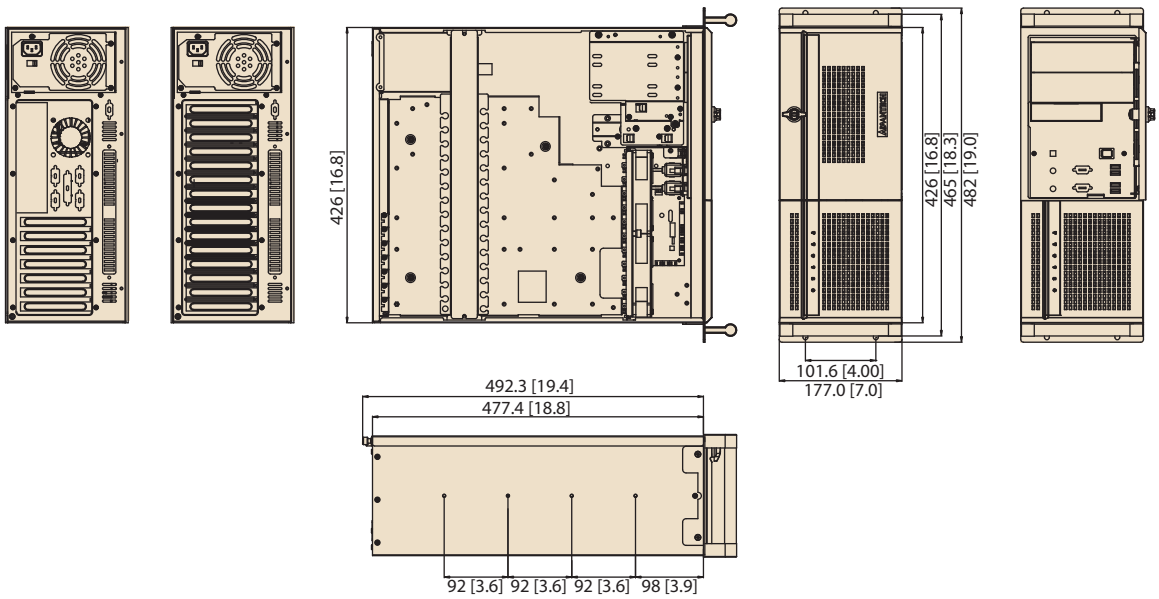


Inside View



Dimensions

Unit: mm [inch]



Ordering Information

Model Name	Description
Backplane Version	
ACP-4010BP-00BE	Without PSU with ATX switch
Motherboard Version	
ACP-4010MB-00BE	Without PSU with ATX switch

Power Supply Options

(For detailed power supply specs, please refer to Chapter 13)

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-300ATX-ZBE	Bronze	300W	Single	AC 100 ~ 240 V (full range)
PS8-400ATX-ZE	Bronze	400W	Single	AC 100 ~ 240 V (full range)
PS8-500ATX-ZE	Bronze	500W	Single	AC 100 ~ 240 V (full range)
RPS8-350ATX-XE	Gold	350W	1+1 Redundant	AC 100 ~ 240 V (full range)
RPS8-500ATX-XE	Bronze	500W	1+1 Redundant	AC 100 ~ 240 V (full range)
RPS8-750ATX-XE	Gold	750W	1+1 Redundant	AC 100 ~ 240 V (full range)

Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays

Spare Parts

Part Number	Description
1990001299	Fan filter 95 x 130 mm
1990001298	Door filter 150 x 68 mm

ACP-4320

Quiet 4U Rackmount Chassis with Dual Hot-Swap SATA HDD Trays



Features

- Supports either an ATX motherboard or a PICMG backplane with up to 15 slots
- Supports dual SATA hot-swap HDD trays
- LED indicators and alarm notification for system fault detection
- Low noise system fans
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

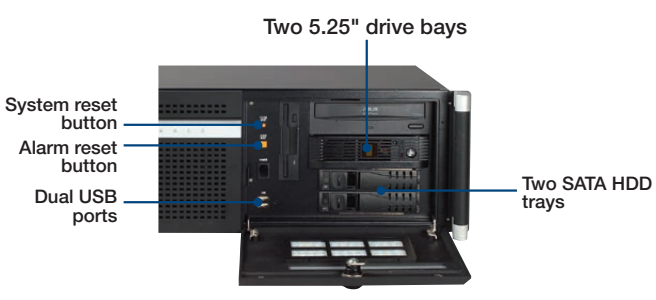
Quiet

CE FCC

Specifications

Driver Bay		External	Internal
	5.25"	2	-
	3.5"	1 SATA Tray	-
	Hot Swap	2 (compatible with 3.5" or 2.5" devices)	
Cooling	Fan	1(12 cm/74 CFM) + 1 (6cm / 28 CFM)	
	Air Filter	Yes	
	Smart Fan	System fan speed referring to chassis thermal sensor, or CPU temperature (Available with selected Advantech MBs/CPU cards)	
Front I/O Interface	USB 2.0	2	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, LAN1 and LAN2	
	Rear Panel	Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub opening and one 25-pin D-sub opening	
Intelligent System Module Remote Monitoring	CPU/System fan speed, CPU/system temperature, motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	- 20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C , non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibtration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10G (with 11 ms duration, half sine wave)	
Physical Characterisitics	Dimension (W x H X D)	482 x 177 x 479 mm (19" x 7.0" x 18.9")	
	Weight	17.6 kg (38.7lb)	

Front View

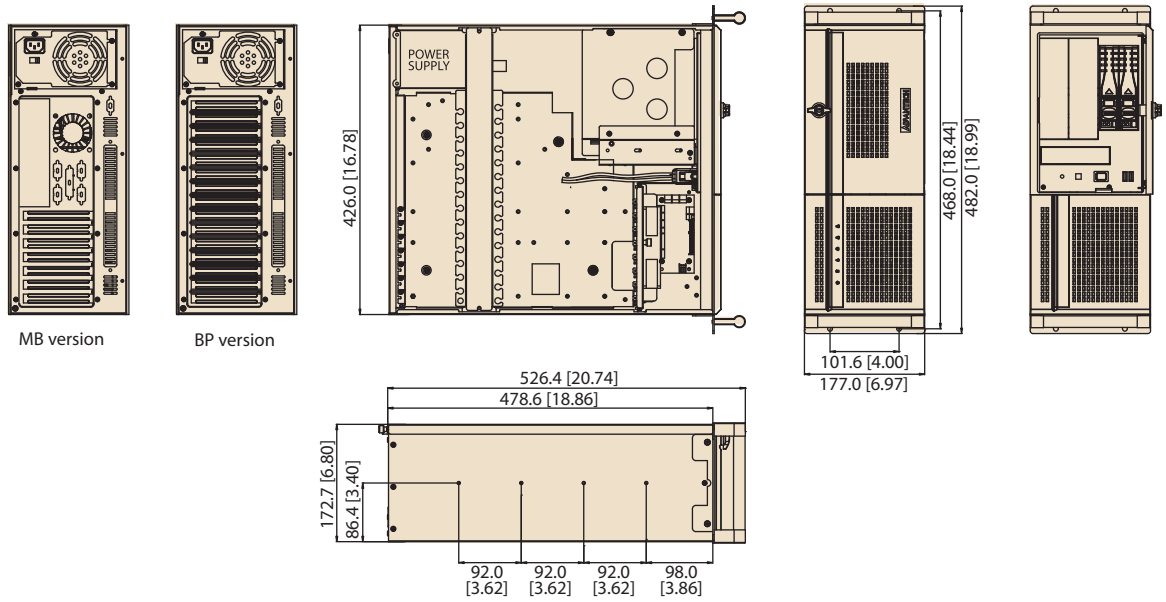


Inside View



Dimensions

Unit: mm [inch]



Ordering Information

Part number	Power supply	Wattage	Switch type
Backplane version			
ACP-4320BP-25BE	PS8-250ATX-ZE	250W	ATX
ACP-4320BP-40BE	PS8-400ATX-ZE	400W	ATX
ACP-4320BP-50BE	PS8-500ATX-ZE	500W	ATX
Motherboard version			
ACP-4320MB-25BE	PS8-250ATX-ZE	250W	ATX
ACP-4320MB-40BE	PS8-400ATX-ZE	400W	ATX
ACP-4320MB-50BE	PS8-500ATX-ZE	500W	ATX

Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays
1700007351	M Cable SATA 7P/SATA 7P 40CM C=R 90/180

When choosing ASMB-781, ASMB-782, ASMB-820, ASMB-823 for system mother board, 2pcs right-angle SATA cable (PN: 1700007351) are necessary for hot-swap driver bay.

Spare Parts

Part Number	Description
1990001299	Fan filter 95 x 130 mm
1990001298	Door filter 150 x 68 mm

ACP-4340

4U Rackmount Chassis for Full-size SHB/SBC or ATX/MicroATX Motherboard with 4 Hot Swap Drive Trays



Features

- Supports a PICMG backplane with up to 14 slots or an ATX/Micro-ATX motherboard
- Shock-resistant disk drive bay holds four hot-swap 3.5" and 2.5" SATA disk trays, one slim optical disk drive, and one 2.5" internal drive
- Dual front USB 3.0 ports
- Front-accessible system fan without opening top cover for easy maintenance
- LED indicators and alarm notification for system fault detection
- Smart fan speed control
- Built-in Intrusion switch function
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

Quiet

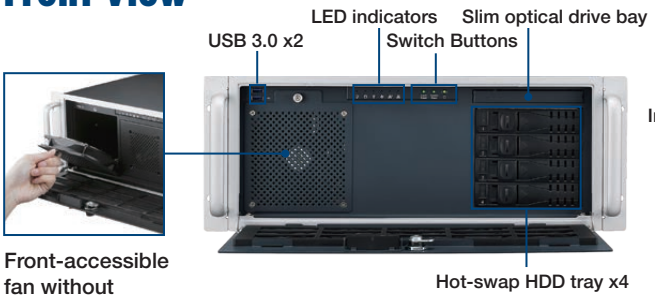
CE FCC

Specifications

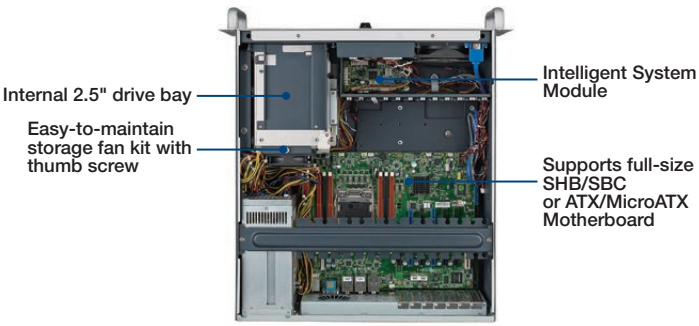
		External	Internal
Drive Bay	Slim Optical Drive Bay	1	-
	3.5"	-	-
	2.5"	-	1
	Hot Swap	4 (Compatible with 3.5" or 2.5" devices)	-
Cooling	Fan	1 (12 cm /74 CFM) + 1 (8 cm/56 CFM) for SATA storage unit	
	Air Filter	Yes	
Front I/O Interface	USB 3.0*	2	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, LAN1, and LAN2	
	Rear Panel	Backplane version: One 9-pin D-Sub opening Motherboard version: Five 9-pin D-Sub and one 25-pin D-Sub openings	
System Monitoring		Chassis intrusion switch	
Intelligent System Module Remote Monitoring	CPU/System fan speed, CPU/system temperature, motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 177 x 479 mm (19" x 7.0" x 18.8")	
	Weight	12.5 kg (27.5 lb)	

The USB 3.0 ports do not operate if the motherboard has no on-board USB 3.0 box header.

Front View



Inside View



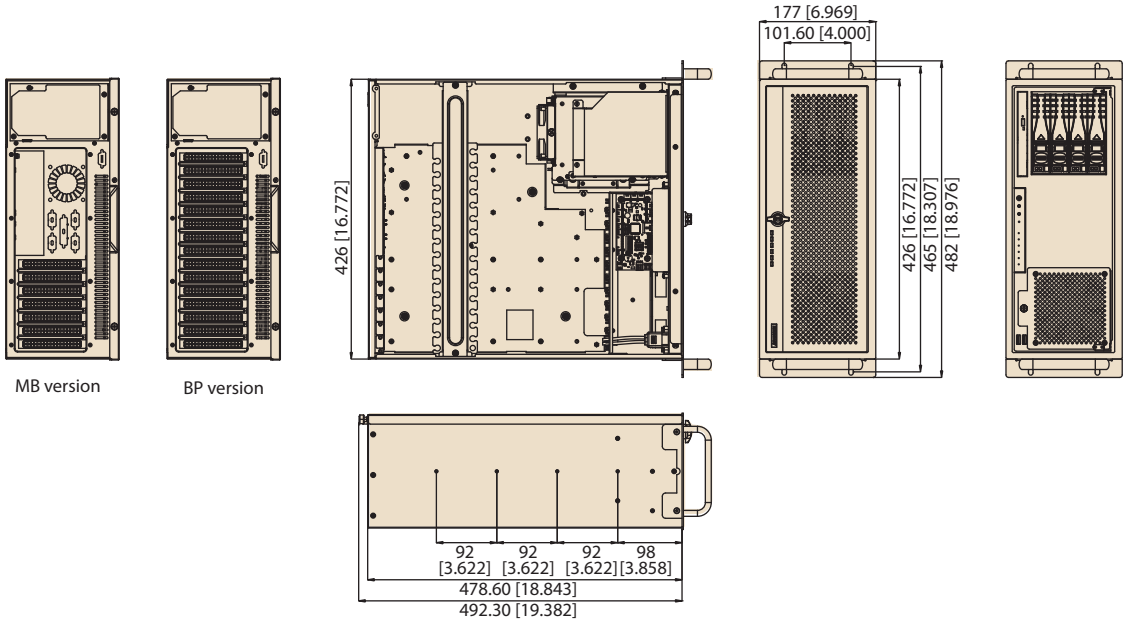
Rear View



*Note: Backplane, SBC, motherboard, and power supply are not included.

Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Power Supply	Wattage	Switch type
Backplane Version			
ACP-4340BP-40ZE	PS8-400ATX-ZE	400W	ATX
ACP-4340BP-50ZE	PS8-500ATX-ZE	500W	ATX
ACP-4340BP-70ZE	PS8-700ATX-ZE	700W	ATX
ACP-4340BP-50RE	RPS8-500ATX-XE	500W (1+1 Redundant)	ATX
Mother board Version			
ACP-4340MB-40ZE	PS8-400ATX-ZE	400W	ATX
ACP-4340MB-50ZE	PS8-500ATX-ZE	500W	ATX
ACP-4340MB-70ZE	PS8-700ATX-ZE	700W	ATX
ACP-4340MB-50RE	RPS8-500ATX-XE	500W (1+1 Redundant)	ATX

Optional Accessories

Part Number	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
98R1434000E	ACP-4340 fan kit for multi GPU card

Spare Parts

Part Number	Description
9662132020E	Black mobile HDD tray
1990021256T000	Door filter

IPC-623

4U 20-Slot Rackmount Chassis with Multi-System and Front-Accessible Redundant Power Supply



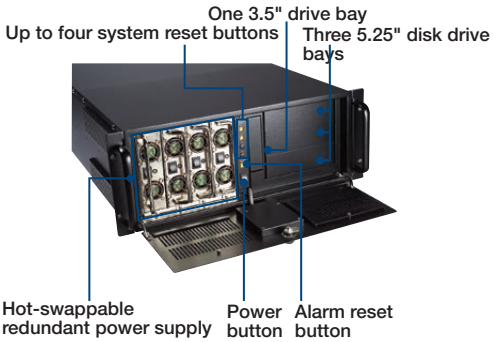
CE FCC

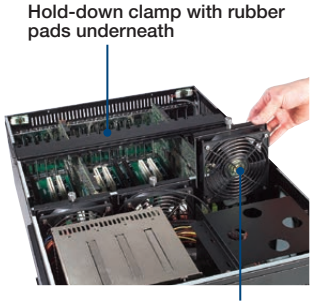
Features

- 4U rackmount chassis supports up to 4 multi-systems
- Front-accessible redundant power supply
- Shockproof disk drive bay design can hold up to three front-accessible 5.25" and one 3.5" disk drives, and one internal 3.5" HDD
- Three 12 cm / 114 CFM ball-bearing cooling fans
- Front LEDs and audible alarm notifications for system power status, fan operation, HDD status, and in-chassis temperature monitoring
- Dual top cover designed for easy maintenance
- Five easily replaceable air filters provide good airflow

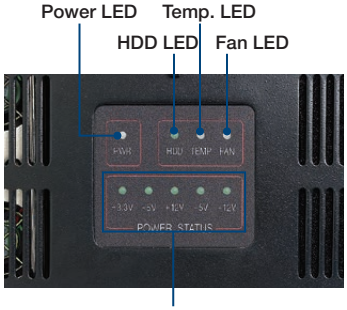
Specifications

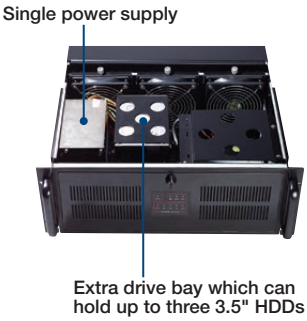
		External	Internal
Drive Bay	3.5"	1	1
	5.25"	3	-
Cooling	Fan	3 (12 cm / 114 CFM each)	
	Air Filter	4 (200 x 45 mm) + 1 (128 x 95 mm)	
Miscellaneous	LED Indicators	Power, HDD, fan, temperature, and power voltage status	
	Control	Power switch, system reset (reserve 3 more for quad-system) and alarm reset buttons	
	Hold-down Clamp	Hold-down clamp with rubber pad underneath and accessory rubber cushions	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
Physical Characteristics	Dimensions (W x H x D)	482 x 177 x 657 mm (19" x 7" x 26")	
	Weight	26 kg (57 lb)	







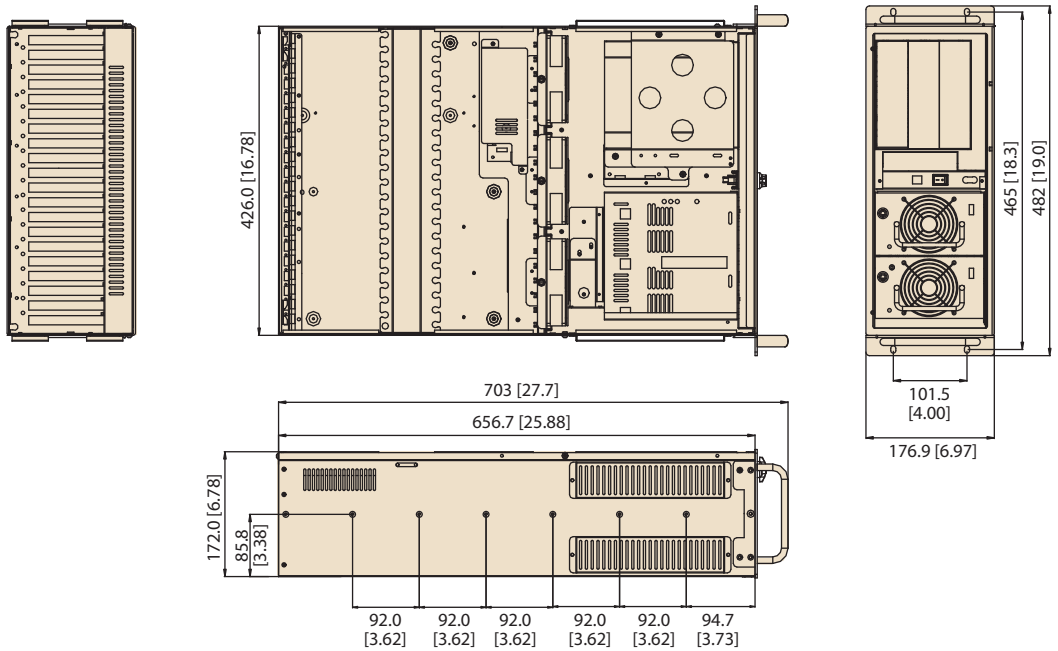






Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Power Supply
IPC-623BP-00XBE	Barebone chassis for single power supply
IPC-623BP-00RBE	Barebone chassis for redundant power supply

Power Supply Options

Part Number	Specifications	
	Watts	Input
96PS-A400WPS2-2 (Single)	400W (ATX, PFC)	AC 100 ~ 240 V (full range)
96PS-A500WPS2-2 (Single)	500W (ATX, PFC)	AC 115 ~ 240 V (full range)
96PSR-A460WOTH-2 (1+1 redundant)	460W (ATX, PFC)	AC 100 ~ 240 V (full range)

Optional Accessories

Part Number	Description
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD trays
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays
1700002459	Reset button with wire

Spare Parts

Part Number	Description
2130004799S000	Side filter 45 x 200 x 6 mm
2130004800S000	Door filter 130 x 95 x 6 mm

IPC-622

6U 20-Slot Rack-mount Short Depth Chassis with Redundant Power Supply



CE FCC

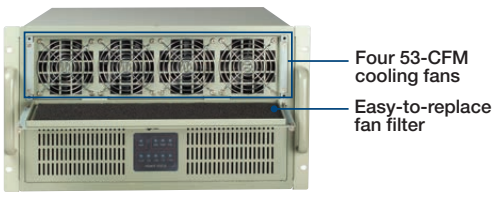
Features

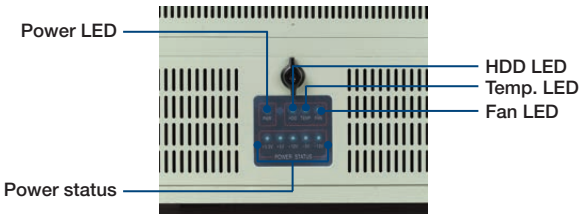
- 6U rackmount chassis supports PICMG 1.0/1.3 20 slots backplane
- Supports Mini-redundant power supply up to 750W
- LED indicators and audible alarm notification for system fault detection
- Four 9 cm / 53 CFM ball-bearing system fans for excellent cooling
- Front accessible fan filters for easy maintenance
- Lockable front door prevents unauthorized access
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

Specifications

Drive Bay		Front-accessible	Internal
	5.25"	4	-
	3.5"	-	2
Cooling	Fan	4 (9 cm / 58 CFM each)	
	Air Filter	Yes (Front accessible)	
Front I/O Interface	USB	2 (default) and reserve up to 4 sets of dual USB ports in the front	
Miscellaneous	LED Indicators	Power, HDD, fan, temperature and power voltage status	
	Control	Power switch, system reset (reserve 3 more for quad-system) and alarm reset buttons	
	Rear Panel	Four 9-pin D-sub openings	
Intelligent System Module Remote Monitoring	CPU/System fan speed , CPU/System temperature , motherboard voltage (Only selected Advantech MBs/CPU cards with WISE-PaaS/RMM installed can fully enable these functions, check with Advantech local rep. for detailed information.)		
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5 ~ 500 Hz)	0.5 Grms	1 G
	Shock	5G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	482 x 266 x 465 mm (19" x 10.5" x 18.3")	
	Weight	30.0 kg (66 lb)	

Front view

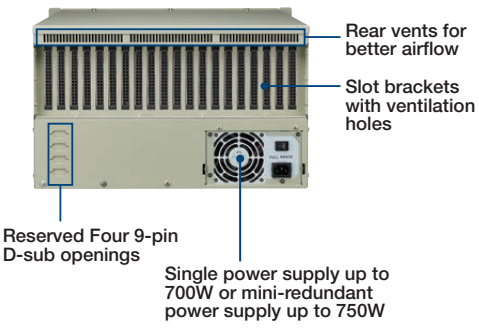




Inside View

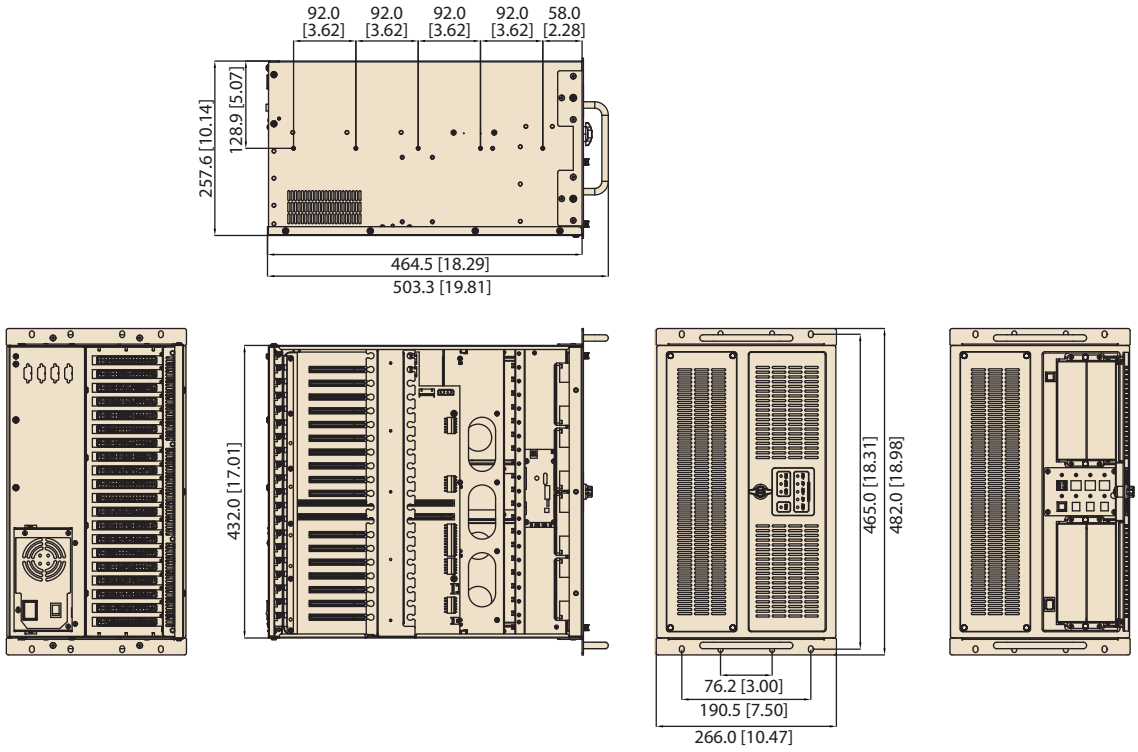


Rear View



Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Description
IPC-622BP-00DE	W/O power supply, with AT switch

Power Supply Options

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-400ATX-ZE	Bronze	400W	Single	AC 100 ~ 240V (full range)
PS8-500ATX-ZE	Bronze	500W	Single	AC 100 ~ 240V (full range)
PS8-700ATX-ZE	Bronze	700W	Single	AC 100 ~ 240V (full range)
RPS8-500ATX-XE (1+1 redundant)	Bronze	500W	1+1 Redundant	AC 100 ~ 240V (full range)
RPS8-750ATX-XE (1+1 redundant)	Gold	750W	1+1 Redundant	AC 100 ~ 240V (full range)

Optional Accessories

Part Number	Description
1700002444	Reset button with wire
1700007032	Dual USB connector with wire
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays

Spare Parts

Part Number	Description
2130004802S000	Door filter 142 x 97 x 5 mm
2130004804S000	Fan filter 382 x 93 x 5 mm

Advantech's Compact and Intelligent IPC
Designed for Equipment Builders



ADVANTECH

Enabling an Intelligent Planet

Full Range of Machine Automation Solutions

Advantech's new-generation IPCs are designed for equipment builders who face the common challenges of limited equipment space, plus the need for quick maintenance times and short line downtime.

Features:

- Small Footprint
- Easy Maintenance
- Simple Manageability



ACP-4D00
4U Dual-Node Intelligent IPC



ACP-4020
4U Short Depth Intelligent IPC



ACP-2020
2U Short Depth Intelligent IPC



IPC-631
4U Short Depth Single Side I/O IPC



IPC-603
2U Short Depth Single Side I/O IPC

www.advantech.com

intel IoT Solutions Alliance Premier

Advantech Headquarters
No. 1, Alley 20, Lane 26, Rueiguang Road,
Neihu District, Taipei 114, Taiwan, R. O. C.
Tel: 886-2-2792-7818
Fax: 886-2-2794-7304

9

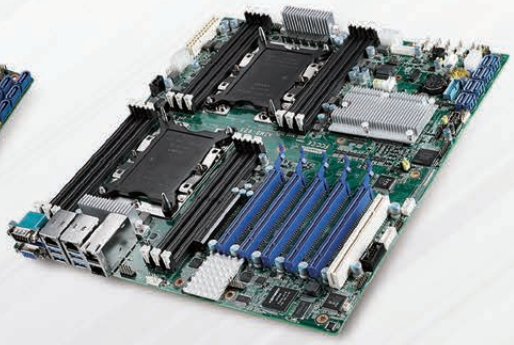
Industrial Server Motherboards

Selection Guide		*9-2*
Server-grade Motherboards		
ASMB-260	Intel® Atom™ C3000 Mini-ITX Server Board with 4 DDR4 DIMM, one PCIe x4 Slot (Gen 3.0), 8 SATA III, IPMI	*9-6*
ASMB-584	LGA 1150 Intel® Xeon® E3 v3/ 4th Generation Core™ Micro ATX Server Board with 2 PCIe x16 slots (x8 link), 1 PCIe x4, 1 PCI, USB 3.0, Dual LANs	*9-8*
ASMB-585	LGA 1151 Intel® Xeon® E3 v5/v6 & 6th/7th Generation Core™ series Micro ATX Server Board with 4 DDR4, 1 PCIe x16, 3 PCIe x4, Quad LANs, USB 3.0	*9-10*
ASMB-784	LGA 1150 Intel® Xeon® E3 v3/ 4th Generation Core™ ATX Server Board with 2 PCIe x16 slots (x8 link), 3 PCI, USB 3.0, Quad/Dual LANs	*9-12*
ASMB-785	LGA 1151 Intel® Xeon® E3 v5/v6 & 6th/7th Generation Core™ ATX Server Board with 4 DDR4, 4 PCIe, 3 PCI, 6 USB 3.0, 6 COM, 6 SATA3, Quad/Dual LANs	*9-14*
ASMB-813	LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 ATX Server Board with 8 DDR4 DIMM, 5 PCIe x16 Slot, 6 USB 3.0, IPMI	*9-16*
ASMB-815	LGA 3647-P0 Intel® Xeon® Scalable ATX Server Board with 6 DDR4, 5 PCIe x8 or 2 PCIe x16 and 1 PCIe x8, 8 SATA3, 6 USB3.0, Dual 10GbE, IPMI	*9-18*
ASMB-823	Dual LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 ATX Server Board with 6 DDR4, 4 PCIe x16, 6 USB 3.0, SATA3, Dual LAN, IPMI	*9-20*
ASMB-825	Dual LGA 3647-P0 Intel® Xeon® Scalable ATX Server Board with 6 DDR4, 4 PCIe x16 + 2 PCIe x8, 8 SATA3, 6 USB3.0, Dual 10GbE, IPMI	*9-22*
ASMB-913	Dual LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 EATX Server Board with 16 DDR4 DIMM, 3 PCIe x16, 6 USB 3.0, PME support, IPMI	*9-24*
ASMB-923	Dual LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 EATX Server Board with 8 DDR4, 4 PCIe x16+ 2 PCIe x8, 4 USB 3.0, IPMI	*9-26*
ASMB-925	Dual LGA 3647-P0 Intel® Xeon® Scalable EATX Server Board with 12 DDR4, 5 PCIe x16 + 1 PCIe x8 + 1 PCI, 8 SATA3, 6 USB3.0, Dual 10GbE, IPMI	*9-28*
ASMB-975	Dual LGA 3647-P0 Intel® Xeon® Scalable Proprietary Server Board with 12 DDR4, 4 PCIe x16 + 1 PCIe x8+4 PCIe x4, 14 SATA3, 8 USB3.0, Dual 10GbE, IPMI	*9-30*
PME Expansion Cards	Various Selections Supporting PCI, PCI-X, PCIe x1/x4/x8/x16	*9-32*
ASMB Riser Card		*9-33*

To view all of Advantech's Industrial Server Motherboards, please visit www.advantech.com/products.



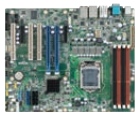




Server-grade Motherboards

NEW

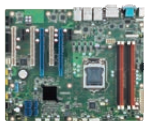


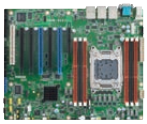



Model Name		ASMB-260	ASMB-584	ASMB-585	ASMB-782
Form Factor		Mini-ITX	Micro ATX	Micro ATX	ATX
Processor System	CPU	Intel® Atom® C3000 Series	Intel® Xeon® E3 v3 and 4th Gen. Core™ i3/i5/i7 Series	Intel® Xeon® E3 v5/v6 and 6th/7th Gen.Core™ i3/i5/i7 Series	Intel Xeon E3/E3 v2/ 2nd and 3rd Gen. Core i7/i5/i3/ Pentium Series
	Socket	-	1 x socket 1150	1 x socket 1151	1 x socket 1155
	Max. Speed	2.2 GHz	3.5 GHz	3.6 GHz	3.5 GHz
	Front Side Bus	-	-	-	-
	L3 Cache	2 MB (based on CPU sku)	8 MB	8 MB	8 MB
	Chipset	-	Intel C226	Intel C236	Intel C216
	BIOS	AMI 128 Mbit, SPI	AMI 128Mbit, SPI	AMI 128Mbit, SPI	AMI 64 Mbit, SPI
Expansion Slot	PCI	-	1*	-	3
	PCIe x16	-	-	1 (Gen3 x16 link)	-
	PCIe x8	-	2 (x16 slot with x8 link)	-	2 (x16 slot with x8 link)
	PCIe x4	1 (1 Gen3 x 4 link)	1	3 (2 Gen3 x4 link, 1 Gen3 x1 link)	2
	PCIe x1	-	-	-	-
Memory	Technology	DDR4 Reg/unbuffered 2400/2133/1866/1600 Mhz DIMM	DDR3 ECC/non-ECC Unbuffer 1066/1333/1600 MHz	DDR4 ECC/non-ECC Unbuffer 1600/1866/2133/2400 MHz	DDR3 ECC/Non-ECC Unbuffer 1066/1333/1600 MHz
	Max. Capacity	128 GB for RDIMM/ 64GB for UDIMM	32 GB ECC/Non-ECC UDIMM	64 GB ECC/Non-ECC UDIMM	32 GB ECC/Non-ECC UDIMM
	Socket	4x 288-pin DIMM	4 x 240-pin DIMM	4 x 288-pin DIMM	4 x 240-pin DIMM
Graphics	Controller	AST2500	Intel GT2-HD Graphics	Intel GT2-HD Graphics	Intel HD Graphics
	VRAM	DDR3 64MB	1 GB maximum shared memory with 2 GB and above system memory installed	1 GB maximum shared memory with 2 GB and above system memory installed	1 GB maximum shared memory with 2 GB and above system memory installed
	LCD	-	-	-	-
	TV-Out	-	-	-	-
	HDMI	-	-	-	-
	DVI	-	1	2	Yes (pin header)
	Dual Display	Yes	Yes	Yes	Yes (pin header for DVI)
Ethernet	Interface	10/100/1000 Mbps Gigabit & 10GBase-T Ethernet	10/100/1000 Mbps Gigabit Ethernet	10/100/1000 Mbps Gigabit Ethernet	10/100/1000 Mbps Gigabit Ethernet
	Controller	2 x Intel I210AT + 1 x Intel X557-AT2	1 x Intel I217LM, 1 x Intel I210AT (G2 SKU only)	1 x Intel I219LM, 3 x Intel I210AT (G4 SKU only)	1 x Intel 82579LM + 3 x Intel 82574L (G4 SKU only)
	Connector	RJ-45 x 3 (1 sharing IPMI function)	RJ-45 x 2 (G2 SKU) / RJ-45 x1 (VG SKU)	RJ-45 x 2 (G2 SKU) / RJ-45 x4 (G4 SKU)	RJ-45 x 4 (G4 SKU) / RJ-45 x 2 (G2 SKU)
TPM		Optional	Optional	Optional	Optional
SATA	Max. Data Transfer Rate	600MB/s for SATA3	600 MB/s	600 MB/s	300MB/s for SATA2 600 MB/s for SATA3
	Channel	Up to 8	6	7	4 for SATA2, 2 for SATA3
SAS	Max. Data Transfer Rate	-	-	-	-
	Channel	-	-	-	-
Rear I/O	VGA/DVI/HDMI/DP	1 / - / - / -	1 / 1 / - / 2	1 / 2 / - / -	1 / - / - / -
	Ethernet	3	2 for G2 SKU and 1 for VG SKU	2 for G2 SKU and 4 for G4 SKU	4 for G4 SKU and 2 for G2 SKU
	USB	2 (USB 3.0)	4 (2 USB 3.0; 2 USB 2.0)	4 (USB 3.0)	4 (2 USB 3.0; 2 USB 2.0)
	Audio	-	Mic-in, Line-out	Mic-in, Line-out	-
	Parallel	-	-	-	-
	Serial	1 (RS-232)	-	1 (RS-232)	1 (RS-232)
	PS/2	-	-	-	2
Internal Connector	DVI	-	-	-	Yes (pin header)
	USB	2 (2 USB3.0)	9 (2 USB 3.0; 6 USB 2.0; 1 USB 2.0 Type A)	9 (2 USB 3.0; 6 USB 2.0; 1 USB 2.0 Type A)	10 (2 USB 3.0; 6 USB 2.0; 2 USB 2.0 Type-A)
	Audio	-	1	1	1
	Serial	1	2	3	1
	Parallel	-	1	-	1
	SATA	8	6	7	6
	SAS	-	-	-	-
	Compact Flash	-	-	-	-
	GPIO	8 bit GPIO	8 bit GPIO	8 bit GPIO	1 (SATA SGPIO)
Watchdog Timer	Output	System reset	System reset	System reset	System reset
	Interval	Programmable, 1 ~ 255 sec	Programmable 1~255 sec	Programmable 1~255 sec	Programmable 1~255 sec
Page		9-6	9-8	9-10	online

* ASMB-584 A2 version has removed PCI slot for 1U & 2U chassis with riser.

NEW







ASMB-784	ASMB-785	ASMB-822	ASMB-813	ASMB-815
ATX	ATX	ATX	ATX	ATX
Intel® Xeon® E3 v3 and 4th Gen. Core™ i3/i5/i7 Series	Intel® Xeon® E3 v5/v6 and 6th/7th Gen. Core™ i3/i5/i7 Series	Intel® Xeon® E5-1600/ 1600 v2 / 2600 / 2600 v2	Intel® Xeon® E5-1600 v3/v4 and 2600 v3/v4 Series Core i7 Series	Intel® Xeon® Scalable Series
1 x socket 1150	1 x socket 1151	1 x socket 2011	1 x socket 2011-R3	1 x socket 3647-P0
3.5 GHz	3.6 GHz	3.7 GHz	2.5 GHz	3.6 GHz
-	-	-	QPI 9.6GT/s	Up to UPI 10.4 GT/s
8MB	8MB	20 MB	30 MB	38.5 MB
Intel C226	Intel C236	Intel C602J	Intel C612	Intel C620
AMI 128Mbit, SPI	AMI 128Mbit, SPI	AMI 64 Mbit, SPI	AMI 128 Mbit, SPI	AMI 256 Mbit, SPI
3	3	1	-	-
1 (switchable to two x8)	1 (switchable to two x8)	-	2/0	2/0
2 (switchable to one x16)	2 (switchable to one x16)	5	1/5	1/5
-	2	1	1	1
2	-	-	1	1
DDR3 ECC/Non-ECC Unbuffer 1066/1333/1600 MHz	DDR4 ECC/Non-ECC Unbuffer 1600/1866/2133/2400 MHz	DDR3 REG/ECC/Non-ECC Unbuffer 1066/1333/1600 MHz	DDR4 REG 2400/2133/1866/1600/1333 MHz DIMM	DDR4 REG 2666/2400/2133 MHz DIMM
32 GB ECC/Non-ECC UDIMM	64 GB ECC/Non-ECC UDIMM	96 GB/Non-ECC/ECC/REG DIMM	256 GB REG DIMM	192 GB REG DIMM
4 x 240-pin DIMM	4 x 288-pin DIMM	6 x 240-pin DIMM	8 x 288-pin DIMM	6 x 288-pin DIMM
Intel GT2-HD Graphics	Intel GT2-HD Graphics	AST1300/AST2300	AST1400/AST2400	AST2510/AST2500
1 GB maximum shared memory with 2 GB and above system memory installed	1 GB maximum shared memory with 2 GB and above system memory installed	DDR3 64MB	DDR3 64MB	DDR3 64MB
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
2	2	-	-	-
Yes	Yes	-	-	-
10/100/1000 Mbps Gigabit Ethernet	10/100/1000 Mbps Gigabit Ethernet	10/100/1000 Mbps Gigabit Ethernet	10/100/1000 Mbps Gigabit Ethernet	10/100/1000 Mbps Gigabit & 10GBase-T Ethernet
1 x Intel I217LM + 3 x Intel I210AT (G4 SKU only)	1 x Intel I219LM + 3 x Intel I210AT (G4 SKU only)	1 x Intel 82579LM + 1 x Intel I210AT 1 x Realtek 8201EL (ASMB-822I SKU only)	2 x Intel I210AT	2 x Intel I210AT 1 x Intel X557-AT2 1 x Realtek 8201EL (ASMB-815I/815T2 SKUs)
RJ-45 x 4 (G4 SKU) / RJ-45 x2 (G2 SKU)	RJ-45 x 2 (G2 SKU) / RJ-45 x4 (G4 SKU)	RJ-45 x 3 (1 for IPMI function)	RJ-45 x 3 (1 for IPMI function)	RJ-45 x 5 (1 for IPMI function)
Optional	Optional	Optional	Optional	Optional
600 MB/s	600 MB/s	300MB/s for SATA2 600 MB/s for SATA3	600MB/s for SATA3	600MB/s for SATA3
6	6	4 for SATA2, 2 for SATA3	8 for SATA3	9 for SATA3
-	-	-	-	-
-	-	-	-	-
1 / 2 / - / -	1 / 2 / - / -	1 / - / - / -	1 / - / - / -	1 / - / - / -
4 for G4 SKU and 2 for G2 SKU	2 for G2 SKU and 4 for G4 SKU	2	2	4 (T2 SKU)
4 (2 USB 3.0; 2 USB 2.0)	4 (USB 3.0)	6 (2 x USB 3.0)	4 (USB 3.0), 2 (USB 2.0)	4 (USB 3.0), 2 (USB 2.0)
-	Mic-in, Line-out	-	-	-
-	-	-	-	-
1 (RS-232)	1 (RS-232)	1 (RS-232)	1 (RS-232)	1 (RS-232)
2	-	2	2	-
-	-	-	-	-
9 (2 USB 3.0; 6 USB 2.0; 1 USB 2.0 Type A)	9 (2 USB 3.0; 6 USB 2.0; 1 USB 2.0 Type A)	8 (6 USB 2.0, 2 USB 2.0 Type-A)	5 (2 USB3.0,2 USB2.0, 1 USB 2.0 Type-A)	5 (2 USB3.0, 4 USB2.0, 1 USB 2.0 Type-A)
1	1	1	1	1
1	3	1	1	1
1	1	1	-	-
6	6	6	8	8
-	-	-	-	-
-	-	-	-	-
8 bit GPIO	8 bit GPIO	8 bit GPIO	8 bit GPIO	8 bit GPIO
System reset	System reset	System reset	System reset	System reset
Programmable 1~255 sec	Programmable 1~255 sec	Programmable, 1 ~ 255 sec	Programmable, 1 ~ 255 sec	Programmable, 1 ~ 255 sec
9-12	9-14	online	9-16	9-18

Server-grade Motherboards

NEW







Model Name		ASMB-823	ASMB-825	ASMB-922
Form Factor		ATX	ATX	EATX
Processor System	CPU	Intel® Xeon® E5-2600 v3/v4 Series	Intel® Xeon® Scalable Series	Intel® Xeon® E5-2600 / 2600 v2
	Socket	2 x socket 2011-R3	2 x socket 3647-P0	2 x socket 2011
	Max. Speed	2.5 GHz	3.6 GHz	2.1 GHz
	Front Side Bus	QPI 9.6GT/s	Up to UPI 10.4 GT/s	QPI 8 GT/s
	L3 Cache	30 MB	38.5 MB	20 MB
	Chipset	Intel C612	Intel C620	Intel C602J
	BIOS	AMI 128 Mbit, SPI	AMI 256 Mbit, SPI	AMI 64 Mbit, SPI
Expansion Slot	PCI	-	-	-
	PCIe x16	4	4	4 (1 for PME)
	PCIe x8	2	2	1
	PCIe x4	1 (x8 slot with x4 link)	-	-
	PCIe x1	-	-	-
Memory	Technology	DDR4 REG 2400/2133/1866/1600/1333 MHz DIMM	DDR4 REG 2666/2400/2133 MHz DIMM	DDR3 REG/ECC/non-ECC Unbuffer 1066/1333/1600 MHz
	Max. Capacity	192 GB REG DIMM	192 GB REG DIMM	128 GB/Non-ECC/ECC/REG DIMM
	Socket	6 x 288-pin DIMM	8 x 288-pin DIMM	8 x 240-pin DIMM
Graphics	Controller	AST1400/AST2400	AST2510/AST2500	AST1300/AST2300
	VRAM	DDR3 64MB	DDR3 64MB	DDR3 64MB
	LCD	-	-	-
	TV-Out	-	-	-
	HDMI	-	-	-
	DVI	-	-	-
	Dual Display	-	-	-
Ethernet	Interface	10/100/1000 Mbps Gigabit Ethernet	10/100/1000 Mbps Gigabit & 10GBase-T Ethernet	10/100/1000 Mbps Gigabit Ethernet
	Controller	2 x Intel I210AT	2 x Intel I210AT + 1 x Intel X557-AT2	1 x Intel 82579LM + 1 x Intel I210AT 1 x Realtek 8201EL (ASMB-922I SKU only)
	Connector	RJ-45 x 3 (1 sharing IPMI function)	RJ-45 x 4 (1 sharing IPMI function)	RJ-45 x 3 (1 for IPMI function)
TPM		Optional	Optional	Optional
SATA	Max. Data Transfer Rate	600MB/s for SATA3	600MB/s for SATA3	300MB/s for SATA2 600 MB/s for SATA3
	Channel	9 for SATA3	9 for SATA3	4 for SATA2, 2 for SATA3
SAS	Max. Data Transfer Rate	-	-	-
	Channel	-	-	-
Rear I/O	VGA/DVI/HDMI/DP	1 / - / - / -	1 / - / - / -	1 / - / - / -
	Ethernet	2	4 (T2 SKU)	2
	USB	4 (USB 3.0)	2 (USB 3.0)	4 (2 x USB 3.0)
	Audio	-	-	-
	Parallel	-	-	-
	Serial	-	1 (RS-232)	1 (RS-232)
	PS/2	-	-	2
Internal Connector	DVI	-	-	-
	USB	5 (2 USB3.0, 2 USB2.0, 1 USB 2.0 Type-A)	5 (4 USB3.0, 4 USB2.0, 1 USB 2.0 Type-A)	9 (8 USB 2.0, 1 USB 2.0 Type-A)
	Audio	1	1	1
	Serial	1	1	1
	Parallel	-	-	-
	SATA	9	8	6
	SAS	-	-	-
	Compact Flash	-	-	-
	GPIO	8 bit GPIO	8 bit GPIO	8 bit GPIO
Watchdog Timer	Output	System reset	System reset	System reset
	Interval	Programmable, 1 ~ 255 sec	Programmable, 1 ~ 255 sec	Programmable, 1 ~ 255 sec
Page		9-20	9-22	online





NEW



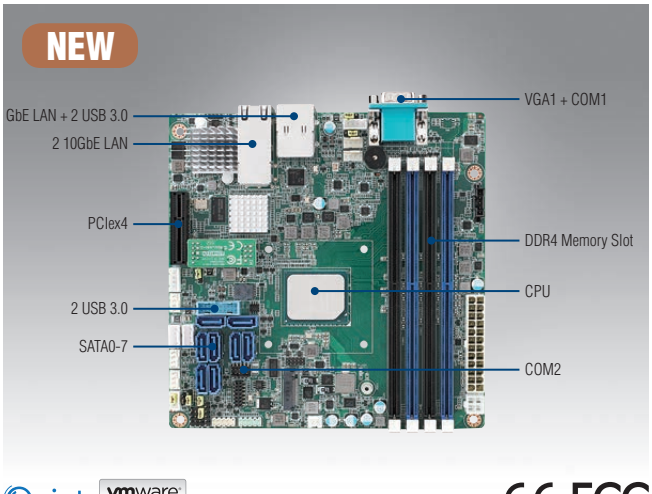
NEW



ASMB-913	ASMB-923	ASMB-925	ASMB-975
EATX	EATX	EATX	Proprietary
Intel® Xeon® E5-2600 v3/v4 Series	Intel® Xeon® E5-2600 v3/v4 Series	Intel® Xeon® Scalable Series	Intel® Xeon® Scalable Series
2 x socket 2011-R3	2 x socket 2011-R3	2 x socket 3647-P0	2 x socket 3647-P0
2.5 GHz	2.5 GHz	3.6 GHz	3.6 GHz
QPI 9.6GT/s	QPI 9.6GT/s	Up to UPI 10.4 GT/s	Up to UPI 10.4 GT/s
30 MB	30 MB	38.5 MB	38.5 MB
Intel C612	Intel C612	Intel C620	Intel C620
AMI 128 Mbit, SPI	AMI 128 Mbit, SPI	AMI 256 Mbit, SPI	AMI 256 Mbit, SPI
-	-	1	-
4 (1 for PME)	4	5	4
-	2	1	1
-	1	-	4
-	-	-	0
DDR4 REG 2400/2133/1866/1600/1333 MHz DIMM	DDR4 REG 2400/2133/1866/1600/1333 MHz DIMM	DDR4 REG 2666/2400/2133 MHz DIMM	DDR4 REG 2666/2400/2133 MHz DIMM
512 GB REG DIMM	256 GB REG DIMM	384 GB REG DIMM	384 GB REG DIMM
16 x 288-pin DIMM	8 x 288-pin DIMM	12 x 288-pin DIMM	12 x 288-pin DIMM
AST1400/AST2400	AST1400/AST2400	AST2510/AST2500	AST2510/AST2500
DDR3 64MB	DDR3 64MB	DDR3 64MB	DDR3 64MB
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
10/100/1000 Mbps Gigabit Ethernet	10/100/1000 Mbps Gigabit Ethernet	10/100/1000 Mbps Gigabit & 10GBase-T Ethernet	10/100/1000 Mbps Gigabit & 10GBase-T Ethernet
4 x Intel I210AT	2 x Intel I210AT	2 x Intel I210AT + 1 x Intel X557-AT2	2 x Intel I210AT + 1 x Intel X557-AT2
RJ-45 x 4 (1 sharing IPMI function)	RJ-45 x 3 (1 for IPMI function)	RJ-45 x 4 (1 sharing IPMI function)	RJ-45 x 4 (1 sharing IPMI function)
Optional	Optional	Optional	Optional
600MB/s for SATA3	600MB/s for SATA3	600MB/s for SATA3	600MB/s for SATA3
8 for SATA3	10 for SATA3	8 for SATA3	14 for SATA3
-	-	-	-
-	-	-	-
1 / - / - / -	1 / - / - / -	1 / - / - / -	1 / - / - / -
4	2	4 (T2 SKU)	4 (T2 SKU)
2 (USB 3.0)	2 (USB 3.0), 2 (USB 2.0)	4 (USB 3.0)	4 (USB 3.0)
-	-	-	-
-	-	-	-
1 (RS-232)	1 (RS-232)	1 (RS-232)	1 (RS-232)
-	2	-	-
-	-	-	-
7 (4 USB3.0,2 USB2.0, 1 USB 2.0 Type-A)	7 (2 USB3.0,4 USB2.0, 1 USB 2.0 Type-A)	7 (2 USB3.0, 4 USB2.0, 1 USB 2.0 Type-A)	11 (8 USB3.0, 2 USB2.0, 1 USB 2.0 Type-A)
1	1	1	1
1	1	1	1
-	-	-	-
8	10	8	12
-	-	-	-
-	-	-	-
8 bit GPIO	8 bit GPIO	8 bit GPIO	8 bit GPIO
System reset	System reset	System reset	System reset
Programmable, 1 ~ 255 sec	Programmable, 1 ~ 255 sec	Programmable, 1 ~ 255 sec	Programmable, 1 ~ 255 sec
9-24	9-26	9-28	9-30

ASMB-260

Intel® Atom™ C3000 Mini-ITX Server Board with 4 DDR4 DIMM, 1 PCIe x4 Slot (Gen 3.0), 8 SATA III, IPMI



Quiet vmware READY CE FCC

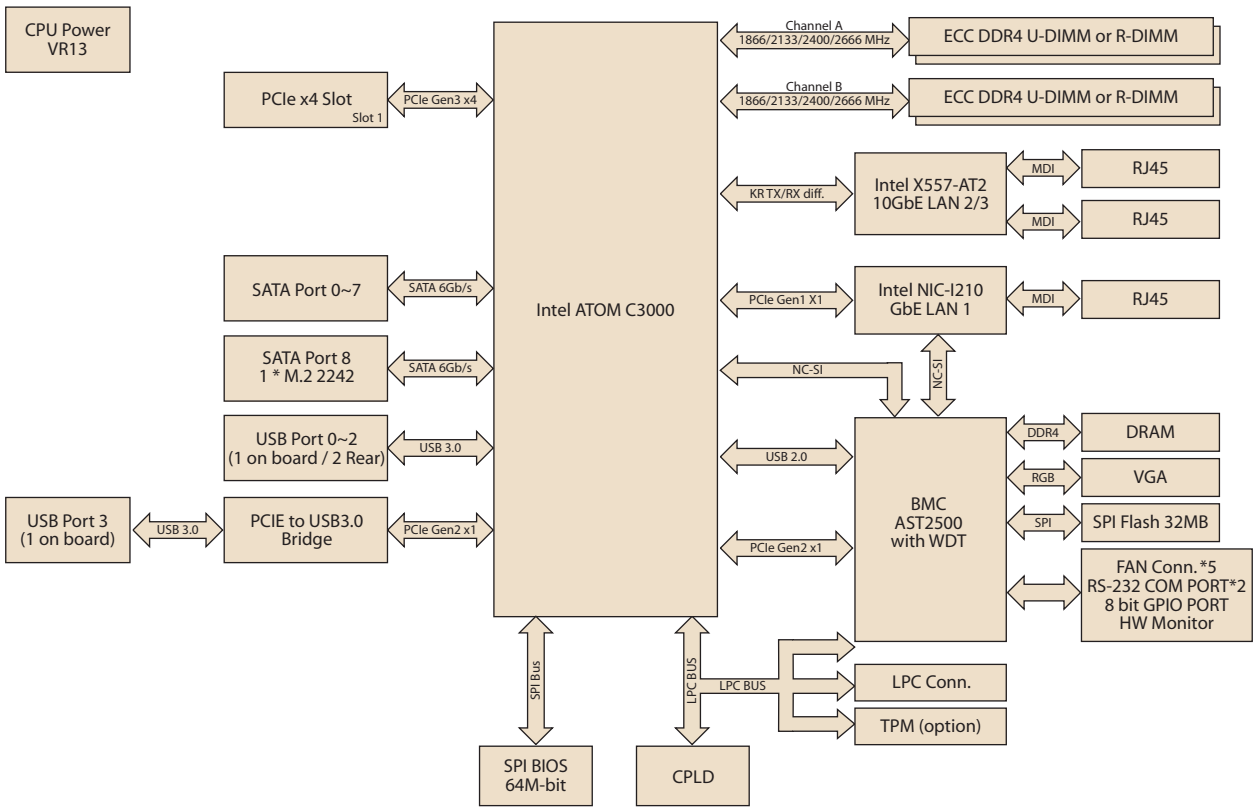
Features

- Mini-ITX Server Board with Intel® Atom™ C3000 processor
- Four DDR4 2400MHz ECC/Non-ECC UDIMM up to 64GB or Four DDR4 2400MHz RDIMM up to 128GB
- One PCIe x4, 8 SATA III, one M.2, four USB 3.0, and two 10GbE/one GbE LAN
- 0 ~ 60 °C ambient operation temperature range

Specifications

Form Factor		Mini-ITX form factor				
Processor System	Socket	Onboard SOC				
	CPU type	Intel® Atom™ C3000				
Core Logic	Chipset	N/A				
Memory	Total slots	4 (Dual Channel)				
	Capacity	Maximum 128GB for RDIMM Maximum 64BGB for UDIMM				
	Memory type	DDR4 2400/2133/1866/1600 MHz DIMM				
	Memory size	4 GB, 8 GB, 16 GB, 32GB (only for RDIMM)				
Expansion Slots	Total PCI/PCI-X/PCIe slots	1				
	Slot location 1	PCIe x4 slot (Gen3 x4 link)				
Graphics	VGA	Aspeed AST 2500				
Storage	IDE controller	-				
	SATA controller	8 x SATA III + 1 x M.2 6 Gb/s ports				
	SAS controller	-				
Networking	GbE/10GbE LAN	Intel I210AT/Intel X557-AT2 (dual 10GbE ports)				
Onboard I/O Connectors	LPC connector	1				
	PSU connector	24-pin ATX power connector or 4-pin 12V DC input				
	USB connector	1 x USB3.0 pin header (supports 2 x USB 3.0 port)				
	Fan header	5 x 4pin (4 for system + 1 for CPU)				
	SMBus	1				
	Chassis intruder	1				
	Front LAN LED	1				
	Audio Header	-				
	Serial port header	1				
Rear I/O Connectors	External serial port	1				
	External USB port	2 (supports 2 x USB 3.0)				
	VGA port	1				
	RJ-45	3 (share NIC for IPMI function)				
	PS/2 KB/mouse	-				
Management Solution	Software	-				
	Out of band remote management	Yes				
Monitoring	CPU temperature	Yes				
	System Monitoring	Yes				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Power Requirement	Power On	3.3V	5V	12V	5Vsb	-12V
		0.10A	0.10A	6.41A	0.54A	0A
Environment		Operating			Non-operating	
	Temperature	0 ~ 60 °C, depends on CPU speed and cooler solution			-40 ~ 85 °C	
	Humidity	10% ~ 95%			10% ~ 95% (Non condensing)	
Physical Characteristics	Dimension (L x H)	170 x 170 mm (6.7" x 6.7")				

Block Diagram



Ordering Information

Part Number	CPU	Memory	10GbE Lan	GbE Lan	SATA	M.2	VGA	IPMI
ASMB-260T2-22A1	C3758	4 xDDR4 RDIMM/UDIMM	2	1	8	1	AST 2500	Yes
ASMB-260I-22A1	C3758	4 xDDR4 RDIMM/UDIMM	-	1	8	1	AST 2500	Yes
ASMB-260I-21A1	C3558	4 xDDR4 RDIMM/UDIMM	-	1	2	0	AST 2500	Yes

Packing List

Part Number	Description	Quantity
2061260I00	Driver CD	x 1
2001026000	Start manual	x 1
1960052312T020	I/O shield	x 1
1700003194	SATA Data Cables	x 2
1930007120-01	Screw for M.2 device	x 2
1700024372-01	SATA Power cable	x 2

Optional Accessories

Part number	Description
1960080721N001	Atom C3000 cooler for 1U/2U and tower chassis
1700019414	COM port cable w/o bracket
1700002204	Dual port USB 2.0 cable (27 cm) with bracket
1700020277-01	Dual port USB3.0 cable (30 cm) with bracket
19Z0000406T010	1U I/O shield

Note: Purchasing ASMB-260's proprietary CPU cooler from Advantech is a must.

I/O View



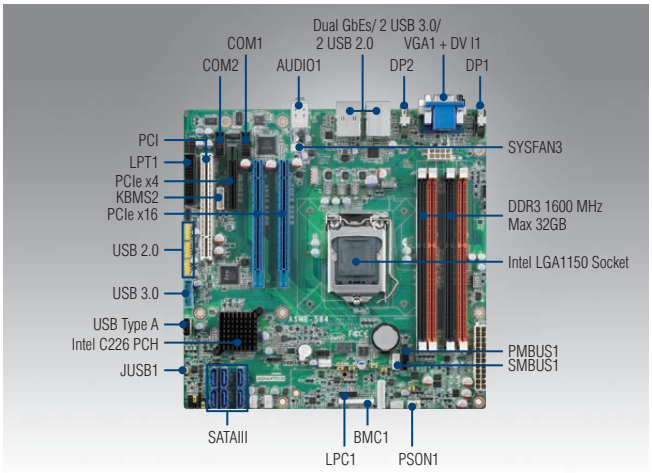
ASMB-260T2-22A1



ASMB-260I-22A1
ASMB-260I-21A1

ASMB-584

LGA 1150 Intel® Xeon® E3 v3/ 4th Generation Core™ Micro ATX Server Board with 2 PCIe x16 slots (x8 link), 1 PCIe x4, 1 PCI, USB 3.0, Dual LANs



Features

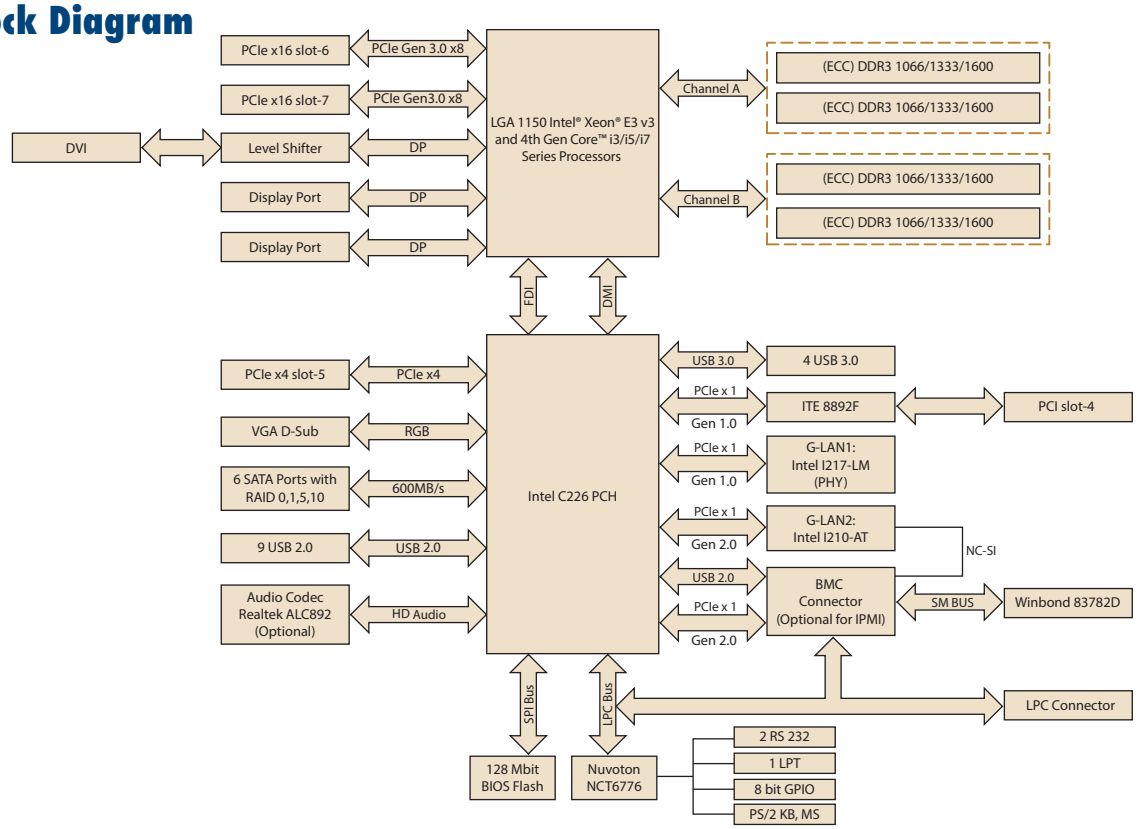
- Supports LGA 1150 Intel® Xeon® E3 v3 and 4th Generation Core™ i7/i5/i3 processors
- DDR3 1600 MHz ECC UDIMM up to 32GB
- Two PCIe x16 slots (x8 link), one PCIe x4 and one PCI slots
- Rackmount optimized placement with positive air flow design
- Supports Intel vPro, AMT 9.0, IPMI (optional), Software RAID 0,1,5,10 and Embedded software APIs/utilities

Specifications

Form Factor		Micro ATX form factor					
Processor System	Socket	Intel LGA 1150					
	CPU type	Intel® Xeon® E3-1200 v3 and Core™ i3/i5/i7 series (TDP up to 88W)					
Core Logic	Chipset	Intel C226 chipset					
Memory	Total slots	4 (Dual Channel)					
	Max. capacity	32 GB					
	Memory type	DDR3 ECC/Non-ECC 1600/1333/1066 MHz UDIMM (240-pin)*					
	Memory size	1 GB, 2 GB, 4 GB, 8 GB					
Expansion Slots	Total PCI/PCI-X/PCIe slots	4					
	Slot location 1	-					
	Slot location 2	-					
	Slot location 3	-					
	Slot location 4	PCI					
	Slot location 5	PCIe x4 (Gen2 x4 link)					
	Slot location 6	PCI x16 slot (Gen3 x8 link)					
	Slot location 7	PCI x16 slot (Gen3 x8 link)					
Graphics	Controller	Intel HD Graphics					
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed					
Storage	SATA controller	Intel C226: 6 SATA3 6 Gb/s ports with Intel Rapid Storage Technology support (for Windows only) (Supports software RAID 0, 1, 10 & 5)					
	SAS controller	-					
Networking	Interface	10/100/1000 Mbps					
	Controller	GbE LAN1: Intel I217-LM; GbE LAN2: Intel I210-AT					
	Connector	RJ-45 x 2					
Onboard I/O Connectors	Printer Port connector	1					
	PSU connector	24-pin SSI power connector + 8-pin SSI 12V power connector					
	USB connector	2 USB 3.0; 7 USB 2.0 (1 x USB Type-A)					
	Fan header	5 (4-pin)					
	SMBus	2					
	Chassis intruder	1					
	Front LAN LED	1					
	Serial port header	2 (RS-232)					
	Audio Connector	1 (ALC 892)					
	PS/2 KB/Mouse	1					
Rear I/O Connectors	External serial port	-					
	External USB port	4 (2 USB 3.0 and 2 USB 2.0)					
	VGA port	1					
	DVI	1					
	Display Port	2					
	RJ-45	2 for G2 version					
	PS/2 KB/mouse	-					
	Audio	2 (Mic-in, Line-out)					
Watchdog Timer	Output	System reset					
	Interval	Programmable 1 ~ 255 sec					
Power Requirement	Power On	Intel LGA1150 2.6GHz; DDR3 4G x4					
		3.3 V	5 V	12 V	12V_8P	5 Vsb	-12 V
		3.7 A	2.22 A	0.07 A	3.77 A	0.12 A	0.02 A
Environment		Operating			Non-operating		
	Temperature	0 ~ 60 °C (32 ~ 140 °F) Depends on CPU speed and cooler solution			-40 ~ 85 °C (-40 ~ 185 °F)		
	Humidity	0% ~ 90%			5% ~ 95% (Non-condensing)		
Physical Characteristics	Dimension (L x H)	244 x 244 mm (9.6" x 9.6")					

*Memory ECC function enabled or not depends on processor support.

Block Diagram



Ordering Information

Part Number	Chipset	Memory	LAN	DVI	Display Port	IPMI	PCI / PCIe Slots
ASMB-584G2-00A1E	C226	DDR3 ECC UNB/Non-ECC	2	1	2	Optional Module	1 / 3
ASMB-584G2-00A2E*	C226	DDR3 ECC UNB/Non-ECC	2	1	2	Optional Module	0 / 3
ASMB-584VG-00A1E	C226	DDR3 ECC UNB/Non-ECC	1	1	N/A	N/A	1 / 3

*ASMB-584G2-00A2E is designed for 1U & 2U chassis with riser.

Packing List

Part Number	Description	Quantity
2066S58402	Driver CD	x 1
2006S58410	Startup manual	x 1
1700003194	SATA data cables	x 2
1700022749-11	SATA power cables	x 2
19Z0000470T000	I/O shield	x 1

I/O View



ASMB-584G2-00A1E
ASMB-584G2-00A2E



ASMB-584VG-00A1E

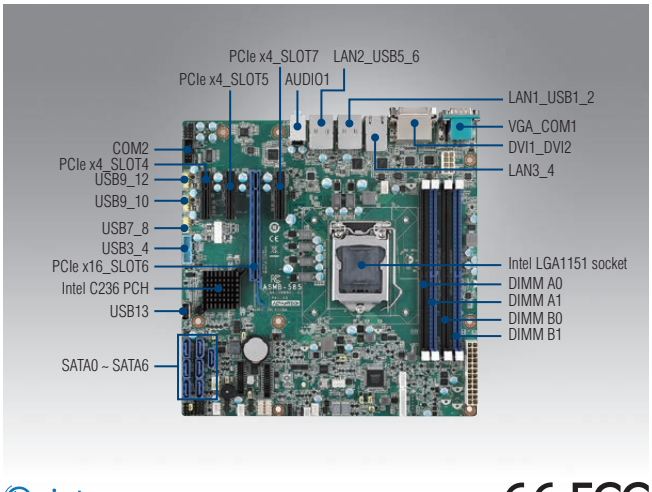
Optional Accessories

Part Number	Description
1700002204	Dual port USB 2.0 cable (27 cm) with bracket
1700008461	Four port USB 2.0 cable (30.5 cm) with bracket
1960052651N021	LGA 1151/1150/1155 CPU cooler for 2U/4U and wallmount chassis (TDP up to 95W)
1960049408N001	LGA 1151/1150/1155 1U CPU Cooler (TDP up to 95W)
19Z0001023T000	1U I/O shield
1700008809	Printer port cable kit (25 cm)
1700020294-01	Printer port cable kit (42 cm)
1701090401	COM port cable with bracket (40 cm)
1700020277-01	Dual port USB 3.0 cable with bracket (30 cm)
ASMB-RF348-21A1E	2U riser card (PCIe x16 to 2 PCIe x4 + 1 PCIe x8)
AIMB-RF10F-01A1E	1U riser card (PCIe x16 to PCIe x16)
IPMI-1000-00A1E	IPMI 2.0 Module
968EMLSAP2	SUSIAccess Pro 3.0
PCA-TPM-00A1E	TPM Module with Infineon TPM 1.2 solution

Note 1: To enable Intel vPro feature, PCA-TPM-00A1E must be installed. TPM and IPMI modules are installation alternatives.
Note 2: Purchasing ASMB-584's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with ASMB-584.

ASMB-585

LGA 1151 Intel® Xeon® E3 v5/v6 & 6th/7th Generation Core™ series Micro ATX Server Board with 4 DDR4, 1 PCIe x16, 3 PCIe x4, Quad LANs, USB 3.0



Features

- Supports LGA 1151 Intel® Xeon® E3-1200 v5/v6 and 6th/7th Generation Core™ i7/i5/i3 processors
- DDR4 ECC/Non-ECC 2400/2133/1866/1600 MHz DIMM up to 64GB
- One PCIe x16 slot (Gen3 x16 link), three PCIe x4 slots (2 Gen3 x4 link, 1 Gen3 x1 link)
- 0 ~ 60 °C ambient operation temperature range
- Support up to ten RS-232 or six RS-232 and four RS-422/485 ports
- Support up to four Gigabit LAN ports
- Triple display - two DVI-D and one VGA ports
- Support seven SATA3 ports and six USB 3.0 ports

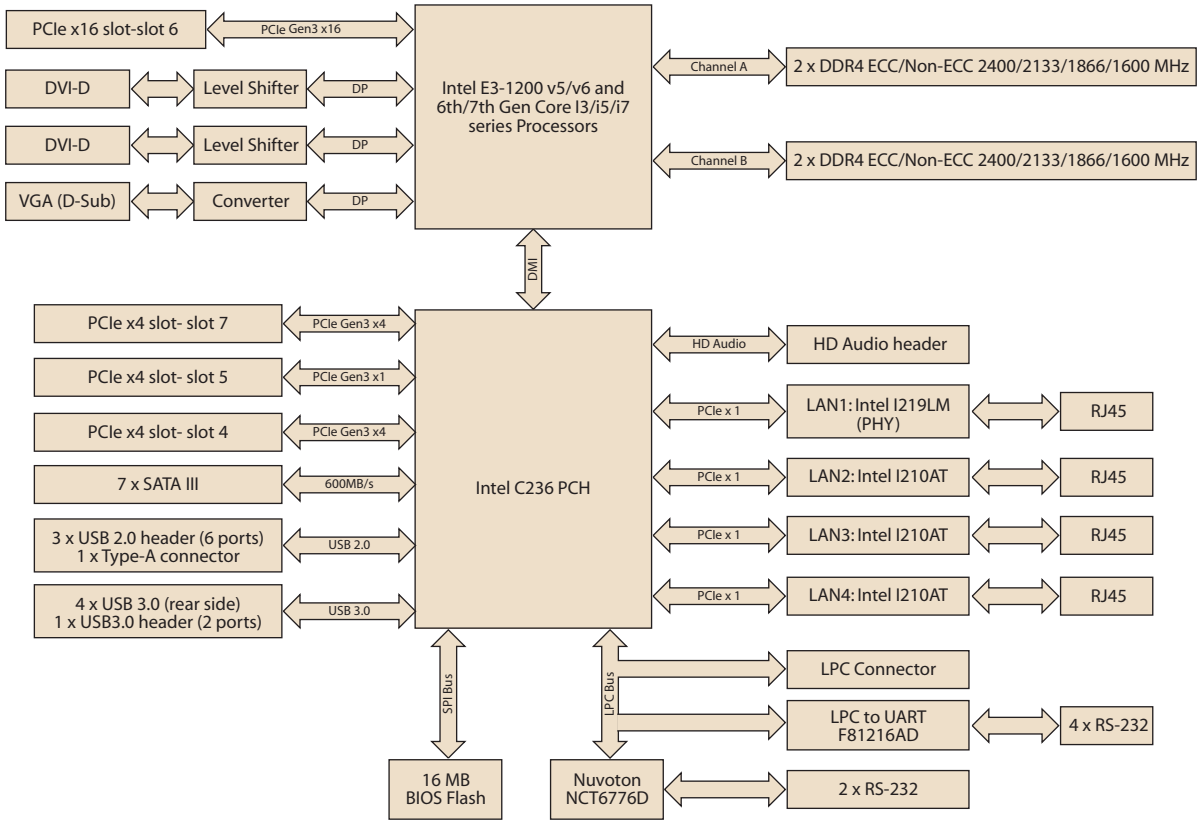
Quiet

CE FCC

Specifications

Form Factor		Micro ATX form factor				
Processor System	Socket	Intel LGA 1151				
	CPU type	Intel® Xeon® E3-1200 v5/v6 and 6th/7th Gen Core™ i3/i5/i7 series processors (TDP up to 91W)				
Core Logic	Chipset	Intel C236 chipset				
Memory	Total slots	4				
	Capacity	Maximum 64 GB				
	Memory type	DDR4 ECC/Non-ECC 2400/2133/1866/1600 MHz UDIMM				
	Memory size	4 GB, 8 GB, 16 GB				
Expansion Slots	Total PCI/PCI-X/PCIe slots	4				
	Slot location 1	-				
	Slot location 2	-				
	Slot location 3	-				
	Slot location 4	PCIe x4 slot (Gen3 x4 link)				
	Slot location 5	PCIe x4 slot (Gen3 x1 link)				
	Slot location 6	PCIe x16 slot (Gen3 x16 link)				
	Slot location 7	PCIe x4 slot (Gen3 x4 link)				
Graphics	VGA	Intel HD Graphics				
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed				
Storage	SATA controller	Intel C236: 7 SATA3 6Gb/s Intel Rapid Storage Technology (for Windows only) (Supports software RAID 0, 1, 10 & 5)				
	SAS controller	-				
Networking	GbE LAN	1 x Intel I219LM + 3 x Intel I210AT				
Onboard I/O Connectors	LPT connector	-				
	PSU connector	24-pin SSI power connector + 8-pin SSI 12 V power connector				
	USB 2.0 connector	3 (supports 6 x USB2.0 port), 1 x Type-A				
	USB 3.0 connector	1 (support 2 x USB 3.0 port)				
	Fan header	5 x 4pin				
	SMBus	1				
	Chassis intruder	1				
	Front LAN LED	2				
	Audio Header	1 (ALC 892)				
	Serial port header	3 (supports 5 x serial ports)				
Rear I/O Connectors	External serial port	1				
	External USB port	4 x USB 3.0				
	VGA port	1				
	DVI port	2				
	RJ-45	4				
	PS/2 KB/mouse	-				
	Audio	2 (Mic-in , Line-out)				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Power Requirement	Power On	3.3 V	5 V	12 V	5 Vsb	-12 V
		0.68A	1.31A	1.04A	0.13A	0.06A
Environment		Operating		Non-operating		
	Temperature	0 ~ 60 °C, depends on CPU speed and cooler solution		-40 ~ 85 °C		
	Humidity	0% ~ 90%		5% ~ 95% (Non condensing)		
Physical Characteristics	Dimension (L x H)	244 x 244 mm (9.6" x 9.6")				

Block Diagram



Ordering Information

Part Number	Chipset	Memory	LAN	IPMI	Graphic
ASMB-585G2-00A1E	C236	DDR4 ECC/Non-ECC	2	-	Intel HD Graphics
ASMB-585G4-00A1E	C236	DDR4 ECC/Non-ECC	4	-	Intel HD Graphics

Packing List

Part Number	Description	Quantity
2061058502	Driver CD	x 1
2001058502	Startup manual	x 1
1700003194	SATA data cables	x 2
1700022749-11	SATA power cables	x 2
19Z0000996T010	I/O shield	x 1

I/O View



ASMB-585G2-00A1E



ASMB-585G4-00A1E

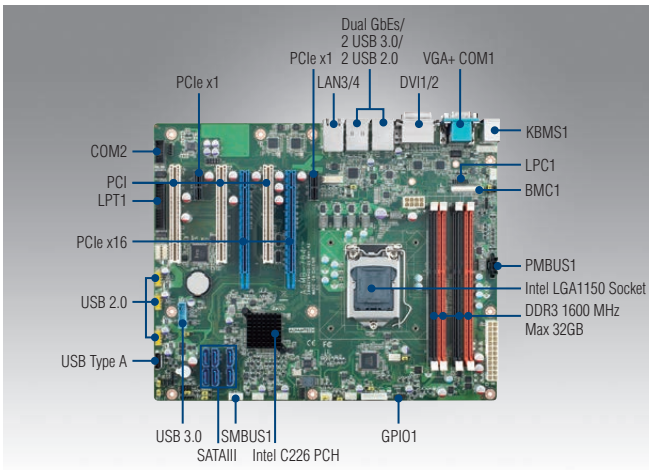
Optional Accessories

Part Number	Description
1960049408N001	LGA 1151 CPU heatsink for 1U chassis (TDP up to 95W)
1960052651N021	LGA 1151 CPU cooler for 2U/4U chassis (TDP up to 95W)
PCA-TPM-00B1E	TPM 2.0 Module by LPC
19Z0001156T010	1U IO bracket for ASMB-585
1700002204	Dual port USB2.0 cable (27 cm) with bracket
1700008461	Four port USB2.0 cable (30.5 cm) with bracket
1700020277-01	Dual port USB3.0 cable (30 cm) with bracket
PCA-COM232-00A1E	4 ports RS-232 module connect to LPC connector
PCA-COM485-00A1E	4 ports RS-422/485 module connect to LPC connector
1701090401	Single port RS-232 cable(40cm) for COM2 connector
1700026254-01	Dual port RS-232 cable(45cm) for COM3_4 & COM5_6 connector
968EMLSAP2	SUSIAccess Pro 3.0
1700019268-11	Cable for onboard KBMS1 connector (35cm)
1960063434N000	Cable bracket for 1700019268-11

Note 1: Purchasing ASMB-585's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers may NOT compatible with ASMB-585.

ASMB-784

LGA 1150 Intel® Xeon® E3 v3/ 4th Generation Core™ ATX Server Board with 2 PCIe x16 slots (x8 link), 3 PCI, USB 3.0, Quad/Dual LANs



Features

- Supports LGA 1150 Intel® Xeon® E3-1200 v3 and 4th Generation Core™ i7/ i5/i3 processors
- DDR3 1600 MHz ECC/Non-ECC UDIMM up to 32GB
- One Gen 3.0 PCIe x16 link or two PCIe x16 slots with x8 link, two PCIe x1 and three PCI slots
- Rackmount optimized placement with positive air flow design
- Supports Intel vPro, AMT 9.0, IPMI (optional) and Embedded software APIs and utilities

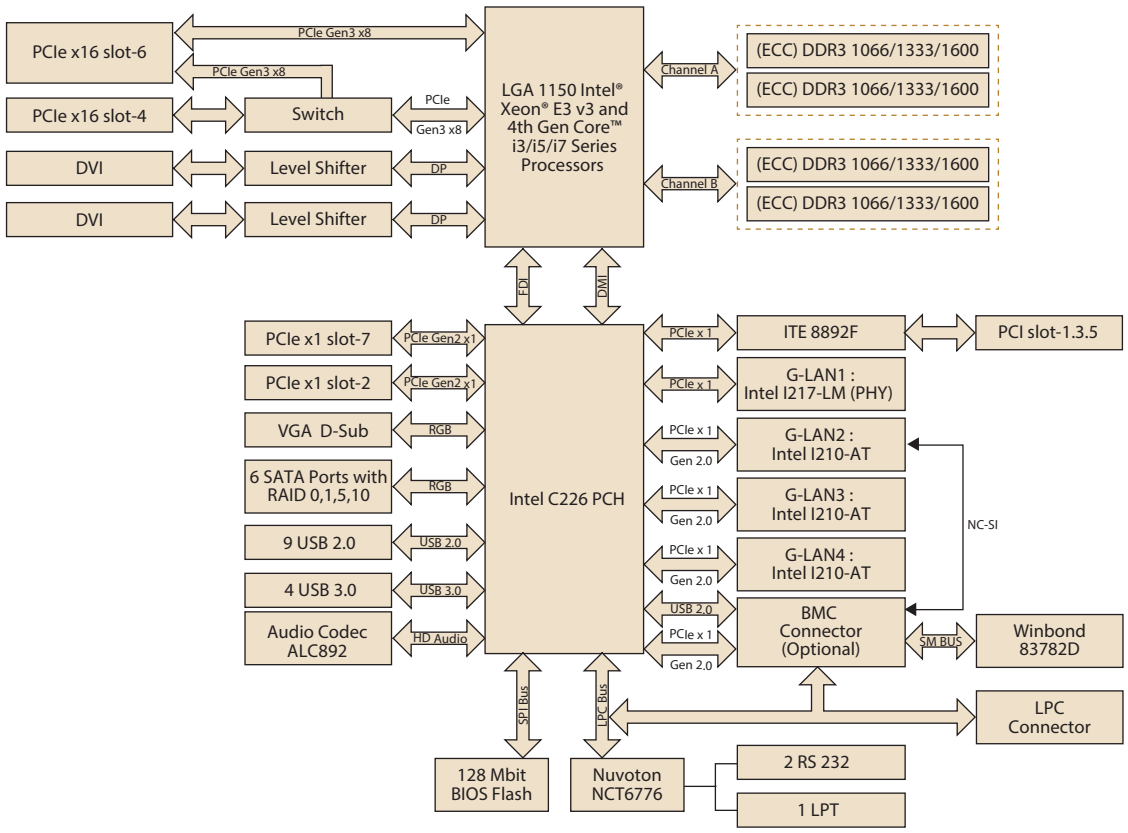
Quiet vmware READY CE FCC

Specifications

Form Factor		ATX form factor					
Processor System	Socket	Intel LGA 1150					
	CPU type	Intel® Xeon® E3-1200 v3 and Core™ i3/i5/i7 series (TDP up to 88W)					
Core Logic	Chipset	Intel C226 chipset					
Memory	Total slots	4 (Dual Channel)					
	Max. capacity	32 GB					
	Memory type	DDR3 ECC/Non-ECC 1600/1333/1066 MHz UDIMM (240-pin)*					
	Memory size	1 GB, 2 GB, 4 GB, 8 GB					
Expansion Slots	Total PCI/PCI-X/PCIe slots	7					
	Slot location 1	PCI					
	Slot location 2	PCIe x1 slot (Gen2 x1 link)					
	Slot location 3	PCI					
	Slot location 4	PCI x16 slot (Gen3 x8 link)					
	Slot location 5	PCI					
	Slot location 6	PCI x16 slot (Gen3 x8 or x16 link)					
	Slot location 7	PCIe x1 slot (Gen2 x1 link)					
Graphics	Controller	Intel HD Graphics					
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed					
Storage	SATA controller	Intel C226: 6 SATA3 6 Gb/s ports with Intel Rapid Storage Technology support (for Windows only) (Supports software RAID 0, 1, 10 & 5)					
	SAS controller	-					
Networking	Interface	10/100/1000 Mbps					
	Controller	GbE LAN1: Intel I217-LM; GbE LAN 2~4: Intel I210-AT					
	Connector	RJ-45 x 2 for G2 version; RJ-45 x 4 for G4 version					
Onboard I/O Connectors	Printer Port connector	1					
	PSU connector	24-pin SSI power connector + 8-pin SSI 12V power connector					
	USB connector	2 USB 3.0; 7 USB 2.0 (1 x USB Type-A)					
	Fan header	5 (4-pin)					
	SMBus	2					
	Chassis intruder	1					
	Front LAN LED	2					
	Serial port header	1 (RS-232)					
	Audio Connector	1 (ALC 892)					
	PS/2 KB/Mouse	1					
Rear I/O Connectors	External serial port	1					
	External USB port	4 (2 USB 3.0 and 2 USB 2.0)					
	VGA port	1					
	DVI	2					
	Display Port	-					
	RJ-45	2 for G2 version. 4 for G4 version					
	PS/2 KB/mouse	2					
Watchdog Timer	Output	System reset					
	Interval	Programmable 1 ~ 255 sec					
Power Requirement	Power On	Intel® Xeon® E3-1275v3 3.5GHz; DDR3 8G x4					
		3.3 V	5 V	12 V	12V_8P	5 Vsb	-12 V
		1.17A	2.30A	0.06A	4.33A	0.16A	0.01A
Environment		Operating			Non-operating		
	Temperature	0 ~ 60 °C (32 ~ 140 °F) Depends on CPU speed and cooler solution			-40 ~ 85 °C (-40 ~ 185 °F)		
	Humidity	0% ~ 90%			5% ~ 95% (Non-condensing)		
Physical Characteristics	Dimension (L x H)	304.8 x 244 mm (12" x 9.6")					

Memory ECC function enabled or not depends on processor support.

Block Diagram



Ordering Information

Part Number	Chipset	LAN	USB 3.0	DVI	SATAIII	IPMI
ASMB-784G2-00A1E	C226	2	4	2	6	Optional
ASMB-784G4-00A1E	C226	4	4	2	6	Optional

Packing List

Part Number	Description	Quantity
2066S78402	Driver CD	x 1
2006S78410	Startup manual	x 1
1700003194	SATA data cables	x 2
1700022749-11	SATA power cables	x 2
19Z0000502T000	I/O shield	x 1

I/O View



ASMB-784G2-00A1E



ASMB-784G4-00A1E

Optional Accessories

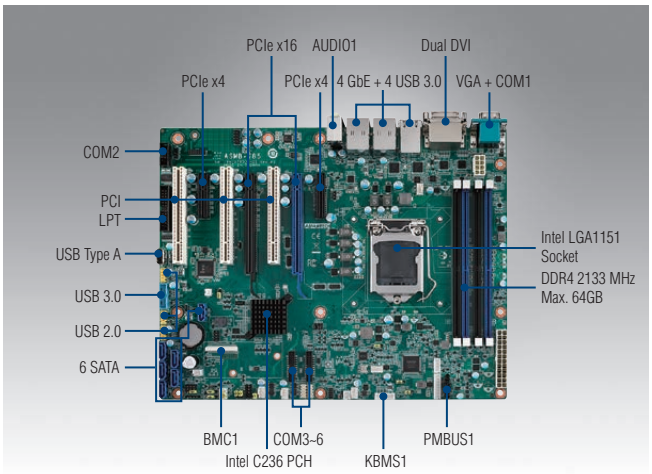
Part Number	Description
1700002204	Dual port USB 2.0 cable (27 cm) with bracket
1700008461	Four port USB 2.0 cable (30.5 cm) with bracket
1960052651N021	LGA 1151/1150/1155 CPU cooler for 2U/4U and wallmount chassis (TDP up to 95W)
1960049408N001	LGA 1151/1150/1155 1U CPU Cooler (TDP up to 95W)
19Z0000747T000	1U I/O shield
1700008809	Printer port cable kit (25 cm)
1700020294-01	Printer port cable kit (42 cm)
1701090401	COM port cable with bracket (40 cm)
1700020277-01	Dual port USB 3.0 cable with bracket (30 cm)
1700007351	SATA cable L-type (for ACP-4320)
AIMB-AUDIO-HDA1E	HD Audio-Card
IPMI-1000-00A2E	IPMI 2.0 Module
968EMLSAP2	SUSIAccess Pro 3.0
PCA-TPM-00A1E	TPM Module with Infineon TPM 1.2 solution

Note 1: To enable Intel vPro feature, PCA-TPM-00A1E must be installed.

Note 2: Purchasing ASMB-784's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with ASMB-784.

ASMB-785

LGA 1151 Intel® Xeon® E3 v5/v6 & 6th/7th Generation Core™ ATX Server Board with 4 DDR4, 4 PCIe, 3 PCI, 6 USB 3.0, 6 COM, 6 SATA3, Quad/Dual LANs



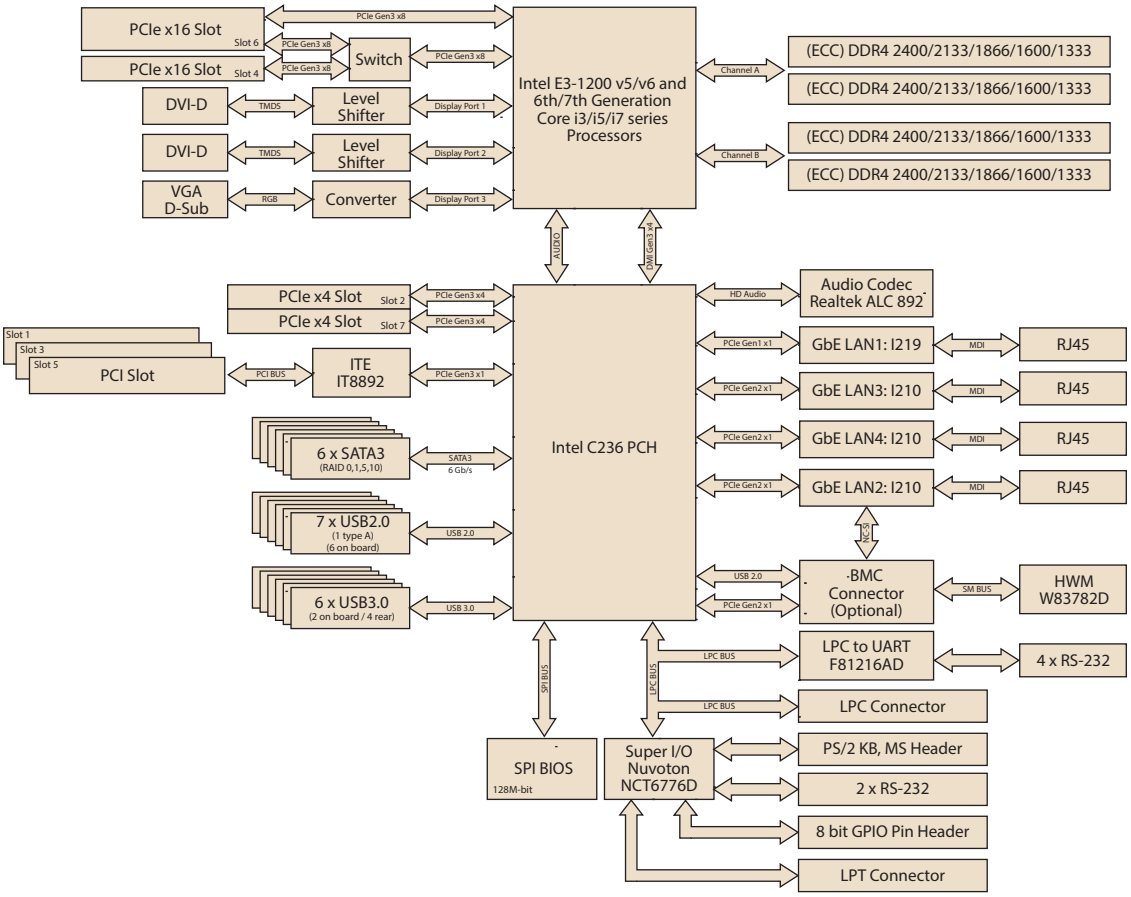
Features

- Supports LGA 1151 Intel® Xeon® E3-1200 v5/v6 and 6th/7th Generation Core™ i7/i5/i3 processors
- DDR4 2400/2133/1866/1600/1333 MHz ECC/Non-ECC UDIMM up to 64 GB
- One Gen 3.0 PCIe x16 link (or two PCIe x16 slots with x8 link), two PCIe x4, and three PCI slots
- Rackmount optimized placement with positive air flow design
- 0 ~ 60 °C ambient operation temperature range

Specifications

Form Factor		ATX form factor					
Processor System	Socket	Intel LGA 1151					
	CPU type	Intel® Xeon® E3-1200 v5/v6 and 6th/7th Generation Core™ i3/i5/i7 series (TDP up to 91W)					
Core Logic	Chipset	Intel C236 chipset					
Memory	Total slots	4 (Dual Channel)					
	Max. capacity	64 GB					
	Memory type	DDR4 ECC/Non-ECC 2400/2133/1866/1600 MHz UDIMM (288-pin)					
	Memory size	4 GB, 8 GB, 16 GB					
Expansion Slots	Total PCI/PCI-X/PCIe slots	7					
	Slot location 1	PCI					
	Slot location 2	PCIe x4 slot (Gen3 x4 link)					
	Slot location 3	PCI					
	Slot location 4	PCIe x16 slot (Gen3 x8 link)					
	Slot location 5	PCI					
	Slot location 6	PCIe x16 slot (Gen3 x8 or x16 link)					
	Slot location 7	PCIe x4 slot (Gen3 x4 link)					
Graphics	Controller	Intel HD Graphics					
	VRAM	1 GB maximum shared memory with 2 GB and above system memory installed					
Storage	SATA controller	Intel C236: 6 SATA3 6 Gb/s ports with Intel Rapid Storage Technology support (for Windows only) (Supports software RAID 0, 1, 10 & 5)					
	SAS controller	-					
Networking	Interface	10/100/1000 Mbps					
	Controller	GbE LAN1: Intel I219; GbE LAN 2~4: Intel I210-AT					
	Connector	RJ-45 x 2 for G2 version; RJ-45 x 4 for G4 version					
Onboard I/O Connectors	Printer Port connector	1					
	PSU connector	24-pin SSI power connector + 8-pin SSI 12V power connector					
	USB connector	1 USB 3.0 (2 ports), 3 USB 2.0 (6 ports), 1 USB Type-A					
	Fan header	5 (4-pin)					
	SMBus	1					
	Chassis intruder	1					
	Front LAN LED	2					
	Serial port header	2 (support 4 RS-232 ports) + 1 (support 1 RS-232 port)					
	Audio connector	1 (ALC 892)					
	PS/2 KB/Mouse	1					
Rear I/O Connectors	External serial port	1					
	External USB port	4 (USB 3.0)					
	VGA port	1					
	DVI	2					
	Display port	-					
	RJ-45	2 for G2 version; 4 for G4 version					
	Audio connector	2 (Mic-in, Line-out)					
	PS/2 KB/Mouse	-					
Watchdog Timer	Output	System reset					
	Interval	Programmable 1 ~ 255 sec					
Power Requirement	Power On	Intel® Xeon® E3-1275 v5 3.60GHz; DDR4 8G x 4					
		3.3 V	5 V	12 V	12V_8P	5 Vsb	-12 V
		0.96A	1.58A	0.32A	7.21A	0.11A	0.06A
Environment		Operating			Non-operating		
	Temperature	0 ~ 60 °C (32 ~ 140 °F) Depends on CPU speed and cooler solution			-40 ~ 85 °C (-40 ~ 185 °F)		
	Humidity	10 ~ 90%			10 ~ 95% (Non-condensing)		
Physical Characteristics	Dimension (L x H)	304.8 x 244 mm (12" x 9.6")					

Block Diagram



Ordering Information

Part Number	Chipset	Memory	LAN	USB 3.0	DVI	SATAIII	IPMI
ASMB-785G2-00A1E	C236	DDR4 Non-ECC/ECC UDIMM	2	6	2	6	Optional
ASMB-785G4-00A1E	C236	DDR4 Non-ECC/ECC UDIMM	4	6	2	6	Optional

Packing List

Part Number	Description	Quantity
2061S78502	Driver CD	x 1
2006S78510	Startup manual	x 1
1700003194	SATA data cables	x 1
1700019381	SATA data cable (right angle)	x 1
1700022749-11	SATA power cables	x 2
19Z0000996T010	I/O shield	x 1

I/O View



ASMB-785G2-00A1E



ASMB-785G4-00A1E

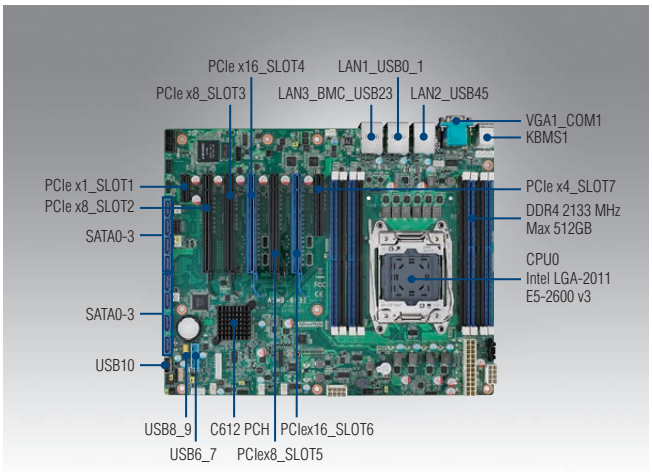
Optional Accessories

Part Number	Description
1700002204	Dual port USB 2.0 cable (27 cm) with bracket
1700008461	Four port USB 2.0 cable (30.5 cm) with bracket
1960052651N021	LGA 1151/1150/1155 CPU cooler for 2U/4U and wallmount chassis (TDP up to 95W)
1960049408N001	LGA 1151/1150/1155 CPU heatsink for 1U chassis (TDP up to 95W)
19Z0001156T010	1U I/O shield
1700008809	Printer port cable kit (25 cm)
1700020294-01	Printer port cable kit (42 cm)
1701090401	Single port RS-232 cable with bracket (40 cm)
1700008762	Dual port RS-232 cable with bracket (22.5 cm)
1700020277-01	Dual port USB 3.0 cable with bracket (30 cm)
1700019268-11	PS/2 cable (35 cm)
1960063434N000	Cable bracket for 1700019268-11
PCA-COM232-00A1E	4 ports RS-232 module to LPC connector
PCA-COM485-00A1E	4 ports RS-485 module to LPC connector
IPMI-1000-00A2E	IPMI 2.0 Module
968EMLSAP2	SUSIAccess Pro 3.0
PCA-TPM-00B1E	TPM 2.0 Module by LPC

Note : Purchasing ASMB-785's proprietary CPU cooler from Advantech is a must. Other brands' CPU coolers are NOT compatible with ASMB-785.

ASMB-813

LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 ATX Server Board with 8 DDR4 DIMM, 5 PCIe x16 Slot, 6 USB 3.0, IPMI



Features

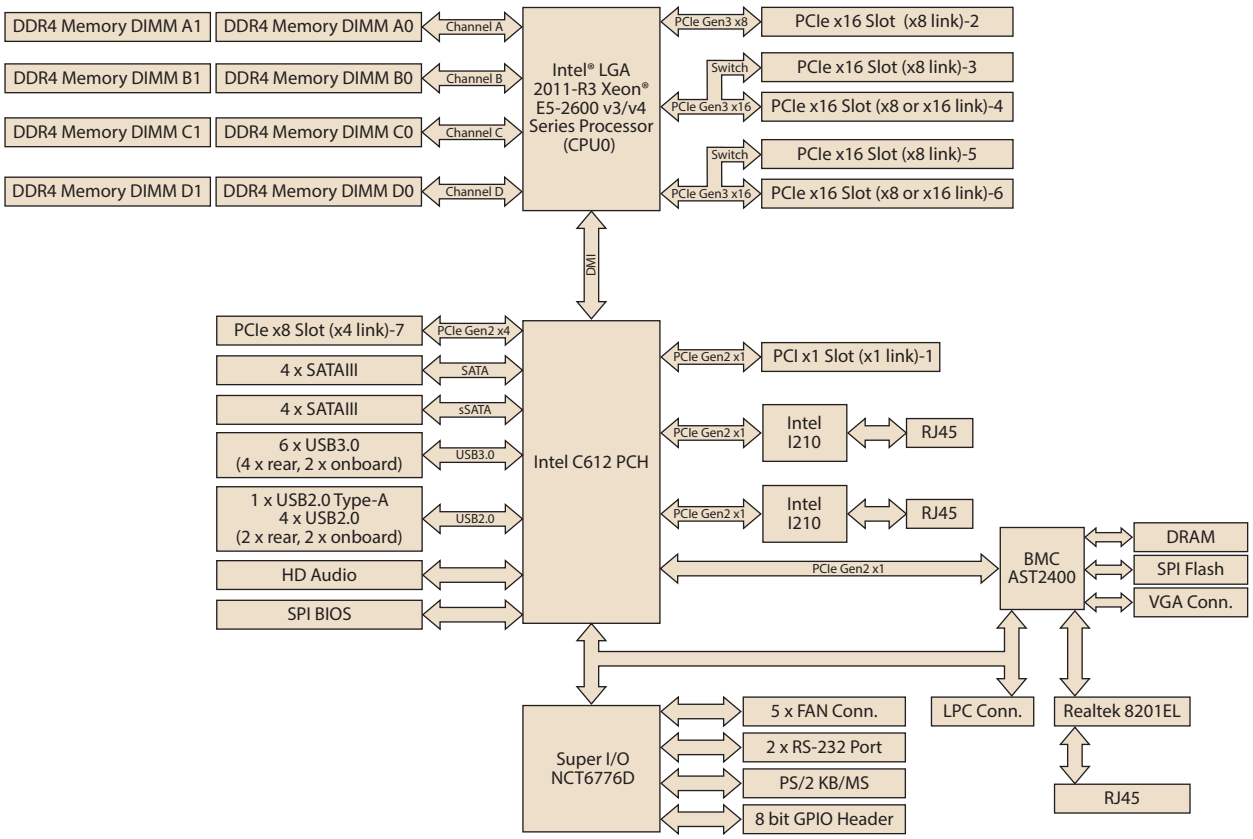
- ATX Server Board with Intel® Xeon® E5-2600 v3/v4 processor
- Eight DDR4 2400 MHz RDIMM up to 256 GB and support DDR4 NVDIMM
- Seven PCIe expansion slots: five PCIe x8 (or two x16 and one x8), one PCIe x4 and one PCIe x1
- 0 ~ 60 °C ambient operation temperature range

Quiet vmware READY CE FCC

Specifications

Form Factor		ATX form factor				
Processor System	Socket	Intel LGA 2011-R3				
	CPU type	Intel® Xeon® E5-2600 v3/v4 Series (CPU cooler should be purchased separately and TDP up to 160W) Intel® Xeon® E5-1600 v3/v4 Series Intel® Core™ i7 5800/5900/6800/6900 Series				
Core Logic	Chipset	Intel C612 chipset				
Memory	Total slots	8 (Quad Channel)				
	Capacity	Maximum 256 GB ECC RDIMM				
	Memory type	DDR4 ECC-REG 2400/2133/1866/1600 MHz DIMM and NVDIMM				
	Memory size	4 GB, 8 GB, 16 GB, 32 GB				
Expansion Slots	Total PCI/PCI-X/PCIe slots	7				
	Slot location 1	PCIe x1 slot (Gen2 x1 link), signal from PCH				
	Slot location 2	PCIe x16 slot (Gen3 x8 link)				
	Slot location 3	PCIe x16 slot (Gen3 x8 link)				
	Slot location 4	PCIe x16 slot (Gen3 x16 link or x8 link when Slot 3 is occupied)				
	Slot location 5	PCIe x16 slot (Gen3 x8 link)				
	Slot location 6	PCIe x16 slot (Gen3 x16 link or x8 link when Slot 5 is occupied)				
	Slot location 7	PCIe x8 slot (Gen2 x4 link), signal from PCH				
Graphics	VGA	Aspeed AST2400/1400 64 MB				
Storage	IDE controller	-				
	SATA controller	Intel C612: 8 SATA3 6 Gb/s ports Intel Rapid Storage Technology (for Windows only) (SATA0-SATA3 and sSATA0-sSATA3 support software RAID 0, 1, 10 & 5)				
	SAS controller	-				
Networking	GbE LAN	2 x Intel I210AT				
Onboard I/O Connectors	LPC connector	1				
	PSU connector	24-pin SSI power connector + 8-pin SSI 12 V power connector + 8-pin SSI 12 V power connector				
	USB connector	2 (supports 2 x USB3.0 ports and 2 x USB2.0 ports) + 1 x Type-A				
	Fan header	5 x 4-pin				
	SMBus	1				
	Chassis intruder	1				
	Front LAN LED	2				
	Audio Header	1				
	Serial port header	1				
Rear I/O Connectors	External serial port	1				
	External USB port	6 (4 x USB3.0 + 2 x USB2.0)				
	VGA port	1				
	RJ-45	3 (1 port dedicated for IPMI function)				
	PS/2 KB/mouse	1				
Management Solution	Software	-				
	Out of band remote management	Yes (ASMB-813I SKU only)				
Monitoring	CPU temperature	Yes				
	System Monitoring	Yes				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Power Requirement	Power On	3.3V	5V	12V	5Vsb	-12V
		1.53A	0.92A	12.21A	0.04A	0.04A
Environment		Operating			Non-operating	
	Temperature	0 ~ 60 °C, depends on CPU speed and cooler solution			-40 ~ 85 °C	
	Humidity	10% ~ 95%			10% ~ 95% (Non condensing)	
Physical Characteristics	Dimension (L x H)	304.8 x 244 mm (12" x 9.6")				

Block Diagram



Ordering Information

Part Number	Chipset	Memory	GbE LAN	IPMI	VGA Chip
ASMB-813-00A1E	C612	8 x DDR4 RDIMM	2	-	AST 1400
ASMB-813I-00A1E	C612	8 x DDR4 RDIMM	2	Yes	AST 2400

Packing List

Part Number	Description	Quantity
2061813I01	Driver CD	x 1
2001813I10	Startup manual	x 1
1700003194	SATA data cables	x 2
1700022749-11	SATA power cables	x 2
1700019748	CPU power cable(8P)	x 2
1960048321T020	I/O shield	x 1

Optional Accessories

Part Number	Description
ASMB-RF3X8-21A1E	2U Riser Card (2 x PCI-X + 1 x PCIe x8)
PCA-AUDIO-HDA1E	HD Audio-card
PCA-TPM-00B1E	TPM 2.0 Module by LPC
1960065593N001	LGA-2011 CPU heatsink narrow type for 1U chassis (TDP up to 130W)
1960063011N001	LGA-2011 CPU cooler narrow type for 2U/4U chassis (TDP up to 130W)
1700002204	Dual port USB cable (27 cm) with bracket
1700008461	Four port USB cable (30.5 cm) with bracket
1701090401	COM port cable with bracket
1700020277-01	Dual port USB 3.0 cable (30 cm) with bracket
19Z0000811N000	1U chassis IO shield
968EMLSAP2	SUSIAccess Pro 3.0

I/O View



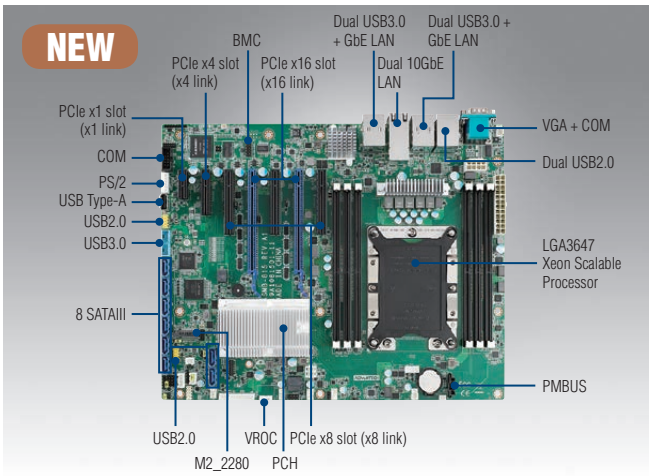
ASMB-813-00A1E



ASMB-813I-00A1E

ASMB-815

LGA 3647-P0 Intel® Xeon® Scalable ATX Server Board with 6 DDR4, 5 PCIe x8 or 2 PCIe x16 and 1 PCIe x8, 8 SATA3, 6 USB3.0, Dual 10GbE, IPMI



CE FCC

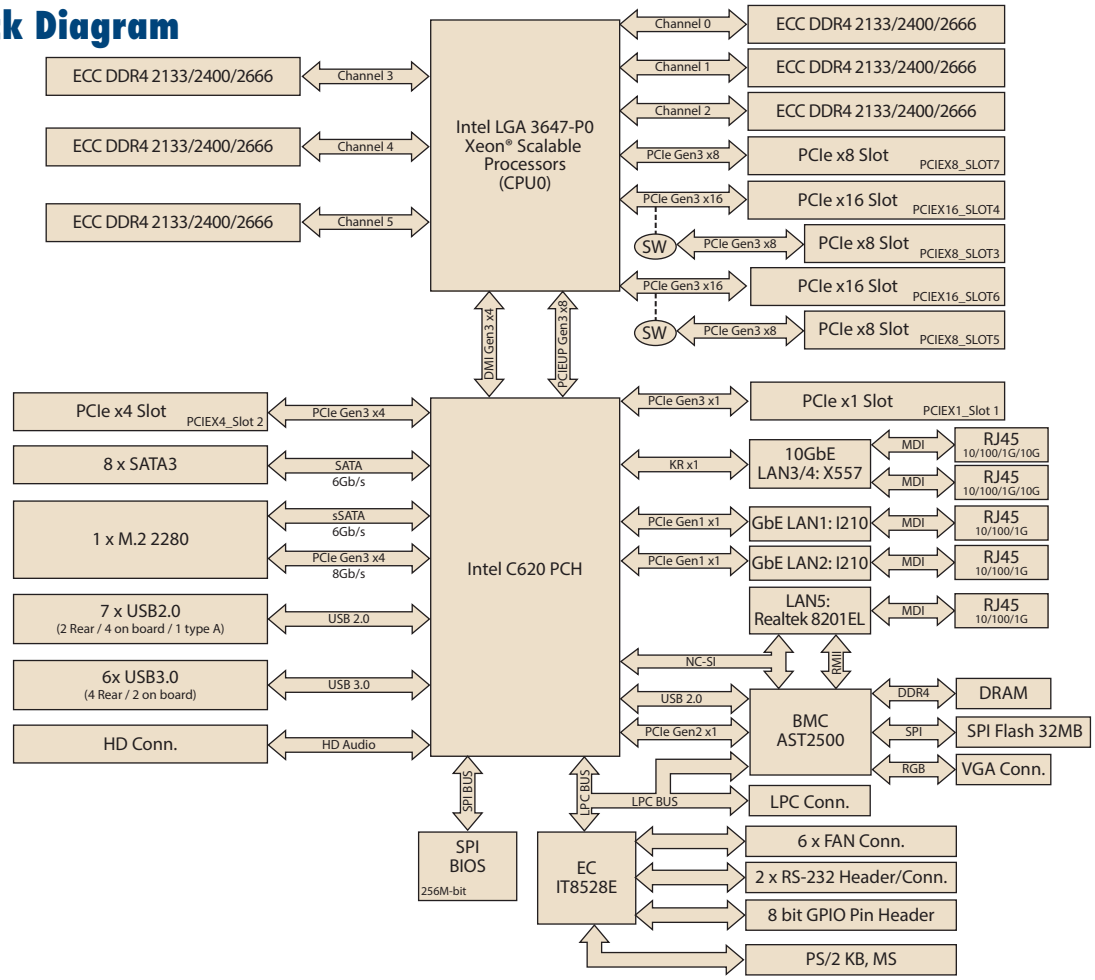
Features

- ATX Server Board with Xeon® Scalable processors
- DDR4 2666 MHz RDIMM up to 192 GB (6 DIMMs)
- Five PCIe x8 or two PCIe x16 and 1 PCIe x8
- Intel® X557-AT2 dual 10GbE ports
- Eight SATA3 and one M.2 connectors (SATA / PCIe compatible)
- 0 ~ 60 °C ambient operation temperature range

Specifications

Form Factor		ATX form factor					
Processor System	Socket	Intel LGA 3647-P0					
	CPU type	Intel Xeon Scalable processors (CPU cooler should be purchased separately and TDP up to 205W)					
Core Logic	Chipset	Intel C620 chipset					
Memory	Total slots	6 (1 DIMM per channel)					
	Capacity	Maximum 192 GB ECC RDIMM					
	Memory type	DDR4 ECC-REG 2133/2400 /2666 MHz DIMM					
	Memory size	4 GB, 8 GB, 16 GB, 32 GB					
Expansion Slots	Total PCI/PCI-X/PCIe slots	7					
	Slot location 1	PCIe x1 slot (x1 link), signal from PCH					
	Slot location 2	PCIe x4 slot (x4 link), signal from PCH					
	Slot location 3	PCIe x8 slot (0 or x8 link), signal from CPU					
	Slot location 4	PCIe x16 slot (x8 or x16 link), signal from CPU					
	Slot location 5	PCIe x8 slot (0 or x8 link), signal from CPU					
	Slot location 6	PCIe x16 slot (x8 or x16 link), signal from CPU					
	Slot location 7	PCIe x8 slot (x8 link), signal from CPU					
Graphics	VGA	Aspeed AST 2500/2510					
Storage	IDE controller	-					
	SATA controller	Intel C620: 8 x SATA3 + 1 x M.2 6 Gb/s ports Intel Rapid Storage Technology (for Windows only) (SATA0-SATA7 supports software RAID 0, 1, 10 & 5)					
	SAS controller	-					
Networking	GbE/10GbE LAN	2 x Intel I210AT / Intel X557-AT2 (dual 10GbE ports)					
Onboard I/O Connectors	Floppy connector	-					
	PSU connector	24-pin SSI power connector + 1 x 8-pin SSI 12 V power connector + 4-pin SSI 12 V power connector					
	USB connector	4 x USB2.0 ports (two onboard headers) + 2 x USB3.0 ports (one onboard header) + 1 x Type-A USB2.0 port					
	Fan header	6 x 4-pin (5 for system + 1 for CPU)					
	SMBus	1					
	Chassis intruder	1					
	Front LAN LED	1					
	Audio Header	1					
	PS/2 KB/Mouse	1					
	Serial port header	1					
Rear I/O Connectors	External serial port	1					
	External USB port	4 (USB3.0) + 2 USB (2.0)					
	VGA port	1					
	RJ-45	5 (1 port dedicated for IPMI function)					
	PS/2 KB/mouse	-					
	Infiniband	-					
Management Solution	Software	-					
	Out of band remote management	Yes (ASMB-815I & ASMB-815T2 SKUs)					
Monitoring	CPU temperature	Yes					
	System Monitoring	Yes					
Watchdog Timer	Output	System reset					
	Interval	Programmable 1 ~ 255 sec/min					
Power Requirement	Power On	3.3V	5V	12V	5Vsb	-12V	12V_8P
	(205W CPU@2.5GHz DDR4 2400 4G*6)	2.77127A	7.00549A	0.57829A	0.132880A	0.063951A	17.5801A
Environment		Operating			Non-operating		
	Temperature	0 ~ 60 °C, depends on CPU speed and cooler solution			-40 ~ 85 °C		
	Humidity	10% ~ 95%			10% ~ 95% (Non condensing)		
Physical Characteristics	Dimension (L x H)	304.8 x 244 mm (12" x 9.6")					

Block Diagram



Ordering Information

Part Number	Chipset	Memory	GbE/10GbE LAN	IPMI	VGA Chip
ASMB-815-00A1E	C621	DDR4 RDIMM	2/-	-	AST 2510
ASMB-815I-00A1E	C621	DDR4 RDIMM	2/-	Yes	AST 2500
ASMB-815T2-00A1E	C622	DDR4 RDIMM	2/2	Yes	AST 2500

Packing List

Part Number	Description	Quantity
2066815I00	Driver CD	x 1
2006815I10	Startup manual	x 1
1700003194	SATA data cables	x 2
1700022749-11	SATA power cables	x 2
1700019748	CPU power cable	x 2
1930007120-01	Screw for M.2 device	x 2
1960076488T000	I/O shield	x 1

Optional Accessories

Part Number	Description
PCA-AUDIO-HDB1E	HD Audio-card
PCA-TPM-00B1E	TPM 2.0 Module by LPC
1960081603N001	LGA-3647 narrow CPU cooler for 2U/4U chassis
1960081155N001	LGA-3647 narrow CPU cooler for 1U chassis
1700002204	Dual port USB cable (27 cm) with bracket
1700008461	Four port USB cable (30.5 cm) with bracket
1700020277-01	Dual port USB 3.0 cable (30 cm) with bracket
1701090401	COM port cable (40 cm) with bracket
1700019268-11	PS/2 port cable (35 cm)
1960063434N000	Cable bracket for 1700019268-11
1960082347T000	For 1U chassis IO shield

I/O View



ASMB-815T2-00A1E



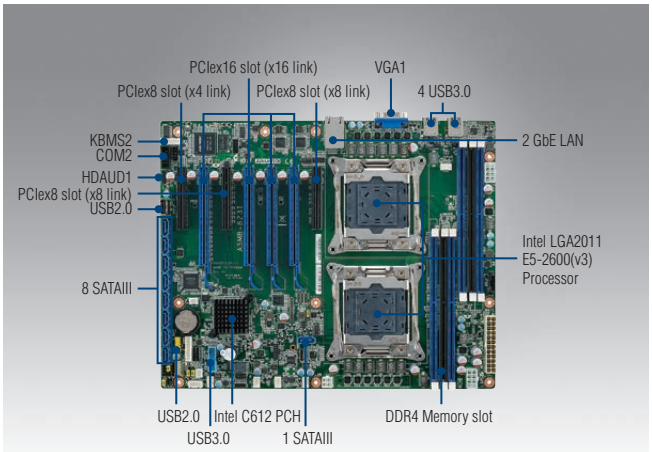
ASMB-815I-00A1E



ASMB-815-00A1E

ASMB-823

Dual LGA 2011-R3 Intel® Xeon® E5-2600 v3/ v4 ATX Server Board with 6 DDR4, 4 PCIe x16, 6 USB 3.0, SATA3, Dual LAN, IPMI



Features

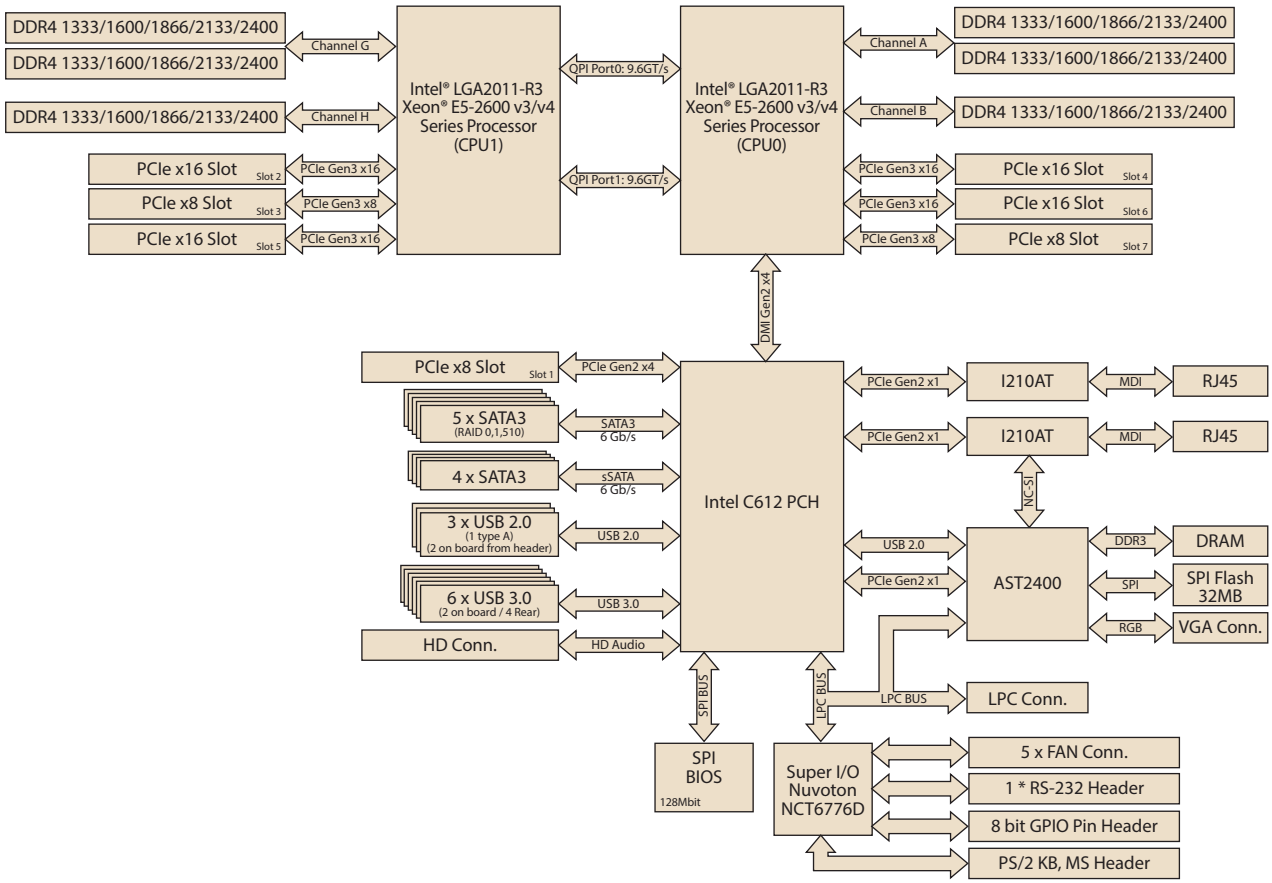
- ATX Server Board with dual Xeon® E5-2600 v3/v4 processors
- DDR4 2400 MHz RDIMM up to 192 GB
- Four PCIe x16 slots (Gen3), two PCIe x8 (Gen3) and one PCIe x4 (Gen2) slots
- Nine SATA3 ports and six USB 3.0 ports
- 0 ~ 40 °C ambient operation temperature range

Quiet vmware READY CE FCC

Specifications

Form Factor		ATX form factor				
Processor System	Socket	Intel LGA 2011-R3				
	CPU type	Intel® Xeon® E5-2600 v3/v4 dual processor (CPU cooler should be purchased separately and TDP up to 160W) Intel® Xeon® E5-1600 v3/v4 Series (1S conditional support, please contact to Advantech application engineer)				
Core Logic	Chipset	Intel C612 chipset				
Memory	Total slots	6 (Quad Channel)				
	Capacity	Maximum 192 GB ECC RDIMM				
	Memory type	DDR4 ECC-REG 2400/2133/1866/1600/1333 MHz DIMM				
	Memory size	1 GB, 2 GB, 4 GB, 8 GB, 16 GB, 32 GB				
Expansion Slots	Total PCI/PCI-X/PCIe slots	7				
	Slot location 1	PCIe x8 slot (x4 link), signal from PCH				
	Slot location 2	PCIe x16 slot (x16 link), signal from CPU1				
	Slot location 3	PCIe x8 slot (x8 link), signal from CPU1				
	Slot location 4	PCIe x16 slot (x16 link), signal from CPU0				
	Slot location 5	PCIe x16 slot (x16 link), signal from CPU1				
	Slot location 6	PCIe x16 slot (x16 link), signal from CPU0				
	Slot location 7	PCIe x8 slot (x8 link), signal from CPU0				
Graphics	VGA	Aspeed AST2400/1400 64 MB				
Storage	IDE controller	-				
	SATA controller	Intel C610: 9 SATA3 6 Gb/s ports Intel Rapid Storage Technology (for Windows only) (SATA0-SATA4 supports software RAID 0, 1, 10 & 5)				
	SAS controller	-				
Networking	GbE LAN	2 x Intel I210AT				
Onboard I/O Connectors	Floppy connector	-				
	PSU connector	24-pin SSI power connector + 2 x 8-pin SSI 12 V power connector + 4-pin SSI 12 V power connector				
	USB connector	2 x USB2.0 ports (in one header) + 2 x USB3.0 ports (in one header) + 1*Type-A USB2.0 ports				
	Fan header	5 x 4-pin (2 for CPU + 3 for SYS)				
	SMBus	1				
	Chassis intruder	1				
	Front LAN LED	2				
	Audio Header	1				
	Serial port header	1				
Rear I/O Connectors	External serial port	-				
	External USB port	4 (USB 3.0)				
	VGA port	1				
	RJ-45	2 (one sharing IPMI function)				
	PS/2 KB/mouse	1 (by onboard connector)				
	Infiniband	-				
Management Solution	Software	-				
	Out of band remote management	Yes				
Monitoring	CPU temperature	Yes				
	System Monitoring	Yes				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Power Requirement	Power On	3.3V	5V	12V	5Vsb	-12V
		1.67A	0.85A	18.11A	0.05A	0.004A
Environment		Operating		Non-operating		
	Temperature	0 ~ 40 °C, depends on CPU speed and cooler solution		-40 ~ 85 °C		
	Humidity	10% ~ 90%		10% ~ 95% (Non condensing)		
Physical Characteristics	Dimension (L x H)	304.8 x 244 mm (12" x 9.6")				

Block Diagram



Ordering Information

Part Number	Chipset	Memory	GbE LAN	IPMI	VGA Chip
ASMB-823-00A1E	C612	DDR4 RDIMM	2	-	AST 1400
ASMB-823I-00A1E	C612	DDR4 RDIMM	2	Yes	AST 2400

Packing List

Part Number	Description	Quantity
2066823I01	Driver CD	x 1
2006823I10	Startup manual	x 1
1700003194	SATA data cables	x 2
1700022749-11	SATA power cables	x 2
1700019748	CPU power cable	x 2
19Z0000777T000	I/O shield	x 1

I/O View



ASMB-823I-00A1E
ASMB-823-00A1E

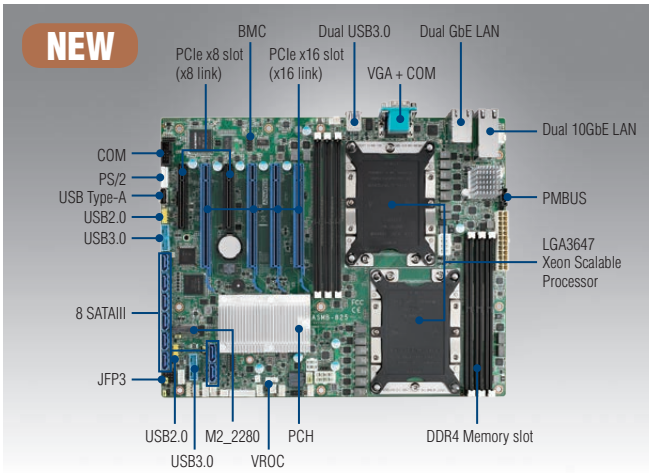
Optional Accessories

Part Number	Description
PCA-AUDIO-HDA1E	HD Audio-card
PCA-TPM-00B1E	TPM 2.0 Module by LPC
1960057226N001	LGA2011 square CPU heatsink for 1U chassis (95W)
1960055362N001	LGA2011 square CPU cooler for 2U/4U chassis (145W)
1960065684N001	LGA2011 square CPU cooler for 4U chassis (160W)*
1700002204	Dual port USB cable (27 cm) with bracket
1700008461	Four port USB cable (30.5 cm) with bracket
1700020277-01	Dual port USB 3.0 cable (30 cm) with bracket
1701090401	COM port cable (40 cm) with bracket
1700019268-11	PS/2 cable (35 cm)
1960063434N000	Cable bracket for 1700019268-11
19Z0000806T000	1U chassis IO shield
1700019127	FAN connector extended cable 1*4P-2.54/1*4P-2.54 35cm
PCA-COM232-00A1E	4 ports RS-232 module connect to LPC connector
PCA-COM485-00A1E	4 ports RS-422/485 module connect to LPC connector
968EMLSAP2	SUSIAccess Pro 3.0

Note : Purchasing ASMB-823's proprietary CPU cooler from Advantech is a must. The 160W cooler for 4U chassis has option of CPUFAN1 cable 1700019127 when length is an issue.

ASMB-825

Dual LGA 3647-P0 Intel® Xeon® Scalable ATX Server Board with 6 DDR4, 4 PCIe x16 + 2 PCIe x8, 8 SATA3, 6 USB3.0, Dual 10GbE, IPMI



CE FCC

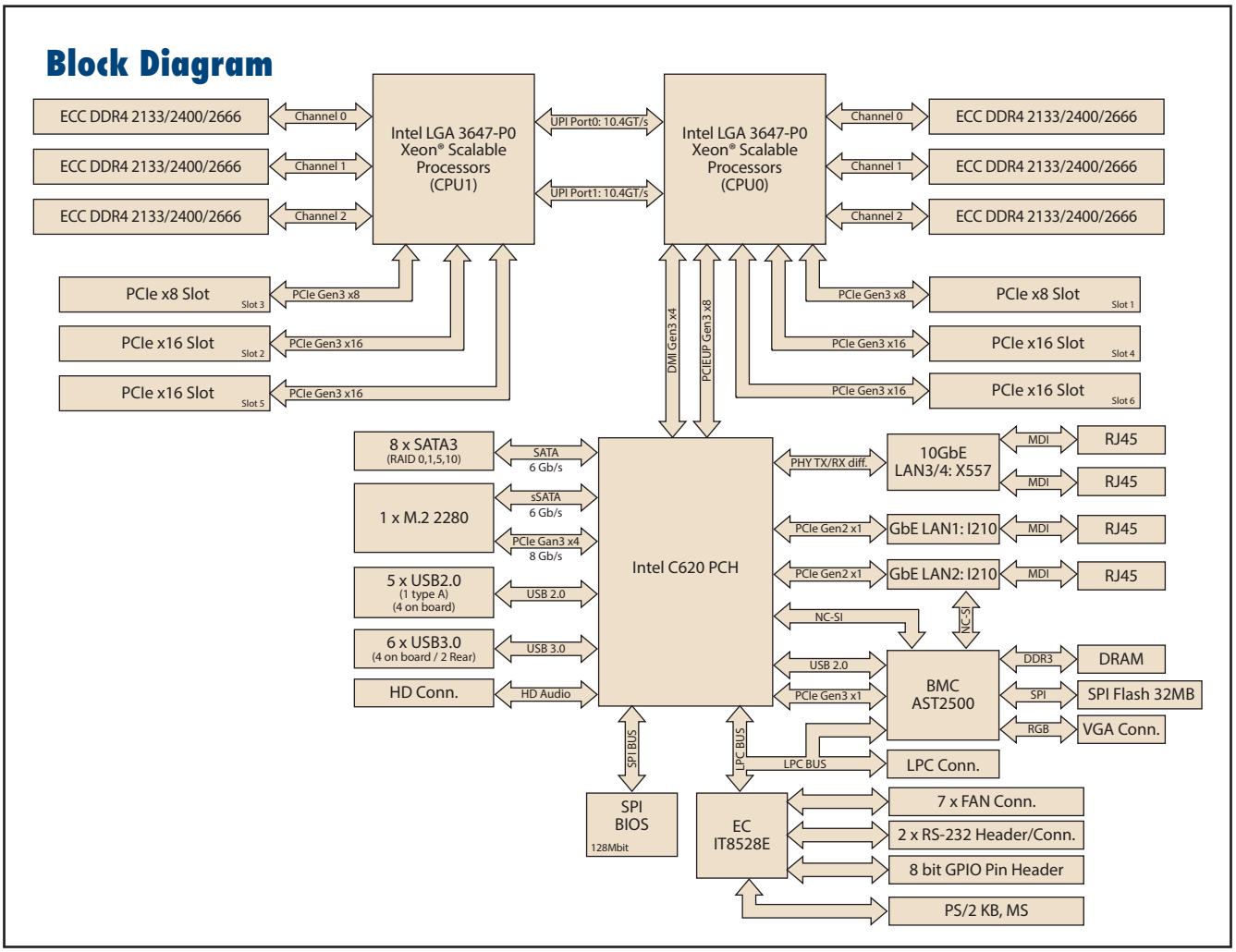
Features

- ATX Server Board with dual Xeon Scalable processors
- DDR4 2666 MHz RDIMM up to 192 GB (6 DIMMs)
- Four PCIe x16 slots (Gen3) and two PCIe x8 (Gen3)
- Intel® X557-AT2 dual 10GbE ports
- Eight SATA3 and one M.2 connectors (SATA / PCIe compatible)
- 0 ~ 40 °C ambient operation temperature range

Specifications

Form Factor		ATX form factor						
Processor System	Socket	Intel LGA 3647-P0						
	CPU type	Intel Xeon Scalable dual processors (CPU cooler should be purchased separately and TDP up to 150W)						
Core Logic	Chipset	Intel C620 chipset						
Memory	Total slots	6 (1 DIMM per channel)						
	Capacity	Maximum 192 GB ECC RDIMM						
	Memory type	DDR4 ECC-REG 2133/2400/2666 MHz DIMM						
	Memory size	4 GB, 8 GB, 16 GB, 32 GB						
Expansion Slots	Total PCI/PCI-X/PCIe slots	6						
	Slot location 1	PCIe x8 slot (x8 link), signal from CPU0						
	Slot location 2	PCIe x16 slot (x16 link), signal from CPU1						
	Slot location 3	PCIe x8 slot (x8 link), signal from CPU1						
	Slot location 4	PCIe x16 slot (x16 link), signal from CPU0						
	Slot location 5	PCIe x16 slot (x16 link), signal from CPU1						
	Slot location 6	PCIe x16 slot (x16 link), signal from CPU0						
Graphics	VGA	Aspeed AST 2500/2510						
Storage	IDE controller	-						
	SATA controller	Intel C620: 8 x SATA3 + 1 x M.2 6 Gb/s ports Intel Rapid Storage Technology (for Windows only) (SATA0-SATA7 supports software RAID 0, 1, 10 & 5)						
	SAS controller	-						
Networking	GbE/10GbE LAN	2 x Intel I210AT / Intel X557-AT2 (dual 10GbE ports)						
Onboard I/O Connectors	Floppy connector	-						
	PSU connector	24-pin SSI power connector + 2 x 8-pin SSI 12 V power connector + 4-pin SSI 12 V power connector						
	USB connector	4 x USB2.0 ports (two onboard headers) + 4 x USB3.0 ports (two onboard headers) + 1 x Type-A USB2.0 port						
	Fan header	7 x 4-pin (5 for system + 2 for CPU)						
	SMBus	1						
	Chassis intruder	1						
	Front LAN LED	1						
	Audio Header	1						
	PS/2 KB/Mouse	1						
	Serial port header	1						
Rear I/O Connectors	External serial port	1						
	External USB port	2 (USB3.0)						
	VGA port	1						
	RJ-45	4 (LAN2 sharing with IPMI function)						
	PS/2 KB/mouse	-						
	Infiniband	-						
Management Solution	Software	-						
	Out of band remote management	Yes (ASMB-825I & ASMB-825T2 SKUs)						
Monitoring	CPU temperature	Yes						
	System Monitoring	Yes						
Watchdog Timer	Output	System reset						
	Interval	Programmable 1 ~ 255 sec/min						
Power Requirement	Power On	3.3V	5V	12V	5Vsb	-12V	12V_8P_0	12V_8P_1
	(150W CPU@2.6GHz DDR4 2400 8G*6)	1.32966A	4.31024A	0.68597A	0.25408A	0.056846A	21.5989A	17.5921A
Environment		Operating				Non-operating		
	Temperature	0 ~ 40 °C, depends on CPU speed and cooler solution				-40 ~ 85 °C		
	Humidity	10% ~ 95%			10% ~ 95% (Non condensing)			
Physical Characteristics	Dimension (L x H)	304.8 x 244 mm (12" x 9.6")						

Block Diagram



Ordering Information

Part Number	Chipset	Memory	GbE/10GbE LAN	IPMI	VGA Chip
ASMB-825-00A1E	C621	DDR4 RDIMM	2/-	-	AST 2510
ASMB-825I-00A1E	C621	DDR4 RDIMM	2/-	Yes	AST 2500
ASMB-825T2-00A1E	C622	DDR4 RDIMM	2/2	Yes	AST 2500

Packing List

Part Number	Description	Quantity
2066825I00	Driver CD	x 1
2006825I10	Startup manual	x 1
1700003194	SATA data cables	x 2
1700022749-11	SATA power cables	x 2
1700019748	CPU power cable	x 2
1930007120-01	Screw for M.2 device	x 2
1960076489T000	I/O shield	x 1

Optional Accessories

Part Number	Description
PCA-AUDIO-HDB1E	HD Audio-card
PCA-TPM-00B1E	TPM 2.0 Module by LPC
1960081603N001	LGA-3647 narrow CPU cooler for 2U/4U chassis
1960081155N001	LGA-3647 narrow CPU cooler for 1U chassis
1700002204	Dual port USB cable (27 cm) with bracket
1700008461	Four port USB cable (30.5 cm) with bracket
1700020277-01	Dual port USB 3.0 cable (30 cm) with bracket
1701090401	COM port cable (40 cm) with bracket
1700019268-11	PS/2 port cable (35 cm)
1960063434N000	Cable bracket for 1700019268-11
1960082348T000	For 1U chassis IO shield

I/O View



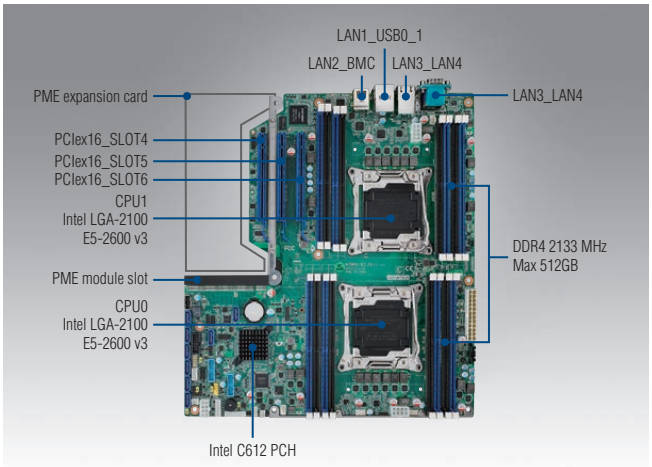
ASMB-825T2-00A1E



ASMB-825-00A1E
ASMB-825I-00A1E

ASMB-913

Dual LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 EATX Server Board with 16 DDR4 DIMM, 3 PCIe x16, 6 USB 3.0, PME support, IPMI



Features

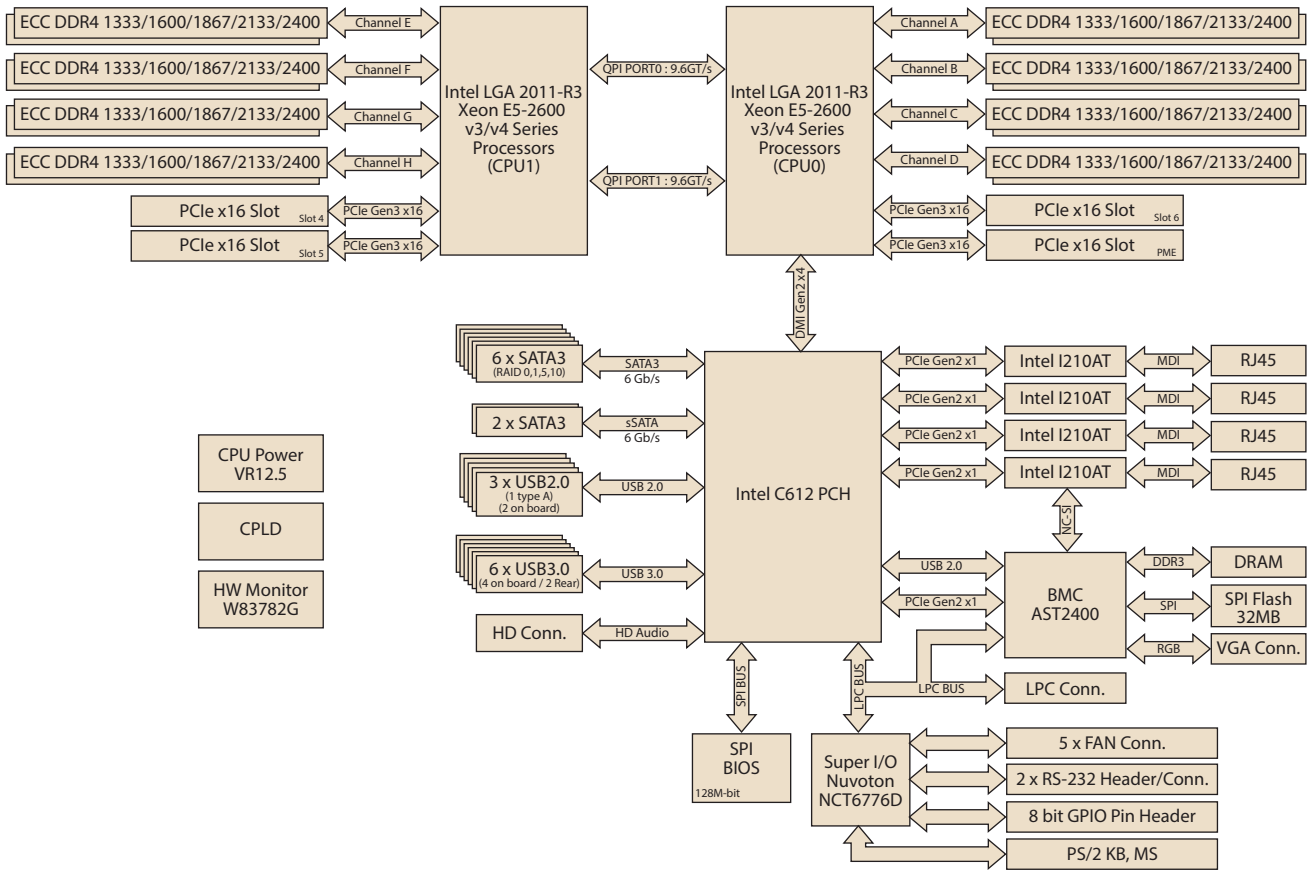
- EATX Server Board with dual Xeon® E5-2600 v3/v4 processor
- 16 x DDR4 2400 MHz RDIMM up to 512 GB
- Three PCIe x16 slot(Gen3.0) and PME expansion slot
- PME expansion cards supporting list is in page 9-32
- 0 ~ 40 °C ambient operation temperature range

Note: ASMB-913I could enable PME slot when processor is installed in CPU0 socket.

Specifications

Form Factor		Extended ATX form factor				
Processor System	Socket	Intel LGA 2011-R3				
	CPU type	Intel® Xeon® E5-2600 v3/v4 dual processor (CPU cooler should be purchased separately and TDP up to 160W) Intel® Xeon® E5-1600 v3/v4 Series (1S conditional support, please contact to Advantech application engineer)				
Core Logic	Chipset	Intel C612 chipset				
Memory	Total slots	16 (Quad Channel)				
	Capacity	Maximum 512 GB ECC RDIMM				
	Memory type	DDR4 ECC-REG 2400/2133/1866/1600 MHz DIMM				
	Memory size	4 GB, 8 GB, 16 GB, 32 GB				
Expansion Slots	Total PCI/PCI-X/PCIe slots	6				
	Slot location 1	Fit to PME daughter board				
	Slot location 2	Fit to PME daughter board				
	Slot location 3	Fit to PME daughter board				
	Slot location 4	1 x PCIe x16 slot (x16 link), signal from CPU1				
	Slot location 5	1 x PCIe x16 slot (x16 link), signal from CPU1				
	Slot location 6	1 x PCIe x16 slot (x16 link), signal from CPU0				
	Slot location 7	-				
Graphics	VGA	Aspeed AST2400/1400 64 MB				
Storage	IDE controller	-				
	SATA controller	Intel C612: 8 SATA3 6 Gb/s ports Intel Rapid Storage Technology (for Windows only) (SATA0-SATA5 and sSATA0-sSATA1 Supports software RAID 0, 1, 10 & 5)				
	SAS controller	-				
Networking	GbE LAN	4 x Intel I210AT				
Onboard I/O Connectors	Floppy connector	-				
	PSU connector	24-pin SSI power connector + 8-pin SSI 12 V power connector + 8-pin SSI 12 V power connector				
	USB connector	2 (supports 4 USB port), 1* Type-A , 2* USB3.0 20pin header (supports 4*USB 3.0 port)				
	Fan header	5 x 4-pin				
	SMBus	1				
	Chassis intruder	1				
	Front LAN LED	2				
	Audio Header	1				
	Serial port header	1				
Rear I/O Connectors	External serial port	1				
	External USB port	4 (2*USB2.0 + 2*USB3.0)				
	VGA port	1				
	RJ-45	4 (one sharing IPMI function)				
	PS/2 KB/mouse	-				
	Infiniband	-				
Management Solution	Software	-				
	Out of band remote management	Yes (ASMB-913I sku only)				
Monitoring	CPU temperature	Yes				
	System Monitoring	Yes				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Power Requirement	Power On	3.3V	5V	12V	5Vsb	-12V
		1.4A	0.5A	23.2A	0.09A	0.05A
Environment		Operating			Non-operating	
	Temperature	0 ~ 40 °C, depends on CPU speed and cooler solution			-40 ~ 85 °C	
	Humidity	10% ~ 95%			10% ~ 95% (Non condensing)	
Physical Characteristics	Dimension (L x H)	304.8 x 330.2 mm (12" x 13")				

Block Diagram



Ordering Information

Part Number	Chipset	Memory	GbE LAN	IPMI	VGA Chip
ASMB-913-00A1E	C612	16 x DDR4 RDIMM	2	-	AST 1400
ASMB-913I-00A1E	C612	16 x DDR4 RDIMM	4	Yes	AST 2400

Packing List

Part Number	Description	Quantity
2061913I01	Driver CD	x 1
2001913I10	Startup manual	x 1
1700003194	SATA data cables	x 2
1703150102	SATA power cables	x 2
1700019748	CPU power cable(8P)	x 2
19Z0000995T000	I/O shield	x 1

Optional Accessories

Part Number	Description
ASMB-FF3P8-12A1E	PME card with 1 PCIe x8 slot and 1 PCIe x4 slot and 1 PCI slot
ASMB-FF3PX-12A1E	PME card with 2 PCI-X and 1 PCI slots
ASMB-FF20F-02A1E	PME card with 2 PCIe x16 slots
ASMB-FF208-02A1E	PME card with 2 PCIe x 8 slots
PCA-AUDIO-HDA1E	HD Audio-card
PCA-TPM-00B1E	TPM 2.0 Module by LPC
1960057226N001	LGA-2011 CPU heatsink for 1U chassis (95W)
1960055362N001	LGA-2011 square CPU cooler for 2U/4U chassis (145W)
1960065684N001	LGA-2011 square CPU cooler for 4U chassis (160W)
1700002204	Dual port USB cable (27 cm) with bracket
1700008461	Four port USB cable (30.5 cm) with bracket
1701090401	COM port cable with bracket
1700020277-01	Dual port USB 3.0 cable (30 cm) with bracket
19Z0001086N000	1U chassis IO shield
968EMLSAP2	SUSIAccess Pro 3.0

I/O View



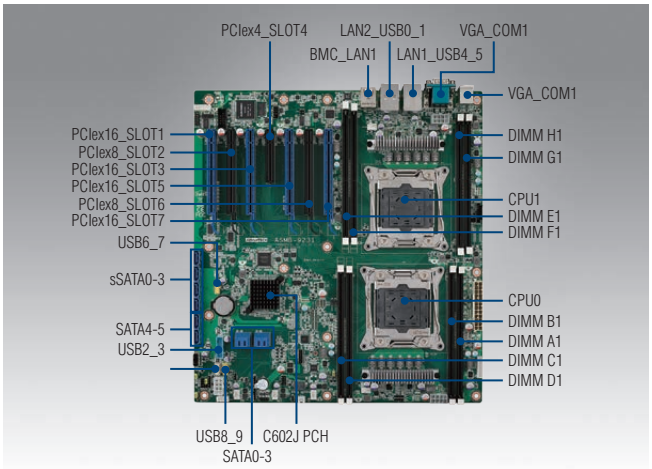
ASMB-913-00A1E



ASMB-913I-00A1E

ASMB-923

Dual LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 EATX Server Board with 8 DDR4, 4 PCIe x16+ 2 PCIe x8, 4 USB 3.0, IPMI



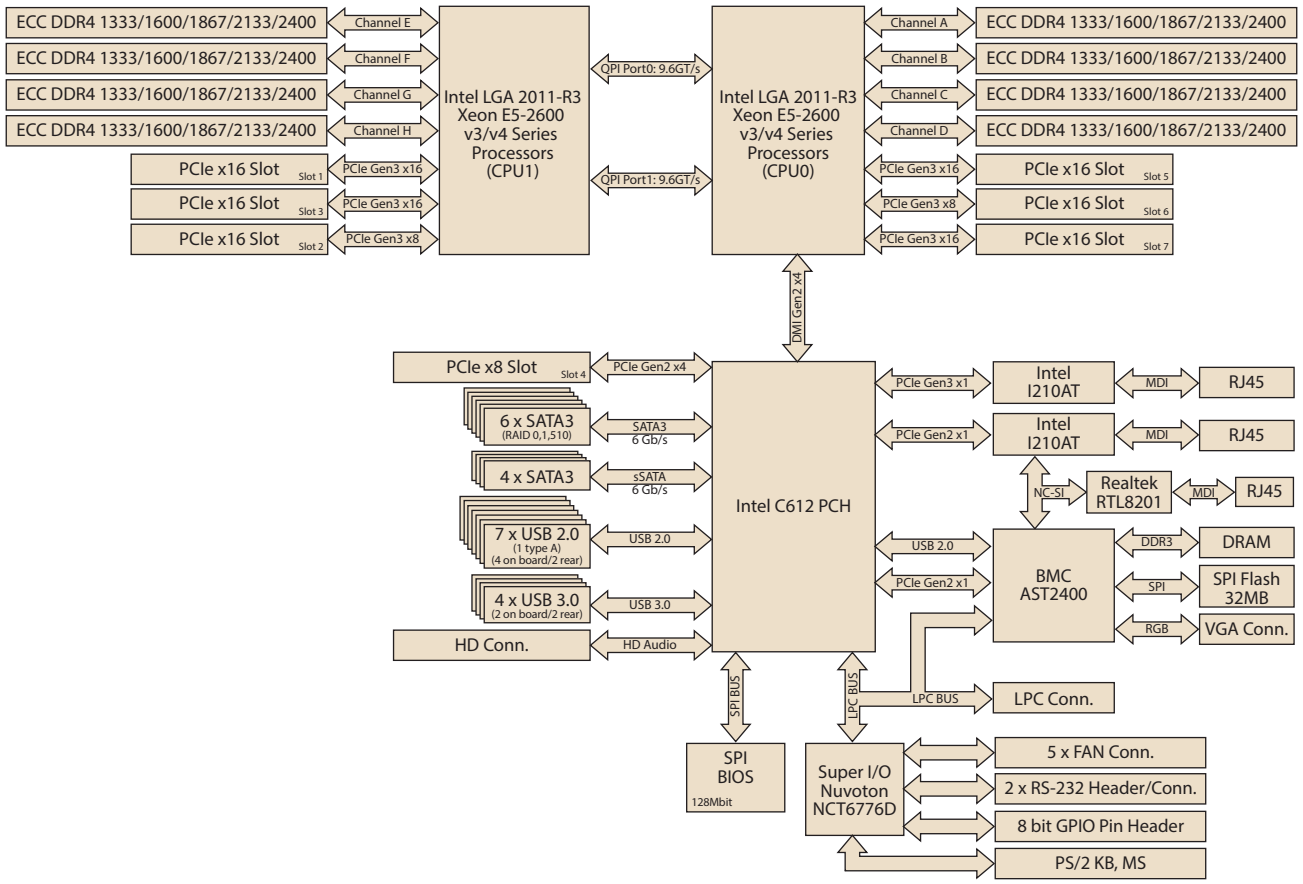
Features

- EATX Server Board with dual Xeon® E5-2600 v3/v4 processor, 8 DIMMs 256 GB memory capacity
- DDR4 2400 MHz RDIMM up to 256 GB
- Four PCIe x16 slots (Gen3) + two PCIe x8 slots (Gen3.0) and one PCIe x4 (Gen2.0)
- 0 ~ 40 °C ambient operation temperature range

Specifications

Form Factor		Extended ATX form factor				
Processor System	Socket	Intel LGA 2011-R3				
	CPU type	Intel® Xeon® E5-2600 v3/v4 dual processor (CPU cooler should be purchased separately and TDP up to 160W) Intel® Xeon® E5-1600 v3/v4 Series (1S conditional support, please contact to Advantech application engineer)				
Core Logic	Chipset	Intel C612 chipset				
Memory	Total slots	8 (Quad Channel)				
	Capacity	Maximum 256 GB ECC RDIMM				
	Memory type	DDR4 ECC-REG 2400/2133/1866/1600/1333 MHz DIMM				
	Memory size	1 GB, 2 GB, 4 GB, 8 GB, 16 GB, 32 GB				
Expansion Slots	Total PCI/PCI-X/PCIe slots	7				
	Slot location 1	PCIe x16 slot (x16 link), signal from CPU1				
	Slot location 2	PCIe x16 slot (x8 link), signal from CPU1				
	Slot location 3	PCIe x16 slot (x16 link), signal from CPU1				
	Slot location 4	PCIe x8 slot (x4 link), signal from PCH				
	Slot location 5	PCIe x16 slot (x16 link), signal from CPU0				
	Slot location 6	PCIe x16 slot (x8 link), signal from CPU0				
	Slot location 7	PCIe x16 slot (x16 link), signal from CPU0				
Graphics	VGA	Aspeed AST2400/1400 64 MB				
Storage	IDE controller	-				
	SATA controller	Intel C610: 10 SATA3 6 Gb/s ports Intel Rapid Storage Technology (for Windows only) (SATA0-SATA5 and sSATA0-sSATA3 Supports software RAID 0, 1, 10 & 5)				
	SAS controller	-				
Networking	GbE LAN	2 x Intel I210AT				
Onboard I/O Connectors	Floppy connector	-				
	PSU connector	24-pin SSI power connector + 8-pin SSI 12 V power connector + 8-pin SSI 12 V power connector				
	USB connector	2 (supports 4 USB port), 1* Type-A , 1* USB3.0 20pin header (supports 2*USB 3.0 port)				
	Fan header	5 x 4-pin				
	SMBus	1				
	Chassis intruder	1				
	Front LAN LED	2				
	Audio Header	1				
	Serial port header	1				
Rear I/O Connectors	External serial port	1				
	External USB port	4 (2*USB2.0 + 2*USB3.0)				
	VGA port	1				
	RJ-45	3 (1 port dedicated for IPMI function)				
	PS/2 KB/mouse	1				
	Infiniband	-				
Management Solution	Software	-				
	Out of band remote management	Yes (ASMB-923I sku only)				
Monitoring	CPU temperature	Yes				
	System Monitoring	Yes				
Watchdog Timer	Output	System reset				
	Interval	Programmable 1 ~ 255 sec/min				
Power Requirement	Power On	3.3V	5V	12V	5Vsb	-12V
		1.69A	1.00A	17.42A	0.05A	0.01A
Environment		Operating			Non-operating	
	Temperature	0 ~ 40 °C, depends on CPU speed and cooler solution			-40 ~ 85 °C	
	Humidity	10% ~ 95%			10% ~ 95% (Non condensing)	
Physical Characteristics	Dimension (L x H)	304.8 x 330.2 mm (12" x 13")				

Block Diagram



Ordering Information

Part Number	Chipset	Memory	GbE LAN	IPMI	VGA Chip
ASMB-923-00A1E	C612	DDR4 RDIMM	2	-	AST 1400
ASMB-923I-00A1E	C612	DDR4 RDIMM	2	Yes	AST 2400

Packing List

Part Number	Description	Quantity
2066923I01	Driver CD	x 1
2006923I10	Startup manual	x 1
1700003194	SATA data cables	x 2
1703150102	SATA power cables	x 2
1700019748	CPU power cable(8P)	x 2
1960052312T010	I/O shield	x 1

Optional Accessories

Part Number	Description
PCA-AUDIO-HDA1E	HD Audio-card
PCA-TPM-00B1E	TPM 2.0 Module by LPC
1960057226N001	LGA-2011 square CPU heatsink for 1U chassis (95W)
1960055362N001	LGA-2011 square CPU cooler for 2U/4U chassis (145W)
1960065684N001	LGA-2011 square CPU cooler for 4U chassis (160W)
1700002204	Dual port USB cable (27 cm) with bracket
1700008461	Four port USB cable (30.5 cm) with bracket
1701090401	COM port cable with bracket
19Z0000406T000	1U chassis IO shield
968EMLSAP2	SUSIAccess Pro 3.0

I/O View



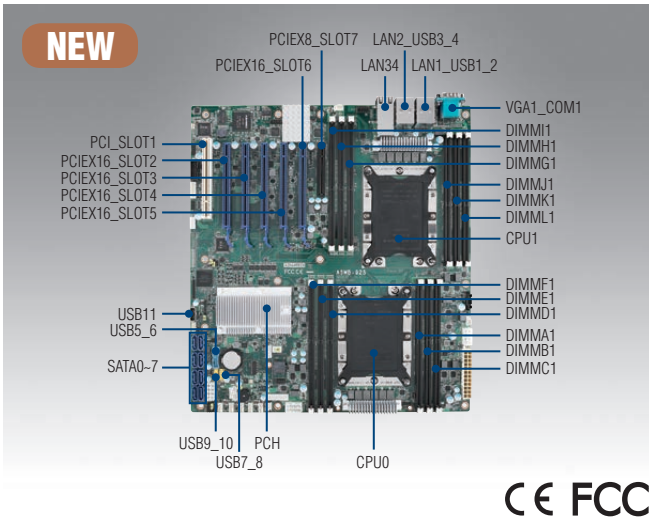
ASMB-923-00A1E



ASMB-923I-00A1E

ASMB-925

Dual LGA3647-P0 Intel® Xeon® Scalable EATX Server Board with 12 DDR4, 5 PCIe x16 + 1 PCIe x8 + 1 PCI, 8 SATA3, 6 USB3.0, Dual 10GbE, IPMI



CE FCC

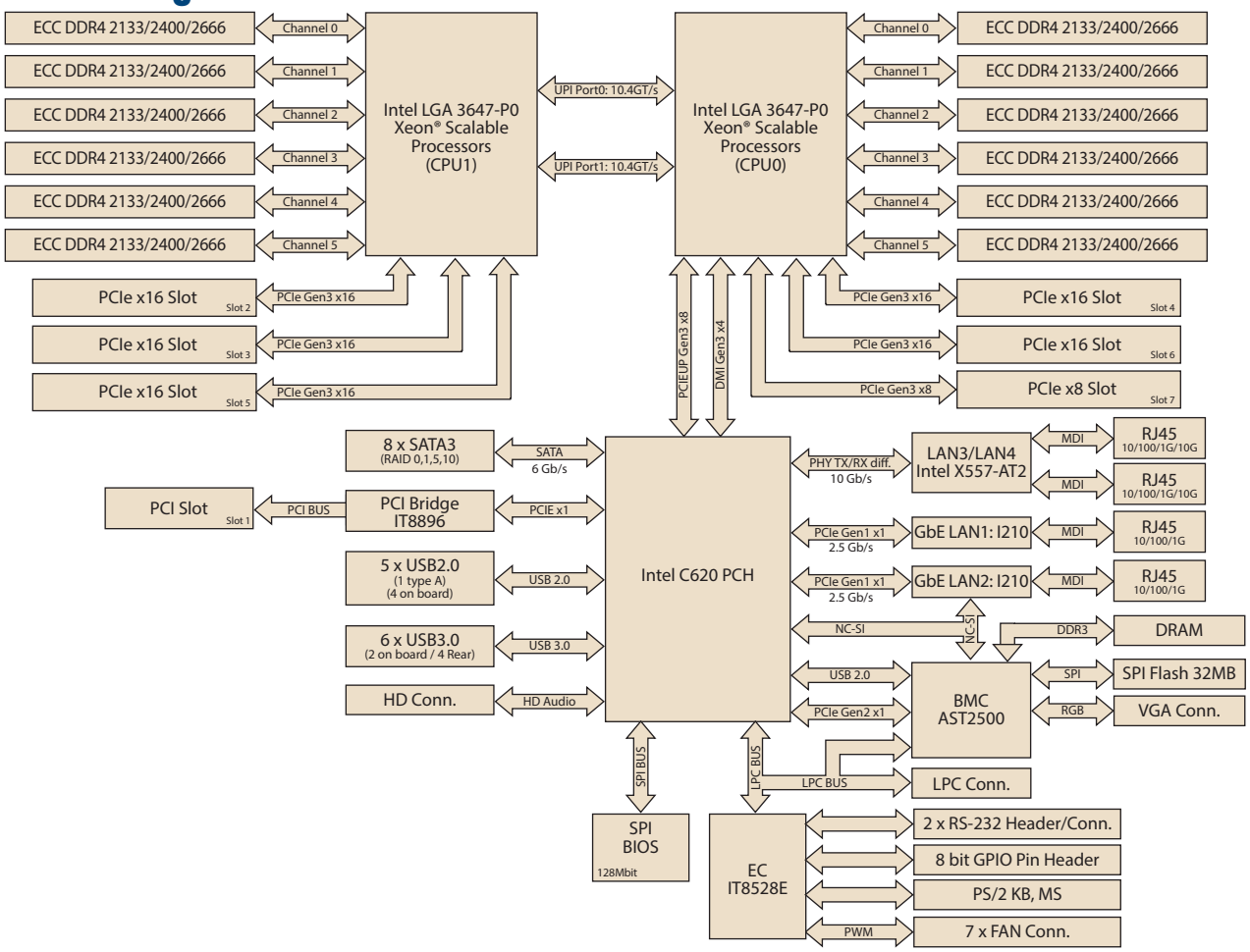
Features

- EATX Server Board with dual Xeon Scalable processors
- DDR4 2666 MHz RDIMM up to 384 GB (12 DIMMs)
- Five PCIe x16 (Gen3), one PCIe x8 (Gen3), and one PCI slots
- Intel® X557-AT2 dual 10GbE ports
- Eight SATA3 and six USB3.0 ports
- 0 ~ 40 °C ambient operation temperature range

Specifications

Form Factor		EATX form factor						
Processor System	Socket	Intel LGA3647-P0						
	CPU type	Intel Xeon Scalable dual processors (CPU cooler should be purchased separately and TDP up to 205W)						
Core Logic	Chipset	Intel C620 chipset						
Memory	Total slots	12 (1 DIMM per channel)						
	Capacity	Maximum 384 GB ECC RDIMM						
	Memory type	DDR4 ECC-REG 1866/2133/2400 /2666 MHz DIMM						
	Memory size	4 GB, 8 GB, 16 GB, 32 GB						
Expansion Slots	Total PCI/PCI-X/PCIe slots	7						
	Slot location 1	PCI, signal from PCH						
	Slot location 2	PCIe x16 slot (x16 link), signal from CPU1						
	Slot location 3	PCIe x16 slot (x16 link), signal from CPU1						
	Slot location 4	PCIe x16 slot (x16 link), signal from CPU0						
	Slot location 5	PCIe x16 slot (x16 link), signal from CPU1						
	Slot location 6	PCIe x16 slot (x16 link), signal from CPU0						
	Slot location 7	PCIe x8 slot (x8 link), signal from CPU0						
Graphics	VGA	ASPEED AST2500/2510						
Storage	IDE controller	-						
	SATA controller	Intel C620: 8 x SATA3 / 6 Gb/s ports Intel Rapid Storage Technology (for Windows only) (SATA0-SATA7 supports software RAID 0, 1, 10 & 5)						
	SAS controller	-						
Networking	GbE/10GbE LAN	2 x Intel I210AT / Intel X557-AT2 (dual 10GbE ports for ASMB-925T2 sku only)						
Onboard I/O Connectors	Floppy connector	-						
	PSU connector	24-pin SSI power connector + 3 x 8-pin SSI 12 V power connector						
	USB connector	4 x USB2.0 ports (two onboard headers) + 2 x USB3.0 ports (one onboard headers) + 1 x Type-A USB2.0 port						
	Fan header	7 x 4pin (5 for system + 2 for CPU)						
	SMBus	1						
	Chassis intruder	1						
	Front LAN LED	1						
	Audio Header	1						
	PS/2 KB/Mouse	1						
	Serial port header	1						
Rear I/O Connectors	External serial port	1						
	External USB port	4 (USB3.0)						
	VGA port	1						
	RJ-45	4 (LAN2 sharing with IPMI function)						
	PS/2 KB/mouse	-						
	Infiniband	-						
Management Solution	Software	-						
	Out of band remote management	Yes (ASMB-925I/ASMB-925T2 sku only)						
Monitoring	CPU temperature	Yes						
	System Monitoring	Yes						
Watchdog Timer	Output	System reset						
	Interval	Programmable 1 ~ 255 sec/min						
Power Requirement	Power On	3.3V	5V	12V	5Vsb	-12V	12V_8P_0	12V_8P_1
	(205W CPU@2.5GHz DDR4 2400 4G*12)	1.51A	5.19A	0A	0.05A	0A	20.58A	20.08A
Environment		Operating			Non-operating			
	Temperature	0 ~ 40 °C, depends on CPU speed and cooler solution			-40 ~ 85 °C			
	Humidity	10% ~ 95%			10% ~ 95% (Non condensing)			
Physical Characteristics	Dimension (L x H)	304.8 x 330.2 mm (12" x 13")						

Block Diagram



Ordering Information

Part Number	Chipset	Memory	GbE/10GbE LAN	IPMI	VGA Chip
ASMB-925-00A1	C621	DDR4 RDIMM	2/-	-	AST2510
ASMB-925I-00A1	C621	DDR4 RDIMM	2/-	Yes	AST2500
ASMB-925T2-00A1	C622	DDR4 RDIMM	2/2	Yes	AST2500

Packing List

Part Number	Description	Quantity
2061092500	Driver CD	x 1
2001092500	Startup manual	x 1
1700003194	SATA data cables	x 2
1700022749-11	SATA power cables	x 2
1700019748	CPU power cable	x 2
1960076488T000	I/O shield	x 1

Optional Accessories

Part Number	Description
PCA-AUDIO-HDB1E	HD Audio-card
PCA-TPM-00A1E	TPM1.2 Module
PCA-TPM-00B1E	TPM2.0 Module
1960081603N001	LGA-3647 narrow CPU cooler for 2U/4U chassis
1960081155N001	LGA-3647 narrow CPU cooler for 1U chassis
1700002204	Dual port USB cable (27 cm) with bracket
1700008461	Four port USB cable (30.5 cm) with bracket
1700020277-01	Dual port USB 3.0 cable (30 cm) with bracket
1701090401	COM port cable with bracket
1960082347T000	For 1U chassis IO shield

I/O View



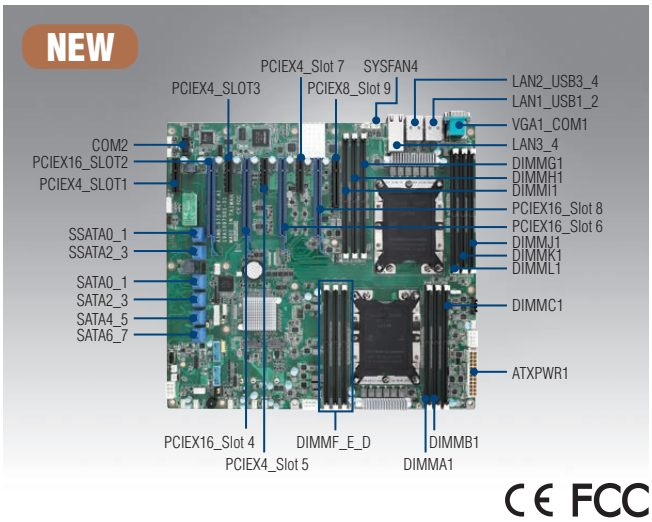
ASMB-925T2-00A1



ASMB-925-00A1/
ASMB-925I-00A1

ASMB-975

Dual LGA 3647-P0 Intel® Xeon® Scalable Proprietary Server Board with 12 DDR4, 4 PCIe x16 + 1 PCIe x8+4 PCIe x4, 14 SATA3, 8 USB3.0, Dual 10GbE, IPMI



CE FCC

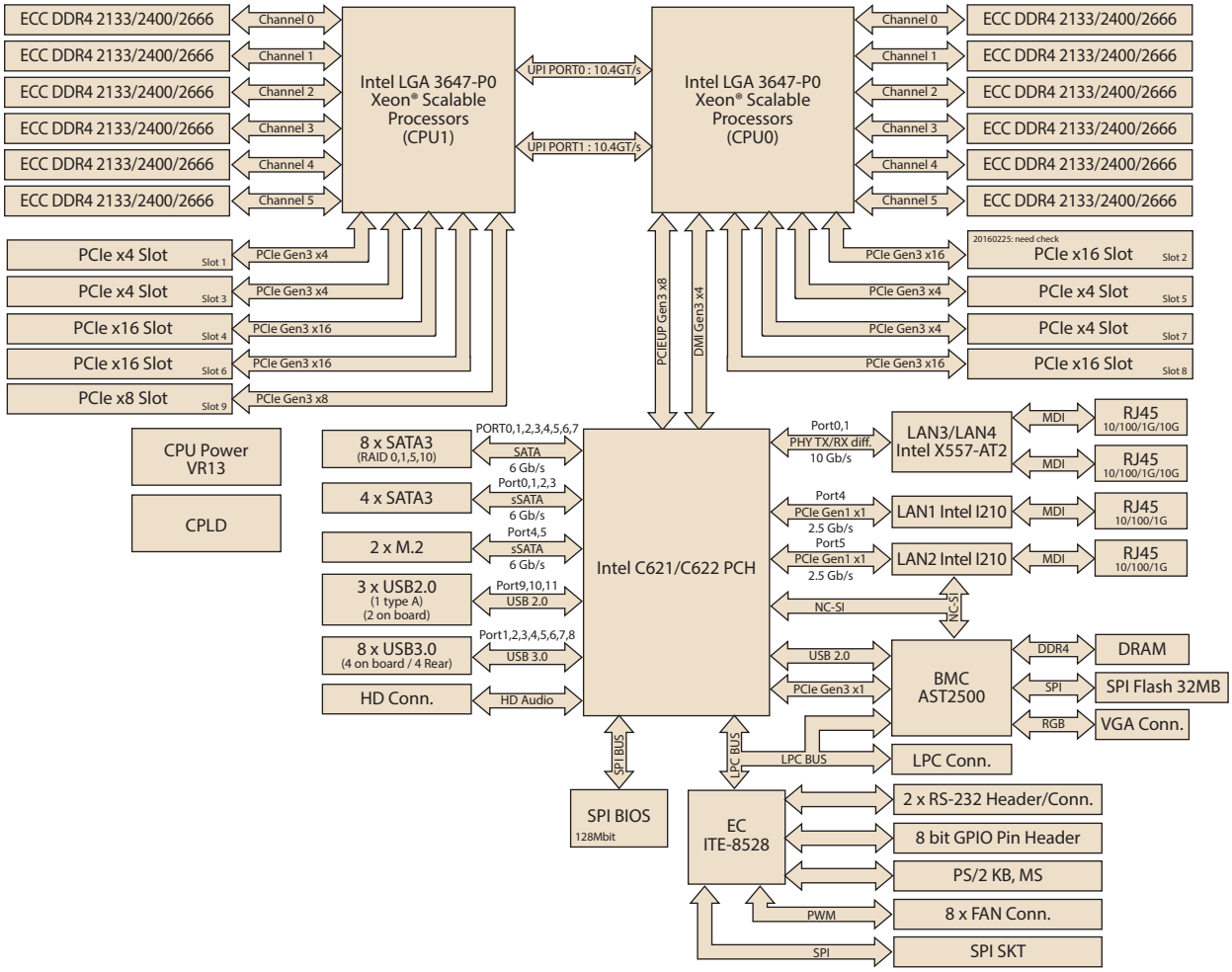
Features

- Proprietary Server Board with dual Xeon Scalable
- DDR4 2666 MHz RDIMM up to 384 GB (12 DIMMs)
- 14 SATA3 connectors (including 2 SATA M.2)
- Four PCIe x16 slots (Gen3) for double-deck cards
- Intel® X557-AT2 dual 10GbE ports
- 0 ~ 40 °C ambient operation temperature range

Specifications

Form Factor		Proprietary (14.1" x 13")						
Processor System	Socket	Intel LGA 3647-P0						
	CPU type	Intel Xeon Scalable dual processors (CPU cooler should be purchased separately and TDP up to 205W)						
Core Logic	Chipset	Intel C620 chipset						
Memory	Total slots	12 (1 DIMM per channel)						
	Capacity	Maximum 384 GB ECC RDIMM						
	Memory type	DDR4 ECC-REG 2133/2400 /2666 MHz DIMM						
	Memory size	4 GB, 8 GB, 16 GB, 32 GB						
Expansion Slots	Total PCIe slots	9						
	Slot location 1	PCIe x4 slot (x4 link), signal from CPU1						
	Slot location 2	PCIe x16 slot (x16 link), signal from CPU0						
	Slot location 3	PCIe x4 slot (x4 link), signal from CPU1						
	Slot location 4	PCIe x16 slot (x16 link), signal from CPU1						
	Slot location 5	PCIe x4 slot (x4 link), signal from CPU0						
	Slot location 6	PCIe x16 slot (x16 link), signal from CPU1						
	Slot location 7	PCIe x4 slot (x4 link), signal from CPU0						
	Slot location 8	PCIe x16 slot (x16 link), signal from CPU0						
	Slot location 9	PCIe x8 slot (x8 link), signal from CPU1						
Graphics	VGA	Aspeed AST 2500/2510						
Storage	IDE controller	-						
	SATA controller	Intel C620: 12 x SATA3 + 2 x M.2 6 Gb/s ports Intel Rapid Storage Technology (for Windows only)						
	SAS controller	-						
Networking	GbE/10GbE LAN	2 x Intel I210AT / Intel X557-AT2 (dual 10GbE ports)						
Onboard I/O Connectors	Floppy connector	-						
	PSU connector	24-pin SSI power connector + 2 x 8-pin SSI 12 V power connector + 4-pin SSI 12 V power connector						
	USB connector	2 x USB2.0 ports (two onboard headers) + 8 x USB3.0 ports (four in rear + two onboard headers) + 1 x Type-A USB2.0 port						
	Fan header	8 (6 for system fan + 2 for CPU fan)						
	SMBus	1						
	Chassis intruder	1						
	Front LAN LED	2						
	Audio Header	1						
	PS/2 KB/Mouse	1						
	Serial port header	1						
Rear I/O Connectors	External serial port	1						
	External USB port	4 (USB3.0)						
	VGA port	1						
	RJ-45	4 (Lan2 sharing IPMI)						
	PS/2 KB/mouse	-						
	Infiniband	-						
Management Solution	Software	-						
	Out of band remote management	Yes						
Monitoring	CPU temperature	Yes						
	System Monitoring	Yes						
Watchdog Timer	Output	System reset						
	Interval	Programmable 1 ~ 255 sec/min						
Power Requirement	Power On	3.3V	5V	12V	5Vsb	-12V	8P_0	8P_1
		1.37A	6.83A	0.09A	0.14A	0.03A	4.4A	4.2A
Environment		Operating				Non-operating		
	Temperature	0 ~ 40 °C, depends on CPU speed and cooler solution				-40 ~ 85 °C		
	Humidity	10% ~ 95%				10% ~ 95% (Non condensing)		
Physical Characteristics	Dimension (L x H)	358.1 x 330.2 mm (14.1" x 13")						

Block Diagram



Ordering Information

Part Number	Chipset	Memory	GbE/10GbE LAN	IPMI	VGA Chip
ASMB-975-00A1	C621	DDR4 RDIMM	2/-	-	AST 2510
ASMB-975I-00A1	C621	DDR4 RDIMM	2/-	Yes	AST 2500
ASMB-975T2-00A1	C622	DDR4 RDIMM	2/2	Yes	AST 2500

Packing List

Part Number	Description	Quantity
2066975I00	Driver CD	x 1
2001097500	Startup manual	x 1
1700003194	SATA data cables	x 2
1700022749-11	SATA power cables	x 2
1700019748	CPU power cable	x 2
1960076489t000	I/O shield	x 1

Optional Accessories

Part Number	Description
PCA-AUDIO-HDB1E	HD Audio-card
PCA-TPM-00B1E	TPM 2.0 Module by LPC
1960081603N001	LGA-3647 narrow CPU cooler for 2U/4U chassis
1960081155N001	LGA-3647 narrow CPU cooler for 1U chassis
1700002204	Dual port USB cable (27 cm) with bracket
1700008461	Four port USB cable (30.5 cm) with bracket
1700020277-01	Dual port USB 3.0 cable (30 cm) with bracket
1701090401	COM port cable with bracket

I/O View



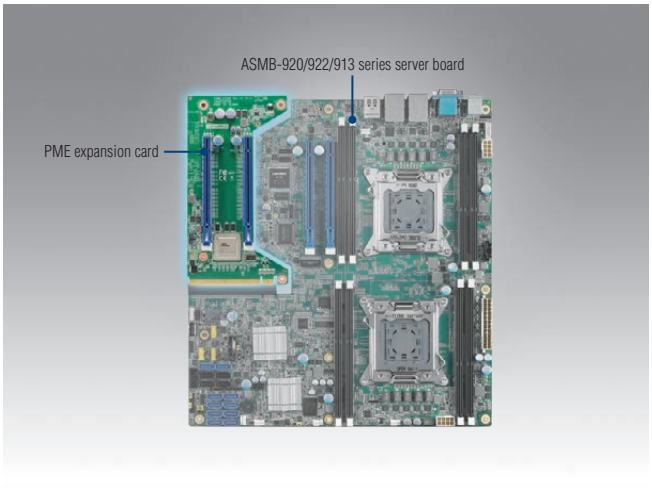
ASMB-975-00A1
ASMB-975I-00A1



ASMB-975T2-00A1

PME Expansion Cards

Various Selections Supporting PCI, PCI-X, PCIe x1/x4/x8/x16



Features

- Auto-configured by BIOS
- ASMB-920/922/913 series plus PME forms a standard EATX motherboard compatible with EATX chassis
- Multiple options for all demands

Note:
1. To enable PME function, processors must be installed in both CPU0 & CPU1 sockets of ASMB-920 series.
2. To enable PME function, a processor must be installed in the CPU0 socket of ASMB-922 & 913 series.

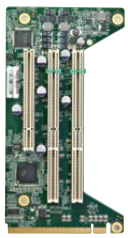
Introduction

Advantech's PME (Powerful Modular Expansion) design allows versatile expansion module options for the ASMB-920/922/913 series motherboards. PME expansion cards are an economical, effective solution for a range of applications, providing function expansion for a range of PCIe modules. In addition to meeting standard industrial specifications, Advantech's PME modules fit just about anywhere. They are easy to assemble and provide a simple upgrade path.

Specifications

Model Name		ASMB-FF3PX	ASMB-FF20F	ASMB-FF208	ASMB-FF3P8	ASMB-FF404*
Expansion Slots	Total PCI/PCI-X/PCIe slots	3	2	2	3	4
	Slot location E1	-	-	-	-	PCIe x8 (Gen3 x4 link)
	Slot location 1	PCI 33/66 MHz	PCIe x16 (Gen3 x16 link)	PCIe x16 (Gen1 x8 link)	PCI 33/66 MHz	PCIe x8 (Gen3 x4 link)
	Slot location 2	PCI-X 100 MHz	-	-	PCIe x8 (Gen3 x4 link)	PCIe x8 (Gen3 x4 link)
	Slot location 3	PCI-X 100 MHz	PCIe x16 (Gen3 x16 link)	PCIe x16 (Gen1 x8 link)	PCIe x8 (Gen3 x8 link)	PCIe x8 (Gen3 x4 link)
Fit Motherboard		ASMB-920/922/913 series				
Environment		Operating			Non-operating	
	Temperature	System: 0 ~ 40 °C Board: 0 ~ 60 °C			-40 ~ 85 °C	
	Humidity	0% ~ 90%			5% ~ 95% (Non condensing)	
Physical Characteristics	Dimension (L x H)	101 x 193 mm (3.9" x 7.5")	101 x 193 mm (3.9" x 7.5")	101 x 193 mm (3.9" x 7.5")	101 x 193 mm (3.9" x 7.5")	111 x 193 mm (4.3" x 7.5")

Front View



ASMB-FF3PX-12A1E



ASMB-FF20F-02A1E



ASMB-FF208-02A1E



ASMB-FF3P8-12A1E



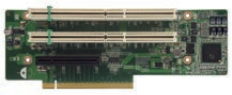
ASMB-FF404-04A1E*Note 3

Ordering Information

Part Number	Description
ASMB-FF3PX-12A1E	PME card with 2 PCI-X and 1 PCI slots
ASMB-FF20F-02A1E	PME card with 2 PCIe x16 slots (x16 link)
ASMB-FF3P8-12A1E	PME card with 1 PCIe x8 slot(x8 link) and 1 PCIe x8 slot(x4 link) and 1 PCI slot
ASMB-FF208-02A1E	PME card with 2 PCIe x16 slots (x8 link)
ASMB-FF404-04A1E	PME card with 4 PCIe x8 slots (x4 link)

Note:
1. To enable PME function, a processor must be installed in the CPU0 socket of ASMB-922 & 913 series.
2. HPC-7400 & HPC-7483 chassis can support ASMB-922/913 series + ASMB-FF404.

ASMB Riser Card






Selection Guide

Model Name		ASMB-RF3X8-21A1E	ASMB-RF348-21A1E	ASMB-RF388-21A1E	ASMB-RF1F-10A1E
Interface		PCIe x16 for slot 6	PCIe x16 for slot 6	PCIe x16 for slot 6	PCIe x16 for slot 6
Expansion Slots	Spec.	2 * PCI-X 64bit 133/100MHz + 1 * PCIe x8	1 * PCIe x8 +2 * PCIe x4	1 * PCIe x8 +2 * PCIe x4	1 * PCI x16
	Top Slot	3.3V PCI-X 64bit 133/100MHz	PCIe x16 (x8 link)	PCIe x16 (x8 link)	PCIe x16(x16 link)
	Middle Slot	3.3V PCI-X 64bit 133/100MHz	PCIe x8 (x4 link)	PCIe x8 (x4 link)	-
	Bottom Slot	PCIe x8 slot (x8 link)	PCIe x8 (x4 link)	PCIe x8 (x4 link)	-
Chassis	2U	HPC-7280/ ACP-2010MB/2320MB/ HPC-7242MB/ HPC-8212/HPC-8224	HPC-7280/ ACP-2010MB/2320MB/ HPC-7242MB/ HPC-8212/HPC-8224	HPC-7280/ ACP-2010MB/2320MB/ HPC-7242MB/ HPC-8212/HPC-8224	HPC-7280/ ACP-2010MB/2320MB/ HPC-7242MB/HPC-8212/ HPC-8224
Motherboard	ASMB-584	X	*△ (Note3)	*△ (Note3)	*(Note4)
	ASMB-585	YES	*△ (Note1)	*△ (Note1)	YES
	ASMB-781	YES	*△ (Note1)	*△ (Note1)	YES
	ASMB-782	X	*△ (Note2)	*△ (Note2)	*(Note4)
	ASMB-784	YES	*△ (Note1)	*△ (Note1)	YES
	ASMB-785	YES	*△ (Note1)	*△ (Note1)	YES
	ASMB-813	YES	YES	YES	YES
	ASMB-815	YES	YES	YES	YES
	ASMB-822	YES	YES	YES	YES
	ASMB-823	YES	YES	YES	YES
	ASMB-825	YES	YES	YES	YES
	ASMB-913	YES	YES	YES	YES
	ASMB-922	YES	YES	YES	YES
	ASMB-923	X	* (Note3)	* (Note3)	*(Note4)
	ASMB-925	YES	YES	YES	YES
	ASMB-975	YES	YES	YES	YES

Yes: Fully compatible

△: Conditionally compatible

*△ Note 1: PCIe x16 slot of ASMB-781/784/785/585 motherboard can split as x8 x8 ode. When an ASMB-RF348-21A1E riser card is installed, it supports one PCIe x4 (bottom slot), and one PCIe x8 (top slot). The middle PCIe x4 slot on the riser card doesn't work.

*△ Note 2: PCIe x16 slot of ASMB-782 motherboard is x8 link only. When installing an ASMB-RF348-21A1E riser card, it only supports one PCI-E x4 slot (bottom).

*△ Note 3: PCIe x16 slot of ASMB-584/923 motherboard is x8 link and can split as x4 x4 mode. When installing an ASMB-RF348-21A1E riser card, it supports two PCIe x4 (bottom and middle slots) and the top PCIe x8 slot doesn't work.

*△ Note 4: PCIe x16 slot of ASMB-584/923 motherboard is x8 link. When installing an ASMB-RF1F-10A1E riser card, it supports PCIe x8 only.

Enhance Your Scalability

Connect to Innovate with Advantech SKY Server Applications



ADVANTECH

Enabling an Intelligent Planet

Advantech launches the latest ASMB server boards to support Intel® Xeon® scalable processors which focus on speed without compromising on data security. They offer up to 28 cores in a single processor and provide at least 1.5 times greater computing capability compared to previous generation Intel® Xeon® processors. Advantech ASMB Dual Processor(DP) and Uni Processor (UP) server boards come in a variety of form factors, including ATX, EATX, and proprietary server boards. They fulfill a multitude of applications, such as visual computing using multiple GPU cards or VDI virtualization requiring high memory capacity configuration.



ASMB-975

Dual LGA 3647-P0 Intel® Xeon® Scalable Proprietary Server Board with 12 DDR4, 4 PCIe x16 + 1 PCIe x8+4 PCIe x4, 14 SATA3, 8 USB3.0, Dual 10GbE, IPMI



ASMB-925

Dual LGA 3647-P0 Intel® Xeon® Scalable EATX Server Board with 12 DDR4, 5 PCIe x16 + 1 PCIe x8 + 1 PCI, 8 SATA3, 6 USB3.0, Dual 10GbE, IPMI



ASMB-825

Dual LGA 3647-P0 Intel® Xeon® Scalable ATX Server Board with 6 DDR4, 4 PCIe x16 + 2 PCIe x8, 8 SATA3, 6 USB3.0, Dual 10GbE, IPMI



ASMB-815

LGA 3647-P0 Intel® Xeon® Scalable ATX Server Board with 6 DDR4, 5 PCIe x8 or 2 PCIe x16 and 1 PCIe x8, 8 SATA3, 6 USB3.0, Dual 10GbE, IPMI

www.advantech.com

intel IoT Solutions Alliance Premier

Advantech Headquarters
No. 1, Alley 20, Lane 26, Rueiguang Road,
Neihu District, Taipei, Taiwan, 11491, R.O.C.
Tel: 886-2-2792-7818
Fax: 886-2-2794-7304

Check Now »

10

Industrial Server Chassis

Selection Guide		***10-2***
Server-grade Chassis		
HPC-2040	Mini 4 Bay Server Tower	***10-4***
HPC-5000	Small Tower Chassis for microATX / Mini-ITX Motherboard	***10-6***
HPC-7000	Server Tower Chassis for EATX/ATX/ MicroATX Motherboard	***10-8***
HPC-7120S	1U Short-Depth Server Chassis for Micro ATX/ATX Motherboards	***10-10***
HPC-7120	1U Server Chassis for MicroATX/ATX/EATX Server board	***10-12***
HPC-7140	1U Rackmount Server Chassis for MicroATX/ATX Server board with 4 x 3.5" Hot-swap Drive Bays	***10-14***
HPC-7242	2U Rackmount Chassis for ATX Motherboard with 4 Hot-Swap SAS/SATA HDD Trays and RPS	***10-16***
HPC-7282	2U Rackmount Chassis for Micro/ATX Server Board with 8 Hot-swap Drive Bays, 7 Low Profile Expansion Slots	***10-18***
HPC-7320	3U Short-depth Rackmount/ Tower Chassis for EATX/ATX/MicroATX Motherboard	***10-20***
HPC-7400	4U Compact Rackmount / Tower Chassis for EATX/ATX/MicroATX Motherboard	***10-22***
HPC-7442	4U Rackmount Chassis for EATX/ATX/ MicroATX Motherboard with 4 Hot Swap Drive Trays	***10-24***
HPC-7483	4U Rackmount / Tower Chassis for EATX/ATX/MicroATX Motherboard	***10-26***
HPC-8212	2U Storage Chassis for ATX/EATX Serverboard with 12 Hot-swap Drive Bays	***10-28***
HPC-8224	2U Storage Chassis for ATX/EATX Serverboard with 24 Hot-swap Drive Bays	***10-30***
HPC-8316	3U Storage Chassis for ATX/EATX Serverboard with 16 Hot-swap Drive Bays	***10-32***
HPC-8424	4U Storage Chassis for ATX/EATX Serverboard with 24 Hot-swap Drive Bays	***10-34***
ASR-1000K	Flexible Expansion Module Fulfilling Various JBOD Demands	***10-36***

To view all of Advantech's Industrial Server Chassis, please visit www.advantech.com/products.



Server-grade Chassis






Height (1U = 1.75")		1U		Tower	
Model Name		HPC-7120S	HPC-7140	HPC-5000	HPC-7000
Form Factor Support		Micro ATX, ATX	Micro ATX, ATX	Micro ATX	Micro ATX, ATX, EATX
No. of slots / No. of full-size cards		1/0	1/0	4/2 (11.73" Length)	7/6
Drive Bay	Slim ODD Bay	-	1 (ODD should be purchased separately)	1 (ODD should be purchased separately)	1 (ODD should be purchased separately)
	5.25" (front-accessible)	-	-	-	-
	3.5" (hot-swappable)	-	4	-	-
	3.5" (internal)	-	-	2*3.5" or 1*3.5" + 1*2.5"	3 (External)
	2.5" (hot-swappable)	2 (HPC-7120S-35ZXE only)	Optional	-	-
	2.5" (internal)	2	-	2*3.5" or 1*3.5" + 1*2.5"	-
Cooling	Chassis Fan	3 (4 cm/23.1 CFM)	4 (4cm / 24CFM)	1 (12cm / 82CFM)	2 (12cm/150CFM)
	Air Filter	-	-	Yes	-
Front I/O Interface	USB 3.0	2	-	2	2
	USB 2.0	-	2	2	-
Miscellaneous	LED Indicators	System: Power, HDD, LAN1, LAN2, System Information HDD Tray: HDD Power and Activity LED	System: Power, HDD, LAN1, LAN2, System Information HDD Tray: HDD Power and Activity LED	System: Power	System: Power
	Rear Panel	-	-	Two reserved DB-9 ports	Two USB reserved ports
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 35 °C (32 ~ 95 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)
	Non-Operating Temperature	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)
	Operating Humidity	10 ~ 95% @ 40 °C non-condensing	10 ~ 85% @ 35 °C non-condensing	10 ~ 95% @ 40 °C non-condensing	10 ~ 95% @ 40 °C non-condensing
	Non-operating Humidity	10 ~ 95% @ 60 °C non-condensing	10 ~ 95% @ 60 °C non-condensing	10 ~ 95% @ 60 °C non-condensing	10 ~ 95% @ 60 °C non-condensing
Physical Characteristics	Dimensions (W x H x D)	438 x 43 x 381 mm (17.24" x 1.7" x 15")	437 x 43.5 x 503 mm (17.2" x 1.7" x 19.85")	192 x 376.7 x 338.5 mm (7.56" x 14.83" x 13.33")	267.1 x 458 x 500 mm (10.52" x 18.03" x 19.69")
Page		10-10	10-14	10-6	10-8








2U		3U / Tower	4U / Tower		
HPC-7242	HPC-7282	HPC-7320	HPC-7400	HPC-7442	HPC-7483
Micro ATX, ATX	Micro ATX, ATX	Micro ATX, ATX, EATX	Micro ATX, ATX, EATX	Micro ATX, ATX, EATX	Micro ATX, ATX, EATX
3/3	7/0	7/6	12/12	7/7	10/10
1 (ODD should be purchased separately)	1 (ODD should be purchased separately)	1 (ODD should be purchased separately)	-	1 (ODD should be purchased separately)	-
-	-	-	2	-	3
4 (3.5" / 2.5")	8	2 (3.5" / 2.5")	-	4 can upgrade to 8 (3.5" / 2.5")	8
-	2	2	2 rear-accessible (3.5" / 2.5")	1	-
4 (3.5" / 2.5")	Optional	2 (3.5" / 2.5")	-	4 can upgrade to 8 (3.5" / 2.5")	-
2	-	-	2 rear-accessible (3.5" / 2.5")	-	2
1 (8 cm/47CFM) + 2 (6 cm/28CFM)	3 (8cm / 52.6 CFM)	2 (8cm/141.9CFM) + 1 (6cm/27.72CFM)	3 (8cm/141.9CFM)	1 (12 cm /114 CFM) + 1 (8 cm/55 CFM)	3 (12 cm /226.5 CFM)
Yes	-	Yes	Yes	Yes	-
2	-	2	2	2	2
-	2	-	-	-	-
System: Power, HDD, LAN1, LAN2, temperature, fan HDD Tray: HDD Power and Activity LED	System: Power, HDD, LAN1, LAN2, System Information HDD Tray: HDD Power and Activity LED	System: Power, HDD, LAN1, LAN2 HDD Tray: HDD Power and Activity LED	System: Power, HDD, LAN1, LAN2	System: Power, HDD, LAN1, LAN2, temperature, fan HDD Tray: HDD Power and Activity LED	System: Power, HDD, LAN1, LAN2, System information HDD Tray: HDD Power and Activity LED
Two reserved DB-9 ports	-	Two reserved DB-9 ports	-	Five DB-9 ports and one 68-pin SCSI openings	Two DB-9 ports and two PS2 and two USB
0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)
-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)	-40 ~ 70 °C (-40 ~ 158 °F)
10 ~ 85% @ 40 °C non-condensing	10 ~ 85% @ 40 °C non-condensing	10 ~ 85% @ 40 °C non-condensing	10 ~ 85% @ 40 °C non-condensing	10 ~ 85% @ 40 °C non-condensing	10 ~ 85% @ 40 °C non-condensing
10 ~ 95% @ 60 °C non-condensing	10 ~ 95% @ 60 °C non-condensing	10 ~ 95% @ 60 °C non-condensing	10 ~ 95% @ 60 °C non-condensing	10 ~ 95% @ 60 °C non-condensing	10 ~ 95% @ 60 °C non-condensing
426.4 x 88 x 525 mm (16.79" x 3.46" x 20.67")	437 x 88.9 x 533.4 mm (17.2" x 3.5" x 21")	426.4 x 132.2 x 480 mm (16.79" x 5.2" x 18.9")	426 x 177 x 448 mm (16.7" x 7.0" x 17.6")	426 x 177 x 600 mm (16.7" x 7.0" x 23.6")	435 x 177 x 658 mm (17.13" x 7.0" x 25.5")
10-16	10-18	10-20	10-22	10-24	10-26

HPC-2040

Mini 4 Bay Server Tower



CE FCC

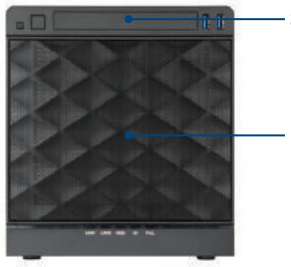
Features

- Four Hot-Swap 3.5"/2.5" drive bays. (SAS 6Gb/s supported)
- Two internal 2.5" HDD, one slim ODD for option
- Dual front USB 3.0 ports
- Support 250W Flex ATX Power
- Supports Mini ITX motherboard

Specifications

Drive Bay		External	Internal
	Slim Optical Drive	Optional	-
	2.5"	-	2 (one for option)
	Hot Swap	4 SASII / SATA III (3.5" or 2.5")	
Cooling	Fan	1 (12cm)	
	Air Filter	-	
Front I/O Interface	USB3.0	2	
Miscellaneous	LED Indicators	Power, LAN 1, LAN 2, HDD, and System Information	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 122 °F)	-40 ~ 70 °C (-40 ~ 156 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration (5 ~ 500 Hz)	0.25Grms	0.5G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	210 x 230 x 275 mm (8.3" x 9.1" x 10.8")	

Front View



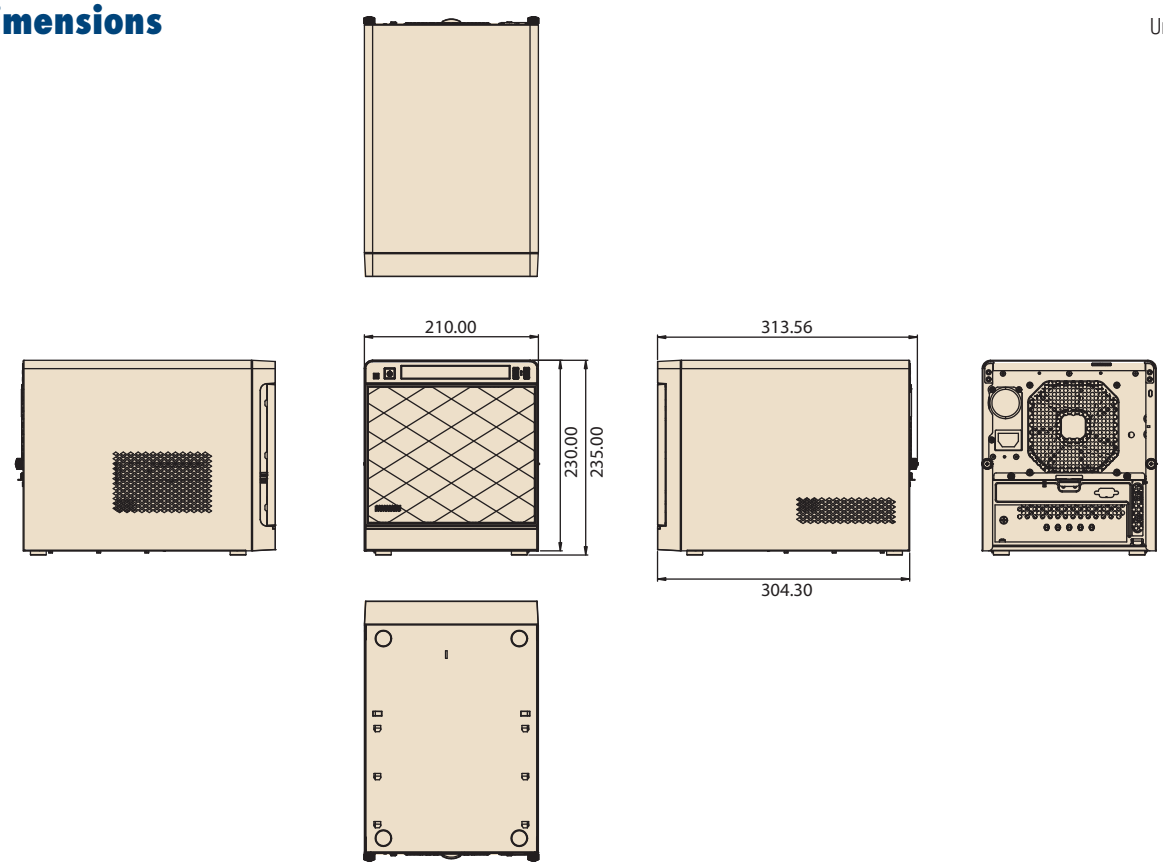


Rear View



Dimensions

Unit: mm



Ordering Information

Part Number	Description
HPC-2040-25ZXE	HPC-2040 Mini Tower Chassis w/ 250W SPS

Packing List

Part Number	Description
PS8-250FATX-XE	250W Flex ATX Power Supply

Optional Accessories

Part Number	Description
1960080721N001	Atom C3000 Cooler for ASMB-260
9891831620E	4 Ports SATAIII HBA Card
96CB-SATAPOWER-6P2	SATA POWER ADAPTER 6PIN TO BIG 4 PIN(G) for Slim ODD

Compatible Motherboard

Part Number	CPU	Memory	10GbE Lan	GbE Lan	SATA	M.2	VGA	IPMI
ASMB-260T2-22A1	C3758	4 xDDR4 RDIMM/UDIMM	2	1	8	1	AST 2500	Yes
ASMB-260I-22A1	C3758	4 xDDR4 RDIMM/UDIMM	-	1	8	1	AST 2500	Yes

HPC-5000

Small Tower Chassis for microATX / Mini-ITX Motherboard



Features

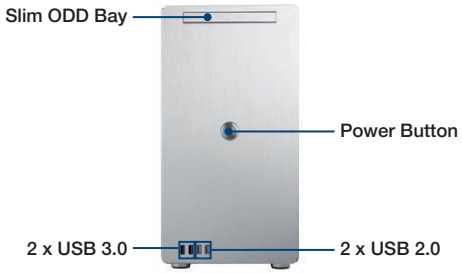
- Supports microATX / Mini-ITX motherboard
- Supports up to internal two 3.5" or one 3.5" + one 2.5" HDD
- Two USB 2.0 and two USB 3.0 ports in the front side
- Supports up to four FH/FL (10.5") expansion slots

CE FCC

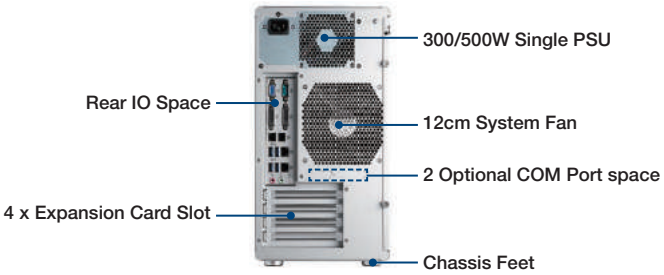
Specifications

Drive Bay		External	Internal
	5.25"	-	-
	3.5" / 2.5"	-	2 x 3.5" or 1 x 3.5" + 1 x 2.5"
	Slim ODD	1	-
Cooling	Fan	1 x 12cm system fan in the rear side 1 x 8cm system fan in the bottom side (optional)	
	Air Filter	Replaceable air filter (in the bottom side)	
Front I/O Interface	USB 3.0	2	
	USB 2.0	2	
Miscellaneous	LED Indicators	Power	
	Rear Panel	-	
Environment		Operating	Non-operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-40 ~ 70 °C (-40 ~ 156 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	192 x 376.7 x 338.5 mm (7.56" x 14.83" x 13.33"), with chassis feet and key lock bracket	
	Weight	10kg (without MB and HDD)	

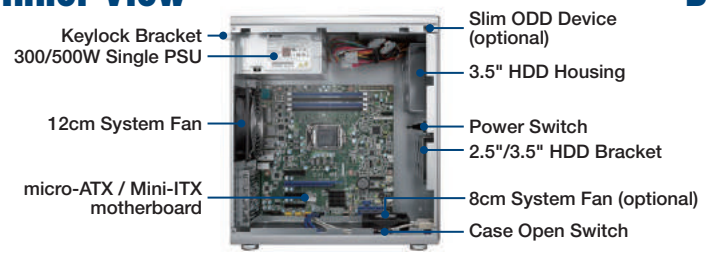
Front View



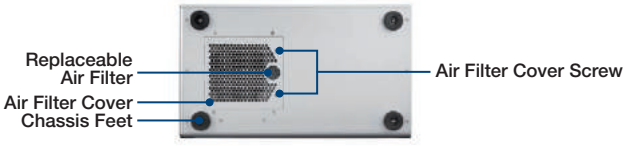
Rear View



Inner View

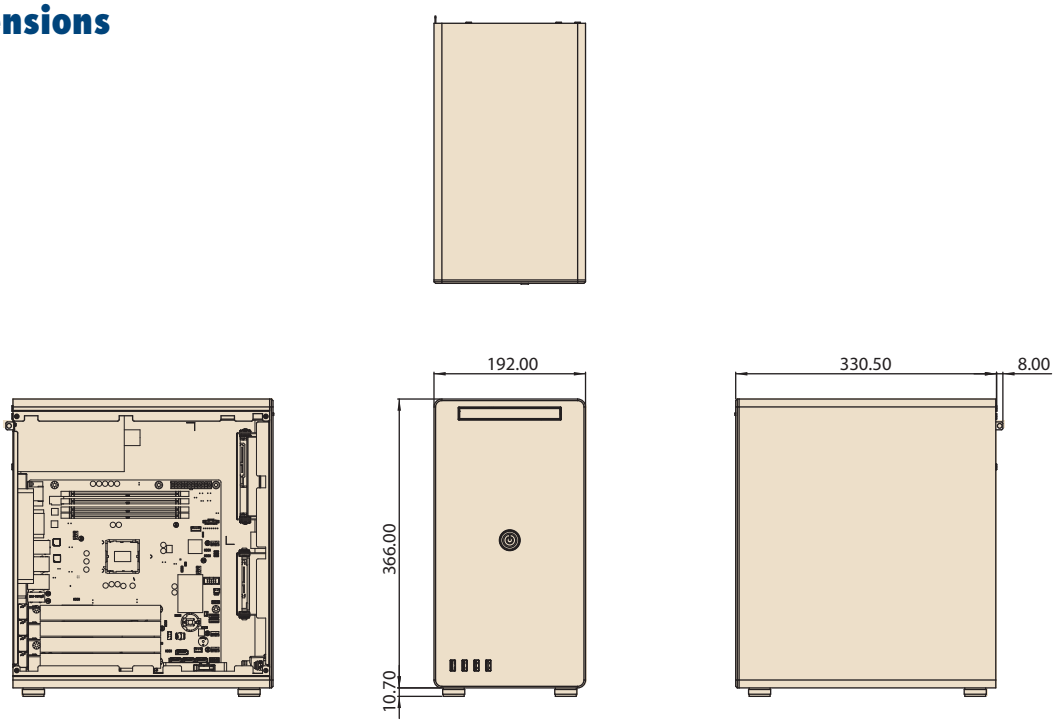


Bottom view



Dimensions

Unit: mm



Ordering Information

Part Number	Description
HPC-5000-30ZXE	HPC-5000 small tower chassis with 300W single ATX PSU
HPC-5000-50ZXE	HPC-5000 small tower chassis with 500W single ATX PSU

Packing List

Part number	Description	Quantity
1990022007S000	Chassis feet (pre-installed)	4
1960078418N002	Key lock bracket (pre-installed)	1
1960077474N000	3.5" HDD cage (pre-installed)	2
1960078421N000	2.5" HDD cage	1
1700007351	SATA HDD cable (40cm)	2
1750008561-01	12cm system fan (pre-installed)	1
2130017820N000	System air filter (pre-installed)	1
96PS-A300WPS2	300W single power supply (Only pre-installed in HPC-5000-30ZXE)	1
96PS-A500WPS2G	500W single power supply (Only pre-installed in HPC-5000-50ZXE)	1

Optional Accessories

Item	Part number	Description	Quantity
2.5" HDD convert module	98R15000M00	Convert module for two 15mm(H) 2.5" HDDs in a 3.5" cage	1
Slim optical device	Check Advantech P-trade available list	Slim optical device	1
	1700019381	Slim optical device SATA cable	1
	96CB-SATAPOWER-6P2	Slim optical device power cable	1
Air filter	2130017820N000	System replaceable air filter	1
System fan	1750007983-01	8cm bottom system fan (57CFM)	1
GPU/GTX card power cable	1700024754-01	2 x B4P Molex power connector to 6+2P PCIe power cable (10cm)	1
COM port cable	1700001788	Single COM port cable for HPC-5000 rear side (30cm)	1

HPC-7000

Server Tower Chassis for EATX/ATX/ MicroATX Motherboard



CE FCC

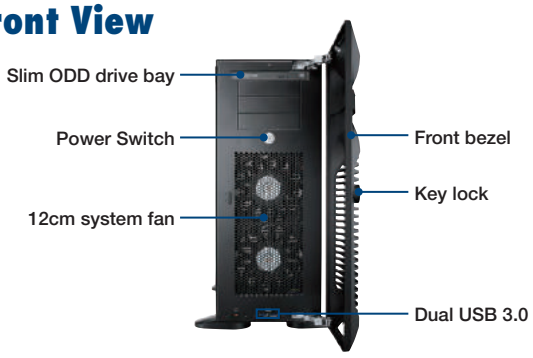
Features

- Supports EATX/ATX/MicroATX motherboard with dual processors
- Three internal 3.5" HDD bays and one slim ODD drive bay
- Dual front USB 3.0 ports
- System fan easy maintainance design

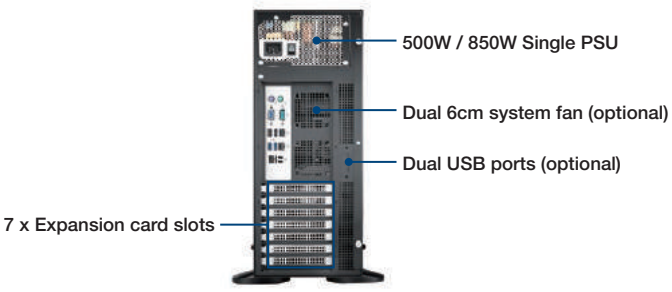
Specifications

		External	Internal
Drive Bay	Slim Optical Drive	1	-
	3.5"	3	-
Cooling	Fan	2 (12cm/150CFM)	
	Air Filter	-	
Front I/O Interface	USB3.0	2	
Miscellaneous	LED Indicators	Power	
	Rear Panel	Two USB reserved ports	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-40 ~ 60 °C (-40 ~ 140 °F)
	Humidity	95% @ 40 °C, non-condensing	95% @ 60 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	267.1 x 458 x 500mm (10.52" x 18.03" x 19.69")	

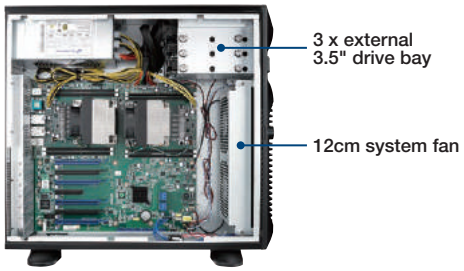
Front View



Rear View

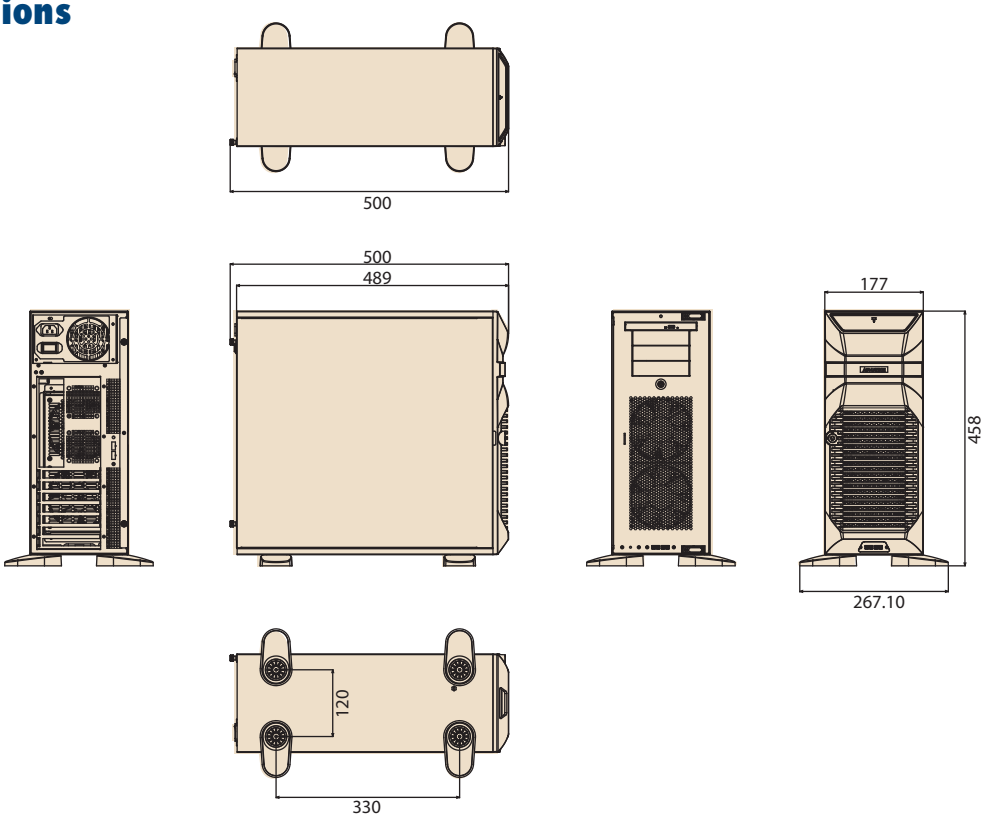


Inside View



Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Description
HPC-7000-50ZXE	HPC-7000 Tower chassis w/ 500W SPS
HPC-7000-85ZXE	HPC-7000 Tower chassis w/ 850W SPS

Optional Accessories

Part Number	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
989K008734	Convert module for dual 9.6mm(H) 2.5" HDDs in a 3.5" cage
IPC-DT-3120E	Mobile rack for converting a 3.5" drive bay to dual 9.6mm(H) 2.5" HDD trays
1700026948-01	USB 3.0 cable (30cm) for rear panel
1700011592	USB 2.0 cable (50cm) for rear panel
1750006117	6cm system fan (23.6CFM) for rear panel

Packing List

Part Number	Description	Quantity
1750008562-01	12cm system fan	2

Note:

1. HPC-7000 does not support AIMB series motherboard

HPC-7120S

1U Short-Depth Server Chassis for Micro ATX/ATX Motherboards



CE FCC

Features

- 1U short-depth server chassis that supports micro ATX/ATX motherboards
- Two hot-swappable and two internal 2.5" SATA/SSD drive bays
- Anti-vibration fan
- Two front-accessible USB 3.0 ports
- Compatible with a front-accessible I/O design

Specifications

Form Factor Support		Micro ATX/ATX	
Expansion Slots		1 x PCIe x16 (Full-Height & Half-Length)	
Drive Bay	Slim ODD Bay	-	
	5.25" (Front Accessible)	-	
	3.5" (Hot Swappable)	-	
	3.5" (Internal)	-	
	2.5" (Hot Swappable)	2 x SASII / SATAIII (HPC-7120S-35ZXE only)	
	2.5" (Internal)	2 x SATA III	
Cooling	Chassis Fan	3 (4 cm/23.1 CFM)	
	Air Filter	-	
System Monitoring	Chassis Intrusion Switch	Yes	
Front I/O	USB 3.0	2	
Miscellaneous	LED Indicators	System: Power, LAN 1, LAN 2, HDD, and System Information HDD Tray: HDD Power and Activity	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-40 ~ 70 °C (-40 ~ 158 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration	1 Grm (5 ~ 500 Hz)	2 G (5 ~ 500 Hz)
	Shock	10G (with 11ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	438 x 43 x 381 mm (17.24" x 1.7" x 15")	

Front View



HPC-7120S-35ZXE



HPC-7120S-70ZXE

Rear View



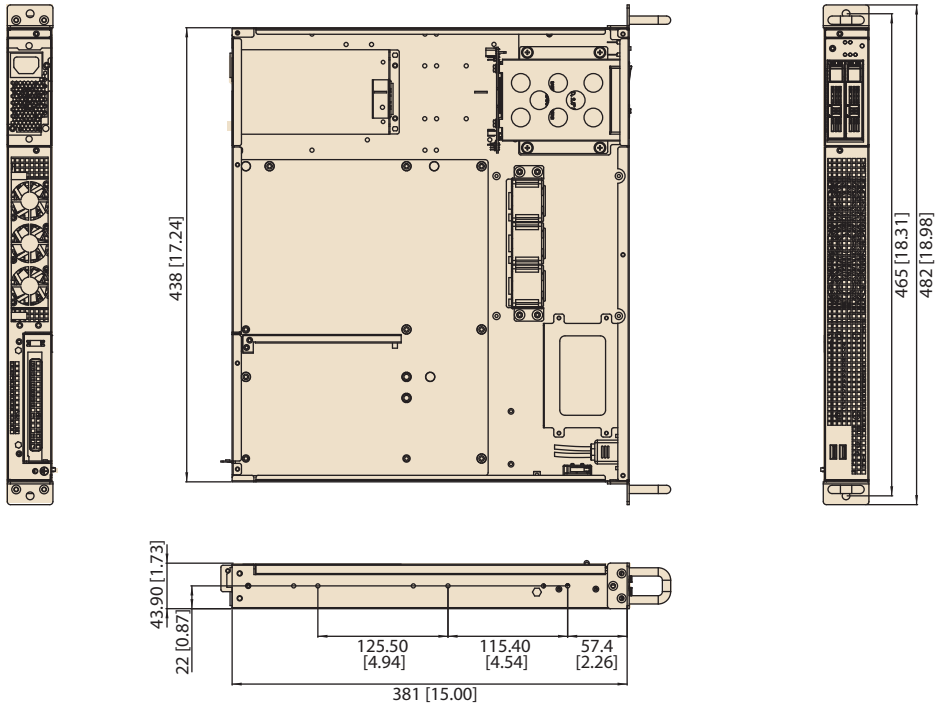
Front I/O View



HPC-7120S-35ZXE

Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Description
HPC-7120S-35ZXE	HPC-7120S 1U chassis w/ 350W SPS
HPC-7120S-70ZXE	HPC-7120S 1U chassis w/ 700W SPS

Packing List

Part Number	Items	Quantity
9661310000E	Hot-swappable 2.5" HDD tray (HPC-7120S-35ZXE only)	2
1700024530-01	Front USB 3.0 cable	1
1750006764-01	System fan (4 cm)	3

Optional Accessories

Part Number	Description
96CB-MSAS-SATA-4P2	Mini SAS to 4-pin SATA SGPIO cable, 0.7 m, 6 G
19Z0001023T000	1U I/O shield for ASMB-584
19Z0001156T000	1U I/O shield for ASMB-585/785
19Z0000747T000	1U I/O shield for ASMB-784
19Z0000406T000	1U I/O shield for ASMB-781/782/820
19Z0000811N000	1U I/O shield for ASMB-822/813
19Z0000806T000	1U I/O shield for ASMB-823
AIMB-RF10F-01A1E	1U PCIe x16 to PCIe x16 riser card
9680017208	22" rail kit for chassis (438 mm)
1990026944T000	Mylar air duct for front I/O application and ASMB-823

Note:

1. A 96CB-MSAS-SATA-4P2 cable is required to use an add-on RAID card with mini SAS connector.
2. HPC-7120S does not support AIMB series motherboards.
3. A 1990026944T000 is recommended for the front I/O to improve thermal performance.
4. A 1990026944T000 is required for ASMB-823 to support dual CPUs. Additionally, only temperatures of up to 30 °C are supported.

HPC-7120

1U Server Chassis for MicroATX/ATX/EATX Server board



CE FCC

Features

- 1U short depth server chassis supports MicroATX/ATX/EATX motherboard
- Two hot swap 2.5" SATA/SSD drive bays
- Anti-vibration FAN design
- Two front USB3.0 ports

Specifications

Form Factor Support		MicroATX/ATX/EATX	
Expansion Slots		PCIe x16 Full Height / Half Length x1	
Drive Bay	Slim ODD Bay	-	
	5.25" (front-accessible)	-	
	3.5" (hot-swappable)	-	
	3.5" (internal)	-	
	2.5" (hot-swappable)	2 x SASII / SATAIII	
	2.5" (internal)	-	
Cooling	Chassis Fan	4 (4cm / 28.6 CFM)	
	Air Filter	-	
System Monitoring	Chassis intrusion switch	Yes	
Front I/O Interface	USB 3.0	2	
Miscellaneous	LED Indicators	System : Power, LAN1, LAN2, HDD, System Information HDD Tray: HDD Power and Activity LED	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-40 ~ 70 °C (-40 ~ 158 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration (5-500 Hz)	1Grms	2G
	Shock	10G (with 11ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	438 x 43 x 478 mm (17.24" x 1.7" x 18.82")	

Front View

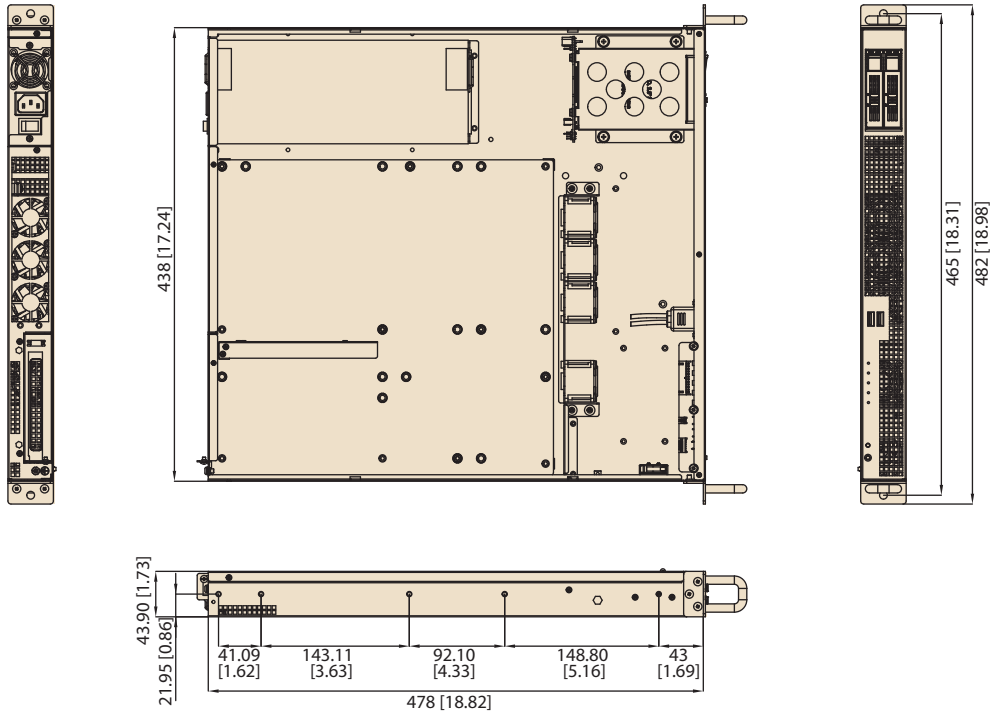


Rear View



Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Description
HPC-7120-00XE	HPC-7120 1U 2 bays server chassis (w/o SPS)

Packing List

Part Number	Items	Quantity
9661310000E	Hot-Swap 2.5" HDD tray	2
1700024529-01	Front USB 3.0 cable	1
1990027281T000	Air duct for ASMB-9XX series	1
1990027567T000	Air duct for ASMB-8XX series	1

Power Supply Options

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-350FATX-XE	Bronze	350W	Single	AC 100 ~ 240V (full range)
96PS-A700W1U	Bronze	700W	Single	AC 100 ~ 240V (full range)

Optional Accessories

Part Number	Description
96CB-MSAS-SATA-4P2	Cable mini SAS to 4P SATA SGPIO 0.7m 6G
19Z0001023T000	1U IO Shield for ASMB-584
19Z0001156T000	1U IO Shield for ASMB-585/785
19Z0000747T000	1U IO Shield for ASMB-784
19Z0000406T000	1U IO Shield for ASMB-781/782/820/920/922/923
19Z0000811N000	1U IO Shield for ASMB-822/813
19Z0000806T000	1U IO Shield for ASMB-823
19Z0001086N000	1U IO Shield for ASMB-913
AIMB-RF10F-01A1E	1U PCIe x16 to PCIe x16 Riser Card
9680017208	22" Rail Kit

* Note:

1. When using an add-on RAID Card with Mini-SAS connector(s), you must use 96CB-MSAS-SATA-4P2 cable.
2. HPC-7120 does not support AIMB series motherboards.
3. HPC-7120 can support 650W redundant power supply on a per project basis.

HPC-7140

1U Rackmount Server Chassis for MicroATX/ATX Server board with 4 x 3.5" Hot-swap Drive Bays



CE FCC

Features

- 1U rackmount server chassis supports MicroATX/ATX motherboard
- Four hot swap 3.5" SAS/SATA/SSD drive bays
- Supports 1U single and redundant power supply
- Easy swap and anti-vibration FAN design
- Two front USB and one front COM ports

Specifications

Form Factor Support		MicroATX/ATX	
Expansion Slots		PCIe x16 Full Height / Half Length x1	
Drive Bay	Slim ODD Bay	1 (ODD should be purchased separately)	
	5.25" (front-accessible)	-	
	3.5" (hot-swappable)	4 x SASII / SATAIII	
	3.5" (internal)	-	
	2.5" (hot-swappable)	Optional	
	2.5" (internal)	-	
Cooling	Chassis Fan	4 x Swappable 40mm PWM fan module	
	Air Filter	-	
System Monitoring	Chassis intrusion switch		
Front I/O Interface	USB 2.0	2	
	COM Ports	1	
Miscellaneous	LED Indicators	System : Power, LAN1, LAN2, HDD, System Information HDD Tray: HDD Power and Activity LED	
	Rear Panel	-	
Environment		Operating	Non-Operating
	Temperature	0 ~ 35 °C (32 ~ 95 °F)	-40 ~ 70 °C (-40 ~ 158 °F)
	Humidity	10 ~ 85% @ 40 °C non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5-500 Hz)	0.25Grms	0.5G
Physical Characteristics	Dimensions (W x H x D)	437 x 43 x 504 mm (17.2" x 1.7" x 19.85")	

Front View



Rear View

Single Power Supply SKU

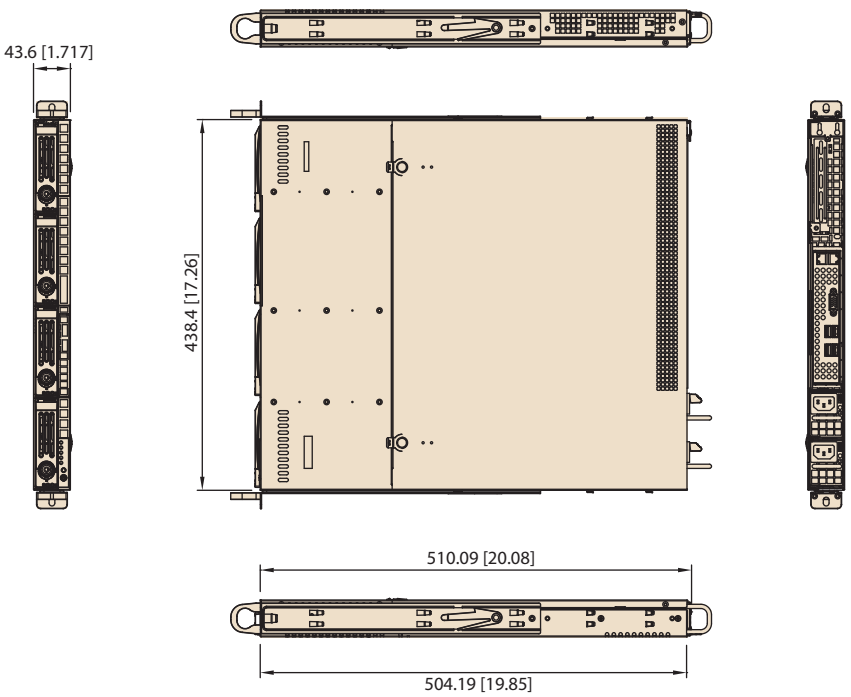


Redundant Power Supply SKU



Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Description
HPC-7140-00A1E	HPC-7140 1U 4 bays server chassis (w/o SPS)
HPC-7140-R4A1E	HPC-7140 1U 4 bays server chassis (w/400W RPS)

Note: Standard HPC-7140-R4A1E does not support PMBUS function. This function is only supported on a per project basis.

Packing List

Items	Quantity
Hot-Swap 3.5" HDD tray with SATA cable (Pre-install)	4
Accessory Box	1

Power Supply Options

Part Number	80 Plus Grade	Wattage	Type	Input
XARR-CPS-2511-1A2	Bronze	250W	Single	AC 100 ~ 240V (full range)
XARR-CPS-6811-2A12	Gold	680W	Single	AC 100 ~ 240V (full range)

Optional Accessories

Part Number	Description
96CB-SAS-SATA-4P1	Mini SAS to 4-port SATA Cable*
19Z0001023T000	1U IO Shield for ASMB-584
19Z0000747T000	1U IO Shield for ASMB-784
19Z0000406T000	1U IO Shield for ASMB-781/782/820
19Z0000811N000	1U IO Shield for ASMB-822/813
19Z0000806T000	1U IO Shield for ASMB-823
1703040150	A Cable B4P-5.08/B4P-5.08*2 15cm*
96CB-SATAPOWER-6P2	SATA POWER ADAPTER 6PIN TO BIG 4 PIN(G) for Slim ODD
AIMB-RF10F-01A1E	1U PCIe x16 to PCIe x16 Riser Card
1990026944T000	ASMB-823 Mylar FAN DUCT for HPC-7140*
9680016633	2.5" HDD Bracket for Swappable HDD Tray
9680016685	25.6" - 33" Rail Kit for HPC-7140

* Note:

1. When using add-on RAID Card with Mini-SAS connector(s), purchasing 96CB-SAS-SATA-4P1 cable is a MUST.
2. HPC-7140 does not support AIMB series motherboards.
3. HPC-7140 only supports up to 30 °C when ASMB-823 has been installed.
4. When installing Slim ODD in HPC-7140-R4A1E, purchasing 1703040150 is a MUST.
5. Purchasing 1990026944T000 is a MUST if using dual CPUs on ASMB-823.

HPC-7242

2U Rackmount Chassis for ATX Motherboard with 4 Hot-Swap SAS/SATA HDD Trays and RPS



Features

- Supports ATX motherboard with dual processors
- Four shock-resistant hot-swap disk trays supporting 3.5" or 2.5" SAS/SATA drives for RAID 5/10 application, one slim ODD, and two 2.5" internal drives
- Dual front USB 3.0 ports
- Supports 80plus single or redundant power supply up to 700W
- Front-accessible system fan without opening top cover for easy maintenance
- LED indicators and audible alarm notification for system fault detection
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

Quiet

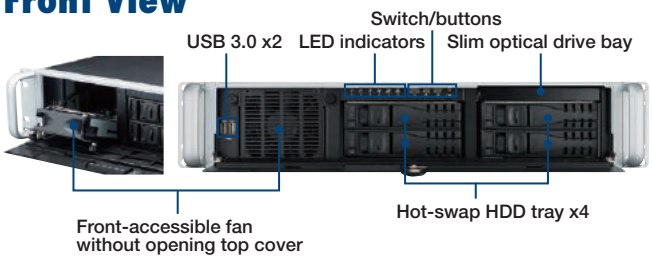
CE FCC

Specifications

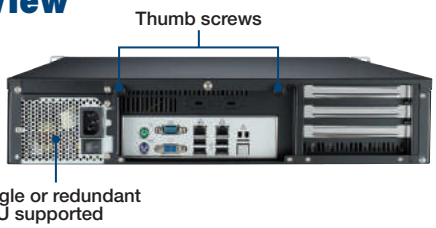
		External	Internal
Drive Bay	Slim Optical Drive	1	-
	2.5"	-	2
	Hot Swap	4 SASII / SATAIII HDDs	
Cooling	Fan	1 (8 cm/47CFM) + 2 (6 cm/28CFM) for SAS/SATA storage unit	
	Air Filter	Yes	
Front I/O Interface	USB 3.0*	2	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, LAN1, and LAN2	
	Rear Panel	Two 9-pin D-Sub	
Intelligent System Module Remote Monitoring	CPU/System fan speed, CPU/System temperature, motherboard voltage (Only selected Advantech MBs/CPU cards with SUSIAccess installed can fully enabled these functions, check with Advantech local rep. for detailed information.)		
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-40 ~ 70 °C (-40 ~ 156 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	426.4 x 88 x 525 mm (16.79" x 3.46" x 20.67")	
	Weight	13.7 kg (30.12 lb)	

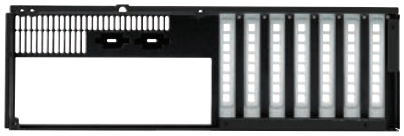
* The USB ports do not operate if a main board without on-board USB 3.0 internal box header is installed.

Front View



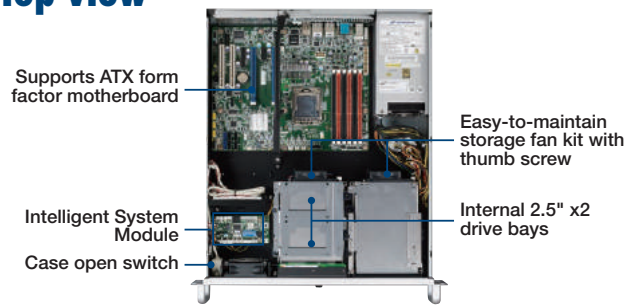
Rear View





Rear I/O bracket for low profile add-on cards

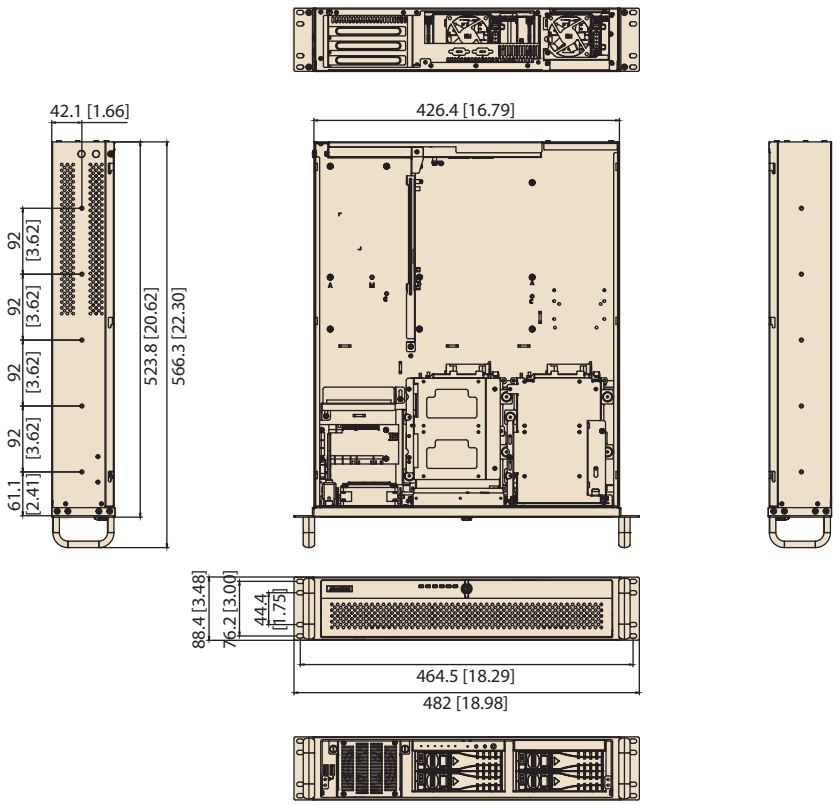
Top view



*Note: Motherboard and power supply are not included.

Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Description
HPC-7242MB-00XE	Without PSU, with ATX switch

Packing List

Part Number	Description
9662132020E	Black mobile HDD tray
1990021407T000	Door filter

Power Supply Options

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-350FATX-XE	Bronze	350W	Single	AC 100 ~ 240 V (full range)
PS8-500U2-XE	Bronze	500W	Single	AC 100 ~ 240 V (full range)
RPS8-500U2-XE	Bronze	500W	(1+1) Redundant	AC 100 ~ 240 V (full range)
RPS8-700U2-XE	Bronze	700W	(1+1) Redundant	AC 100 ~ 240 V (full range)

Optional Accessories

Part Number	Description
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
96CB-SAS-SATA-4P1	Mini SAS to 4-port SATA Cable
1950014302N001	Special bracket for riser card AIMB-RP3P8-12A1E
9680006905	26" Slide Rail
Rear I/O panel kit for low-profile add-on cards	
1939000361	Screws (should purchase 7 pcs)
1960034816N000	I/O bracket (should purchase 7 pcs)
1960019475T201	Rear panel for low-profile

HPC-7282

2U Rackmount Chassis for Micro/ATX Server Board with 8 Hot-swap Drive Bays, 7 Low Profile Expansion Slots



CE FCC

Features

- 2U rackmount chassis supports MicroATX/ATX motherboard
- Eight hot swap SAS/SATA drive bays
- Swappable fan module design facilitates maintenance
- Supports 7 x low-profile/half-length I/O expansion slots

Specifications

Form Factor Support		MicroATX/ATX	
Expansion Slots		Supports 7 x low-profile/half-length I/O expansion slots	
Drive Bay	Slim ODD Bay	1 (ODD should be purchased separately)	
	5.25" (front-accessible)	-	
	3.5" (hot-swappable)	8 SASII / SATAIII (Lockable)	
	2.5" / 3.5" (internal)	2	
	2.5" (hot-swappable)	Optional	
Cooling	Chassis Fan	3 x 80 mm fan module with swappable bracket	
	Air Filter	-	
System Monitoring		Chassis intrusion switch	
Front I/O Interface	USB 2.0	2	
	COM Port	1	
Miscellaneous	LED Indicators	Power, HDD activity, LAN, System Information	
	Rear Panel	-	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-40 ~ 70 °C (-40 ~ 158 °F)
	Humidity	10 ~ 85% @ 40 °C non-condensing	10 ~ 95% @ 40 °C, non-condensing
	Vibration (5~500 Hz)	0.25Grms	0.5G
Physical Characteristics	Dimensions (W x H x D)	437 x 88.9 x 533.4 mm (17.2" x 3.5" x 21")	

Front View

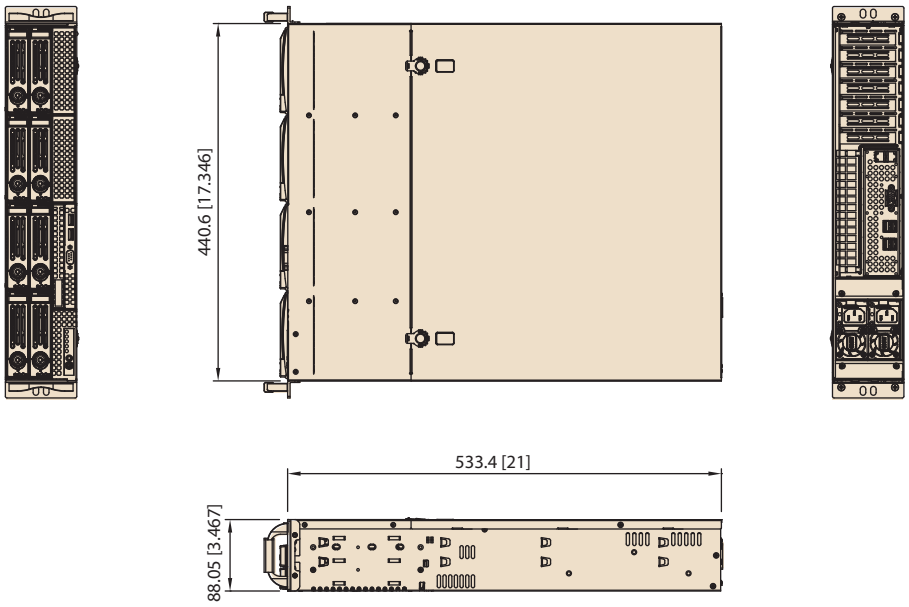


Rear View



Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Description
HPC-7282-00A1E	HPC-7282 2U 8 bays server chassis (w/o PSU)

Packing List

Description	Quantity
Hot-swap 3.5" HDD Trays with SATA cable (Pre-installed)	x 8
System Accessory	x 1

Power Supply Options

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-500U2-XE	Bronze	500W	Single	AC 100 ~ 240 V (full range)
XARR-CPS-6811-2A12	Gold	680W	Single	AC 100 ~ 240 V (full range)
RPS8-500U2-XE	Bronze	500W	(1+1) Redundant	AC 100 ~ 240 V (full range)
RPS8-700U2-XE	Gold	700W	(1+1) Redundant	AC 100 ~ 240 V (full range)

Optional Accessories

Part Number	Description
96CB-SAS-SATA-4P1	Mini SAS to 4-port SATA Cable*
96CB-SATAPOWER-6P2	SATA power adapter 6-pin to big 4-pin (G) for slim ODD
9680016633	2.5" HDD Bracket for Swappable HDD Tray
9680016697	19" - 26.6" Rail Kit for HPC-7282
9680016698	26.5" - 33" Rail Kit for HPC-7282

* Note:

1. When using an add-on RAID card with mini-SAS connector(s), purchasing the 96CB-SAS-SATA-4P1 cable is a essential:- single port RAID card needs 1 piece, dual port needs 2 pieces.
2. HPC-7282 does not support AIMB series motherboards.
3. When installing the power supply please use the power supply bracket inside the accessory box.

HPC-7320

3U Short-depth Rackmount/ Tower Chassis for EATX/ATX/MicroATX Motherboard



Features

- Supports EATX/ATX/MicroATX motherboard with dual processors
- Two Hot-Swap 3.5"/2.5" drive bays, one slim ODD drive bay and two internal 3.5" HDD bays
- Dual front USB 3.0 ports
- Supports Flex ATX Power, 2U 80Plus single or redundant power supply
- Front-accessible system fan without opening top cover for easy maintenance

Quiet

CE FCC

Specifications

		External	Internal
Drive Bay	Slim Optical Drive	1	-
	3.5"	-	2
	Hot Swap	2 SASII / SATAIII (3.5" or 2.5")	
Cooling	Fan	2 (8cm/57CFM) + 1 (6cm/27.72CFM)	
	Air Filter	Yes	
Front I/O Interface	USB3.0	2	
Miscellaneous	LED Indicators	Power, HDD, LAN1, and LAN2	
	Rear Panel	Two 9-pin D-Sub	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 122 °F)	-40 ~ 70 °C (-40 ~ 156 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	426.4 x 132.2 x 480 mm (16.79" x 5.2" x 18.9")	
	Weight	12 kg	

Front View



Rear View



Inside View

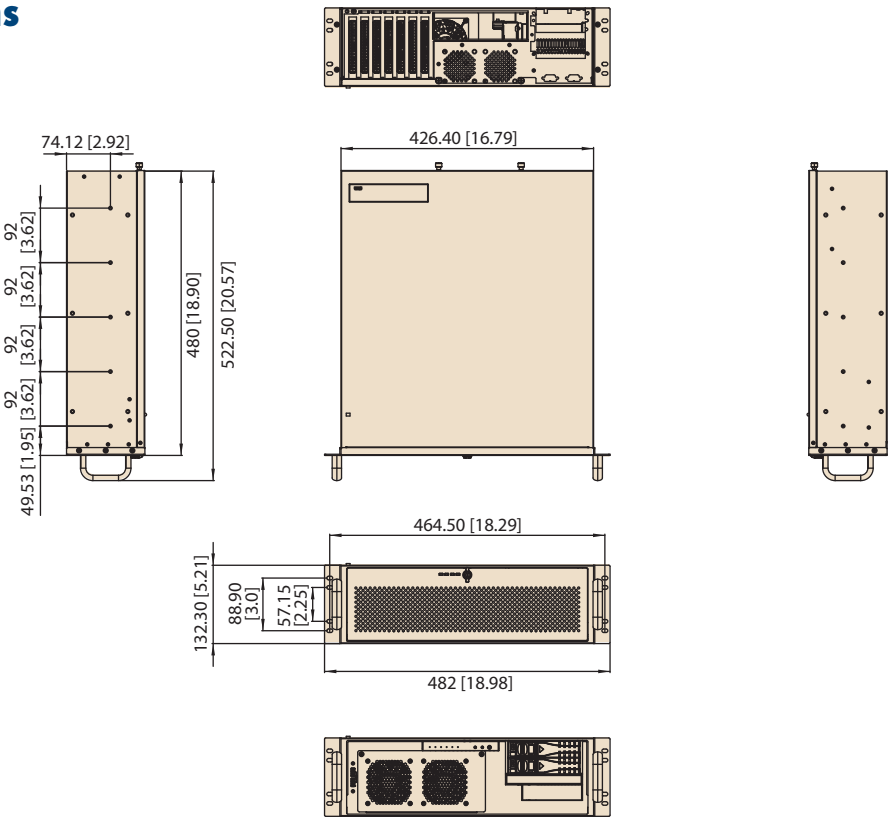


Rackmount View



Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Description
HPC-7320MB-00XE	Without PSU, with ATX switch

Packing List

Part Number	Description	Quantity
1960002043T001 & 1960004574T001	Wall mount bracket	1
1960061378T001	FATX power rear bracket	1
1960069262N001	1U power rear bracket	1
1990025044T000	Door filter	1
1750008101-01	8cm system fan	2

Note:

1. HPC-7320 does not support AIMB-701, AIMB-780, AIMB-781, AIMB-782, AIMB-784.
2. HPC-7320 does not support add-on cards which need to be connected to additional power cables from the top.

Power Supply Options

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-350FATX-XE	Bronze	350W	Single	AC 100 ~ 240 V (full range)
PS8-500U2-XE	Bronze	500W	Single	AC 100 ~ 240 V (full range)
96PS-A700W1U	Bronze	700W	Single	AC 100 ~ 240V (full range)
RPS8-500U2-XE	Bronze	500W	(1+1) Redundant	AC 100 ~ 240 V (full range)
RPS8-700U2-XE	Gold	700W	(1+1) Redundant	AC 100 ~ 240 V (full range)

Optional Accessories

Part Number	Description
2130015257T000	CPU cooler box
9680006905	26" Slide Rail
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
1700011592	Front dual USB2.0 cable
1750007769-01	8038mm High speed system fan for GPU server solution

HPC-7400

4U Compact Rackmount / Tower Chassis for EATX/ATX/MicroATX Motherboard



Features

- 4U compact industrial server chassis suitable for space-sensitive applications
- Supports EATX/ATX/MicroATX motherboard
- Shock-resistant 2 x 5.25" (front) + 2 x 3.5" int (rear) and optional 2 x 3.5" int. HDD bays
- Supports 80plus 1U single and 1+1 redundant higher watt power supply
- Front-accessible system fan without opening top cover
- Lockable front door with replaceable air filter prevents unauthorized access

Quiet

CE FCC

Specifications

Drive Bay		Front-accessible	Internal
	5.25"	2	-
	2.5" / 3.5"	-	2 (rear-accessible)
Cooling	Fan	3 (8 cm / 57 CFM) PWM fans + optional 2 (6cm) rear fans	
	Air Filter	Yes	
Front I/O Interface	USB	2 (USB 3.0)	
Miscellaneous	LED Indicators	Power, HDD, LAN1 & LAN2	
	Control	Power switch and system reset button	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-40 ~ 60 °C (-40 ~ 140 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	426 x 177 x 448 mm (16.7" x 7.0" x 17.6")	
	Weight	16 kg	

Front View



Rear View



With 700W single power supply



With 1400W redundant power supply

Inside View

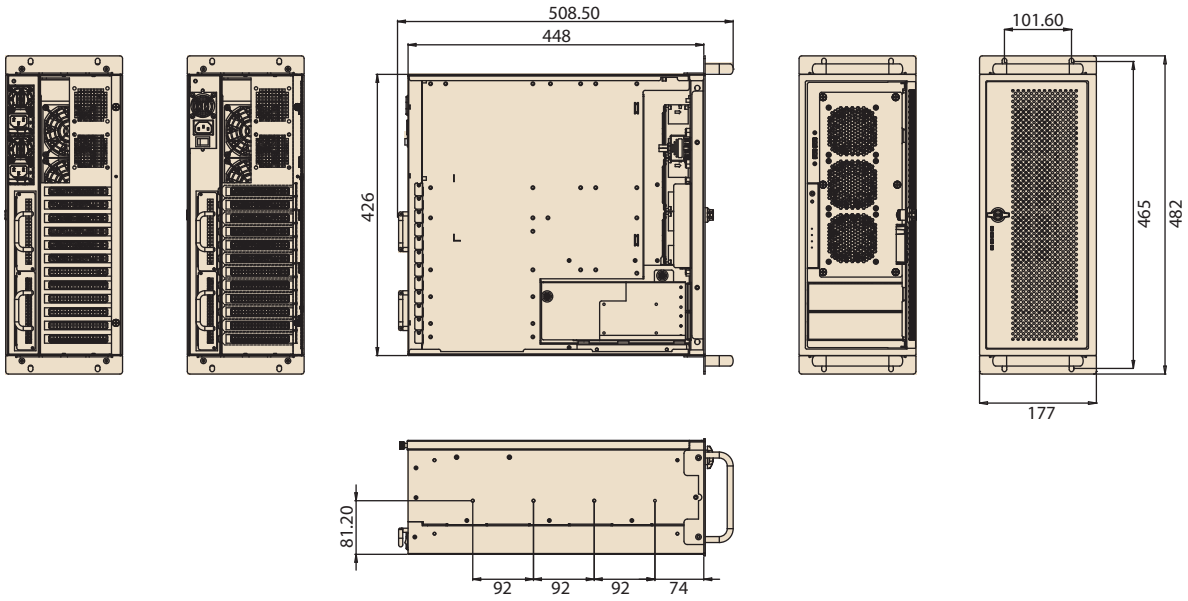


Tower View



Dimensions

Unit: mm



Ordering Information

Part Number	Power Supply
HPC-7400MB-70A1E	With single 700W power supply, with ATX switch
HPC-7400MB-14A1E	With redundant 1+1 1400W power supply, with ATX switch

Packing List

Part Number	Description	Quantity
1990021256T000	Door filter	1
1750008101-01	8cm system fan	3
96PS-A700W1U	1U 700W single power supply, AC 100~240V (full range) (HPC-7400MB-70A1E only)	1
96PSRM-A1K4WMDU	1U 1400W 1+1 redundant power module, AC 100~240V (full range) (HPC-7400MB-14A1E only)	2
96PSR-1U-BKP-F1K4	1400W power distribution board for 96PSRM-A1K4WMDU (HPC-7400MB-14A1E only)	1

Optional Accessories

Part Number	Description
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SAS/SATA HDD Trays
96RACK-5SS-CAGE-CR	Mobile rack for converting one 5.25" drive bays to four 2.5" SATA/SAS HDD Trays (Max. HDD height :15mm)
9892200013E	Module to convert one 5.25" drive bay to one slim ODD and one internal 3.5" drive bay
9680006905	26" Slide Rail
1700007032	Front dual USB 2.0 cable kit
1750007769-01	8038mm High speed system fan for GPU server solution

Note:

1. HPC-7400 does not support AIMB series motherboard.
2. HPC-7400 does not support add-on cards which need to be connected to additional power cables from the top.
3. HPC-7400 does not support 1960065684N001 due to mechanical limitations.

HPC-7442

4U Rackmount Chassis for EATX/ATX/ MicroATX Motherboard with 4 Hot Swap Drive Trays



Features

- Supports EATX/ATX/MicroATX motherboard
- Shock-resistant disk drive bay provides four hot-swap 3.5" or 2.5" SAS/SATA disk trays, one slim optical disk drive, and one 3.5" internal drive
- With optional storage upgrade kit installed, system equipped up to eight hot-swap HDD trays for higher storage capacity requirement
- Supports 80plus single and redundant power supply
- Front-accessible system fan without opening top cover for easy maintenance
- LED indicators and alarm notification for system fault detection
- Built-in Intelligent System Module enabling whole system fan control and remote manageability

Quiet

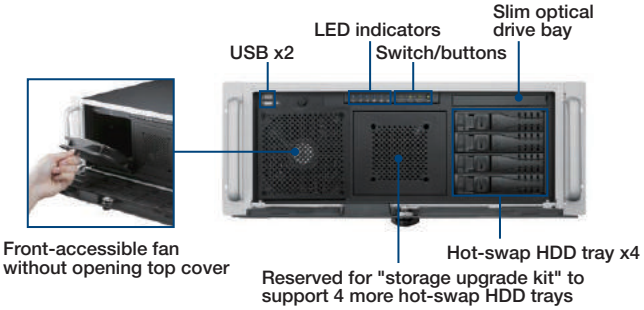
CE FCC

Specifications

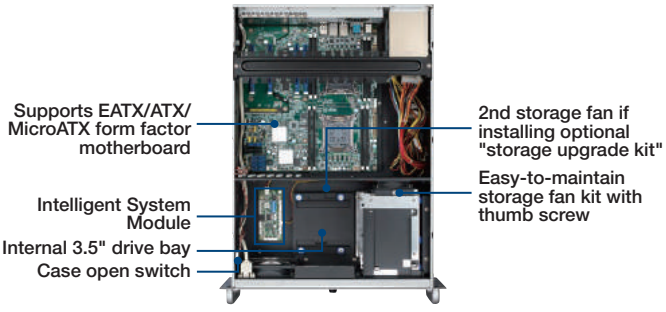
		External	Internal
Drive Bay	Slim Optical Drive	1	-
	3.5"	-	1
	Hot Swap	4 SASII / SATAIII HDDs (support upgrade to 8)	
Cooling	Fan*	1 (12 cm /114 CFM) + 1 (8 cm/55 CFM)	
	Air Filter	Yes	
Front I/O Interface	USB 2.0	2	
Miscellaneous	LED Indicators	Power, HDD, temperature, fan, LAN1, and LAN2	
	Rear Panel	Five 9-pin D-Sub and one 68-pin SCSI openings	
Intelligent System Module Remote Monitoring	CPU/System fan speed, CPU/System temperature, motherboard voltage (Only selected Advantech MBs/CPU cards with SUSIAccess installed can fully enable these functions, check with an Advantech local rep. for detailed information.)		
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-40 ~ 70 °C (-40 ~ 156 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	426 x 177 x 600 mm (16.7" x 7.0" x 23.6")	
	Weight	18.5 kg (40.68 lb)	

* While adding the optional "storage upgrade kit", the chassis will support four more front-accessible SAS/SATA drive trays and one more (8cm/55CFM) fan for SAS/SATA drives.

Front View



Inside View



Upgrade Features



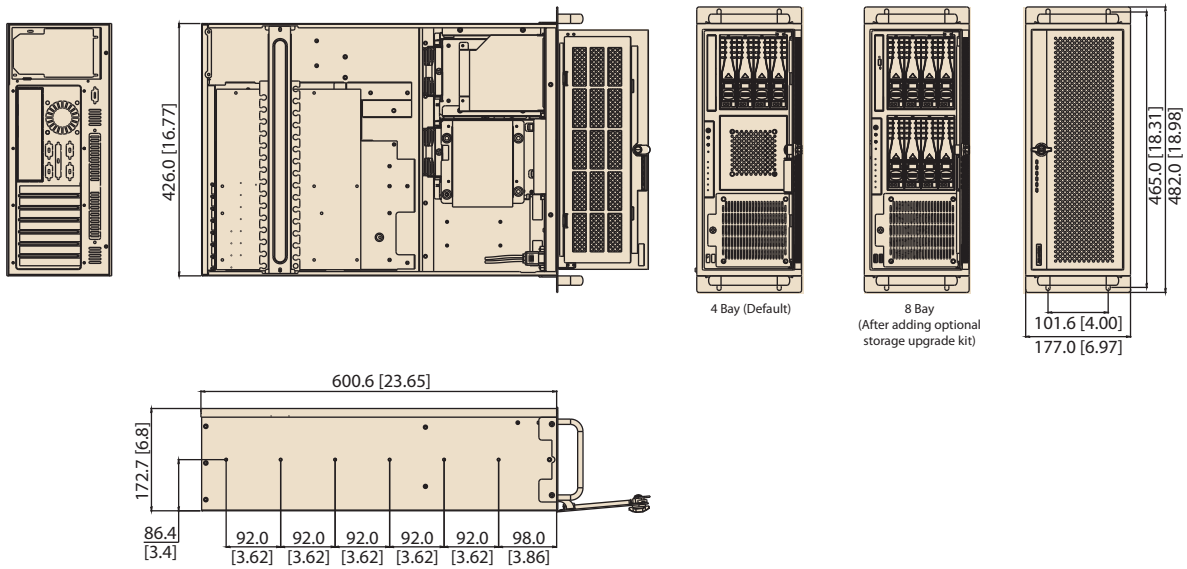
HPC-7442 default SKU (supports 4 hot-swap HDD trays)

Storage upgrade kit (optional , 98R2744200E)

HPC-7442 8-bay SKU (supports 8 hot-swap HDD trays)

Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Description
HPC-7442MB-00XE	Without PSU, with ATX switch

Packing List

Part Number	Description
9662132020E	Black mobile HDD tray
1990021256T000	Door filter

Power Supply Options

Part Number	80 Plus Grade	Wattage	Type	Input
PS8-400ATX-ZE	Bronze	400W	Single	AC 100 ~ 240 V (full range)
PS8-500ATX-ZE	Bronze	500W	Single	AC 100 ~ 240 V (full range)
PS8-700ATX-ZE	Bronze	700W	Single	AC 100 ~ 240 V (full range)
RPS8-500ATX-XE	Bronze	500W	(1+1) Redundant	AC 100 ~ 240 V (full range)
RPS8-750ATX-XE	Gold	750W	(1+1) Redundant	AC 100 ~ 240 V (full range)

Optional Accessories

Part Number	Description
98R2744200E	Storage Upgrade Kit
96CB-SATAPOWER-6P2	SATA power wire 6-pin to big 4-pin (for slim ODD)
96CB-SAS-SATA-4P1	Mini SAS to 4-port SATA Cable
989K008734	Internal 3.5" to two 2.5" HDD Frame
9680006905	26" Slide Rail

HPC-7483

4U Rackmount / Tower Chassis for EATX/ATX/MicroATX Motherboard



CE FCC

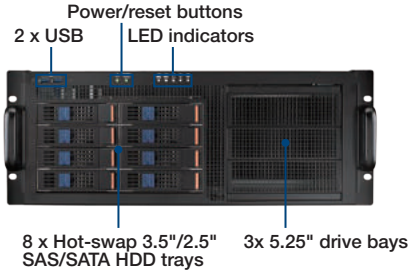
Features

- Supports EATX/ATX/MicroATX motherboard
- Supports up to eight SATA3 or SAS3 hot-swap HDD
- With the optional storage upgrade kit installed, the system will support up to eleven hot-swap HDD trays for higher storage requirements
- Supports 80plus 1U 1+1 redundant high watt power supply
- Supports up to ten FH/FL expansion slots

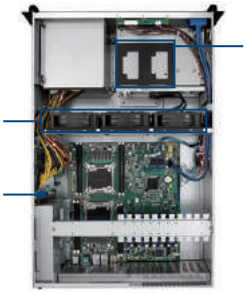
Specifications

		External	Internal
Drive Bay	5.25"	3	-
	3.5"	8*SATA 3/SAS 3 (2.5" HDD compatible)	-
	2.5"	-	2
Cooling	Fan*	3*12cm system fan in middle fan bar 2*8cm system fan in rear window (optional)	
	Air Filter	-	
Front I/O Interface	USB 3.0	2	
Miscellaneous	LED Indicators	Power, HDD, Information, LAN1, and LAN2	
	Rear Panel	Two PS/2 and two D-sub and two USB openings	
Environment		Operating	Non-Operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-40 ~ 70 °C (-40 ~ 156 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	435 x 177 x 658 mm (19" x 7.0" x 26.5")	
	Weight	20 kg (44 lb)	

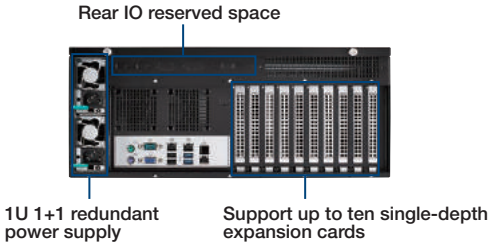
Front View



Inner View



Rear View

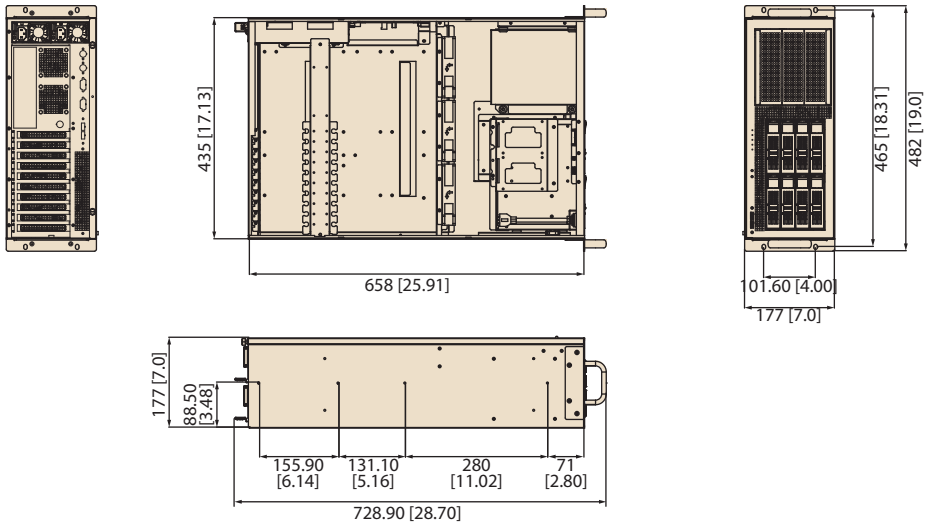


Tower View



Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Description	Remark
HPC-7483-12RXE	With redundant 1+1 1200W power supply, with ATX switch	1000W @ 110V ; 1200W @ 220V
HPC-7483-20RX	With redundant 1+1 2000W power supply, with ATX switch	1000W @ 110V ; 2000W @ 220V

Packing List

Part number	Description	Quantity
1750008306-01	12cm system fan (Pre-installed)	3
9661831600E	3.5" HDD Trays (Pre-installed)	8
1700025828-01	PDB CN1 connector to MB 4pin or 8pin 12V connector of PCIe slot	1
1700019127	4P 2.54mm to 4P 2.54 Extend FAN connector	1

Optional Accessories

Cable request for optional device	Part number	Description	Quantity
5.25" to 3.5" Convert HDD kit	Refer to the P-Trade web site	Mobile rack for converting dual 5.25" drive bays to three 3.5" SAS/SATA HDD Trays	1
	1700021733-01	SATA cable for optional ODD/HDD (65cm)	3
5.25" ODD or other SATA device	1700021733-01	SATA cable for optional ODD/HDD (65cm)	1
MB without RAID card	1700025861-01	Mini SAS HD 8643 to 4 ports SATA Cable (50cm)	2
MB with SAS2 RAID card	1700025440-01	Mini SAS HD 8643 to Mini SAS (85cm)	2
MB with SAS3 RAID card	1700025065-01	Mini SAS HD 8643 to Mini SAS HD 8643 (85cm)	2
The 2nd GPU card	1700025829-01	PDB 8P connector to 6+2 connector for GPU card (80cm)	2
The 3rd GPU card	1700025829-01	PDB 8P connector to 6+2 connector for GPU card (80cm)	2
The 4th GPU card	1700025829-01	PDB 8P connector to 6+2 connector for GPU card (80cm)	2
4 ports SATA HBA card	9691831620E 1700021733-01	ASS'Y HPC-8316 SATA HBA Rev.A1 01 SATA cable for optional ODD/HDD (65cm)	1 4

Optional device	Part number	Description	Quantity
Rail kit	9680016858	3U/4U 26" slide kit (pair) for HPC-8316/7483	1
Rear window optional fan kit	98R1748300E	Rear window 8cm fan kit for high-watt expansion card solution	1
Internal air duct	98R1748310E	Air duct for HPC-7483 + ASMB-923 + 4*Double depth GPU cards	1
Rear IO KMBS port	1700019268-11	A Cable M-DIN 6P(F)*2/1*6P-2.5	1
Rear IO COM port	1701092300	Dual RS-232 COM port cable	1
Rear IO USB port	1700024532-01	USB 3.0 dual port cable	1
	1700017849	USB 2.0 dual port cable	1

HPC-8212

2U Storage Chassis for ATX/EATX Serverboard with 12 Hot-swap Drive Bays



CE FCC

Features

- 2U rackmount chassis supports EATX/ATX/uATX motherboard
- 12-bay hot-swappable 3.5"/2.5" SAS 12Gb/s drives or SATA 6Gb/s drives
- 4 x NVMe drives supported via an optional riser card
- Default 7x slots (low profile) rear panel, 3x slots (full height) optional
- Supports 80Plus redundant power supply

Specifications

Drive Bay		Front	Rear
	3.5"/2.5"	12 (Hot Swap)	-
	2.5"	-	2 (for R6A1E SKU)
Cooling	Fan	4 (8 cm)	
	Air Filter	-	
Front I/O Interface	USB	2	
Miscellaneous	LED Indicators	LAN1, LAN2, HDD, Power, and Information LED	
Environment		Operating	Non-Operating
	Temperature	0 ~ 35 °C (32 ~ 95 °F)	-40 ~70 °C (-40 ~158 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration (5 ~ 500 Hz)	0.25 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	438 x 88.4 x 620 mm (17.24" x 3.48" x 24.41") / 438 x 88.4 x 540 mm (17.24" x 3.48" x 21.26")	
	Weight	25 kg (without hard drivers)	

Front View



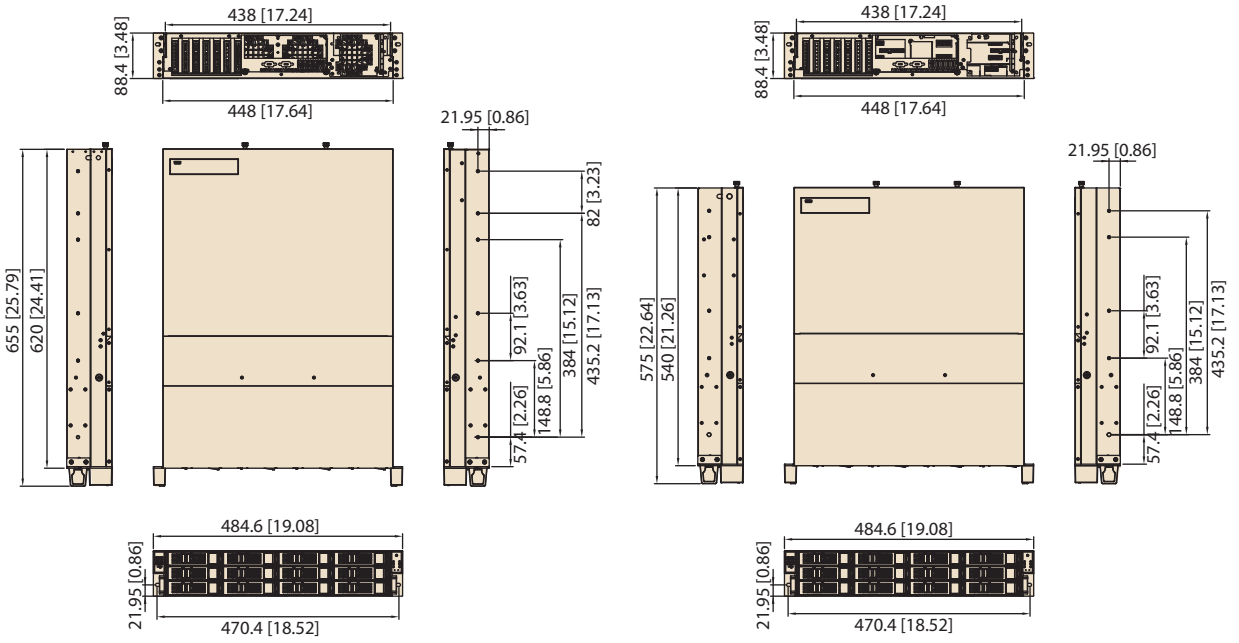
Rear View



Optional full-height rear panel via
98R112SE00E & 98R112AE00E

Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Chassis Depth	Built-in PSU	Front HDD Backplane	Rear HDDs (2 x 2.5")	Default Rail Kit	Motherboard Form-factor	Expansion Slots
HPC-8212SE-R8A1E	620mm	RPSU 800W	SAS12Gb/s	-	26"	EATX, ATX, uATX	x6* Low Profile
HPC-8212SE-R6A1E	620mm	RPSU 650W	SAS12Gb/s	Hot-swap	26"	EATX, ATX, uATX	x6* Low Profile
HPC-8212SA-R5A1E	540mm	RPSU 550W	SAS12Gb/s	-	22"	ATX, uATX	x6* Low Profile

Note: one slot will be occupied by SAS RAID card

Packing List

Part Number	Description	Quantity
9680017208	22" Slide Rail Kit for HPC-8212SA	1
9680017207	26" Slide Rail Kit for HPC-8212SE	1

Optional Accessories

Part Number	Description
98R112SE00E*	Rear Panel kit of Full-Height x3 slots for SE SKU
98R112SA00E*	Rear Panel kit of Full-Height x3 slots for SA SKU
9891821200E	PCIe x16 Riser card for 4-port NVMe drives
1700025064-01	Internal SAS cable (12G) SFF8643 to SFF8643, 60cm
1700025439-01	Internal SAS cable (6G) SFF8643 to SFF8087, 60cm
ASR-1000K-00A1E	JBOD module for SA SKU

Note: an additional ASMB riser card is required.

HPC-8224

2U Storage Chassis for ATX/EATX Serverboard with 24 Hot-swap Drive Bays



CE FCC

Features

- 2U rackmount chassis supports EATX/ATX/uATX motherboard
- 24-bay hot-swappable 2.5" SAS 12Gb/s drives or SATA 6Gb/s drives
- 4 x NVMe drives supported via an optional riser card
- Default 7x slots (low profile) rear panel, 3x slots (full height) optional
- Supports 80Plus redundant power supply

Specifications

Drive Bay		Front	Rear
	2.5"	24 (Hot Swap)	-
Cooling	Fan	4 (8 cm)	
	Air Filter	-	
Front I/O Interface	USB	2	
Miscellaneous	LED Indicators	LAN1, LAN2, HDD, Power, and Information LED	
Environment		Operating	Non-Operating
	Temperature	0 ~ 35 °C (32 ~ 95 °F)	-40 ~ 70 °C (-40 ~ 158 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration (5 ~ 500 Hz)	0.25 Grms	2 G
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	438 x 88.4 x 620 mm (17.24" x 3.48" x 24.41") / 438 x 88.4 x 540 mm (17.24" x 3.48" x 21.26")	
	Weight	25 kg (without hard drivers)	

Front View



Rear View

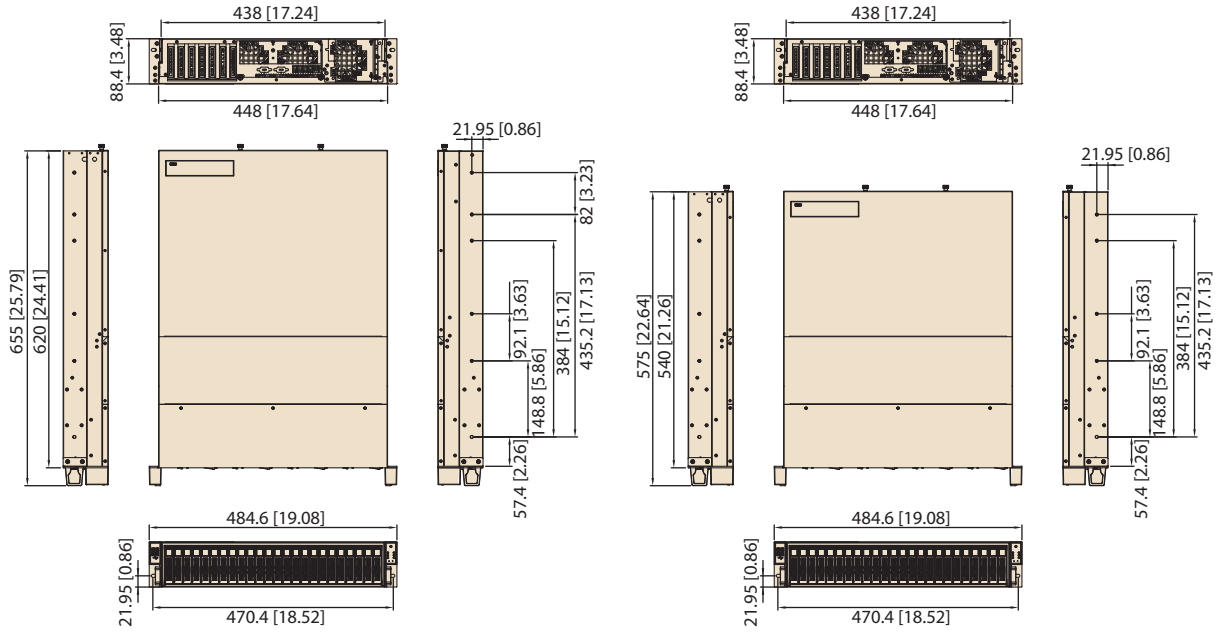




Optional full-height rear panel via
98R112SE00E & 98R112AE00E

Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Chassis Depth	Built-in PSU Configuration	Front HDD Backplane	Rear HDDs (2 x 2.5")	Default Rail Kit	Motherboard Form-factor	Expansion Slots
HPC-8224SE-R8A1E	620mm	RPSU 800W	SAS12Gb/s	-	26"	EATX, ATX, uATX	x6* Low Profile
HPC-8224SA-R5A1E	540mm	RPSU 550W	SAS12Gb/s	-	22"	ATX, uATX	x6* Low Profile

Note: one slot will be occupied by SAS RAID card

Packing List

Part Number	Description	Quantity
9680017208	22" Slide Rail Kit for HPC-8224SA	1
9680017207	26" Slide Rail Kit for HPC-8224SE	1

Optional Accessories

Part Number	Description
98R112SE00E*	Rear Panel kit of Full-Height x3 slots for SE SKU
98R112SA00E*	Rear Panel kit of Full-Height x3 slots for SA SKU
9891821200E	PCIe x16 Riser card for 4-port NVMe drives
1700025064-01	Internal SAS cable (12G) SFF8643 to SFF8643, 60cm
1700025439-01	Internal SAS cable (6G) SFF8643 to SFF8087, 60cm
ASR-1000K-00A1E	JBOD module for SA SKU

Note: an additional ASMB riser card is required

HPC-8316

3U Storage Chassis for ATX/EATX Serverboard with 16 Hot-swap Drive Bays



Features

- 3U rackmount chassis supports EATX/ATX/uATX motherboard
- 16-bay hot-swappable 3.5"/2.5" SAS 12Gb/s drives or SATA 6Gb/s drives
- Supports 2 hot-swappable 2.5" drive bays at the rear for SAS SKUs
- Eliminates the need for an additional HBA card for SATA SKUs
- Supports 80Plus redundant power supply

Quiet

CE FCC

Specifications

Drive Bay		Front	Rear
	3.5/2.5"	16 (hot swappable)	-
	2.5"	-	2
Cooling	Fan	4 (8 cm)	
	Air Filter	-	
Front I/O	USB 3.0	2	
Miscellaneous	LED Indicators	LAN1, LAN2, HDD, Power, and Information	
Environment		Operating	Non-Operating
	Temperature	0 ~ 35 °C (32 ~ 95 °F)	-40 ~ 70 °C (-40 ~ 158 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration	0.25 Grms, 5 ~ 500 Hz	2 Grms, 5 ~ 500 Hz
	Shock	10 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	435 x 132 x 620 mm (17.13" x 5.2" x 24.41") / 435 x 132 x 540 mm (17.13" x 5.2" x 21.26")	
	Weight	28 kg (without hard drives)	

Front View



Rear View



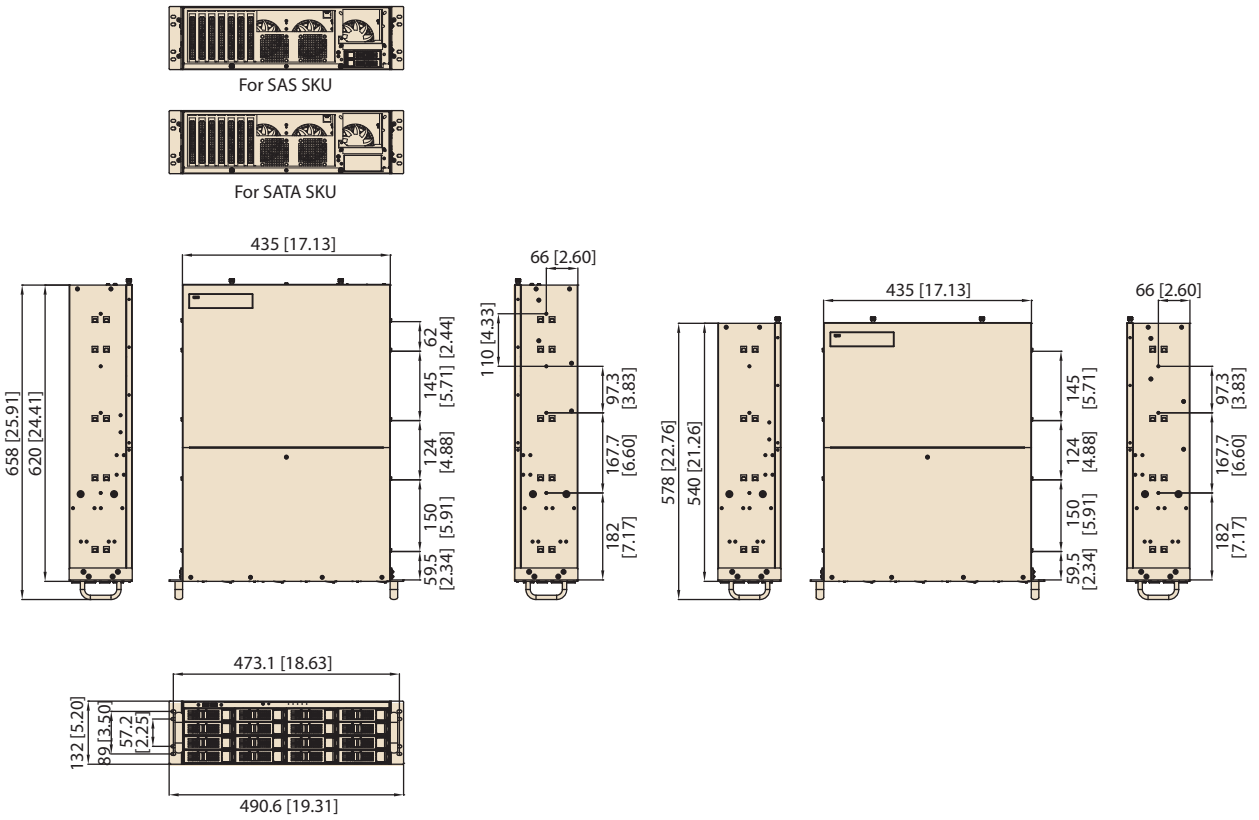
HPC-8316SE-R8A1E, HPC-8316SA-R5A1E



HPC-8316TE-00A1E, HPC-8316TA-00A1E

Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Chassis Depth	Built-in PSU Configuration	Front HDD Backplane	Rear HDDs (2 x 2.5")	Default Rail Kit	Motherboard Form-factor	Expansion Slots
HPC-8316SE-R8A1E	620mm	RPSU 800W	SAS12Gb/s	Hot-Swap	26"	EATX, ATX, uATX	x6[-1] Full Height
HPC-8316SA-R5A1E	540mm	RPSU 550W	SAS12Gb/s	Hot-Swap	26"	ATX, uATX	x6[-1] Full Height
HPC-8316TE-00A1E	620mm	-	SATA6Gb/s	Internal	26"	EATX, ATX, uATX	x6[-2] Full Height
HPC-8316TA-00A1E	540mm	-	SATA6Gb/s	Internal	26"	ATX, uATX	x6[-2] Full Height

Note 1: One slot will be occupied by SAS Raid card.
Note 2: One slot will be occupied by Advantech proprietary SATA HBA card.

Power Supply Options

Part Number	80 Plus Grade	Description
96PSR-A800WCR	Platinum	Redundant (1+1) 800W for HPC-8316TE
96PSR-A550W2U	Silver	Redundant (1+1) 550W for HPC-8316TA
PS8-500U2-XE	Bronze	Single 500W SPS for HPC-8316TA

Optional Accessories

Part Number	Description
1700025064-01	Internal SAS cable (12G) SFF-8643 to SFF-8643, 60 cm
1700025065-01	Internal SAS cable (12G) SFF-8643 to SFF-8643, 85 cm
1700025439-01	Internal SAS cable (6G) SFF-8643 to SFF-8087, 60 cm
1700025440-01	Internal SAS cable (6G) SFF-8643 to SFF-8087, 85 cm
ASR-1000K-00A1E	JBOD module for SA SKU

Packing List

Part Number	Description	Quantity
9680016858	Slide Rail Kit	1

HPC-8424

4U Storage Chassis for ATX/EATX Serverboard with 24 Hot-swap Drive Bays



CE FCC

Features

- 4U rackmount chassis supports EATX/ATX/uATX motherboard
- 24-bay hot-swappable 3.5"/2.5" SAS 12Gb/s drives or SATA 6Gb/s drives
- 4 x NVMe drives supported via an optional riser card
- Support 2 hot-swappable 2.5" drive bays at the rear
- Supports 80Plus redundant power supply

Specifications

Drive Bay		Front	Rear
	3.5"/2.5"	24 (Hot-Swap)	-
	2.5"	-	2
Cooling	Fan	4 (8 cm)	
	Air Filter	-	
Front I/O Interface	USB	2	
Miscellaneous	LED Indicators	LAN1, LAN2, HDD, Power, and Information LED	
Environment		Operating	Non-Operating
	Temperature	0 ~ 35 °C (32 ~ 95 °F)	-40 ~70 °C (-40 ~158 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Vibration (5 ~ 500 Hz)	0.25 Grms	2 G
	Shock	5 G (with 11 ms duration, half sine wave)	
Physical Characteristics	Dimensions (W x H x D)	438 x 176 x 620 mm (17.24" x 6.93" x 24.41") / 438 x 176 x 540 mm (17.24" x 6.93" x 21.26")	
	Weight	31 kg (without hard drivers)	

Front View

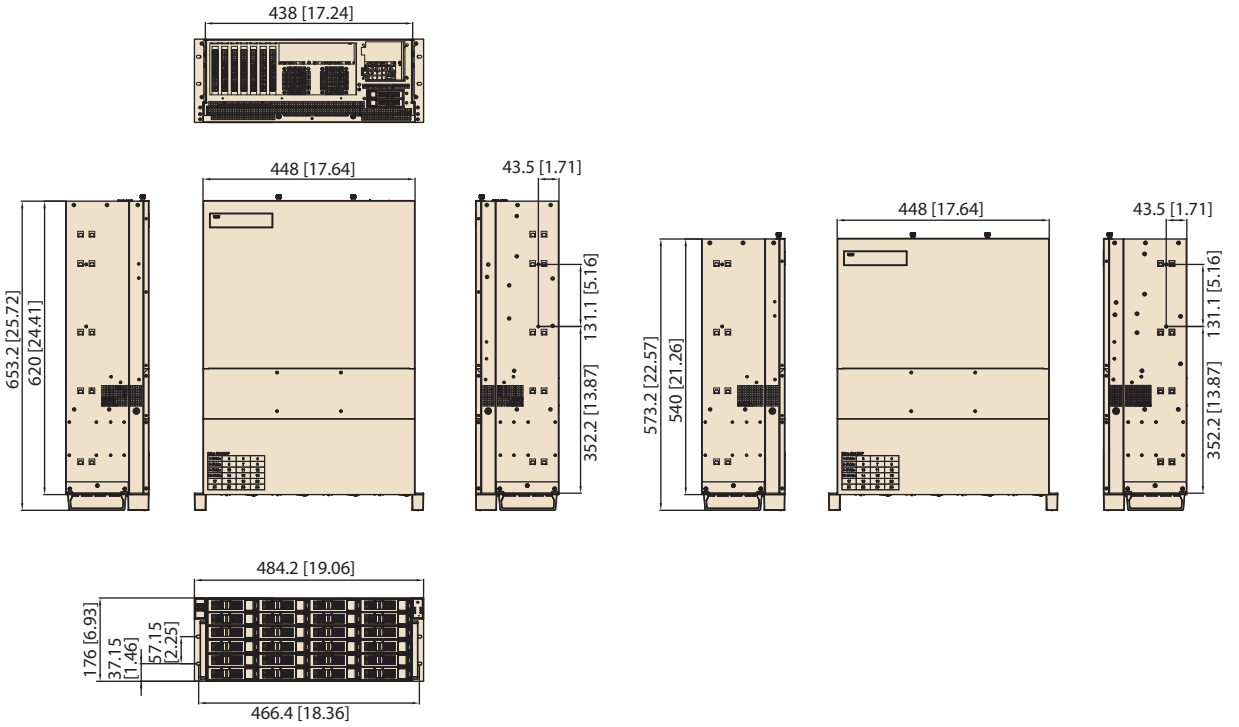


Rear View



Dimensions

Unit: mm [inch]



Ordering Information

Part Number	Chassis Depth	Built-in PSU Configuration	Front HDD Backplane	Rear HDDs (2 x 2.5")	Default Rail Kit	Motherboard Form-factor	Expansion Slots
HPC-8424SE-R8A1E	620mm	RPSU 800W	SAS12Gb/s	Hot-Swap	26"	EATX, ATX, uATX	x6* Full Height
HPC-8424SA-R5A1E	540mm	RPSU 550W	SAS12Gb/s	Hot-Swap	26"	ATX, uATX	x6* Full Height

Note: one slot will be occupied by an SAS RAID card.

Packing List

Part Number	Description	Quantity
9680017375	26" Slide Rail Kit	1

Optional Accessories

Part Number	Description
9891821200E	PCIe x16 Riser card for 4-port NVMe drives
1700025064-01	Internal SAS cable (12G) SFF8643 to SFF8643, 60cm
1700025439-01	Internal SAS cable (6G) SFF8643 to SFF8087, 60cm
ASR-1000K-00A1E	JBOD module for SA SKU

ASR-1000K

Flexible Expansion Module Fulfilling Various JBOD Demands



Features

- Two Mini-SAS HD (SFF-8644) host ports
- Supports 12Gbps SAS protocol
- SES enclosure management & smart fan control
- Storage daisy chain & maximum 72 SAS/SATA HDDs
- Flexibly leverage HPC-8000 series chassis to build JBOD subsystems

Specifications

System	Form Factor	I/O module	
	Back Panel I/O Port	2 mini-SAS HD (SFF-8644)	
	Internal I/O Connector	2 mini-SAS HD (SFF-8643)	
	SAS Interlink	2 SAS 12Gbps cables	
	Smart Fan Control	Yes	
	Storage Daisy Chain	Yes, up to 72 drives	
Mechanical	Dimension (W x H x D)	175 x 53.2 x 181.77 mm (6.8" x 2" x 7.1")	
	Weight	500g	
Environment		Operating	Non-operating
	Temperature	System: 0 ~ 35 °C Board: 0 ~ 40 °C	-40 ~ 85 °C
	Humidity	10% ~ 90%	10% ~ 95% (Non condensing)
Misc	Notification LED	Power LED, System Alert LED, FAN Fault LED, Overheat LED	
	Button	Power button, Mute Button	

I/O View



TOP View



Ordering Information

Part Number	Description
ASR-1000K-00A1E	JBOD kit for enclosure expansion function

Packing List

Part Number	Description	Quantity
1700025064-01	Mini-SAS HD (SFF-8643) to mini-SAS HD (SFF-8643) 60cm cable	2

Optional Accessories

Part Number	Description
1700025067-01	Mini-SAS HD (SFF-8644) to mini-SAS HD (SFF-8644) 150cm cable
1700025066-01	Mini-SAS (SFF-8088) to mini-SAS HD (SFF-8644) 150cm cable

Compatible Enclosures

Part Number	Description
HPC-8316SA-R5A1E	3U-16 bay short-depth storage chassis
HPC-8212SA-R5A1E	2U-12 bay short-depth storage chassis
HPC-8224SA-R5A1E	2U-24 bay short-depth storage chassis
HPC-8424SA-R5A1E	4U-24 bay short-depth storage chassis

11

Industrial Storage

Selection Guide		***11-2***
ASR-3100	1U Rackmount Dual Intel® Xeon® E5-2600 v3/v4 Storage Server, with up to 16x 2.5" NVMe SSDs and 2x PCIe Gen III x8 Slots	***11-4***
SKY-4311	1U Rackmount Dual Intel® Xeon® E5-2600 v3/v4 Storage Server, with up to 8x 2.5" NVMe SSDs and 2x PCIe Gen III x8 Slots	***11-6***
ASR-5300I	3U 16-bay IP-SAN Storage with Reinforced Reliability for Surveillance	***11-8***
SKY-4120B	2U 24-bay JBOD Enclosure for High Availability Applications	***11-10***

To view all of Advantech's industrial storage product offerings, please visit www.advantech.com/products.



Selection Guide







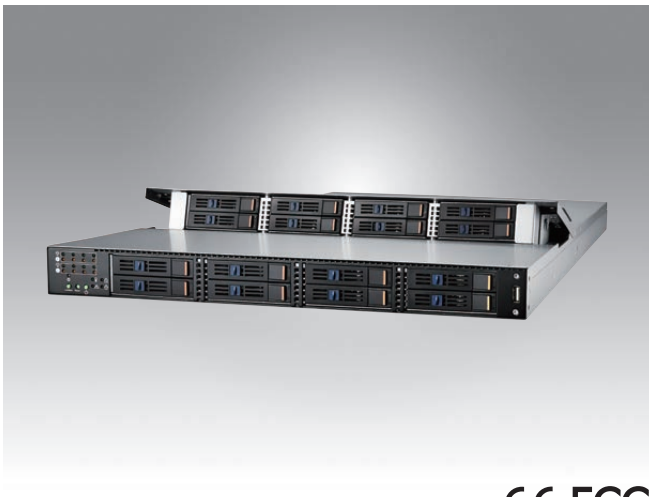
Product Categories		Storage Server		Disk Expansion Enclosure
Model Name		ASR-3100	SKY-4311	SKY-4120B
System	Form Factor	1U 16 bay	1U 8 bay	2U 24bay
	Number of Drives	16 bays (2.5")	8 bays (2.5")	24 bays (2.5")
	Drive Type	NVMe/SAS/SATA	NVMe/SATA	12/6 Gb/s SAS
	CPU Type	Dual LGA 2011-R3 supports Intel® Xeon® E5-2600 V3/V4 series	Dual LGA 2011-R3 supports Intel® Xeon® E5-2600 V3/V4 series	-
	Chipset	Intel® C612	Intel® C612	-
	Memory Type	16 x DDR4-2133 ECC RDIMM (up to 512 GB)	16 x DDR4-2133 ECC RDIMM (up to 512 GB)	-
	Storage Expansion	2 x PCIe x8 (Gen3) (supports 1 x HHHL card and 1 x FHHL card)	2 x PCIe x8 (Gen3) (supports 1 x HHHL card and 1 x FHHL card)	3 x mSAS HD wide-ports 2 for SAS-in, 1 for SAS-out
	Configuration	-	-	Redundant controller
	TPM	-	-	-
	Smart Fan Control	Yes	Yes	Yes
Expansion Slot	PCIe x16	-	-	-
	PCIe x8	2 (supports 1 x HHHL card and 1 x FHHL card)	2 (supports 1 x HHHL card and 1 x FHHL card)	-
Display	Integrated Chipset	-	-	-
	Display Memory	1 GB	1 GB	-
	VGA	ASPEED AST-2400	ASPEED AST-2400	-
Ethernet	RJ-45 Ethernet	2	2	Remote managements - SNMP trap supported
I/O	Front I/O	1 x USB 2.0	1 x USB 2.0	-
	Rear I/O	1 x VGA 1 x COM RS-232 4 x USB 3.0 2 x LAN RJ45	1 x VGA 1 x COM RS-232 4 x USB 3.0 2 x LAN RJ45	1 x LAN RJ45
	Internal I/O Connector	2 x M.2 connectors (2242)	2 x M.2 connectors (2242)	-
Power Supply	Power Output	1100W redundant power	1100W redundant power	650W redundant power
	Input Range	100 ~ 240V_{AC}	100 ~ 240V_{AC}	100 ~ 240V_{AC}
Mechanical	Dimensions (L x W x H)	806 x 430 x 44 mm (31.7" x 16.9" x 1.7")	626 x 430 x 44 mm (24.6" x 16.9" x 1.7")	502 x438 x 88.4 mm (19.7" x 17.2" x 3.4")
	Weight	17 kg (without hard drives)	15 kg (without hard drives)	20 kg (without hard drives)
Environmental	Operating Temperature	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)	0 ~ 40 °C (32 ~ 104 °F)
	Non-Operating Temperature	-20 ~ 60 °C (-4 ~ 140 °F)	-20 ~ 60 °C (-4 ~ 140 °F)	-40° C ~ 60° C (-40° F ~ 140° F)
	Operating Humidity	10 ~ 85% @ 40 °C, non-condensing	10 ~ 85% @ 40 °C, non-condensing	95% @ 40° C, non-condensing
	Non-Operating Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 40 °C, non-condensing	95% @ 60° C, non-condensing
	Operating Vibration (5~500 Hz)	0.25Grms	0.25Grms	0.25Grms
Miscellaneous	Notification LED	Power Status, System Error, HDD Status, LAN LED, Location	Power Status, System Error, HDD Status, LAN LED, Location	Power Status, System Fail
Page		11-4	11-6	11-10



Product Categories		External Disk Array
Model Name		ASR-5300I
System	Form Factor	3U 16 bays (LFF)
	Configuration	Single controller
	Number of Drives	116 bays (3.5")
	Drive Type	6 Gb/s SAS, 6 Gb/s SATA
	Cache Memory	2 GB (default), up to 16 GB
	JBOD Expansion	Yes (mini SAS)
	Max. Drives	160 x 3.5"
	Default Host	4 x 1Gb/s iSCSI RJ45 port
	Optional Host	-
	RAID Level	0, 1 , 3, 5, 6, 10, 30, 50, 60
	LUN Number	2048 LUNs
	Notification	Email, fax, LAN broadcast, SNMP traps, SMS, Skype
Data Service	Advanced Functions	Thin provisioning
		Snapshot (64 images per source volume, max. 128 per system)
		Volume copy/ mirror (16 source volumes, 4 replication pairs per volume, max. 64 per system)
	Optional Features	-
Power Supply	Power Output	460W redundant power (80PLUS)
	Input Range	100 ~ 240V_{AC}
Mechincal	Dimensions (L x W x H)	500 x 448 x 130 mm (19.6" x 17.6" x 5.1")
	Weight	21.66 kg (47.75 lbs) without hard drives (without hard drives)
Environment	Operating Temperature	0 ~ 40 °C (32 ~ 104 °F) without BBU or supercap
	Non-Operating Temperature	-40 ~ 60 °C (-40 ~ 140 °F)
	Operating Humidity	5 ~ 95%, non-condensing
	Non-Operating Humidity	5 ~ 95%, non-condensing
Page		11-8

ASR-3100

1U Rackmount Dual Intel® Xeon® E5-2600 v3/v4 Storage Server with 16 x 2.5" NVMe SSDs and 2 x PCIe Gen III x8 Slots



CE FCC

Features

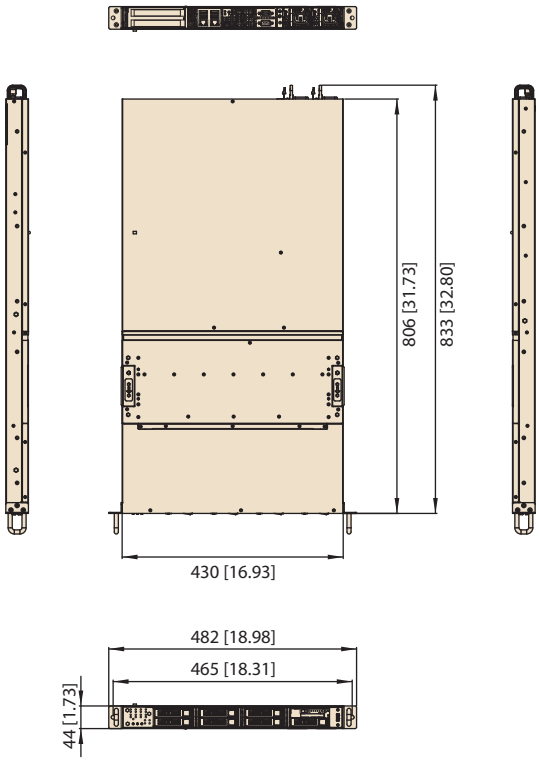
- Dual LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 processors
- 16 DDR4-2133 RDIMMs for a maximum of 512 GB
- Up to 16 x hot-swappable 2.5" NVMe/SAS/SATA drives
- Intelligent Platform Management Interface (IPMI) support
- Supports 2 x PCIe Gen III x8 cards for I/O expansion
- 1100 W 1+1 redundant power supply with 80 PLUS Platinum certification

Specifications

System	Chipset	Intel® C612	
	CPU	Intel® Xeon® E5-2600(v3/V4) dual processor (up to 135W TDP)	
	Memory	16 x DDR4-2133 ECC RDIMMs, maximum 512 GB	
Graphics	Controller	ASPEED AST2400	
	VRAM	64 MB	
Expansion Slot	PXIe x8	2 x PCIe Gen III x8 slots (Supports 1 x HHHL card and 1 x FHHL card)	
Drive Bay	2.5" (hot swappable)	Up to 16 x NVMes/SAS (12Gb)/SATA (6Gb) drives (Refer to the ordering information for further details.)	
Ethernet	Interface	2 x 1 GB Base-T Ethernet	
	Controller	2 x Intel® I210	
Front I/O	USB	1 x USB 2.0	
Rear I/O	USB	4 x USB 3.0	
	PS/2	-	
	COM	1	
	Display	1 x VGA	
	RJ45	2	
Internal Connector	Type-A USB	-	
	SATA	2 (SATA M.2 2242)	
	LPC	-	
Watchdog Timer	Output	Interrupt, system reset	
	Interval	Programmable, 1~255 sec	
Power Supply	Power Output	80 PLUS Platinum 1+1 redundant power supply 900W @ 100 ~ 120 V 1100W @ 200 ~ 240 V	
	Input Range	100 ~ 240V_{AC}	
Cooling	Chassis Fan	7 x 4056	
	Air Filter	-	
Miscellaneous	LED Indicators	Power status, HDD activity, LAN status, location, error messages	
	Remote Management	Advantech Remote Monitoring Utility	
Environment		Operating	Non-operating
	Temperature	0 ~ 40 °C (32~104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C	10 ~ 95% @ 40 °C
	Vibration (5 ~ 500 Hz)	0.25 Grms	-
Characteristics	Dimensions (D x W x H)	806 x 430 x 44 mm (31.7" x 16.9" x 1.7")	

Dimensions

Unit: mm [inch]



Ordering Information

Part Number	2.5" Front HDD Bay	Second Row 2.5" HDD Bay	PCIe Slots	Chassis Depth	1 GbE	IPMI	Power Supply
ASR-3100PP-R11A1E	X8 NVMe	X8 NVMe + SATA (SAS optional)	2	806 mm	2	Yes	1+1 1100W RPS
ASR-3100PT-R11A1E	X8 NVMe	X8 SATA (SAS optional)	2	806 mm	2	Yes	1+1 1100W RPS
ASR-3100SS-R11A1E	X8 SAS+SATA	X8 SAS + SATA (x2 NVMe optional)	1*	806 mm	2	Yes	1+1 1100W RPS

Note:

1. One slot is occupied by the SAS12G RAID card.
2. For quality assurance purposes, the product must be sold as a complete system with the CPU, memory, and drives fully integrated and tested.

Package Contents

Part Number	Description	Quantity
CPU0 heatsink	Heatsink for E5-2600 series	1
CPU1 heatsink	Heatsink for E5-2600 series	1
Rail kit	1U slide rail kit	1
CMA	Cable management arm	1
Driver CD	ASR-3100 CD with drivers and user manual	1
Startup manual	ASR-3100 startup manual	1

Compatible NVMe Drives

Part Number	Description
96FD25-V2TB-IN7	Intel P3700 2.5" NVMe, 2.0TB, MLC
96FD25-V1.6TB-IN7	Intel P3700 2.5" NVMe, 1.6TB, MLC
96FD25-800-IN7	Intel P3700 2.5" NVMe, 800GB, MLC
96FD25-400-IN7	Intel P3700 2.5" NVMe, 400GB, MLC

SKY-4311

1U Rackmount Dual Intel® Xeon® E5-2600 v3/v4 Storage Server with 8 x 2.5" NVMe SSDs and 2 x PCIe Gen III x8 Slots



CE FCC

Features

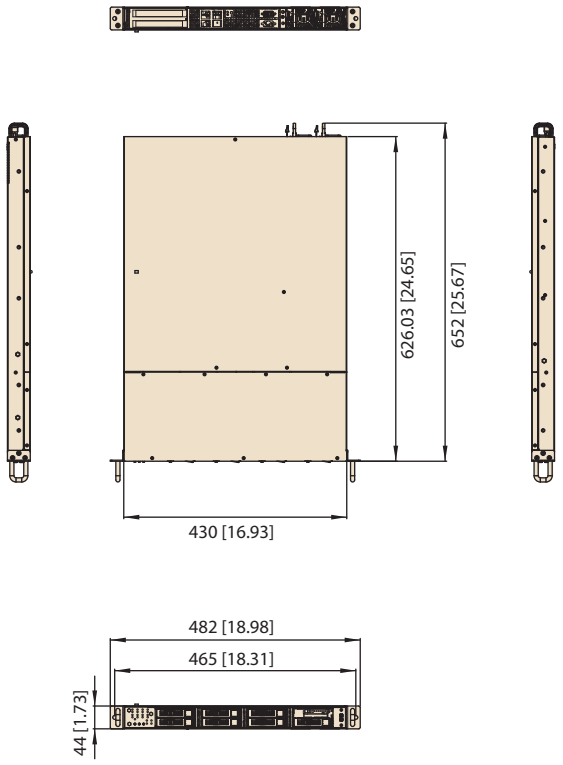
- Dual LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 processors
- 16 x DDR4-2133 RDIMMs for a maximum of 512 GB
- Up to 8 x hot-swappable 2.5" NVMe/SATA drives
- Intelligent Platform Management Interface (IPMI) support
- Supports 2 x PCIe Gen III x8 cards for I/O expansion
- 1100 W 1+1 redundant power supply with 80 PLUS Platinum certification

Specifications

System	Chipset	Intel® C612	
	CPU	Intel® Xeon® E5-2600(v3) dual processor (up to 135W TDP)	
	Memory	16 x DDR4-2133 ECC RDIMMs, maximum 512 GB	
Graphics	Controller	ASPEED AST2400	
	VRAM	64 MB	
Expansion Slot	PXIe x8	2 x PCIe Gen III x8 slots (Supports 1 x HHHL card and 1 x FHHL card)	
Drive Bay	2.5" (hot swappable)	Up to 8 x NVMes/SAS (12 Gb)/SATA (6 Gb) drives (Refer to the ordering information for further details.)	
Ethernet	Interface	2 x 1 GB Base-T Ethernet	
	Controller	2 x Intel® I210	
Front I/O	USB	1 x USB 2.0	
Rear I/O	USB	4 x USB 3.0	
	PS/2	-	
	COM	1	
	Display	1 x VGA	
	RJ45	2	
Internal Connector	USB Type A	-	
	SATA	2 (SATA M.2 2242)	
	LPC	-	
Watchdog Timer	Output	Interrupt, system reset	
	Interval	Programmable, 1~255 sec	
Power Supply	Power Output	80 PLUS Platinum 1+1 redundant power supply 900W @ 100 ~ 120 V 1100W @ 200 ~ 240 V	
	Input Range	100 ~ 240V_{AC}	
Cooling	Chassis Fan	5 x 4056	
	Air Filter	-	
Miscellaneous	LED Indicators	Power status, HDD activity, LAN status, location, error messages	
	Remote Management	Advantech Remote Monitoring Utility	
Environment		Operating	Non-operating
	Temperature	0 ~ 40 °C (32~104 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C	10 ~ 95% @ 40 °C
	Vibration (5 ~ 500 Hz)	0.25 Grms	-
Characteristics	Dimensions (D x W x H)	626 x 430 x 44 mm (24.6" x 16.9" x 1.7")	

Dimensions

Unit: mm [inch]



Ordering Information

Part Number	2.5" Front HDD Bay	PCIe Slots	Chassis Depth	1 GbE	IPMI	Power Supply
SKY-4311P-R11A1E	x8 NVMe+SATA (SAS is optional)	2	626 mm	2	Yes	1+1 1100W RPS

Note:
1. For quality assurance purposes, the product must be sold as a complete system with the CPU, memory, and drives fully integrated and tested.

Package Contents

Part Number	Description	Quantity
CPU0 heatsink	Heatsink for E5-2600 series	1
CPU1 heatsink	Heatsink for E5-2600 series	1
Rail kit	1U slide rail kit	1
Driver CD	CD with drivers and user manual	1
Startup manual	Startup manual	1

Compatible NVMe Drives

Part Number	Description
96FD25-V2TB-IN7	Intel P3700 2.5" NVMe, 2.0TB, MLC
96FD25-V1.6TB-IN7	Intel P3700 2.5" NVMe, 1.6TB, MLC
96FD25-800-IN7	Intel P3700 2.5" NVMe, 800GB, MLC
96FD25-400-IN7	Intel P3700 2.5" NVMe, 400GB, MLC

ASR-5300I

3U 16-Bay IP-SAN Storage Solution with Enhanced Reliability for Surveillance



CE FCC

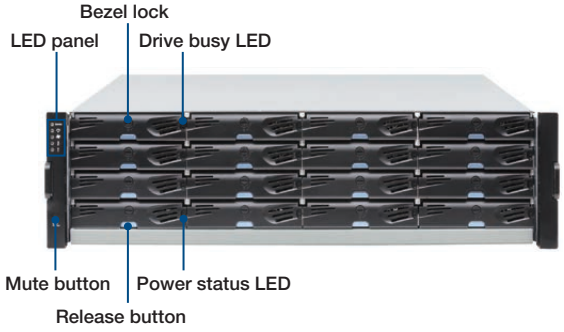
Features

- Single controller configuration
- 3U 16-bay (LFF) short-depth form factor
- 4 x iSCSI 1Gb/s host interfaces
- 2 GB cache (default), up to 16 GB
- Up to 160 x 3.5"/2.5" SATA/SAS drives
- Optional BBU/Supercap+Flash module for cache backup
- Supports thin provisioning, snapshot, and volume copy/mirror data service functions

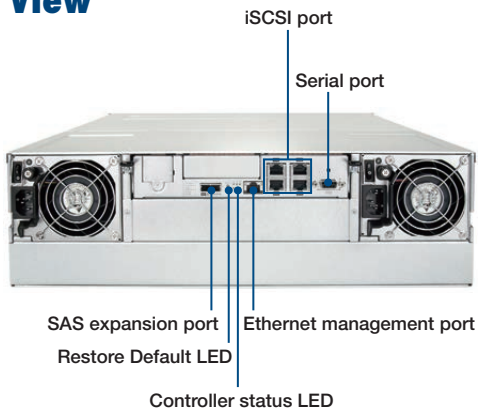
Specifications

System	Form Factor	3U 16 bays (LFF)	
	Configuration	Single controller	
	Number of Drives	16 bays (3.5")	
	Drive Type	6 Gb/s SAS, 6 Gb/s SATA	
	Cache Memory	2 GB (default), up to 16 GB	
	JBOD Expansion	Yes (mini SAS)	
	Max. Drives	160 x 3.5" (with corresponding JBODs)	
	Default Host	4 x 1Gb/s iSCSI RJ45 port	
	RAID Level	0, 1, 3, 5, 6, 10, 30, 50, 60	
	LUN Number	2048 LUNs	
	Notification	Email, fax, LAN broadcast, SNMP traps, SMS, Skype	
Data Service	Advanced Function	Thin provisioning Snapshot (64 images per source volume, max. 128 per system) Volume copy/mirror (16 source volume, 4 replication pairs per volume, max. 64 per system)	
Power Supply	Power Output	460W Redundant Power (80 Plus)	
	Input Range	100 ~ 240V_{AC}	
Mechanical	Dimensions (L x W x H)	500 x 448 x 130 mm (19.6" x 17.6" x 5.1")	
	Weight	21.66 kg (47.75 lbs) without hard drives	
Environment		Operating	Non-operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F) without BBU or supercap	-40 ~ 60 °C (-40 ~ 140 °F)
	Humidity	5 ~ 95%, non-condensing	5 ~ 95%, non-condensing

Front View

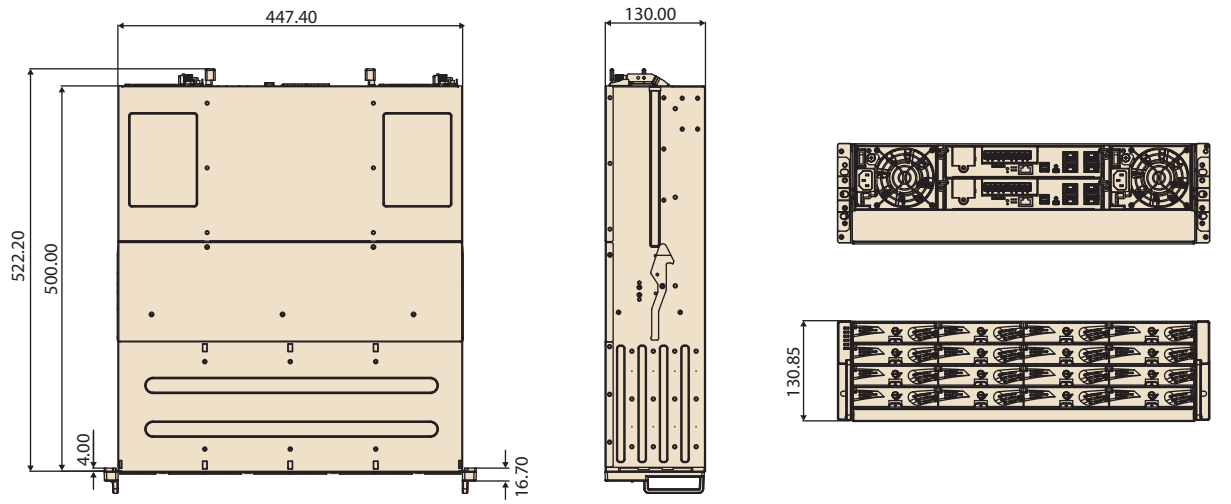


Rear View



Dimensions

Unit: mm



Ordering Information

Part Number	Description
ASR-5300I-16A1E	3U 16-bay single controller iSCSI disk array

System Contents

Description	Quantity
Mount kit	1

Compatible Drives

Part Number	Description
96HD2T-ST-WD7KE	WD 3.5" Enterprise SATA 2TB, 7Krpm, with 5-year warranty
96HD4TB-ST-WD7KE	WD 3.5" Enterprise SATA 4TB, 7Krpm, with 5-year warranty
96HD3TB-ST-SG5KA	Seagate 3.5" Surveillance SATA 3TB, 5Krpm, with 3-year warranty
96HD4TB-ST-SG5KA	Seagate 3.5" Surveillance SATA 4TB, 5Krpm, with 3-year warranty
96HD2TB-ST-SG7KE	Seagate 3.5" Enterprise SATA 2TB, 7Krpm, with 5-year warranty
96HD3TB-ST-SG7KE	Seagate 3.5" Enterprise SATA 3TB, 7Krpm, with 5-year warranty
96HD4TB-ST-SG7KE	Seagate 3.5" Enterprise SATA 4TB, 7Krpm, with 5-year warranty
96ND500G-ST-SG7K2	Seagate 2.5" Enterprise SATA 500GB, 7Krpm, with 5-year warranty
96ND1T-ST-SG7KE	Seagate 2.5" Enterprise SATA 1TB, 7Krpm, with 5-year warranty
96ND300G-SS-SG10KE	Seagate 2.5" Enterprise SAS 300GB, 10Krpm, with 5-year warranty
96ND600G-SS-SG10KE	Seagate 2.5" Enterprise SAS 600GB, 10Krpm, with 5-year warranty
96ND900G-SS-SG10KE	Seagate 2.5" Enterprise SAS 900GB, 10Krpm, with 5-year warranty

Optional Accessories

Part Number	Description
ASR-5300I-CBMB	Cache backup module, BBU+Flash
ASR-5300I-CBMC	Cache backup module, Super-capacitor+ Flash
ASR-5300I-8GB	8GB DDR-III DIM module
ASR-5300I-4GB	4GB DDR-III DIM module
ASR-5300I-2GB	2GB DDR-III DIM module

SKY-4120B

2U 24-Bay JBOD Enclosure for High-Availability Applications



Features

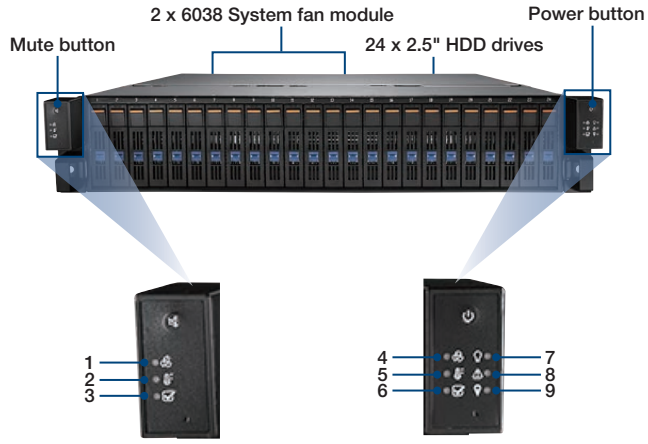
- Supports 24 x hot-swappable 2.5" SAS (12/6 Gb) drives
- SES enclosure management and smart fan control
- 3 x Mini SAS HD (SFF-8644) per expander module (2 x for input and 1 x for output)
- Storage daisy chain support for up to 72 drives
- High-efficiency (80PLUS) redundant power supply

CE FCC

Specifications

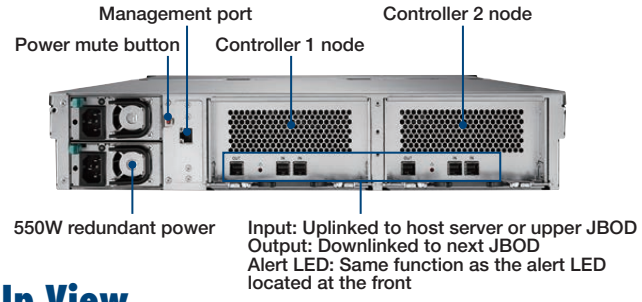
System	Form Factor	2U 24 bays	
	Number of Drives	24 x 2.5" bays	
	Drive Type	SAS 12/6 Gb only	
	SAS Expansion Port	3 x Mini SAS HD (SFF-8644) per expander module	
	Cooling	2 x (1+1) 6038 easy-swap fans with smart fan control	
Power Supply	Power Output	550W 1+1 redundant power	
	Input Range	100 ~ 240V_{AC}	
Mechanical	Dimensions (W x H x D)	438 x 88.4 x 502 mm (19.7" x 17.2" x 3.4") (without handle ears)	
	Weight	20 kg (without hard drives)	
Environment		Operating	Non-operating
	Temperature	0 ~ 40 °C (32 ~ 104 °F)	-40 ~ 60 °C (-40 ~ 140 °F)
	Humidity	95% @ 40 °C, non-condensing	95% @ 60 °C, non-condensing
	Vibration (5 ~ 500Hz)	0.25Grms	2G
	Shock	10G @11 ms duration, half sine wave	
Miscellaneous	LED Indicators	System power, system alert, location, controller fan, controller temperature, controller ready	

Front View

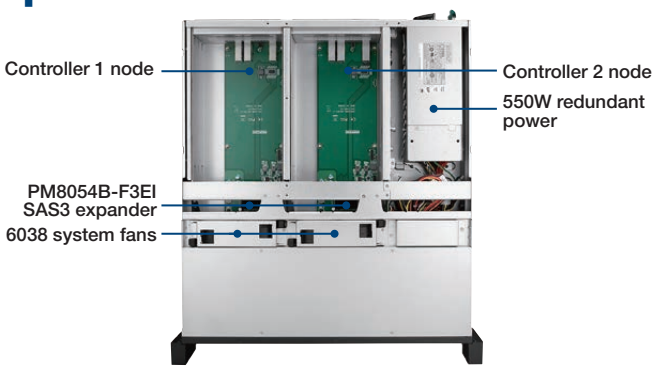


1. Controller2 Fan LED
2. Controller2 Temp. LED
3. Controller2 Ready LED
4. Controller1 Fan LED (Red)
5. Controller1 Temp. LED (Red)
6. Controller1 Ready LED (Blue)
7. System Power LED (Blue)
8. System Alert LED (Red)
9. Location LED (Blue)

Rear View

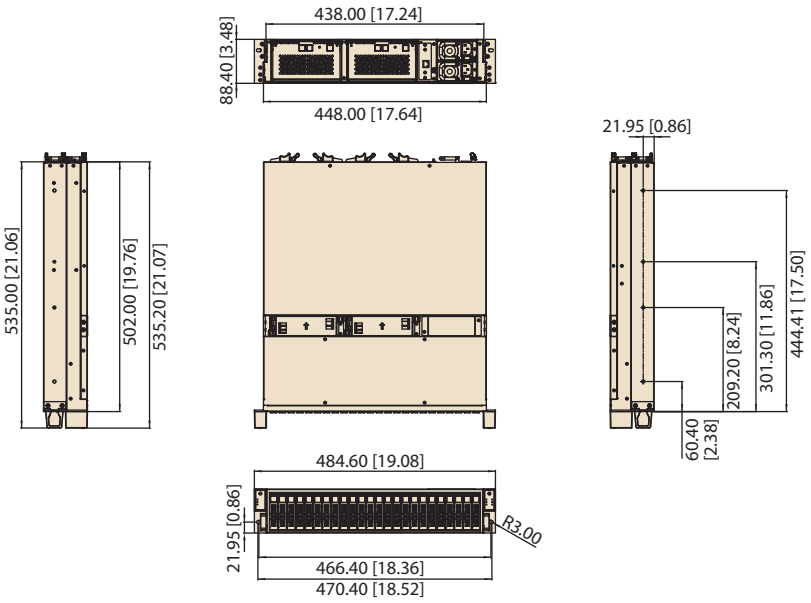


Up View



Dimensions

Unit: mm



Ordering Information

Part Number	Description
SKY-4120B-R5A1E	2U 24-bay dual controller JBOD enclosure

Optional Accessories

Part Number	Description
1700025067-01	mSAS HD (8644) to mSAS HD, 1.5m
1700025066-01	mSAS (8088) to mSAS HD, 1.5m

Packing List

Part Number	Description	Quantity
9680017208	22" slide rail kit	1

Accelerate Your Business

Advantech Full Range of NVMe Servers and Storage



ADVANTECH

Enabling an Intelligent Planet

Advantech's full range of NVMe servers and storage solutions are targeted at Industrial 4.0 demands. They fulfill a variety of application demands in surveillance, network security, broadcasting, and factory automation. Our HPC-8000 series chassis feature hot-swappable NVMe SSD, 12Gb/s SAS, and SATA HDD. The NVMe interface/protocol overcomes data bottlenecks in flash drives and upgrades the IOPS so I/O performance can be up to 10 times greater than regular SATA drives.



SKY-4311
Optimal NVR/DVR Storage Server



HPC-8212
2U 12 Hot-swappable 3.5" Drive Bays Storage Server



ASR-3100
High I/O Performance Storage Server



HPC-8224
2U 24 Hot-swappable 2.5" Drive Bays Storage Server

Advantech Headquarters
No. 1, Alley 20, Lane 26, Rueiguang Road,
Neihu District, Taipei, Taiwan, 11491, R.O.C.
Tel: 886-2-2792-7818
Fax: 886-2-2794-7304

www.advantech.com

Check Now »

12

GPU Servers

Selection Guide		***12-2***
Compatible GPU/Xeon Phi		***12-3***
AGS-913	1U Rackmount Intel® Xeon® E5-2600 v3/v4 GPU server, Supporting 3 x PCIe x16 double-depth card and 1 x PCIe x8 single-depth FH/HL card	***12-4***
AGS-923	2U Rackmount Intel® Xeon® E5-2600 v4/v3 GPU server, Supporting 4 x PCIe x16 double-depth card and 1 x PCIe x8 single-depth FH/HL card	***12-6***
HPC-7400-S813	4U GPU Server System With Intel® Xeon® E5-2600 v3/v4 CPU, Supporting up to 2* GPU cards and 1400W RPS	***12-8***
HPC-7400-S923	4U GPU Server System With Dual Intel® Xeon® E5-2600 v3/v4 CPU, Supporting up to 3* GPU cards and 1400W RPS	***12-10***
HPC-7483-S923	4U GPU Server System With Dual Intel® Xeon® E5-2600 v4 CPU, Supporting up to 4* GPU cards and 1800W RPS	***12-12***

To view all of Advantech's GPU Servers, please visit www.advantech.com/products.



Selection Guide





Model Name		AGS-913	AGS-923	HPC-7400-S813
Processor Support		Dual Intel® Xeon® E5-2600 v3/v4	Dual Intel® Xeon® E5-2600 v3/v4	Single Intel® Xeon® E5-2600 v3/v4
Expansion Slots		3 x PCIe x16 double-depth card + 1 x PCIe x8 FH/HL card	4 x PCIe x16 double-depth card + 1 x PCIe x8 FH/HLcard	2 x PCIe x16 double-depth card + 1 x PCIe x8 + PCIe x4 + 1 x PCIe x1
Drive Bay	Slim ODD Bay	-	-	-
	2.5" Hot Swap	4	8	-
	3.5" Hot Swap	-	-	2
Cooling	Chassis Fan	7 x 40x56 + 2 x 40x28 high speed fan	4 x 80x38 + 1 x 80x20 + 1 x 80x38 (optional) high speed fan	3 x 80x38 + optional 2 (6cm) rear fans
	Air Filter	-	-	Yes
Chassis Intrusion Alarm		Yes	Yes	Yes
Front USB		2	2	2
Miscellaneous	LED Indicators	Power status, HDD activity, LAN status, location, error message	Power status, HDD activity, LAN status, location, error message	Power switch and system reset button
	Rear Panel	Location, error message	Location, error message	-
Environment		Operating		Non-Operating
	Temperature	0 ~ 40 °C (32~104 °F)		-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C		10 ~ 95% @ 40 °C
	Vibration (5~500 Hz)	0.5 Grms	2G	2G
	Shock	10 G (with 11ms duration, half since wave)	10 G (with 11ms duration, half since wave)	10 G (with 11ms duration, half since wave)
Physical Characteristics	Dimensions (W x H x D)	430 x 44 x 770 mm (16.9" x 1.7" x 30.3")	430 x 88 x 770 mm (16.9" x 3.4" x 30.3")	482 x 177 x 448 mm (18.9" x 6.9" x 17.6")
Page		12-4	12-6	12-8




Model Name		HPC-7400-S923	HPC-7483-S923
Processor Support		Intel Xeon E5-2500 v4/v3 processor	
Expansion Slots		3 x PCIe x 16 double-depth cards	4 x PCIe x 16 double-depth cards
Drive Bay	Slim ODD Bay	-	-
	2.5" Internal	2 rear-accessible (3.5"/2.5")	2
	2.5" Hot Swap	-	
	3.5" (internal)	2 rear-accessible (3.5"/2.5")	8
	5.25" (front accessible)	2	3
Cooling	Chassis Fan	(8 cm/1.41.9 CFM) + optional 2 (6 cm) rear fans	3 (12 cm / 226.5 CFM)+ optional 2 (8 cm) rear fans
	Air Filter	Yes	No
Chassis Intrusion Alarm		Yes	Yes
Front USB		2	2
Miscellaneous	LED Indicators	Power switch , system reset button,HDD, LAN1,LAN2	System: Power, HDD, LAN1, LAN2, System information HDD Tray: HDD Power and Activity LED
	Rear Panel	-	Two 9-pin D-Sub and two PS2 and two USB
Environment		Operating	Non-Operating
	Temperature	0 ~ 35 °C (32 ~ 95 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 35 °C	10 ~ 95% @ 40 °C
	Vibration (5~500 Hz)	1 Grms	2 G
	Shock	10G	
Physical Characteristics	Dimensions (W x H x D)	482x 177 x 448 mm (18.9" x 6.9" x 17.6")	435 x 177 x 658 mm (17.1" x 6.9" x 25.9")
Page		12-10	12-12

Compatible GPU/Xeon Phi

GPU Card Vendor \ Advantech Product Model			1U	2U	3U chassis HPC-7320/ 4U chassis HPC-7483 & HPC-7400					4U		
			AGS-913	AGS-923	ASMB-813	ASMB-822	ASMB-913	ASMB-922	ASMB-923	HPC-7400-S813	HPC-7400-S923	HPC-7483-S923
Nvidia	Tesla	P100	*	*	v	v	v	v	v	v	v	*
		P40	v	v	v	v	v	v	v	v	v	*
		M60	*	*	v	v	v	v	v	*	v	v
		M40	*	*	v	v	v	v	v	v	*	*
		K80	v	*	v	v	v	v	v	*	*	v
		K40	v	v	v	v	v	v	v	v	v	v
AMD	Workstation	W9000	v	v	v	v	v	v	v	v	v	v
		W9100	v	v	v	v	v	v	v	v	v	v
	Server	S9000	v	v	v	v	v	v	v	v	v	v
		S9150	v	v	v	v	v	v	v	v	v	v
Intel	Coprocessor	Xeon Phi 5110P	v	v	v	v	v	v	v	v	v	v

Note:
1. v means they have already passed compatibility tests (GPU card and driver install).
2. * means qualified tesla server by Nvdia
3. Some GPU cards need to enable "Above 4G Decoding" in BIOS setup menu when installing multiple GPU cards

GPU P/N

Cat.	Part Number	Description
NVS series GPU cards	SKY-NVS-310-1E	NVS 310 1GB PCI-E x16 DP*2 FS
	SKY-NVS-315E	NVS 315 1GB PCI-E x16 DMS59 FS
	SKY-NVS-510E	NVS 510 2GB PCI-E x16 MDP*4 FS
	SKY-NVS-810E	NVS 810 4GB PCI-E x16 MDP*8 FS
Quadro series GPU cards	SKY-QUAD-GP100	Quadro GP100 16GB PCI-Ex16 DVI-D*1 DP*4 FS
	SKY-QUAD-K1200E	Quadro K1200 4GB PCI-Ex16 MDP*4 FS
	SKY-QUAD-K1200LPE	Quadro K1200 4GB PCI-Ex16 MDP*4 FS/LP B
	SKY-QUAD-K420-2E	Quadro K420 2GB PCI-Ex16 DVI-I*1 DP*1 FS
	SKY-QUAD-K4200E	Quadro K4200 4GB PCI-Ex16 DVI*1 DP*2 FS
	SKY-QUAD-K5200E	Quadro K5200 8GB PCI-Ex16 DVI*2 DP*2 FS
	SKY-QUAD-K6000E	Quadro K6000 12GB PCI-Ex16 DVI*2 DP*2 FS
	SKY-QUAD-K620E	Quadro K620 2GB PCI-Ex16 DVI-I*1 DP*1 FS
	SKY-QUAD-M2000E	Quadro M2000 4GB PCI-Ex16 DP*4 FS
	SKY-QUAD-M4000E	Quadro M4000 8GB PCI-Ex16 DP*4 FS
	SKY-QUAD-M5000E	Quadro M5000 8GB PCI-Ex16 DVI*1 DP*4 FS
	SKY-QUAD-M6000-2E	Quadro M6000 24GB PCI-Ex16 DVI*1 DP*4 FS
	SKY-QUAD-M6000E	Quadro M6000 12GB PCI-Ex16 DVI*1 DP*4 FS
	SKY-QUAD-P400	Quadro P400 2GB PCI-Ex16 MDP*2 FS
	SKY-QUAD-P600	Quadro P600 2GB PCI-Ex16 MDP*4 FS
	SKY-QUAD-P1000	Quadro P1000 4GB PCI-Ex16 MDP*4 FS
	SKY-QUAD-P2000	Quadro P2000 5GB PCI-Ex16 DP*4 FS
	SKY-QUAD-P4000	Quadro P4000 8GB PCI-Ex16 DP*4 FS
	SKY-QUAD-P5000E	Quadro P5000 12GB PCI-Ex16 DVI-D*1 DP*4 FS
	SKY-QUAD-P6000E	Quadro P6000 24GB PCI-Ex16 DVI-D*1 DP*4 FS
	SKY-QUAD-SYNC-KE	Quadro Sync for Kepler w/4*ribbon cable
Tesla series GPU cards	SKY-TESL-K40-AE	Tesla K40 12GB PCI-E x16 FS
	SKY-TESL-K40-PE	Tesla K40 12GB PCI-E x16 HS
	SKY-TESL-K80E	Tesla K80 24GB PCI-E x16 HS
	SKY-TESL-M10-PE	Tesla M10 32GB PCI-E x16 HS
	SKY-TESL-M40-2E	Tesla M40 24GB PCI-E x16 HS
	SKY-TESL-M40E	Tesla M40 12GB PCI-E x16 HS
	SKY-TESL-M4E	Tesla M4 4GB PCI-E x16 HS/Low profile
	SKY-TESL-M6-MXM-PE	Tesla M6 8GB MXM3.1 type B HS
	SKY-TESL-M60-PLRE	Tesla M60 16GB PCI-E x16 HS L to R
	SKY-TESL-M60-PRLE	Tesla M60 16GB PCI-E x16 HS R to L
	SKY-TESL-P100-16P	Tesla P100-PCIE-16GB x16 HS
	SKY-TESL-P100-PE	Tesla P100 12GB PCI-E x16 HS
	SKY-TESL-P4-PE	Tesla P4 8GB PCI-E x16 HS
	SKY-TESL-P40-PE	Tesla P40 24GB PCI-E x16 HS

AGS-913

1U Rackmount Intel® Xeon® E5-2600 v3/v4 GPU Server, Supporting 3 x PCIe x16 Double-depth Cards and 1 x PCIe x8 Single-depth FH/HL Card



CE FCC

Features

- Processor: Dual Intel® Xeon® E5-2600 v3/v4 series, up to 20 cores / 40 threads
- Memory: DDR4 1600/1866/2133 MHz ECC-REG type up to 256GB
- Remote Management: IPMI function support
- Expansion: Supporting 3 * PCIe x16 double-deck cards + 1* PCIe x8 single-deck FH/HL card
- PSU: 1100W 1+1 redundant power supply with 80 PLUS Platinum level certification

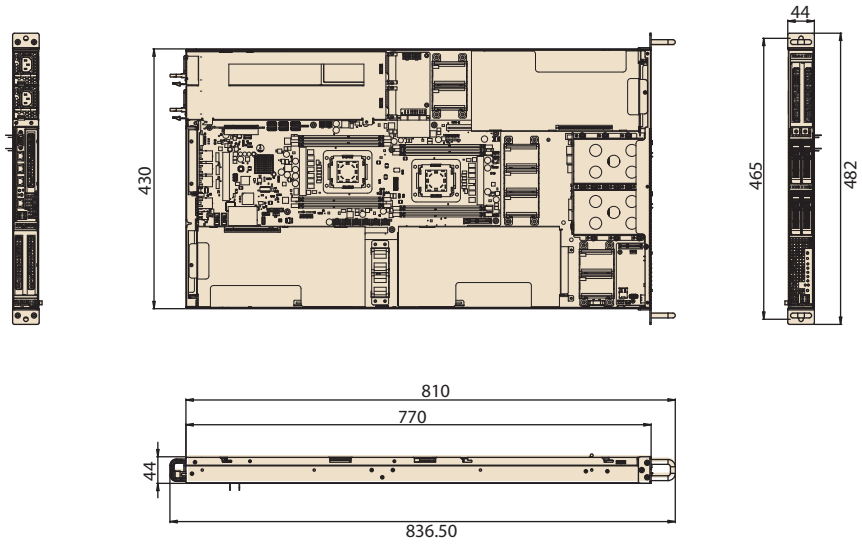
Specifications

Processor System	Chipset	Intel C612 Chipset	
	CPU	Dual Intel LGA2011 Xeon E5-2600 v3/v4 processor (up to 135W TDP)	
	L2 Cache	Up to 30 MB	
	Memory	8 x DDR4 1600/1866/2133 ECC-REG DIMM, up to 256GB	
Graphics	Controller	Aspeed AST2400	
	VRAM	64 MB	
Expansion Slot	Slot location 1 (Upper Middle slot)	PCIe x 8 slot (Gen3 x8 link) for FH/HL expansion cards	
	Slot location 2 (Lower Right slot)	PCIe x16 slot (Gen3 x16 link), for double-deck 4.376"(H)/10.5"(L) expansion cards	
	Slot location 3 (Upper Left slot)	PCIe x16 slot (Gen3 x16 link), for double-deck 4.376"(H)/10.5"(L) expansion cards	
	Slot location 4	-	
	Slot location 5	-	
	Slot location 6 (Lower Left slot)	PCIe x16 slot (Gen3 x16 link), for double-deck 4.376"(H)/10.5"(L) expansion cards	
Drive Bay	2.5" (Hot-swap)	4	
	3.5" (Front Accessible)	-	
	3.5" Internal	-	
Ethernet	Interface	4 x 10/100/1000 Mbps Gigabit Ethernet	
	Controller	4 x Intel I210AT	
Front I/O Interface	USB	2 x USB2.0	
Rear I/O Interface	USB	2 x USB3.0	
	PS/2	-	
	COM	-	
	Disaplay	1 x VGA	
	RJ-45	4 (1 is sharing NIC for IPMI)	
Internal connector	Type-A USB	1	
	COM	2	
	LPC	1	
Watchdog Timer	Output	Interrup, system reset	
	Interval	Programmable, 1~255 sec	
Power Supply	Power Output Wattage	80 PLUS Platinum 1+1 redundant Power Supply 900W @ 100 ~ 120V 1100W @ 200 ~ 240V	
	Input Range	AC 100 ~ 240 V	
Cooling	Chassis Fan	7 x 40 x 56 + 2 x 40 x 28 high speed fan	
	Air Filter	-	
Miscellaneous	LED Indicators	Power status, HDD activity, LAN status, location, error message	
	Remote Management	Advantech Remote Monitoring Utility	
Environment		Operating	Non-Operating
	Temperature	0 ~ 35 °C (32 ~ 85 °F) *0 ~ 30 °C (32 ~ 85.9 °F) for nVidia tesla P100	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C	10 ~ 95% @ 40 °C
	Vibration (5 ~ 500 Hz)	0.5 Grms	2 G
	Shock	10G (with 11ms duration, half since wave)	30G
Physical Characteristics	Dimension (W x H x D)	430 x 44 x 770 mm (16.9" x 1.7" x 30.3")	

Note1: operating temperature qualified AGS-913 max 2 GPU cards by nVidia certification.

Dimensions

Unit: mm [inch]



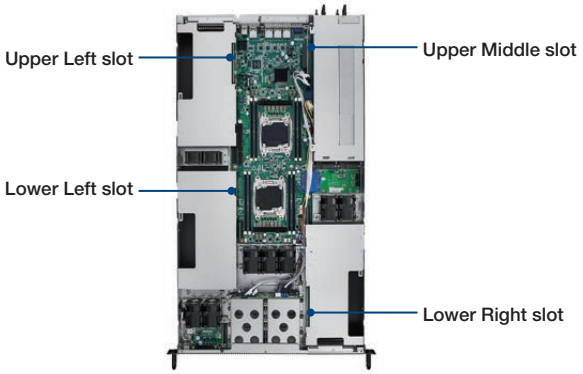
Front View



Rear View



Inside View



Note1: nVidia qualified AGS-913 max 2 of GPU slots on lower left slot & lower right slot

Ordering Information

Part Number	HDD	VGA Chip	RJ45	IPMI	Power supply
AGS-913I-R11A1E	4	AST 2400	4	YES	1+1 1100W RPS

System Contents

Items	Advantech P/N	Quantity
CPU0 heatsink	1960065593N001	1
CPU1 heatsink	1960065591N001	1
Slide rail kit	9680015703	1
Power cable for expansion card (Pre-assembled in the system)	1700023022-01	6
Driver CD	2061S91301	1
Startup manual	2001S91310	1

Optional Accessories

Part Number	Description
1700026210-01	SATA Power cable for nVidia GPU card (20 cm)

AGS-923

2U Rackmount Intel® Xeon® E5-2600 v3/v4 GPU Server, Supporting 4 x PCIe x16 Double-depth Cards and 1 x PCIe x8 Single-depth FH/HL Card



CE FCC

Features

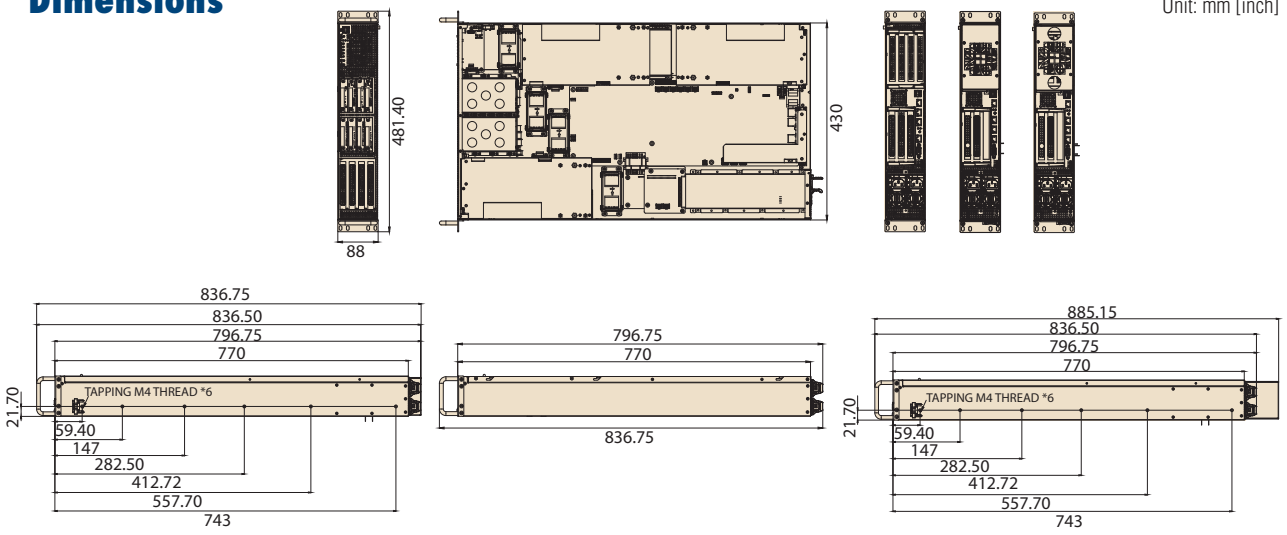
- Processor: Dual Intel® Xeon® E5-2600 v4/v3 series
- Memory: DDR4 1600/1866/2133 MHz ECC-REG type up to 256GB
- Remote Management: IPMI function support
- Expansion: Supporting 4 * PCIe x16 double-depth card + 1* PCIe x8 single-depth FH/HL card
- PSU: max 1800W 1+1 redundant power supply with 80 PLUS Platinum level certification

Specifications

Processor System	Chipset	Intel C612 Chipset	
	CPU	Dual Intel LGA2011 Xeon E5-2600 v3/v4 processor (up to 145W TDP)	
	L2 Cache	Up to 30 MB	
	Memory	8 x DDR4 1600/1866/2133 ECC-REG DIMM, up to 256GB	
Graphics	Controller	Aspeed AST2400	
	VRAM	64 MB	
Expansion Slot	Slot location 1 (Upper Middle slot)	PCIe x 8 slot (Gen3 x8 link) for single-depth 4.376"(H)/6.4"(L) expansion cards	
	Slot location 2 (Lower Right slot)	PCIe x16 slot (Gen3 x16 link), for double-depth 4.376"(H)/10.5"(L) expansion cards	
	Slot location 3 (Upper Left slot/bottom)	PCIe x16 slot (Gen3 x16 link), for double-depth 4.376"(H)/10.5"(L) expansion cards, support 12"(L) when remove 8020 FAN	
	Slot location 4	-	
	Slot location 5 (Upper Left slot/top)	PCIe x16 slot (Gen3 x16 link), for double-depth 4.376"(H)/10.5"(L) expansion cards, support 12"(L) when remove 8020 FAN	
	Slot location 6 (Lower Left slot)	PCIe x16 slot (Gen3 x16 link), for double-depth 4.376"(H)/10.5"(L) expansion cards	
Drive Bay	2.5" (Hot-swap)	8 (4 from SATA III and 4 from slave SATA III on-board)	
	3.5" (Front Accessible)	-	
	3.5" Internal	-	
Ethernet	Interface	4 x 10/100/1000 Mbps Gigabit Ethernet	
	Controller	4 x Intel I210AT	
Front I/O Interface	USB	2 x USB2.0	
Rear I/O Interface	USB	2 x USB3.0	
	PS/2	-	
	COM	-	
	Disaplay	1 x VGA	
	RJ-45	4 (1 is sharing NIC for IPMI)	
Internal connector	Type-A USB	1	
	COM	2	
	LPC	1	
Watchdog Timer	Output	System reset	
	Interval	Programmable, 1~255 sec	
Power Supply	Power Output Wattage	80 PLUS Platinum 1800W 1+1 redundant Power Supply 1000W @ 100 ~ 127V 1800W @ 200 ~ 240V 80 PLUS Platinum 1400W 1+1 redundant Power Supply 900W @ 100 ~ 120V 1400W @ 200 ~ 240V	
	Input Range	AC 100 ~ 240 V	
Cooling	Chassis Fan	[1800W] 3 * 80 x 38 + 2 * 80 x 38 high speed fan [1400W] 4 * 80 x 38 + 1 * 80x20 + 1 * 80 x 38 (optional) high speed fan	
	Air Filter	-	
Miscellaneous	LED Indicators	Power status, HDD activity, LAN status, location, error message	
	Remote Management	Advantech Remote Monitoring Utility	
Environment		Operating	Non-Operating
	Temperature	0 ~ 30 °C (32 ~ 86 °F, for 1800W) 0 ~ 40 °C (32 ~ 194 °F, for 1400W)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C	10 ~ 95% @ 40 °C
	Vibration (5 ~ 500 Hz)	0.5 Grms	2 G
	Shock	10G (with 11ms duration, half since wave)	
Physical Characteristics	Dimension (W x H X D)	[1800W] 430 x 88 x 798 mm (16.9" x 3.4" x 31.4") [1400W] 430 x 88 x 770 mm (16.9" x 3.4" x 30.3")	

Dimensions

Unit: mm [inch]



Front View



Supports 1 x PCEIe x 16 double deck/
1 x single deck FH card

Rear View

1400W



Supports 1 x PCIe x8 FH/HL card

Supports 2 x PCEe X16 double deck/
2 x single deck FH card

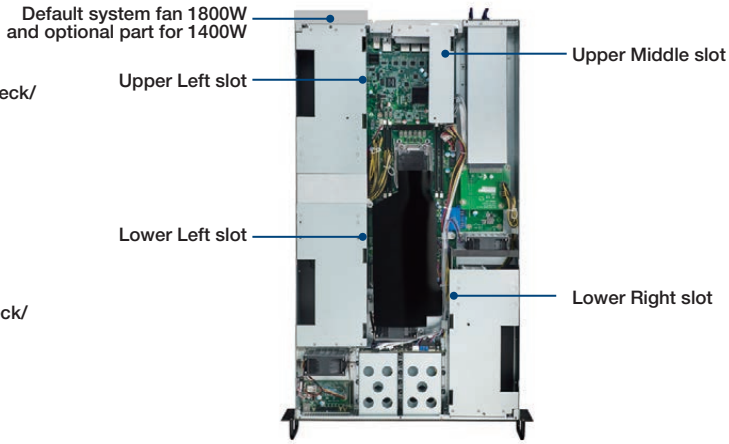
1800W



Supports 1 x PCIe x8 FH/HL card

Supports 2 x PCEe X16 double deck/
2 x single deck FH card

Inside View



Ordering Information

Part Number	HDD tray	VGA CHip	RJ45	IPMI	Power Supply
AGS-923I-R18A1E	8	AST 2400	4	YES	1+1 1800W RPS
AGS-923I-R14A1E	8	AST 2400	4	YES	1+1 1400W RPS

Optional Accessories (for 1400W)

Part Number	Description
98R1920I10E	Optional parts for Upper Left GPU card air duct with FAN
98R1920I20E	Optional parts for Upper Left GPU card air duct with FAN and display output

System Contents

Items	Advantech P/N	Quantity
Startup manual	2001S91310	1
Driver CD	2061S92300	1
Rail kit (pair)	9680015703	1
CPU cooler	1960063011N001	2
Power module (Installed in the system)	96PSRM-A1K8WCR	2
Power cable for GPU/VGA card (Installed in the system)	1700023022-01	8

HPC-7400-S813

4U GPU Server System With Intel® Xeon® E5-2600 v3/v4 CPU, Supporting up to 2* GPU Cards and 1400W RPS



CE FCC

Features

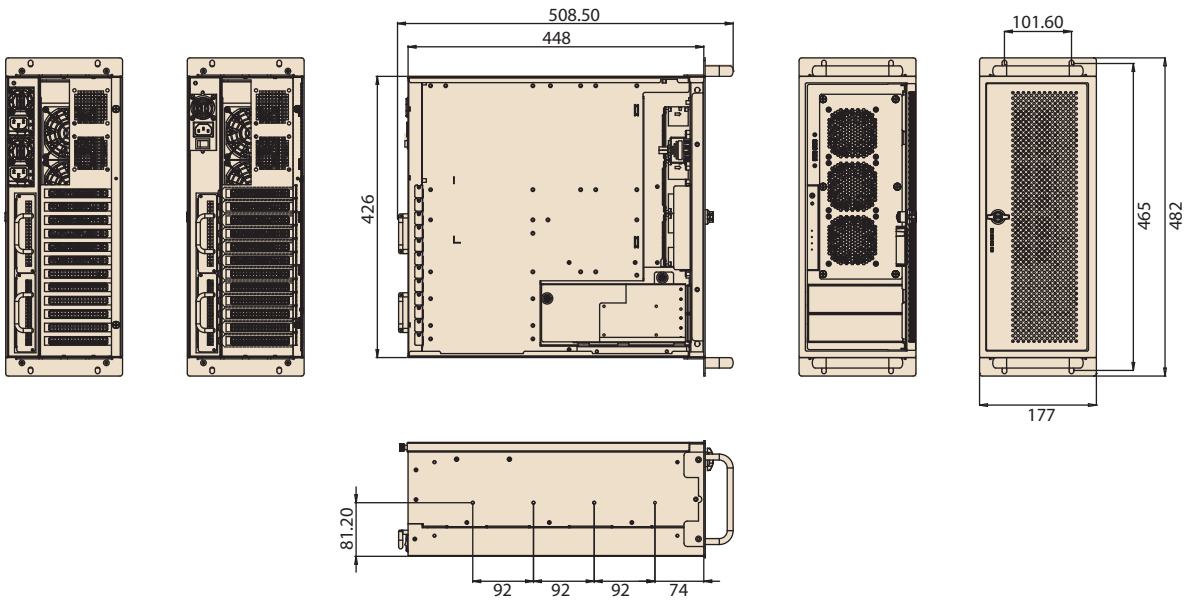
- 7 years longevity support- Revision control
- 0 ~ 35 °C operating temperature
- Reliable resume from AC power loss function
- Supports Intel® Xeon® E5-2600/E5-1600 v3/v4 Series CPUs
- Quad channel DDR4 2133 MHz ECC & Registered DIMMs up to 256 GB
- Supports up to 2* GPU cards
- 1400W 1+1 Redundant PSU with 80 PLUS Platinum level
- IPMI remote management

Specifications

Processor System	CPU type	Intel Xeon E5-2600 / E5-1600 v3/v4 / Core i7 5800/5900/6800/6900 series processor	
	CPU socket	Intel LGA-2011-R3	
	Memory	DDR4 ECC-REG 2133/1866/1600 MHz RDIMMs, maximum 256 GB	
	Chipset	Intel C612 Chipset	
Graphics	Controller	Aspeed AST2400	
	VRAM	64 MB	
Expansion Slot	PCIe x16 (Gen 3.0)	2 (Slot 4 and Slot 6 for GPU cards)	
	PCIe x8 (Gen 3.0)	1 (Slot 2)	
	PCIe x4 (Gen 2.0)	1 (Slot 7) from PCH	
	PCIe x1 (Gen 2.0)	1 (Slot 1) from PCH	
Drive Bay	Slime Odd Bay	-	
	5.25" Front-Accessibl	2	
	3.5" Hot-swappable	-	
	2.5" Hot-swappable	-	
	3.5" Internal	2 (rear-accessible)	
	2.5" Internal	-	
Ethernet	Interface	10/100/1000 Mbps Gigabit Ethernet	
	Controller	2 x Intel I210AT	
Remote Management		IPMI, Advantech Remote Monitoring Utility	
Front I/O Interface	USB	2 x USB3.0	
Rear I/O Interface	USB	6 (4 x USB3.0 + 2 x USB2.0)	
	PS/2	2	
	COM	1	
	Disaplay	1 x VGA	
	Parallel	-	
	RJ-45	3 (1 port dedicated for IPMI function)	
Watchdog Timer	Output	Interrup, system reset	
	Interval	Programmable, 1~255 sec	
Power Supply	Power Output Wattage	80 PLUS Platinum 1400W 1+1 redundant Power Supply 900W @ 100 ~ 120V 1400W @ 200 ~ 240V	
	Input Range	AC 100 ~ 240 V	
Cooling	Chassis Fan	3 (8cm / 142CFM) PWM fans (6cm) rear fans	
	Air Filter	Yes	
Miscellaneous	LED Indicators	Power status, HDD activity, LAN activity	
	Remote Management	IPMI, Advantech Remote Monitoring Utility	
Environment		Operating	Non-Operating
	Temperature	0 ~ 35 °C (32 ~ 95 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 35 °C	10 ~ 95% @ 40 °C
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock (with 11 ms du ration, half sine wave)	10G	
Physical Characteristics	Dimension (W x H x D)	482 x 177 x 448 mm (18.9" x 6.9" x 17.6")	

Dimensions

Unit: mm



Ordering Information

Part Number	Description	Quantity
HPC-7400MB-14A1E	4U chassis with redundant 1+1 1400W PSU	1
ASMB-813I-00A1E	LGA 2011-R3 ATX server board	1
1750007769-01	FAN 12V 80X80X38 14000 2W L250	3

Spare Parts

Parts number	Description
1990021256T00	Door filter
1750007769-01	8cm system fan
96PSRM-A1K4WMDU	1U 1400W 1+1 redundant power module, AC 100~240V (full range)
96PSR-1U-BKP-F1K4	1400W power distribution board for 96PSRM-A1K4WMDU

Optional Accessories

Parts number	Description
1700024754-01	GPU power cable (2*B4P Molex power connector to 6+2P PCIe power cable)
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SAS/SATA HDD Trays
96RACK-5SS-CAGE-CR	Mobile rack for converting one 5.25" drive bays to four 2.5" SATA/SAS HDD Trays (Max. HDD height :15mm)
9680006903	20" Slide Rail (supports 75~100cm depth cabinet)
9680006904	24" Slide Rail (supports 90~110cm depth cabinet)
1700007032	Front dual USB 2.0 cable kit
1960063011N001	LGA-2011 CPU cooler (narrow type)

Front View



Rear View



With 1400W redundant power supply

HPC-7400-S923

4U GPU Server System With Dual Intel® Xeon® E5-2600 v3/v4 CPU, Supporting up to 3* GPU Cards and 1400W RPS



CE FCC

Features

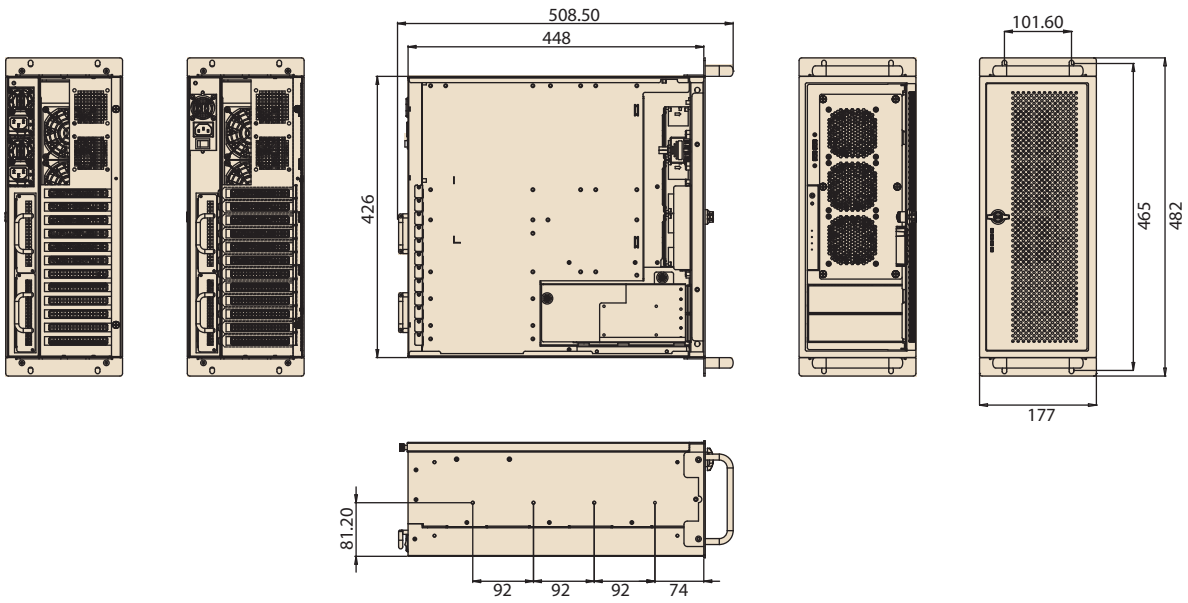
- 7 years longevity support- Revision control
- 0 ~ 35 °C operating temperature
- Reliable resume from AC power loss function
- Supports Intel® Xeon® E5-2600/E5-1600 v3/v4 Series CPUs
- Quad channel DDR4 2133 MHz ECC & Registered DIMMs up to 256 GB
- Supports up to 3* GPU cards
- 1400W 1+1 Redundant PSU with 80 PLUS Platinum level
- IPMI remote management

Specifications

Processor System	CPU type	Intel Xeon E5-2600 v3/v4 processor	
	CPU socket	Intel LGA-2011-R3	
	Memory	DDR4 ECC-REG 2133/1866/1600 MHz RDIMMs, maximum 256 GB	
	Chipset	Intel C612 Chipset	
Graphics	Controller	Aspeed AST2400	
	VRAM	64 MB	
Expansion Slot	PCIe x16 (Gen 3.0)	4 (Slot 3, Slot 5 and Slot 7 for GPU cards)	
	PCIe x8 (Gen 3.0)	2 (Slot 2, Slot 6)	
	PCIe x4 (Gen 2.0)	1 (Slot 4) from PCH	
	PCIe x1 (Gen 2.0)	-	
Drive Bay	Slime Odd Bay	-	
	5.25" Front-Accessibl	2	
	3.5" Hot-swappable	-	
	2.5" Hot-swappable	-	
	3.5" Internal	2 (rear-accessible)	
	2.5" Internal	-	
Ethernet	Interface	10/100/1000 Mbps Gigabit Ethernet	
	Controller	2 x Intel I210AT	
Remote Management		IPMI, Advantech Remote Monitoring Utility	
Front I/O Interface	USB	2 x USB3.0	
Rear I/O Interface	USB	4 (2 x USB3.0 + 2 x USB2.0)	
	PS/2	2	
	COM	1	
	Disaplay	1 x VGA	
	Parallel	-	
	RJ-45	3 (1 port dedicated for IPMI function)	
Watchdog Timer	Output	Interrup, system reset	
	Interval	Programmable, 1~255 sec	
Power Supply	Power Output Wattage	80 PLUS Platinum 1400W 1+1 redundant Power Supply 900W @ 100 ~ 120V 1400W @ 200 ~ 240V	
	Input Range	AC 100 ~ 240 V	
Cooling	Chassis Fan	3 (8cm / 142CFM) PWM fans + 2 (6cm) rear fans	
	Air Filter	Yes	
Miscellaneous	LED Indicators	Power status, HDD activity, LAN activity	
	Remote Management	IPMI, Advantech Remote Monitoring Utility	
Environment		Operating	Non-Operating
	Temperature	0 ~ 35 °C (32 ~ 95 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 35 °C	10 ~ 95% @ 40 °C
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock (with 11 ms du ration, half sine wave)	10G	
Physical Characteristics	Dimension (W x H x D)	482 x 177 x 448 mm (16.9" x 3.4" x 30.3")	

Dimensions

Unit: mm



Ordering Information

Part Number	Description	Quantity
HPC-7400MB-14A1E	4U chassis with redundant 1+1 1400W PSU	1
ASMB-923I-00A1E	LGA 2011-R3 EATX server board	1
1750007769-01	FAN 12V 80X80X38 14000 2W L250	3

Spare Parts

Parts number	Description
1990021256T00	Door filter
1750007769-01	8cm system fan
96PSRM-A1K4WMDU	1U 1400W 1+1 redundant power module, AC 100~240V (full range)
96PSR-1U-BKP-F1K4	1400W power distribution board for 96PSRM-A1K4WMDU

Optional Accessories

Parts number	Description
1700024754-01	GPU power cable (2*B4P Molex power connector to 6+2P PCIe power cable)
IPC-DT-5230E	Mobile rack for converting dual 5.25" drive bays to three 3.5" SAS/SATA HDD Trays
96RACK-5SS-CAGE-CR	Mobile rack for converting one 5.25" drive bays to four 2.5" SATA/SAS HDD Trays (Max. HDD height :15mm)
9680006903	20" Slide Rail (supports 75~100cm depth cabinet)
9680006904	24" Slide Rail (supports 90~110cm depth cabinet)
1700007032	Front dual USB 2.0 cable kit
1960063011N001	LGA-2011 CPU cooler (narrow type)

Front View



Rear View



With 1400W redundant power supply

HPC-7483-S923

4U GPU Server System With Dual Intel® Xeon® E5-2600 v3/v4 CPU, Supporting up to 4* GPU Cards and 2000W RPS



CE FCC

Features

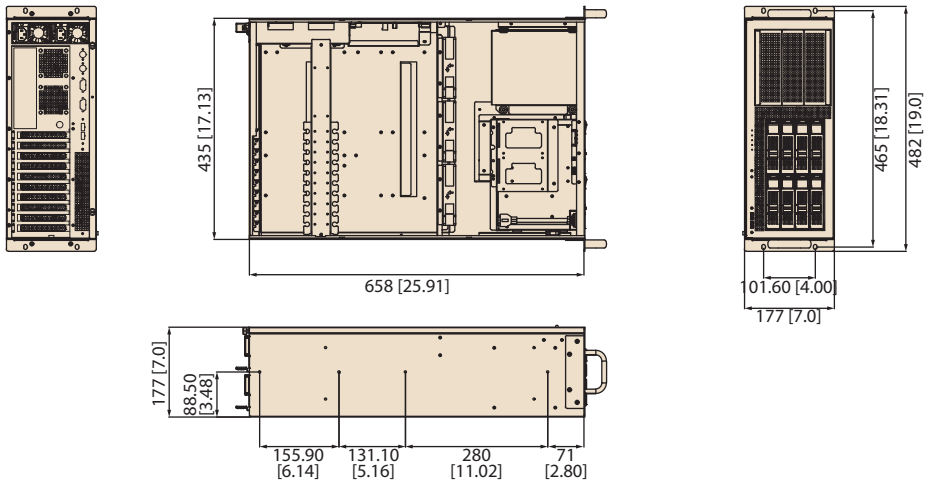
- 7 years longevity support- Revision control
- 0 ~ 35 °C operating temperature
- Reliable resume from AC power loss function
- Supports Intel® Xeon® E5-2600 v3/v4 Series CPUs
- Quad channel DDR4 2133 MHz ECC & Registered DIMMs up to 256 GB
- Supports up to 4* Double-depth GPU cards
- 2000W 1+1 Redundant PSU with 80 PLUS Platinum level
- IPMI remote management

Specifications

Processor System	CPU type	Intel Xeon E5-2600 v3/v4 processor	
	CPU socket	Intel LGA-2011-R3	
	Memory	DDR4 ECC-REG 2133/1866/1600 MHz RDIMMs, maximum 256 GB	
	Chipset	Intel C612 Chipset	
Graphics	Controller	Aspeed AST2400	
	VRAM	64 MB	
Expansion Slot	PCIe x16 (Gen 3.0)	4 (Slot 3, Slot 5 and Slot 7 for GPU cards)	
	PCIe x8 (Gen 3.0)	2 (Slot 2, Slot 6)	
	PCIe x4 (Gen 2.0)	1 (Slot 4) from PCH	
	PCIe x1 (Gen 2.0)	-	
Drive Bay	Slime Odd Bay	-	
	5.25" Front-Accessibl	3	
	3.5"/2.5" Hot-swappable	8	
	2.5" Internal	2	
Ethernet	Interface	10/100/1000 Mbps Gigabit Ethernet	
	Controller	2 x Intel I210AT	
Remote Management		IPMI, Advantech Remote Monitoring Utility	
Front I/O Interface	USB	2 x USB3.0	
Rear I/O Interface	USB	4 (2 x USB3.0 + 2 x USB2.0)	
	PS/2	2	
	COM	1	
	Disaplay	1 x VGA	
	Parallel	-	
	RJ-45	3 (1 port dedicated for IPMI function)	
Watchdog Timer	Output	Interrup, system reset	
	Interval	Programmable, 1~255 sec	
Power Supply	Power Output Wattage	80 PLUS Platinum 1800W 1+1 redundant Power Supply 1000W @ 100 ~ 127V 1800W @ 200 ~ 240V	
	Input Range	AC 100 ~ 240 V	
Cooling	Chassis Fan	3 x 12cm system fan in middle fan bar 2 x 8cm system fan in rear window	
	Air Filter	-	
Miscellaneous	LED Indicators	Power status, HDD activity, LAN activity	
	Remote Management	IPMI, Advantech Remote Monitoring Utility	
Environment		Operating	Non-Operating
	Temperature	0 ~ 35 °C (32 ~ 95 °F)	-20 ~ 60 °C (-4 ~ 140 °F)
	Humidity	10 ~ 85% @ 40 °C	10 ~ 95% @ 40 °C
	Vibration (5 ~ 500 Hz)	1 Grms	2 G
	Shock (with 11 ms du ration, half sine wave)	10G	
Physical Characteristics	Dimension (W x H x D)	482 x 177 x 448 mm (17.1" x 6.9" x 25.9")	

Dimensions

Unit: mm



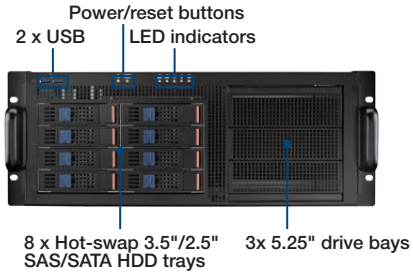
Ordering Information

Part Number	Description	Quantity
HPC-7483-20RX	With redundant 1+1 2000W power supply	1
ASMB-923I-00A1E	LGA 2011-R3 EATX server board	1
98R1748300E	Rear side 8cm fan kit for high-watt GPU cards	1

Packing List

Part number	Description	Quantity
1750008306-01	12cm system fan (Pre-installed)	3
9661831600E	3.5" HDD Trays (Pre-installed)	8
1700025828-01	PDB CN1 connector to MB 4pin or 8pin 12V connector of PCIe slot	1
2066923I00	Driver CD	1
2006923I10	Startup manual	1
1700003194	SATA data cables	2
1703150102	SATA power cables	2
1700019748	CPU power cable(8P)	2
1960052312T010	I/O shield	1

Front View



Rear View



Optional Accessories

Cable request for optional device	Part number	Description	Quantity
5.25" to 3.5" Convert HDD kit	Refer to the P-Trade web site	Mobile rack for converting dual 5.25" drive bays to three 3.5" SAS/SATA HDD Trays	1
	1700021733-01	SATA cable for optional ODD/HDD (65cm)	3
5.25" ODD or other SATA device	1700021733-01	SATA cable for optional ODD/HDD (65cm)	1
MB without RAID card	1700025861-01	Mini SAS HD 8643 to 4 ports SATA Cable (50cm)	2
MB with SAS2 RAID card	1700025440-01	Mini SAS HD 8643 to Mini SAS (85cm)	2
MB with SAS3 RAID card	1700025065-01	Mini SAS HD 8643 to Mini SAS HD 8643 (85cm)	2
The 2nd GPU card	1700025829-01	PDB 8P connector to 6+2 connector for GPU card (80cm)	2
The 3rd GPU card	1700025829-01	PDB 8P connector to 6+2 connector for GPU card (80cm)	2
The 4th GPU card	1700025829-01	PDB 8P connector to 6+2 connector for GPU card (80cm)	2
4 ports SATA HBA card	9691831620E 1700021733-01	ASS'Y HPC-8316 SATA HBA Rev.A1 01 SATA cable for optional ODD/HDD (65cm)	1 4
Rear IO KMBS port	1700019268-11	A Cable M-DIN 6P(F)*2/1*6P-2.5	1
Rear IO COM port	1701092300	Dual RS-232 COM port cable	1
Rear IO USB port	1700024532-01	USB 3.0 dual port cable	1
	1700017849	USB 2.0 dual port cable	1
CPU cooler for 2U/4U	LGA-2011 square CPU cooler for 4U chassis (160W)	LGA-2011 square CPU cooler for 2U/4U chassis (145W)	
CPU cooler for 4U	1960065684N001	LGA-2011 square CPU cooler for 4U chassis (160W)	

Unlock Visual Computing Power

Trusted Platform and Comprehensive Industrial GPU Server Solution



ADVANTECH

Enabling an Intelligent Planet

Advantech's comprehensive GPU server solutions for accelerating industrial applications come in a wide 1U to 4U product range, and satisfy all validation requirements. The unique industrial design and industry-leading 3-5-7 service guarantee make these GPU servers ideal solutions for accelerating business growth.

Allied with diverse GPU and DSP processor providers

Supports GPU/DSP card brands including

- NVIDIA® Tesla®, GRID™, Quadro®
- AMD FirePro™
- Intel® Xeon Phi™
- Advantech-designed DSP cards

Ultimate Industrial-Grade Design

- Front and internal USB ports enhance usability
- Exclusive anti-vibration mechanism
- Cable-less design increases thermal efficiency
- GTX side power connector supports various GPU cards

3-5-7 Service Guarantee

- 3 service levels in design customization and development
- 5-year extended warranty
- 7-year product longevity



AGS-913

1U rackmount Intel® Xeon® E5-2600 v3 GPU server that supports 3 x PCIe x16 double-depth cards and 1 x PCIe x8 single-depth FH/HL card



AGS-923

2U rackmount Intel® Xeon® E5-2600 v3 GPU server that supports 4 x PCIe x16 double-depth cards and 1 x PCIe x8 single-depth FH/HL card



ASMB-813 with **HPC-7400**

4U GPU server system with Intel® Xeon® E5-2600 v3/v4 CPU, supporting up to 2* GPU cards and 1400W RPS



ASMB-923 with **HPC-7483**

4U GPU server system with dual Intel® Xeon® E5-2600 v4 CPU, supporting up to 4* GPU cards and 1800W RPS

www.advantech.com

Advantech Headquarters
No. 1, Alley 20, Lane 26, Rueiguang Road,
Neihu District, Taipei, Taiwan, 11491, R.O.C.
Tel: 886-2-2792-7818
Fax: 886-2-2794-7304

Check Now »

13

CompactPCI Platforms

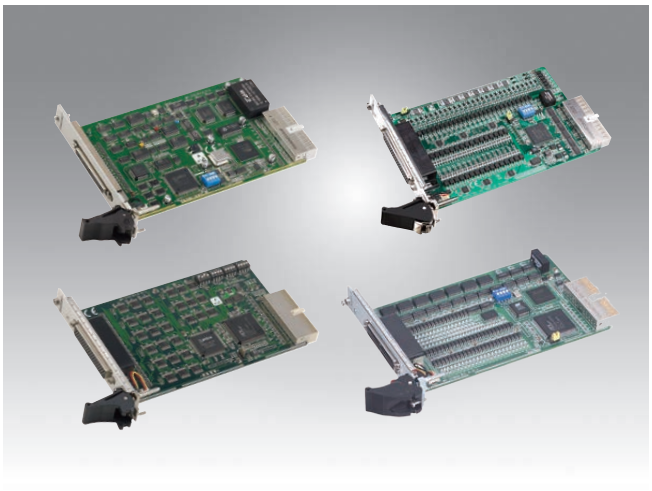
Advantech CompactPCI Introduction		*13-2*
3U/4U Chassis Selection Guide		*13-4*
3U/4U Chassis		
MIC-3106 **MIC-3111**	4U CompactPCI® with 2 Peripheral Slots 4U CompactPCI® with 7 Peripheral Slots	*13-5*
MIC-3121	4U CompactPCI® with 7 Peripheral Slots	*13-7*
MIC-3022	4U CompactPCI® Enclosure for 3U Cards	*13-9*
MIC-3023	3U CompactPCI® Enclosure for 3U Cards	*13-11*
3U CPU Cards		
MIC-3328	3rd Generation Intel® Core™ Processor 3U CompactPCI® PlusIO Card	*13-12*
MIC-3329	Quad-Core Intel® Atom™ SoC Processor 3U CompactPCI® Card	*13-14*
3U Peripheral Cards Selection Guide		*13-16*
MIC-3612 **MIC-3620** **MIC-3680**	4-port RS-232/422/485 3/6U CompactPCI® Card 8-port RS-232 3U CompactPCI® Card 2-Port CAN-bus 3U CompactPCI® Card	*13-18*
MIC-3714 **MIC-3716**	30 MS/s, 12-bit, Simultaneous 4-ch Analog Input 3U CompactPCI® Card 250 kS/s, 16-bit, 16-ch Multifunction 3U CompactPCI® Card	*13-19*
MIC-3720 **MIC-3723**	12-bit, 4-ch Isolated Analog Output Universal CompactPCI® Card 16-bit, 8-ch Analog Output 3U CompactPCI® Card	*13-20*
MIC-3753 **MIC-3756** **MIC-3758**	72-CH Digital I/O 3U CompactPCI® Card 64-ch Isolated Digital I/O CPCI Card 128-CH Isolated Digital I/O 3U CompactPCI® Card	*13-21*
MIC-3761 **MIC-3780**	8-CH Relay & 8-CH Isolated Digital Input 3U CompactPCI® Card 8-CH, 16-bit Counter/Timer 3U CompactPCI® Card	*13-22*
MIC-3953	Single PMC Slot Carrier 3U CompactPCI® Card	*13-23*
MIC-3954	PCIe® Mini or Storage Carrier 3U CompactPCI® Serial Card	*13-24*
MIC-3957	GPS Communication 3U CompactPCI® Card	*13-25*
MIC-3958	4 RJ45 Port Gigabit Ethernet 3U CompactPCI® Card	*13-26*

To view all of Advantech's Video Wall Controllers, please visit www.advantech.com/products.



Advantech CompactPCI®

Introduction



Features

- Commercial standard PCI chips provide high performance at a low price
- Up to 8 slots in one bus segment. Expandable using PCI-to-PCI bridge chips
- Eurocard form factor
- Airtight, high density, 2 mm pin-and-socket connectors
- Front loading and removal
- Vertical card orientation for better cooling
- Staged power pins for hot-swap capability
- Excellent shock and vibration characteristics

Introduction

Engineers have been trying to apply high-performance, low-cost PC technologies to critical applications such as telecommunications and industrial automation for quite some time. Unfortunately, the characteristics of desktop PC technologies do not readily lend themselves to critical applications where high serviceability, vibration & shock resistance, and good ventilation are required. CompactPCI may be the answer.

What is CompactPCI ?

CompactPCI is a small, rugged, high-performance industrial computer architecture based on the standard PCI bus specification. It was developed by the PCI Industrial Computers Manufacturers Group (PICMG) in late 1994, and is ideal for embedded applications.

Three important technologies form the core of CompactPCI: PCI local bus, Eurocard mechanics, and airtight pin-and-socket connectors.

PCI Local Bus

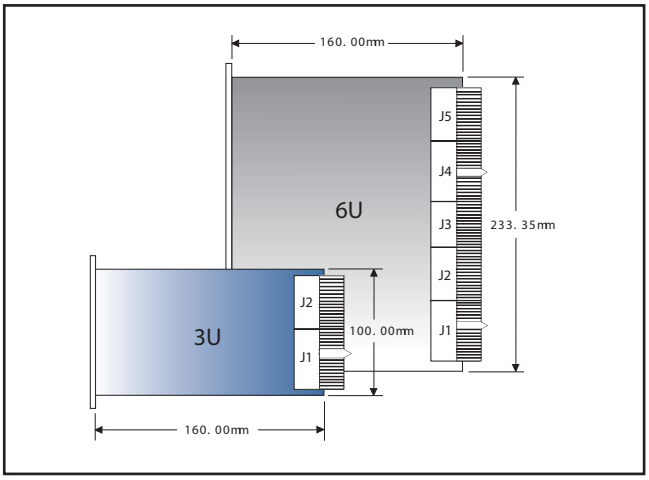
PCI stands for Peripheral Component Interconnect. It was published by Intel® in 1992, and soon became popular in commercial PC designs. It is a high-performance, processor-independent data bus, and most importantly, it is very inexpensive. The PCI local bus specification defines two data widths: 32-bit and 64-bit operating at a speed up to 66 MHz. This provides theoretical throughput up to 264 MB/s at 32-bit or 528 MB/s at 64-bit. Most computer systems and operating systems support the PCI bus. For example, Pentium, Alpha, PowerPC, Windows, Unix, and MacOS. Because PCI components are manufactured in large quantities, they are inexpensive and readily available. With these advantages, the PCI bus is very suitable for high speed computing and high speed data communication applications.

Eurocard Mechanics

Eurocard is an industrial-grade packaging standard popularized by VMEbus. CompactPCI allows the use of 3U and 6U Eurocards. The dimensions of a 3U CompactPCI board are 160 mm deep x 100 mm high, while the dimensions of a 6U CompactPCI board are 160 mm deep x 233.35 mm high. The front panels of CompactPCI boards are IEEE 1101.1 and IEEE 1101.10 compliant, and may include optional EMC gaskets to minimize electromagnetic interference. Typically, the front panel contains I/O connectors, LED indicators, and switches. CompactPCI also supports rear panel I/O, which is compliant with IEEE 1101.11. Rear panel I/O is popular for telecommunication equipment because of its easy-to-maintain characteristics. If all the wiring is done on rear transition boards (passive boards), the front CompactPCI boards (active boards), which may require maintenance, are "clean" without any connected wiring. The front CompactPCI boards can then simply be replaced without the need for rewiring.

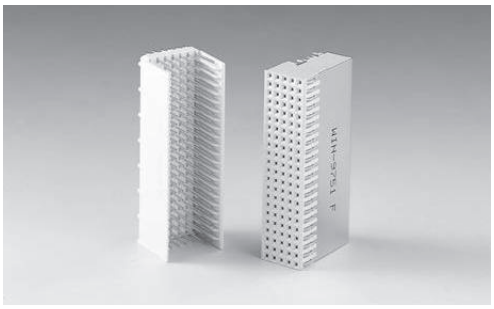
Airtight Pin-and-Socket Connectors

CompactPCI uses airtight, high-density pin-and-socket connectors as specified in the IEC-1076 international standard. These 2 mm "hard metric" connectors have low inductance and controlled impedance, which reduce signal reflections caused by the high speed PCI bus. They enable CompactPCI systems to have up to eight slots in one bus segment.



Eurocard Form Factor

The CompactPCI specification defines five connectors, designated as J1 through J5. The 3U CompactPCI board has two connectors labeled J1 and J2, while the 6U CompactPCI board has five connectors labeled J1 through J5. J1 and J2 are defined identically on both 3U and 6U CompactPCI boards, so 3U and 6U CompactPCI boards are electrically interchangeable.



Pin-and-Socket Connector

CompactPCI® versus Conventional Industrial PCs

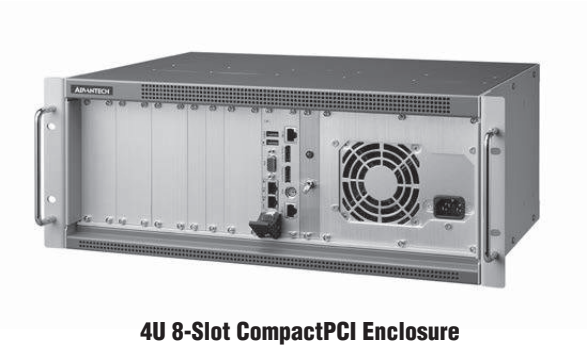
Serviceability

Replacement of a card from a conventional industrial PC system is always time-consuming. Users need to unfasten the chassis cover, disconnect all wiring from the card, replace the card, reconnect the wiring, and refasten the chassis cover. It is a process prone to error because there can be internal cabling between cards and peripheral devices, and it is necessary to remove all cabling before a card can be replaced. The serviceability of conventional industrial PC systems is not as simple and fast as CompactPCI systems.

CompactPCI is designed to be a front loading and removable system. The replacement of a CompactPCI board is very simple, with no need to remove the chassis cover. In addition, if the I/O is cabled through the back of the system, the front CompactPCI boards are "clean" without any connected wiring, and the replacement of a CompactPCI board is quick and easy. The maintenance time can be reduced from a matter of hours (conventional industrial PCs) to a matter of minutes, yielding a lower Mean Time To Repair (MTTR).



3U Dual System CompactPCI® Enclosure for 3U Cards



4U 8-Slot CompactPCI Enclosure

Vibration and Shock Resistance

Conventional industrial PCs do not provide reliable and secure support for peripheral cards in the system. Cards inside conventional industrial PCs are screwed down at one point only, and the top and bottom card edges are not supported by guide rails. Therefore, the connecting edge of a card is prone to shift under shock and vibration.

CompactPCI boards are firmly mounted in the system. Guide rails support the top and bottom edges of the boards. Front panel retaining mechanisms securely lock the front panel to the surrounding mechanical frame. The connecting edge of the board is held tightly in place by the pin-and-socket connectors. With all four sides of the board firmly held in place, it is much less prone to suffer loss of electrical contact in high vibration and shock environments.

Ventilation

Conventional industrial PC systems cannot provide regular airflow paths, resulting in uneven cooling within the chassis. Airflow is blocked by backplanes, card brackets, and disk drives. Cooling air cannot circulate over all the cards, and hot air is not immediately forced out of the chassis. Electronic devices and circuit boards deteriorate because of these cooling related problems: warped circuit boards, bad connections, broken traces, and shortened component lives.

CompactPCI systems provide clear paths for airflow over all active, heat-producing boards in the system. Cooling air easily flows through the spaces between cards, and carries heat out of the spaces. A fan system can be integrated at the bottom of the boards to provide forced air to each slot. CompactPCI systems are therefore much less susceptible to cooling problems because of the even cooling pattern inherent in their mechanical design.

The Complete Offering for Mission-Critical Applications

The MIC-3000 series is an industrial CompactPCI solution which features front-end access, high shock and vibration tolerance characteristics, automatic cooling system, fault resilient and hot swappable capabilities. These features make MIC-3000 the most reliable PC-based computing platform, for mission-critical applications. Advantech leverages 3U CompactPCI as the industrial high-end computing platform, providing Pentium 4-grade CPU modules, 8-slot chassis, high-speed I/O and serial communication modules, to become a total solution provider for industrial CompactPCI solutions. Target applications include military defense, transportation, traffic control, test and measurement (T&M) and critical data acquisition & control markets.

3U/4U Chassis







Model		MIC-3106				MIC-3111				MIC-3121			
Backplane	slot	System x 1, Peripheral x 2 CompactPCI® peripherl slot x 2				System x 1, Peripheral x 7 CompactPCI® peripherl slot x 7				System x 1, Peripheral x 7 CompactPCI® peripherl slot x 7			
	bus	32-bit/33 MHz PCI bus				32-bit/33 MHz PCI bus				32-bit/33 MHz PCI bus			
	V (I/O)	+3.3 V/+5 V (selectable)				+3.3 V/+5 V (selectable)				+3.3 V/+5 V (selectable)			
Cooling	FAN	1 Blower on Top (Max. 2.47CFM/FAN) 1 Fan on Bottom (Max.18 CFM/FAN)				2 Blowers on Top (Max. 2.47CFM/FAN) 1 Fan on Bottom (Max.18 CFM/FAN)				2 Blowers on Top (Max. 2.47CFM/FAN) 1 Fan on Bottom (Max.18 CFM/FAN)			
Power Supply	Input	AC 100 ~ 240 V @ 50 ~ 60 Hz, full range				AC 100 ~ 240 V @ 50 ~ 60 Hz, full range				AC 100 ~ 240 V @ 50 ~ 60 Hz, full range			
	Output	ATX 180W PSU				ATX 180W PSU				ATX 300W PSU			
		+3.3V	+5V	+12V	-12V	+3.3V	+5V	+12V	-12V	+3.3V	+5V	+12V	-12V
	Max Load	14A	16A	14A	0.5A	14A	16A	14A	0.5A	16A	19A	11A	0.3A
	Min Load	0.3A	0.3A	0.3A	0A	0.3A	0.3A	0.3A	0A	0A	0.5A	0.1A	0A
Physical Characteristics	Dimensions (W x H x D)	134 x 177 x 238 mm (5.27" x 6.96" x 9.37")				234 x 177 x 258 mm (9.21" x 6.96" x 9.37")				482 x 177 x 310 mm (18.97" x 6.96" x 12.2")			
Environment		Operating		Non-operating		Operating		Non-operating		Operating		Non-operating	
	Temperature	0 ~ 50 °C (32 ~ 122 °F)		-20 ~ 60 °C (-4 ~ 138 °F)		0 ~ 50 °C (32 ~ 122 °F)		-20 ~ 60 °C (-4 ~ 138 °F)		0 ~ 50 °C (32 ~ 122 °F)		-20 ~ 60 °C (-4 ~ 138 °F)	
	Humidity	10 ~ 85% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C,non-condensing		10 ~ 85% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C, non-condensing		10 ~ 85% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C, non-condensing	
	Vibration	2Grms				2Grms				2Grms			
	Shock	10G				10G				10G			
Reliability	MTBF	Backplane		FAN module		Backplane		FAN module		Backplane		FAN module	
		800,000 hours / 50,000 hours @ 40 °C / 10,000 hours @ 80% load				800,000 hours / 50,000 hours @ 40 °C / 10,000 hours @ 80% load				800,000 hours / 50,000 hours @ 40 °C / 10,000 hours @ 80% load			
Regulatory	Conformance	RoHS, CE, FCC, UL, CCC				RoHS, CE, FCC, UL, CCC				RoHS, CE, FCC, UL, CCC			
Compliance	Standards	PICMG 2.0 R3.0 CompactPCI Specification PICMG 2.1 R2.0 CompactPCI Hot Swap Specification				PICMG 2.0 R3.0 CompactPCI Specification PICMG 2.1 R2.0 CompactPCI Hot Swap Specification				PICMG 2.0 R3.0 CompactPCI Specification PICMG 2.1 R2.0 CompactPCI Hot Swap Specification			
Page		13-5				13-5				13-7			







Model		MIC-3022CE/MIC-3022PCE				MIC-3022AE				MIC-3023D1-A1E/ MIC-3023S1-D1E			
Backplane	slot	System x 1, Peripheral x 7, Rear transition x 8 CompactPCI® PlusIO system slot x 1 CompactPCI® peripherl slot x 3				System x 1, Peripheral x 7, Rear transition x 8 CompactPCI® PlusIO system slot x 1 CompactPCI® peripherl slot x 3 CompactPCI® Serial peripherl slot x 4				MIC-3023D1-A1E: System x 2, Peripheral x 10, Rear transition x 0 MIC-3023S1-D1E: System x 1, Peripheral x 6, adding peripheral x7 by using bridge card, Rear transition x 0			
	bus	32-bit/33 MHz/66 MHz PCI bus Serial bus, up to 5.0Gb/s				32-bit/33 MHz/66 MHz PCI bus Serial bus, up to 5.0Gb/s				MIC-3023: 32-bit/33 MHz/66 MHz PCI bus			
	V (I/O)	+3.3 V/+5 V (selectable)				+3.3 V/+5 V (selectable)				+3.3 V/+5 V (selectable)			
Cooling	FAN	2 Blowers (Max 45.6CFM/FAN); up to 4 Blowers for dual system				2 Blowers (Max 45.6CFM/FAN); up to 4 Blowers for dual system				fanless			
Power Supply	Input	AC 100 ~ 240 V @ 50 ~ 60 Hz, full range				AC 100 ~ 240 V @ 50 ~ 60 Hz, full range				AC 100 ~ 240 V @ 50 ~ 60 Hz, full range DC 24V/110V			
	Output	AC cPCI 250 W redundant power module (for Legacy) AC cPCI 300 W redundant power module (for PlusIO)				ATX 400W PSU				AC cPCI 50W power module (for MIC-3023D) DC cPCI 150W redundant power module (for MIC-3023S)			
		+3.3V	+5V	+12V	-12V	+3.3V	+5V	+12V	-12V	+3.3V	+5V	+12V	-12V
	Max Load	250W PSU				11.6A	12.89A	11.74A	0.37A	50W AC PSU			
		18A	25A	5A	0.5A					0A	10A	0A	0A
		300W PSU								150W DC PSU			
		40A	40A	10A	2A					10A	20A	3A	0.5A
	Min Load	0A	1A	0A	0A	0.3A	0.3A	0.5A	0A	0A	0.1A	0A	0A
Physical Characteristics	Dimensions (W x H x D)	440 x 177 x 295 mm (17.3" x 7" x 11.6")				440 x 177 x 295 mm (17.3" x 7" x 11.6")				436.8 x 133.3 x 252 mm (17.2" x 5.25" x 9.92")			
Environment		Operating		Non-operating		Operating		Non-operating		Operating		Non-operating	
	Temperature	0 ~ 50 °C (32 ~ 122 °F)		-40 ~ 70 °C (-40 ~ 158 °F)		0 ~ 50 °C (32 ~ 122 °F)		-40 ~ 70 °C (-40 ~ 158 °F)		-25 ~ 55 °C (-13 ~ 131 °F)		-40 ~ 85 °C (-40~ 185 °F)	
	Humidity	10 ~ 95% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C, non-condensing		10 ~ 95% @ 40 °C, non-condensing		10 ~ 95% @ 60 °C, non-condensing	
	Vibration	2Grms		2Grms		2Grms		2Grms		1.06Grms		2Grms	
	Shock	10G		30G		10G		30G		10G		30G	
Reliability	MTBF	Backplane	FAN module	Power supply		Backplane	FAN module	Power supply		Backplane		Power supply	
		800,000 hours	50, 000 hours @ 25 °C	100, 000 hours @70% load		800,000 hours	50, 000 hours @ 25 °C	100, 000 hours @ 70% load		147,077 hours		AC:733,472 hours @ 50% load DC: 2,815,391 hours @ 50% load	
Regulatory	Conformance	RoHS, CE, FCC, UL, CCC				RoHS, CE, FCC, UL, CCC				RoHS, CE, FCC,CCC			
Compliance	Standards	PICMG 2.0 R3.0 CompactPCI Specification PICMG 2.1 R2.0 CompactPCI Hot Swap Specification PICMG 2.11 R3.0 Front-Access Power Connectors Specification				PICMG 2.0 R3.0 CompactPCI Specification PICMG 2.1 R2.0 CompactPCI Hot Swap Specification PICMG 2.11 R3.0 Front-Access Power Connectors Specification				PICMG 2.0 R3.0 CompactPCI Specification PICMG 2.1 R2.0 CompactPCI Hot Swap Specification PICMG 2.11 R3.0 Front-Access Power Connectors Specification			
Page		13-9				13-9				13-11			

MIC-3106
MIC-3111

4U CompactPCI® with 2 Peripheral Slots

4U CompactPCI® with 7 Peripheral Slots



Features

- 4U CompactPCI supports 2 or 7 peripheral slots
- High performance or low power consumption CPU selectable
- Lockable power on/off switch prevents inadvertent access
- 40dB Ultra low system noise for working environments
- Easy-accessible cooling fan and air filter for system maintenance
- Robust design, Anti-Vibration up to 2G with SSD

Introduction

The MIC-3106 and 3111 are Advantech's latest IPC's and the first to use the CompactPCI standard. CompactPCI is an open standard that gives users the flexibility to add the components that they need. The small footprint of MIC-3106 and 3111 makes it the smallest CPCI system available and offers either 2 or 7 expansion slots to give users the flexibility to build the system they require. For improved access and configuration, the MIC-3106 and 3111 are front accessible and the highly reliable nature of CompactPCI makes it the perfect choice for industrial applications. The three available models in the MIC-3106 and 3111 offer a choice of either high power or low power CPUs and therefore a range of prices to suit the requirements of specific companies.

Specifications

			MIC-3106	MIC-3111
Power Supply	Power Type		ATX	ATX
	Input Voltage		100 ~ 240 V_{AC}	100 ~ 240 V_{AC}
	Wattage		180W	180W
	ON/OFF Switch		Lockable Toggle Switch	Lockable Toggle Switch
Backplane	System Slot		1, on the right	1, on the right
	Peripheral Slot		2 Slots	7 Slots
	PCI Bus		32-bit 33MHz	32-bit 33MHz
Physical	Dimensions (W x H x D)		134 x 177 x 238 mm (5.27" x 6.96" x 9.37")	234 x 177 x 258 mm (9.21" x 6.96" x 9.37")
	Weight (kg)		4.33 Kg	6.14 Kg
Environment	Temperature	Operating	0 ~ 50 °C	0 ~ 50 °C
		Non-Operating	-20 ~ 60 °C	-20 ~ 60 °C
	Humidity (non-condensing)	Operating	10 ~ 85% @ 40 °C	10 ~ 85% @ 40 °C
		Non-Operating	10 ~ 95% @ 40 °C	10 ~ 95% @ 40 °C
	Vibration (5 ~ 500 Hz)	Operating	2Grms (without HDD)	2Grms (without HDD)
		Non-Operating	2G	2G
	Shock (11ms)	Operating	10G	10G
		Non-Operating	30G	30G
Compliance	Regulatory		CE, FCC, CCC, UL, RoHS	CE, FCC, CCC, UL, RoHS
	Compliance		PICMG 2.0 Rev. 3.0	PICMG 2.0 Rev. 3.0

Ordering Information

Part Number	Description
MIC-3106-00-AE	Modular Industrial Chassis 4U, 2 slots, w/ 180W
MIC-3111-00-AE	Modular Industrial Chassis 4U, 7 slots, w/ 180W
MIC-3106-L1-AE	4U, 2 slots, w/ 180W, MIC-3325N
MIC-3106-L2-AE	4U, 2 slots, w/ 180W, MIC-3325D
MIC-3106-H1-AE	4U, 2 slots, w/ 180W, MIC-3328 w/ 3217UE
MIC-3111-L1-AE	4U, 7 slots, w/ 180W, MIC-3325N
MIC-3111-L2-AE	4U, 7 slots, w/ 180W, MIC-3325D
MIC-3111-H1-AE	4U, 7 slots, w/ 180W, MIC-3328 w/ 3217UE
MIP-3104-AE	MIC-3100 PCI Hybrid Box
MIC-3106-H2-AE	4U, 2 slots, w/ 180W, MIC-3328 w/ 3517UE
MIC-3111-H2-AE	4U, 7 slots, w/ 180W, MIC-3328 w/ 3517UE

Optional Accessories

Part Number	Description
1990024035N000	Fan filter 130 x 10 x 12 mm^3 (for MIC-3106)
1990024034N000	Fan filter 230 x 10 x 10 mm^3 (for MIC-3111)
1750002440	Bottom side fan 60 x 60 x 13 mm^3
1750007398-01	Top side blower 51 x 51 x 15 mm^3
1960064154N001	4HP bracket cover
1960064193N001	Wall Mount Kit for MIC-3106
1960064192N001	Wall Mount Kit for MIC-3111
1960064183N001	Table Mount for MIC-3106
1960064184N001	Table Mount for MIC-3111

CPU Options

L1	Processor	CPU	Intel Atom N455, 1.66GHz
		Memory	2 GB Onboard
		Storage	1 x CompactFlash Type II 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
		Ethernet	2 x 10/100/1000 Mbps, RJ45 connector
		USB 2.0	3 x Type A
		Serial	2 x RS-232, DB9 connector
		PS/2	1
	Operating System	Windows	XP, XPE, 7
L2	Processor System	CPU	Intel Atom D525, 1.8GHz
		Memory	2GB On board
		Storage	1 x CompactFlash Type II 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
		Ethernet	2 x 10/100/1000 Mbps, RJ45 connector
		USB 2.0	3 x Type A
		Serial	2 x RS-232, DB9 connector
		PS/2	1
	Operating System	Windows	XP ,XPE, 7

H1	Processor	CPU	Intel 3rd Gen. Core i3-3217UE, 1.6GHz
		Memory	4GB On board
		Storage	1 x CFast 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
		Ethernet	2 x 10/100/1000 Mbps, RJ45 connector
		USB 2.0	2 x Type A
		Serial	2 x RS-232, RJ45 connector
		PS/2	1
	Operating System	Windows	XP, 7
H2	Processor	CPU	Intel 3rd Gen. Core i7-3517UE, 1.7 GHz
		Memory	4GB On board
		Storage	1 x CFast 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
		Ethernet	2 x 10/100/1000 Mbps, RJ45 connectors
		USB 3.0	2 x Type A
		Serial	2 x RS-232, RJ45 connector
		PS/2	1
	Operating System	Windows	XP, 7

PCI Hybrid Box

MIP-3104			
Backplane	CPCI interface to chassis		1 for chassis
	PCI Slot		4 Slots
	PCI Slot Power (4 Slot)		12V @ 2.4A, -12V @ 0.8A, +5V @ 7.5A, +3.3V @ 10A
Physical	Dimensions (W x H x D)		142 x 131 x 213 mm (5.59" x 5.15" x 8.38")
	Weight (g)		725
	Temperature	Operating	0~50 °C
		Non-operating	-20~60 °C
	Humidity (non-condensing)	Operating	10~85% @40 °C
		Non-operating	10~95% @40 °C
	Vibration (5~500 Hz)	Operating	1 Grms (with MIC-3100 chassis)
		Non-operating	1G
	Shock (11 ms)	Operating	10G (with MIC-3100 chassis)
		Non-operating	30G
Compliance	Regulatory		CE, FCC
	Compliance		PICMG 2.0 Rev. 3.0



MIC-3121

4U CompactPCI® with 7 Peripheral Slots



Features

- 4U height rackmount CompactPCI supports 7 peripheral slots
- Optional 4-slot PCI hybrid box for flexible configuration
- Selectable high performance or low power consumption CPU
- Lockable power on/off switch prevents accidental access
- Very low noise cooling fan for quiet environments
- Easily-accessible cooling fan and air filter for system maintenance
- All front-accessible connectors/cables for easy wall mounting

Introduction

The MIC-3121 CompactPCI is Advantech's new generation IPC to meet the CompactPCI standard; it offers a 4U height rackmount platform, with compact features, and is the most compact device in its price range. The MIC-3121 measures 482 x 177 x 310 mm, which is the standard 4U height rackmount CPCI system. With seven CPCI expansion slots or three CPCI expansion slots plus an optional four slot PCI hybrid box, users have the flexibility to configure their own system. With all these features the MIC-3121 is an open platform with a front access modular design, and high reliability which makes it the perfect choice for industrial applications where high availability matters.

The MIC-3121 has two levels of CPU choice. One is the Intel Core i3-3217UE CPU for high performance applications, and the other is the Intel Atom N455 CPU which is the most cost effective for low power consumption applications.

Specifications

Power Supply	Power Type	ATX
	Input Voltage	100~240 V_{AC}
	Wattage	300W
	On/Off Switch	Lockable Toggle Switch
Backplane	System Slot	1 on the right
	Peripheral Slot	7 slots
	PCI Bus	32-bit 33 MHz
Dimensions (W x H x D)	482 x 177 x 310 mm (18.97" x 6.96" x 12.2")	
Weight (kg)	9.65 Kg	
Temperature	Operating	0~50 °C
	Non-operating	-20~60 °C
Humidity (non-condensing)	Operating	10~85% @ 40 °C
	Non-operating	10~95% @ 40 °C
Vibration (5~500 Hz)	Operating	2Grms (without HDD)
	Non-operating	2G
Shock (11ms)	Operating	10G
	Non-operating	30G
Certification	CE, FCC, CCC, UL, RoHS	
Compliance	PICMG 2.0 Rev. 3.0	

Ordering Information

Part Number	Description
MIC-3121-00-AE	Modular Industrial Chassis 4U, 7 slots, w/ 300W
MIC-3121-L1-AE	4U, 7 slots, w/ 300W, MIC-3325N
MIC-3121-L2-AE	4U, 7 slots, w/ 300W, MIC-3325D
MIC-3121-H1-AE	4U, 7 slots, w/ 300W, MIC-3328 w/ 3217UE
MIP-3104-AE	MIC-3100 PCI Hybrid Box
MIC-3121-H2-AE	4U, 7 slots, w/ 300W, MIC-3328 w/ 3517UE

Optional Accessories

Part Number	Description
1990024038N000	Fan filter 430 x 10 x 10 mm3 (for MIC-3121 only)
1750002440	Bottom side fan 60 x 60 x 13 mm3
1750007398-01	Top blower 51 x 51 x 15 mm3
1960064154N001	4HP bracket cover
1960064155N001	8HP bracket cover

CPU Options

L1	Processor	CPU	Intel Atom N455, 1.66GHz
		Memory	2GB Onboard
		Storage	1 x CompactFlash Type II 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
		Ethernet	2 x 10/100/1000 Mbps, RJ45 connector
		USB 2.0	3 x Type A
		Serial	2 x RS-232, DB9 connector
		PS/2	1
	Operating System	Windows	XP, XPE, 7
L2	Processor System	CPU	Intel Atom D525, 1.8GHz
		Memory	2GB On board
		Storage	1 x CompactFlash Type II 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
		Ethernet	2 x 10/100/1000 Mbps, RJ45 connector
		USB 2.0	3 x Type A
		Serial	2 x RS-232, DB9 connector
		PS/2	1
	Operating System	Windows	XP, XPE, 7

H1	Processor	CPU	Intel 3rd Gen. Core i3-3217UE, 1.6GHz
		Memory	4GB On board
		Storage	1 x CFast 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
		Ethernet	2 x 10/100/1000 Mbps, RJ45 connector
		USB 2.0	2 x Type A
		Serial	2 x RS-232, RJ45 connector
		PS/2	1
	Operating System	Windows	XP, 7
H2	Processor	CPU	Intel 3rd Gen. Core i7-3517UE, 1.7 GHz
		Memory	4GB On board
		Storage	1 x CFast 1 x 2.5" SATA HDD
	Front I/O	VGA	1 x DB15 port
		Ethernet	2 x 10/100/1000 Mbps, RJ45 connectors
		USB 3.0	2 x Type A
		Serial	2 x RS-232, RJ45 connector
		PS/2	1
	Operating System	Windows	XP, 7

PCI Hybrid Box

MIP-3104			
Backplane	CPCI interface to chassis		1 for chassis
	PCI Slot		4 Slots
	PCI Slot Power (4 Slot)		12V @ 2.4A, -12V @ 0.8A, +5V @ 7.5A, +3.3V @ 10A
Physical	Dimensions (W x H x D)		142 x 131 x 213 mm (5.59" x 5.15" x 8.38")
	Weight (g)		725
	Temperature	Operating	0~50 °C
		Non-operating	-20~60 °C
	Humidity (non-condensing)	Operating	10~85% @40 °C
		Non-operating	10~95% @40 °C
	Vibration (5~500 Hz)	Operating	1 Grms (with MIC-3100 chassis)
		Non-operating	1G
	Shock (11 ms)	Operating	10G (with MIC-3100 chassis)
		Non-operating	30G
Compliance	Regulatory		CE, FCC
	Compliance		PICMG 2.0 Rev. 3.0





MIC-3022

4U CompactPCI® Enclosure for 3U Cards



Features

- Hosts up to eight 3U Eurocard boards
- CompactPCI® Legacy or Plus IO Hybrid backplane
- PICMG 2.11power supplies
- ATX power supply option for cost sensitive applications
- Dual-system ready

Introduction

MIC-3022 is a 4U enclosure designed to host up to 8 CompactPCI 3U cards connected via a 32bit 33MHz or 66MHz PCI bus or serial bus. The chassis can be powered by PICMG2.11 CPCI power supplies or an ATX 400W power supply for cost sensitive applications. A CPCI power supply supports a wide range of applications in the industrial market requiring a robust, compact and reliable platform. Rear transition modules can be installed for each of the 8 slots to support I/O extension.

The MIC-3022 enclosure is available for two kinds of backplanes; Legacy backplane provides up to 8 peripheral PCI slot while the hybrid backplane offers three PCI slots and four serial slots. Being a hybrid system, it offers an uncomplicated and cost effective migration solution from parallel 3U CompactPCI® to serial CompactPCI® via the CompactPCI PlusIO standard instead of a bridge or an active logic. To save peripheral slot, there is two SATA connectors reserved on hybrid backplane by cable connection for storage extension.

The chassis can be powered by PICMG2.11 CPCI power supplies or an ATX 400W power supply for cost sensitive applications. Four high performance fans provide adequate air flow to all slots, enabling system configurations which can be used in extended temperature environments. With the support of front swappable power supplies and add-in cards as well as a simplified fan replacement mechanism built in, systems based on the MIC-3022 can support a MTTR of 5 minutes or less.

Specifications

Backplane	Legacy backplane		System x 1, Peripheral x 7, Rear transition x 8 (80 mm, IEEE1101.11 compliant) 32-bit/33 MHz/66 MHz PCI bus			
	PlusIO Hybrid backplane		System x 1, Peripheral x 7 (80 mm, IEEE1101.11 compliant) 32-bit/33 MHz/66 MHz PCI bus, serial bus			
	V (I/O)		+3.3 V/+5 V (selectable)			
Cooling	Fan		2 Blowers ;up to 4 Blowers for dual system			
Power Supply	Legacy chassis: CPCI PSU 250W	Input	AC 100 ~ 240 V @ 50 ~ 60 Hz, full range			
			+3.3V	+5V	+12V	-12V
		Max. Load	18A	25A	5A	0.5A
		Min. Load	0A	1A	0A	0A
	PlusIO Hybrid Chassis: CPCI PSU 300W		+3.3V	+5V	+12V	-12V
		Max. Load	40A	40A	10A	2A
		Min. Load	0A	1A	0A	0A
	Legacy/PlusIO Hybrid Chassis: ATX PSU 400W	Input	AC 100 ~ 240 V @ 50 ~ 60 Hz, full range			
			+3.3V	+5V	+12V	-12V
		Max. Load	11.6A	12.89A	11.74A	0.37A
		Min. Load	0.3A	0.3A	0.5A	0A
Environment	Temperature		Operation: 0 ~ 50 °C (32 ~ 122 °F); Storage: -40 ~ 70 °C (-40 ~ 158 °F)			
	Humidity		10 ~ 95% @ 40 °C, non-condensing 10 ~ 95% @ 60 °C, non-condensing			
	Shock		Operation: 10G; Non Operation 30G			
	Vibration		Random: Operating: 2G Sine: Non-operating: 2G			
Physical Characteristics	Dimensions (W x H x D)		440 x 177 x 295 mm (17.3" x 7" x 11.6")			
	Weight		11 kg			
Reliability	MTBF		Backplane	Fan module	Power supply	
			800, 000 hours	50, 000 hours @25 °C	100, 000 hours @ 70% load	
Compliance			PICMG 2.0 R3.0 CompactPCI Specification PICMG 2.1 R2.0 CompactPCI Hot Swap Specification PICMG 2.11 R3.0 Front-Access Power Connectors Specification RoHS, CE, FCC, UL, CCC			

Backplane Information

MIC-3022 PlusIO Hybrid		
Physical Number	**Function**	**Rear I/O**
1	CPCI I/O slot	Yes
2	CPCI I/O slot	Yes
3	CPCI I/O slot	Yes
4	Plus IO System slot	-
5	CPCI-Serial I/O slot	-
6	CPCI-Serial I/O slot	-
7	CPCI-Serial I/O slot	-
8	CPCI-Serial I/O slot	-

MIC-3022 Legacy		
Physical Number	**Function**	**Rear I/O**
1	System Slot	Yes
2	CPCI I/O slot	Yes
3	CPCI I/O slot	Yes
4	CPCI I/O slot	Yes
5	CPCI I/O slot	Yes
6	CPCI I/O slot	Yes
7	CPCI I/O slot	Yes
8	CPCI I/O slot	Yes

Recommended Configurations

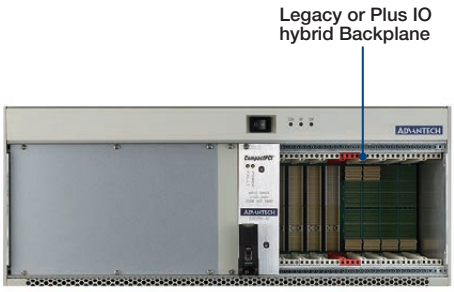
Enclosure	CPU Board	Front I/O Board
MIC-3022AE MIC-3022CE MIC-3022PAE MIC-3022PCE	MIC-3329 MIC-3328	MIC-3953;MIC-3954; MIC-3955; MIC-3957;MIC-3958

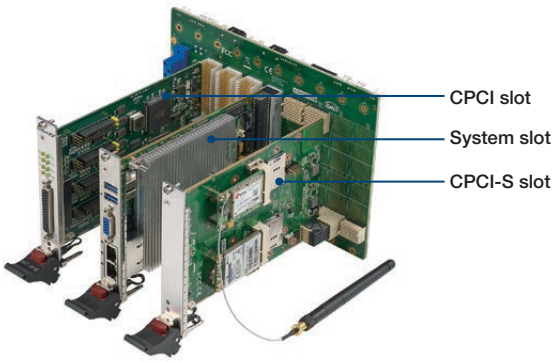
Ordering Information

Part Number	PCI/Serial	PICMG 2.11	ATX power SPEC	Description
MIC-3022AE	Yes	-	Yes	3U CPCI enclosure with 400W ATX PSU, single system
MIC-3022CE	Yes	Yes	-	3U CPCI enclosure with 250W CPCI PSU, single system
MIC-3022PCE	Yes	Yes	-	3U CPCI Plus IO enclosure with 300W CPCI PSU, single system

Optional Accessories

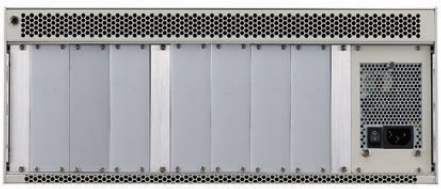
Part Number	Description
1757004516-01	CPCI 250W Power Supply Unit
1757004391-01	ATX 400W Power Supply Unit
1757004594-01	CPCI 300W Power Supply Unit
1757004391-01	ATX 400W Power Supply Unit







CPCI PSU Rear side



ATX PSU Rear side

MIC-3023

3U CompactPCI® Enclosure for 3U Cards



Features

- Hosts up to twelve 3U CompactPCI® boards
- 32bit 33/66MHz PCI bus backplane
- Two 50W low power PICMG2.11power supplies
- Dual system ready
- Fanless design

Introduction

The MIC-3023 is a space and cost optimized 3U CompactPCI enclosure which is designed to host up to two 6-slot CompactPCI 3U backplanes. Each backplane supports 32bit 33MHz or 66MHz PCI add in cards. The chassis can be powered by two PICMG2.11 CPCI power supplies for two individual systems, which is suitable for redundant, room less and high density application. MIC-3023 provides for a wide range of applications in the industrial market requiring a robust, compact and reliable platform such as in transportation.

With fanless design and the support of front swappable power supplies, systems based on the MIC-3023 can support a Mean Time To Repair (MTTR) of 5 minutes or less.

Specifications

			MIC-3023	
Backplane	Backplane		Up to two backplanes. Each backplane supports 1 System slot left and 5 Peripheral slots, 2 PSU slots	
	Bus Interface		32-bit/33 MHz/66 MHz PCI bus	
	V (I/O)		+3.3 V/+5 V (selectable)	
Cooling	Natural convection		Fanless design	
Power Supply	MIC-3956-50AE CPCI 50W PSU	Input	AC 100 ~ 240 V @ 50 ~ 60 Hz, full range, DC power is under development	
			+5 V	
		Max. Load	10 A	
		Min. Load	0.1 A	
Environment			Operating	Non-Operating
	Temperature		-25 ~ 55 °C (-13 ~ 131 °F)	-40 ~ 80 °C (-40 ~ 176 °F)
	Humidity		10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Shock		10 G	30 G
	Vibration (5 ~ 500 Hz)		1.06 Grms	2 Grms
Physical Characteristics	Dimensions (W x H x D)		436.8 x 133.3 x 252 mm (17.2" x 5.25" x 9.92")	
	Weight		4.76kg (10.5 lb)	
Reliability	MTBF		Backplane	Power supply
	at 25 °C ambient		147,077 hours	746,880 hours @ 100% load
Compliance			PICMG 2.0 R3.0 CompactPCI Specification PICMG 2.1 R2.0 CompactPCI Hot Swap Specification PICMG 2.11 R3.0 Front-Access Power Connectors Specification	
			RoHS, CE, FCC GB/T 17626	

Related Products

CPU Board	Description
MIC-3329B1-D1E	MIC-3329 w/ E3827 4G RAM dual slot
MIC-3329C1-D1E	MIC-3329 w/ E3845 4G RAM dual slot

Ordering Information

Part Number	Description
MIC-3023D1-A1E	3U CPCI fanless enclosure dual system with 2 backplane, 2 AC-In panel
MIC-3023S1-D1E	3U CPCI fanless enclosure single system with 1 back plane, 2 CPCI power connecter for DC-Input power

MIC-3328

3rd Generation Intel® Core™ Processor 3U CompactPCI® PlusIO Card



Features

- Supports 3rd Generation Intel® Core™ processor
- Intel® QM77 Platform Controller Hub
- 4 or 8GB DDR3-1600 soldered SDRAM with ECC
- Triple independent display support
- Optional 8GB SATA NAND Flash on board
- 2.5" SATA-II SSD, CFast, XMC on 8HP version
- Two 10/100/1000 Mbps ports, 2 USB 3.0 ports, 1 VGA port on front panel (4HP)
- Two COM ports, 2 Display ports, 1 PS/2 port (8HP)
- Supports CompactPCI PlusIO
- PICMG2.0, R3.0 , PICMG2.1, R2.0, PICMG2.30 compliant

Introduction

Advantech's MIC-3328 is a 3U CompactPCI PlusIO CPU blade based on the Intel® 3rd generation Core™ processor family. Based on latest 22nm process technology these processors support up to four cores / eight threads at up to 2.5GHz and up to 6M last level cache. With Intel® HD Graphics(Gen7,DX11,OCL1.1) integrated into the CPU, the MIC-3328 can serve applications demanding high performance, high resolution video output on up to three independent display interfaces. Latest DDR3 DRAM up to 8GB running at 1600MT/s complement the powerful processor with high performance, ECC protected onboard memory.

MIC-3328's design for reliability includes using a soldered processor, DRAM and flash storage for enhanced shock and vibration tolerance make it an ideal choice for workstation workloads in harsh environments and mission/business-critical applications such as military, transportation, test & measurement and traffic control.

MIC-3328 uses the Intel® QM77 PCH, which provides extensive I/O support such as USB3.0, PCI Express gen.2 and SATA-III ports.

The MIC-3328 PlusIO J2 supports interfaces such as 4 PCI Express x1 gen. 2 links for IO extension, one GbE for computer to computer multiprocessing, three SATA for Hard drives and RAID systems as well as 4 USB ports for wireless interfaces and legacy interface replacement.

For more information about CompactPCI PlusIO and Serial offerings from Advantech or information on how this new platform can help you to gain competitive advantages, please contact your Advantech representative.

Specifications

Processor System	CPU	Intel® 3nd Generation Core™ i7 up to 2.5 GHz (6MB L2 cache) 1.7G, 3517UE, 17w / 2.5G,3555LE, 25w/ 2.1G, 3612QE, 35w
	Platform Controller Hub	Intel® QM77
	BIOS	Customized AMI Aptio UEFI BIOS
CompactPCI Interface	J1 Connector	32-bit PCI local bus (33MHz)
	J2 Connector	CompactPCI PlusIO / RTM
Memory	Technology	DDR3-1600MHz SDRAM, dual channel with ECC support
	Max. Capacity	8GB
	Soldered/socket	Soldered
Graphics	Chipset	Integrated in Intel® CPU
	Resolution	VGA 2048 x 1536 pixels with 32-bit color at 75 Hz Display port 2560 x 1600 at 60 Hz
Ethernet	Controller	3 x i210AT
	Interface	10/100/1000 Mbps
	I/O Connector	RJ-45 x 2 (front panel), RJ-45 x 1 (RTM / PlusIO)
Storage	IDE	1 x CFast Socket on 8HP
	SATA	1 x optional SATA NAND Flash on 4HP,1x Internal SATA connector on 8HP version
Front I/O	VGA	DB15 Port
	Ethernet	2 x 10/100/1000 Mbps RJ-45
	USB 3.0	2 x Type A
	8HP XTM	8HP-1: 2x RJ45 RS232, 2x Display port, 1x PS/2 port 8HP-2: XMC (PCIex8 gen.3) front IO
PlusIO / RTM interface (4HPJ2 interface)	PCIE	4 x PCIex1 Gen 2 (one PCIex1 is routed to Mini-PCIe socket on board for wireless LAN using)
	SATA	2 x SATA-II (one SATA-II is designed as half size mSATA socket on board), 1 x SATA-III
	RJ45	1 GbE based on i210AT
	USB 2.0	4 ports

Specifications (Cont.)

RIO (8HP)	8HP-1 J2 interface	1 x PS/2 is mutually exclusive with PS/2 on 8HP front panel by BOM control. It required a special 8HP board to work. The special 8HP board is on request by customer 2 x COM default setting is RS232, RS422/485 could be set by the switch on 8HP board (Total 4 COM ports on 8HP and its RIO) 2 x DisplayPort is switchable from front panel by switch on 8HP board	
Watchdog Timer	Supervision	0 ~ 255s, 1s step, generate reset signal	
Operating System	Compatibility	Microsoft Windows XP Professional, Windows 7, Windows server 2008, VxWorks 6.9, Linux Redhat 6.1	
Power Requirement	Configuration	CPU TDP 17w/25w/35w, 8HP with RIO	
	Consumption	23.42W/ 33.12W /43.91W	
Physical	PCB Dimensions (L x H)	4HP or 8HP, 160.00 x 100.00 mm (6.30" x 3.95")	
	Weight	0.62kg w. AL Heatsink ,0.9kg w. Cu Heatsink including XTM	
Environment		Operating	Non-operating
	Temperature	0 ~ 60 °C (32 ~ 140 °F)	- 40 ~ 85 °C (-40 ~ 185 °F)
	Humidity	95% @ 40 °C (non condensing)	95% @ 60 °C (non-condensing)
	Shock	10 G, 11ms, each axis three times	30 G, 11ms, each axis three times
	Vibration	2Grms (5~500Hz, with CFast on 8HP)	Sine 2 Grms, 30mins each axis (5 ~ 500 Hz)
Regulatory	Conformance	FCC, Class A, CE, RoHS	
Compliance	Standard	PICMG 2.0 Rev. 3.0, PICMG 2.1 R2.0, PICMG2.30 PlusIO compatible	

Supported CPU Configurations

Intel® CPU Model Number	# Cores	Freq.	Cache	Memory Types	CPU TDP
I3 3120ME	2	2.4GHz	3 MB L2 Cache	DDR3-1600	35W
I7 3517UE	2	1.7 GHz	4 MB L2 Cache	DDR3-1600	17W
I7 3555LE	2	2.5GHz	4 MB L2 Cache	DDR3-1600	25W
I7 3612QE	4	2.1GHz	6 MB L2 Cache	DDR3-1600	35W

Ordering Information

System board	Front panel								On board Features			
	LAN (RJ45)	LAN (M12)	USB3.0	VGA	COM RJ45	COM DB9	Displayport	PS/2	CPU	Memory	SATA CFast/ HDD	Slot Width
MIC-3328B1-D1E	2		2	1	2		2	1	I7 3555LE	8GB	2	2
MIC-3328C2-D1E	-	2	2	1	-	1	-	-	I7 3612QE	8GB	2	2
MIC-3328D1-D1E	2		2	1	2		2	1	I3 3120ME	4GB	2	2
MIC-3328B1-D3E	2		2	1	2		2	1	I7 3555LE	8GB	2	2

Ordering Information

Model Number	Configuration
MIC-3328B1-D1E	MIC-3328, 3555LE, 8G RAM, w/ 8HP-1, 2 DP, 2 COM, PS/2, Support PlusIO
MIC-3328C2-D1E	MIC-3328, 3612QE, 8G RAM, VGA, USB,w/ 8HP-3, 2 M12 LAN, 1 DB9 COM
MIC-3328D1-D1E	MIC-3328, i3120ME, 4G RAM, w/8HP-1, 2DP, 2COM, PS/2
MIC-3328B1-D3E	MIC-3328, 3555LE, 8G RAM, w/8HP-1, 2DP, 2COM, PS/2

For other CPU blade SKU,chassis and RIO, please contact your Advantech sales representative.

Related Products

Model Number	Configuration
MIC-3955A2-S1E	4port RS for RIO application 3U CPCI
MIC-3527A1-S1E	4port RS RIO for MIC-3955A2-S1E 3U CPCI
MIC-3955A1-S1E	4-port RS-232/422/485
MIC-3716/3-AE	3U 250kS/s,16-bit,16-ch multifunction Card
MIC-3756-BE	3U CPCI 64-ch Isolated DI/O Card
MIC-3680/3-AE	2-port CAN Card
MIC-3022AE	3U single system CPCI enclosure, with 400W ATX PSU
MIC-3022PAE	3U single system CPCI PlusIO enclosure, with 400W ATX PSU
MIC-3022CE	3U enclosure,8slots,32-bit/33 MHz/66 MHz,250W CPCI PSU
MIC-3022PCE	3U enclosure, w/ CPCI PlusIO BP, 300W CPCI PSU
MIC-3954-AE	3U CPCI-Serial card with dual mini-PCIe slot and SIM slot
MIC-3953-AE	3U CPCI PMC Carrier board

MIC-3329

Quad-Core Intel® Atom™ SoC Processor 3U CompactPCI® Card



Features

- Supports latest 22nm Intel® Atom™ Low power Quad Core E3845/Dual Core E3827 SoC processor
- Supports up to 4GB DDR3L-1333 soldered ECC memory
- Optional extension module on 8HP and RIO for VGA, LAN, USB, PS/2, Audio, COM ports
- Supports fanless application with optimized heatsink design
- Design to meet EN50121-4 and EN50155 for railway application
- PICMG2.0 R3.0, PICMG2.1 R.0 Compliant

Introduction

The Advantech MIC-3329 Series uses the latest Intel® 22 nm Atom™ technology to provide significant performance and power efficiency.

MIC-3329 series, as a 3U CompactPCI® processor blade, is featured with a dual-core E3827 and quad-core E3845 Atom™ SoC processors, up to 4GB soldered DDR3L-1066/1333 ECC memory. It is available in single and dual slots width form factor, to offer various I/O functionalities by XTM (8HP) & Rear IO extensions. Front panel I/O on the single slot (4HP) provides 2 x RJ45 GbE ports (Switchable with RIO 4HP),1 x VGA port (Switchable with RIO 4HP), 1 x USB2.0 port and 1 x USB3.0 port. Front panel I/O on the second layer (XTM) provides 2 x COM ports (RS232/422/485), 1 x PS/2 KB/MS and 1 x Audio ports. There are three types of storage device available such as on board 8GB SSD flash on 4HP (optional) or a Cfast socket on RIO 4HP, Cfast socket or 2.5" on board SATA drive on the front second layer.

MIC-3329 provides an ideal solution for transportation, railway and factory automation applications. By using robust designs for board layout a thermal dissipation, it meets or exceeds EN50155 and EN50121-4; with a low TDP, selection of processor such as 8W/10W give it very low power consumption, and industrial SoC features make the MIC-3329 a perfect fit for fanless system applications.

Specifications

Processor System	CPU	Intel® Atom™ Processor SOC E3827/E3845
	Max Speed	Up to 2MB L2 Cache, 1.91 GHz
	BIOS	2 x AMI 8 MByte SPI flash
Memory	Technology	Single Channel DDR3L 1333 MHz with ECC
	Max. Capacity	Up to 4GB on board
Compact PCI Interface	J1 Connectors	32bit/33MHz PCI local bus
	J2 Connector	RTM
	Mode	System Master/Drone (Stand alone)
Ethernet	Controller	Intel® WGI210AT SLJXR Gigabit Ethernet Controller
	Interface	PCIe 1.0 x 1, 10/100/1000 Base TX Ethernet
	I/O Connector	2 x RJ45 to 4HP front (Switchable with RIO 4HP)
Graphics	Chipset	Integrated in processor
	I/O Connector	1 x VGA to 4HP front (Switchable with RIO 4HP)
	Resolution	1 x VGA 2560 x 1600, 60Hz
Storage	Mode	SATA-II
	Channels	1 x 2.5" SATA Drive connector on front 8HP (optional to Cfast upon request) 1 x Cfast socket on RIO (switchable with 8GB SSD flash on front 4HP, upon request)
Front I/O	USB	1 x US2.0 type A, 1 x USB3.0 type A
	VGA	1 x VGA (Switchable with RIO)
	LAN	2 x 10/100/1000Mbps on RJ45 (Switchable with RIO)
	Front Panel LEDs	x 1 blue/yellow for Hot Swap/HDD, x 1 green for Power, and x 1 green for Master/Drone mode
	8HP (XTM)	2 x COM port on DB9 (RS232/422/485); 1 x PS/2 KB/MS; 1 x Audio Line-in/Line-out
	Buttons	System reset button
To RTM	USB	2 x US2.0 type A,
	VGA	1 x VGA (Switchable with front)
	LAN	2 x 10/100/1000Mbps on RJ45 (Switchable with front)
	8HP (XTM)	2 x COM port on DB9 (RS232/422/485)
BIOS	Boot Options	SATA, USB, network (PXE)

Watchdog Timer	Output	Local reset	
	Interval	Programmable 1s ~ 255s	
Operating System	Compatibility	Windows7,Windows8.1,Linux, CentOS6.6	
Physical	Dimension (L x H) & Weight	3U/ 4HP&8HP: 100 x 160 mm (6.30" x 3.95")	
Environment		Operating	Non-operating
	Temperature	-40 ~ 60 °C (-40 ~ 140 °F) Fanless	-40 ~ 85 °C (-40 ~ 185 °F)
	Humidity	95 % @ 40 °C, non-condensing	95 % @ 60 °C, non-condensing
	Vibration	2Grms (X,Y,Z 1H/axis, w/o HDD)	2G
	Shock	30 G, 11ms, each axis three times	
Regulatory	Conformance	FCC Class A, CE, RoHS EN50121-4, EN50155	
Compliance	Standards	PICMG2.0 R3.0, PICMG2.1 R.0	

Supported CPU Configurations

Intel® CPU Model Number	# Cores	Freq.	Cache	Memory Types	CPU TDP
Intel® Atom™ Processor E3827	2	1.75GHz	1 MB L2 Cache	DDR3L-1333	8W
Intel® Atom™ Processor E3845	4	1.91GHz	2 MB L2 Cache	DDR3L-1333	10W

Ordering Information

System board	Front panel								On board Features		
	LAN(1)	USB2.0	USB3.0	VGA(2)	COM	PS/2	Audio	CPU	Memory	SATA	Slot Width
MIC-3329B1-D1E	2	1	1	1	2	1	1	E3827	4GB	1	2
MIC-3329C1-D1E	2	1	1	1	2	1	1	E3845	4GB	1	2

*Note: (1)(2): 2 x LAN and 1 x VGA are switchable between front and RTM

RIO Board	Rear panel				On board Features	
	LAN(1)	USB2.0	VGA(2)	COM	Cfast Socket	Slot Width
MIC-3329R1-D1E	2	2	1	2	1	2

*Note: (1)(2): 2xLAN and 1xVGA are switchable between front and RTM

Recommended Configurations

CPU board	Rear I/O Board
MIC-3329xx-DxE Series	MIC-3329Rx-DxE Series

Front Board



RIO Board



Related Products

Peripheral board	Description
MIC-3955	4-port RS232/422/485 communication card, with RIO support
MIC-3958	3U CPCI 4/2 port RJ45 Gigabit Ethernet Card, with RIO support
MIC-3953-AE	PMC carrier board
MIC-3022	4U enclosure for 3U cards, with RIO support
MIC-3023	3U fanless enclosure for 3U cards,w/o RIO support

3U Peripheral Cards

NEW









Model		MIC-3612	MIC-3620	MIC-3680	MIC-3714	MIC-3716	MIC-3720	MIC-3723
Form Factor		3U	3U	3U	3U	3U	3U	3U
Main Function		-	-	-	-	-	-	-
Bus	PCI	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz
Power Consumption	TDP	3W	3.5W	2W	13W	13W	6.7W	12W
Environment	Operating Temperature	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)
	non-operating temperature	-20 ~70 °C (-4~ 158 °F)	-20 ~70 °C (-4~ 158 °F)	-20 ~70 °C (-4~ 158 °F)	-20 ~70 °C (-4~ 158 °F)	-20 ~70 °C (-4~ 158 °F)	-20 ~70 °C (-4~ 158 °F)	-20 ~70 °C (-4~ 158 °F)
	Humidity	95 % @ 40 °C, non-condensing (Operating)	95 % @ 40 °C, non-condensing (Operating)	95 % @ 40 °C, non-condensing (Operating)	95 % @ 40 °C, non-condensing (Operating)	95 % @ 40 °C, non-condensing (Operating)	95 % @ 40 °C, non-condensing (Operating)	95 % @ 40 °C, non-condensing (Operating)
		95 % @ 60 °C, non-condensing (Non-operating)	95 % @ 60 °C, non-condensing (Non-operating)	95 % @ 60 °C, non-condensing (Non-operating)	95 % @ 60 °C, non-condensing (Non-operating)	95 % @ 60 °C, non-condensing (Non-operating)	95 % @ 60 °C, non-condensing (Non-operating)	95 % @ 60 °C, non-condensing (Non-operating)
	Vibration	2Grms	2Grms	2Grms	2Grms	2Grms	2Grms	2Grms
	Shock	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Altitude	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Regulatory	Conformance	FCC Class A, CE, RoHS	FCC Class A, CE, RoHS	FCC Class A, CE, RoHS	FCC Class A, CE, RoHS	FCC Class A, CE, RoHS	FCC Class A, CE, RoHS	FCC Class A, CE, RoHS
Operating System	Compatibiity	WinXP, Win 7/8/10	WinXP, Win 7/8/10	WinXP, Win 7/8/10	WinXP, Win 7/8/10	WinXP, Win 7/8/10	WinXP, Win 7/8/10	WinXP, Win 7/8/10
Compliance	Standards	PICMG 2.0 R3.0 PICMG 2.1 R2.0	PICMG 2.0 R3.0 PICMG 2.1 R2.0	PICMG 2.0 R3.0 PICMG 2.1 R2.0	PICMG 2.0 R3.0 PICMG 2.1 R2.0	PICMG 2.0 R3.0 PICMG 2.1 R2.0	PICMG 2.0 R3.0 PICMG 2.1 R2.0	PICMG 2.0 R3.0 PICMG 2.1 R2.0
Page		13-18	13-18	13-18	13-19	13-19	13-20	13-20











MIC-3753	MIC-3756	MIC-3758	MIC-3761	MIC-3780	MIC-3953	MIC-3954	MIC-3957	MIC-3958
3U	3U	3U	3U	3U	3U	3U	3U	3U
-	-	-	-	-	PMC carrier	mini-PCIe/HDD carrier	GPS board	Quad GbE LAN
32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz	32-bit/33 MHz	32-bit PCI	CPCI-Serial	32-bit/33 MHz	32-bit PCI
3.5W	6W	8.3W	4W	8.5W	depending on plugged card,0.1A max. w/o card	depending on plugged card, 0.1A max. w/o card	2.5W	Up to 9.5W
0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C (32 ~ 140 °F)	0 ~ 60 °C	-25 ~ 55 °C (-13 ~ 131 °F)	-40 ~ 60 °C (-40 ~ 140 F)
-20 ~70 °C (-4~ 158 °F)	-20 ~70 °C (-4~ 158 °F)	-20 ~70 °C (-4~ 158 °F)	-20 ~70 °C (-4~ 158 °F)	-20 ~70 °C (-4~ 158 °F)	-40 ~ 85 °C (-40~ 185 °F)	-40 ~ 85 °C (-40~ 185 °F)	-40 ~ 85 °C (-40~ 185 °F)	-40 ~ 85 °C (-40~ 185 °F)
95 % @ 40 °C, non-condensing (Operating)	95 % @ 40 °C, non-condensing (Operating)	95 % @ 40 °C, non-condensing (Operating)	95 % @ 40 °C, non-condensing (Operating)	95 % @ 40 °C, non-condensing (Operating)	95 % @ 40 °C, non-condensing (Operating)	95 % @ 40 °C, non-condensing (Operating)	10 ~ 95% @ 40 °C, non-condensing	95 % @ 40 °C, non-condensing (Operating)
95 % @ 60 °C, non-condensing (Non-operating)	95 % @ 60 °C, non-condensing (Non-operating)	95 % @ 60 °C, non-condensing (Non-operating)	95 % @ 60 °C, non-condensing (Non-operating)	95 % @ 60 °C, non-condensing (Non-operating)	95 % @ 60 °C, non-condensing (Non-operating)	95 % @ 60 °C, non-condensing (Non-operating)		95 % @ 60 °C, non-condensing (Non-operating)
2Grms	2Grms	2Grms	2Grms	2Grms	2Grms	2Grms (5-500Hz, without HDD) (Operating)	1.06 Grms Operating 2 Grms Non-Operating	2Grms
n/a	n/a	n/a	n/a	n/a	n/a	n/a	10 Grms Operating 20 Grms Non-Operating	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	4,000m (operating) 10,000m (non-operating)	n/a
FCC Class A, CE, RoHS	FCC Class A, CE, RoHS	FCC Class A, CE, RoHS	FCC Class A, CE, RoHS	FCC Class A, CE, RoHS	FCC Class A, CE, RoHS	FCC Class A, CE, RoHS	FCC Class A, CE, RoHS	FCC Class A, CE, RoHS
WinXP, Win 7/8/10	WinXP, Win 7/8/10	WinXP, Win 7/8/10	WinXP, Win 7/8/10	WinXP, Win 7/8/10				
PICMG 2.0 R3.0 PICMG 2.1 R2.0	PICMG 2.0 R3.0 PICMG 2.1 R2.0	PICMG 2.0 R3.0 PICMG 2.1 R2.0	PICMG 2.0 R3.0 PICMG 2.1 R2.0	PICMG 2.0 R3.0 PICMG 2.1 R2.0	PICMG 2.0 R3.0 PICMG 2.3 R1.0 IEEE P1386.1 R2.3 PMC Specification	PICMG CPCI-S.0 CompactPCI® Serial peripheral card	PICMG 2.0 R3.0	PICMG2.0 R3.0
13-21	13-21	13-21	13-22	13-22	13-23	13-24	13-25	13-26

MIC-3612
MIC-3620
MIC-3680

4-port RS-232/422/485 3/6U CompactPCI® Card

8-port RS-232 3U CompactPCI® Card

2-Port CAN-bus 3U CompactPCI® Card



MIC-3612/3



MIC-3620/3



MIC-3680/3

Features

- PCI Specification 2.1 compliant
- Speeds up to 921.6 kbps
- 4-port RS-232/422/485
- Surge protection
- 16C954 UARTs with 128-byte standard
- Standard Industrial CompactPCI® 3U Board size
- I/O address automatically assigned by PCI Plug & Play
- OSs supported: Windows® 98/2000/XP, Linux 2.4
- Interrupt status register for increased performance
- Automatic RS-485 data flow control
- Tx/Rx LED indicator

Specifications

Communications

- **Communication**: BUS controller: PLX9030
Controller UART: 16C954
- **Data Bits**: 5, 6, 7, 8
- **Data Signals**: TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND (for RS-232)
TxD, RxD, RTS, CTS (for RS-422)
DATA+, DATA- (for RS-485)
- **IRQ**: All ports use the same IRQ assigned by PCI Plug & Play
- **Parity**: None, even, odd
- **Speed (bps)**: 50 ~ 921.6 k
- **Stop Bits**: 1, 1.5, 2

General

- **PICMG Compliance**: CompactPCI V2.0, R 3.0
Hot swap V2.1, R 2.0
- **Bus Type**: CompactPCI V2.1
- **I/O Connectors**: DB 44pin female
- **Dimensions (L x H)**: 160 x 100 mm (6.3" x 3.9"), 3U bracket
- **Power Consumption**

	Typical	Max.
+5 V	220 mA	285 mA
+3.3 V	100 mA	200 mA
+12 V	60 mA	80 mA

- **Operating Temperature**: 0 ~ 70 °C (32 ~ 158 °F) (IEC68-2-1, 2)
- **Storage Temperature**: -20 ~ 80 °C (-4 ~ 176 °F)
- **Operating Humidity**: 5 ~ 95% RH, non-condensing (IEC 68-2-1, 2)

Ordering Information

- **MIC-3612/3-BE**: 3U CompactPCI 4-port RS-232/422/485 Card
- **MIC-3612/6-BE**: 6U CompactPCI 4-port RS-232/422/485 Card

Features

- PCI Specification 2.1 compliant
- Speeds up to 921.6 kbps
- 16C954 UARTs with 128-byte standard
- 8-port RS-232
- Standard Industrial CompactPCI 3U Board size
- I/O address automatically assigned by PCI Plug & Play
- OSs supported: Windows 98/2000/XP, Linux 2.4
- Interrupt status register for increased performance

Specifications

Communications

- **Communication**: PCI9030 + 16C954 Controller
- **Data Bits**: 5, 6, 7, 8
- **Data Signals**: TxD, RxD, RTS, CTS, DTR, DSR, DCD, RI, GND
- **IRQ**: All ports use the same IRQ assigned by PCI Plug & Play
- **Parity**: None, even, odd
- **Speed (bps)**: 50 ~ 921.6 k
- **Stop Bits**: 1, 1.5, 2

General

- **PICMG Compliance**: CompactPCI V2.0, R 3.0
Hot swap V2.1, R 2.0
- **Bus Type**: CompactPCI bus specification 2.1 compliant
- **I/O Connectors**: SCSI 68-pin female
- **Dimensions (L x H)**: 160 x 100 mm (6.3" x 3.9"), 3U Bracket
- **Power Consumption**: +5 V, +3.3 V, +12 V
- **Operating Temperature**: 0 ~ 70 °C (32 ~ 158 °F) (refer to IEC68-2-1, 2)
- **Storage Temperature**: -20 ~ 80 °C (-4 ~ 176 °F)
- **Storage Humidity**: 5 ~ 95% Relative Humidity, non-condensing (IEC 68-2-1, 2)

Ordering Information

- **MIC-3620/3-BE**: 3U CompactPCI 8-port RS-232 Card

Features

- CompactPCI specification PICMG 2.0 R3.0 compatible
- Hot swap support
- Two individual CAN ports
- Supports CAN2.0 A/B
- High speed transmission up to 1 Mbps
- 16 MHz CAN controller frequency
- Optical isolation up to 2,500 V_{DC}
- Microsoft Windows DLL library and examples included
- Supports Windows 98/2000/XP drivers and utility
- Supports Rear I/O

Specifications

Communications

- **CAN Controller Frequency**: 16 MHz
- **CAN Transceiver**: 82C250
- **Communication Controller**: SJA-1000
- **Ports**: 2
- **Protocol**: CAN 2.0 A/B
- **Signal Support**: CAN_H, CAN_L, GND
- **Speed (bps)**: Up to 1 Mbps programmable transfer rate
- **Isolation Protection**: 2,500 V_{DC}

General

- **PICMG Compliance**: CompactPCI V2.0, R 3.0
Hot swap V2.1, R 2.0
- **Bus Type**: CompactPCI
- **I/O Connectors**: 2 x DB9-M
- **Dimensions (L x H)**: 160 x 100 mm (6.3" x 3.9")
- **Power Consumption**: 5 V @ 400 mA (Typical)
- **Operating Temperature**: 0 ~ 65 °C (32 ~ 149 °F)
- **Storage Temperature**: -25 ~ 85 °C (-13 ~ 185 °F)
- **Storage Humidity**: 5 ~ 95% RH, non-condensing

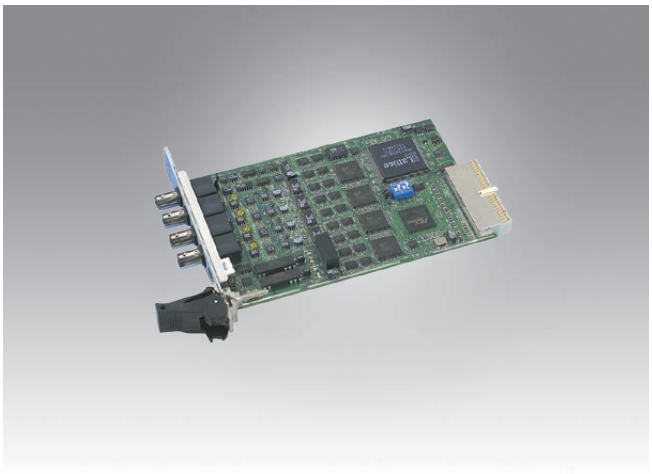
Ordering Information

- **MIC-3680/3-AE**: 3U CompactPCI 2-port Isolated CAN Communication Card

MIC-3714
MIC-3716

30 MS/s, 12-bit, Simultaneous 4-ch Analog Input 3U CompactPCI® Card

250 kS/s, 16-bit, 16-ch Multifunction 3U CompactPCI® Card



MIC-3714/3

CE FCC



MIC-3716/3

CE

Specifications

Analog Input

- **Channels** 4 single-ended channels
- **Resolution** 12 bits
- **Max. Sampling Rate** 30 MS/s (Only in FIFO 32k)
- **FIFO Size** 32,768 samples/ch
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 50 Ω/1 MΩ/jumper selectable, 100 pF
- **Sampling Modes** Software, pacer, post-trigger, pre-trigger, delay-trigger, about-trigger
- **Input Range (V)** ±5, ±2.5, ±1, ±0.5

General

- **Bus Type** CompactPCI
- **I/O Connectors** 4 x BNC connector (for AI)
  1 x PS/2 connector (for ext. colock and trigger)
- **Dimensions (L x H)** 160 x 100 mm (6.3" x 3.9") with 3U bracket
- **Power Consumption** Typical: +3.3 V @ 550 mA, +5 V @ 150 mA, +12 V @ 600 mA
  Max.: +3.3 V @ 850 mA, +5 V @ 200 mA, +12 V @ 700 mA
- **Operating Temperature** 0 ~ 70 °C (32~158 °F)
- **Storage Temperature** -20 ~ 85 °C (-4 ~ 185 °F)
- **Storage Humidity** 5 ~ 95% RH, non-condensing (refer to IEC 68-2-3)
- **Certification** CE, FCC

Ordering Information

- **MIC-3714/3-AE** 3U, 30 MS/s Simultaneous 4-ch Analog Input Card
- **ADAM-3909-AE** DB-9 Wiring Terminal for DIN-rail Mounting
- **PCL-10901-3E** PS2 to DB-9 wiring cable, 3 m
- **PCL-1010B-1E** BNC to BNC wiring cable, 1 m

Specifications

Analog Input

- **Channels** 16 single-ended, 8 differential, or combination
- **Resolution** 16 bits
- **Max. Sampling Rate** 250 kS/s
- **FIFO Size** 1024 samples/ch
- **Overvoltage Protection** 30 Vp-p
- **Input Impedance** 100 MΩ/10 pF (Off); 100 MΩ/100 pF (On)
- **Sampling Modes** Software, pacer, or external
- **Input Range**

Bipolar	±10	±5	±2.5	±1.25	±0.625
Unipolar	-	0 ~ 10	0 ~ 5	0 ~ 2.5	0 ~ 1.25
Accuracy (% of FSR ±1LSB)	0.15	0.03	0.03	0.05	0.1

Analog Output

- **Channels** 2
- **Resolution** 16 bits
- **Output Rate** Static update
- **Output Range**

Internal Reference	Bipolar	±5, ±10
	Unipolar	0 ~ 5, 0 ~ 10
External Reference		0 ~ +x V @ +x v (-10 ≤ x ≤ 10) -x ~ +x V @ +x v (-10 ≤ x ≤ 10)

- **Slew Rate** 20 V/μs
- **Driving Capability** ±20 mA
- **Output Impedance** 0.1 Ω max.
- **Operation Mode** Single output
- **Accuracy** Relative: ±1LSB

Digital Input/Output

- **Channels** 16, 5V/TTL
- **Input Voltage** Logic 0: 0.4 V max.
  Logic 1: 2.4 V min.
- **Output Voltage** Logic 0: 0.4 V max.
  Logic 1: 2.7 V min.
- **Output Capability** Sink: 0.4 V max. @ +8 mA
  Source: 2.4 V min. @ -0.4 mA

Counter/Timer

- **Channels** 3
- **Compatibility** 5 V/TTL
- **Resolution** 16 bits
- **Max. Input Frequency** 1 MHz
- **Reference Clock** Internal 10 MHz
  External Clock Frequency 10 MHz
  External Voltage Range TTL (Low: 0.8, High: 2 V)

General

- **PICMG Compliance** CompactPCI V2.0, R 2.1 Hot-Swap V2.1, R 2.0
- **Bus Type** CompactPCI
- **I/O Connector Type** 68-pin SCSI-II female
- **Dimensions (L x H)** 160 x 100 mm (6.9" x 3.9") with 3U Bracket
- **Power Consumption** Typical: +5 V @ 850 mA, +12 V @ 600 mA
  Max.: +5 V @ 1 A, +12 V @ 700 m A
- **Certification** CE

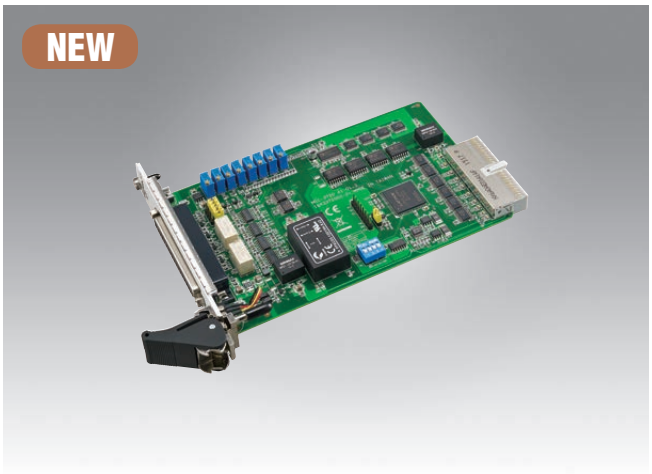
Ordering Information

- **MIC-3716/3-AE** 3U, 250 kS/s, 16-bit, 16-ch High-Resolution Multifunction Card
- **PCLD-8710-AE** Industrial Wiring Terminal Board with CJC circuit for DIN-rail Mounting. (cable not included)
- **PCL-10168-1E/2E** 68-pin SCSI-II cable with male connectors on both ends and special shielding for noise reduction, 1 and 2 m
- **ADAM-3968-AE** 68-pin SCSI-II Wiring Terminal Board for DIN-rail Mounting

MIC-3720
MIC-3723

12-bit, 4-ch Isolated Analog Output Universal CompactPCI® Card

16-bit, 8-ch Analog Output 3U CompactPCI® Card



MIC-3720



MIC-3723/3

Specifications

Analog Output

- **Channels** 4 isolated
- **Resolution** 12 bits
- **Output Rate** Static update
- **Output Range**

Bipolar (V)	±5, ±10
Unipolar (V)	0 ~ 5, 0 ~ 10
Current Loop (mA)	0 ~ 20, 4 ~ 20 (software programmable)

- **Slew Rate** 2.5 V/us @ ±10 V
1.5 V/us @ ±5 V, 0 ~ 10 V
0.7 V/us @ 0 ~ 5 V
- **Isolation Protection** 2,500 V_{DC}
- **Driving Capability** 5 mA
- **Operation Modes** Software polling
- **Accuracy** Relative:±1 LSB; Differential
Non-Linearity: ±1 LSB (monotonic)

General

- **Bus Type** CompactPCI
- **I/O Connectors** 1 x DB37 female connector
- **Dimensions (L x H)** 175 mm x 100 mm (6.9" x 3.9")
- **Power Consumption** 5 V @ 350 mA (typical), 500 mA (max.)
12 V @ 200 mA (typical), 350 mA (max.)
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Humidity** 5 ~ 95% RH, non-condensing

Ordering Information

- **MIC-3720-AE** 12-bit, 4-ch Isolated AO Universal CompactPCI Card

Accessories

- **PCL-10137-1E** DB37 Cable, 1 m
- **PCL-10137-2E** DB37 Cable, 2 m
- **PCL-10137-3E** DB37 Cable, 3 m
- **ADAM-3937-AE** DB37 DIN-rail Wiring Board

Specifications

Analog Output

- **Channels** 8
- **Resolution** 16 bits
- **Output Rate** Static update
- **Output Range** (V, software programmable)

Internal Reference	**Unipolar**	±10 V
	Current Loop	0 ~ 20 mA, 4 ~ 20 mA

- **Slew Rate** 20 V/μs
- **Driving Capability** 5mA
- **Output Impedance** 0.1 Ω max.
- **Operation Modes** Single output, synchronized output

Digital Input/Output

- **Channels** 16, 5V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
Logic 1: 2.0 V min.
- **Output Voltage** Logic 0: 0.5 V max. @ 24 mA
Logic 1: 2.4 V min. @ -15 mA
- **Output Capability** Sink: 0.5 V max. @ 24 mA
Source: 2.4 V min. @ -15 mA

General

- **PICMG Compliance** CompactPCI V2.0, R 2.1
Hot-Swap V2.1, R 2.0
- **Bus Type** CompactPCI
- **I/O Connector Type** 68-pin SCSI-II female
- **Dimensions (L x H)** 160 x 100 mm (6.9" x 3.9") with 3UBracket
- **Power Consumption** Typical: 5 V @ 850, 12 V @ 600 mA
- **Certification** CE

Ordering Information

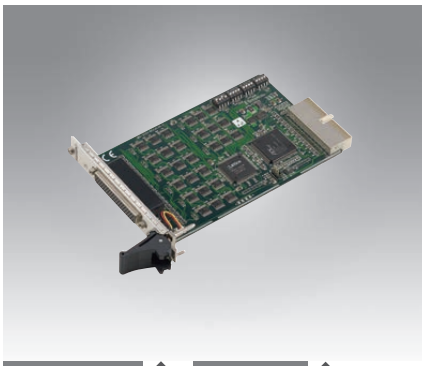
- **MIC-3723/3-AE** 3U CompactPCI 16-bit, 8-ch non-isolated analog output card
- **PCL-10168-1E** 68-pin SCSI-II cable with male connectors on both ends and special shielding for noise reduction, 1 and 2 m
- **PCL-10168-2E**
- **ADAM-3968-AE** 68-pin SCSI-II Wiring Terminal Board for DIN-rail mounting

MIC-3753
MIC-3756
MIC-3758

72-CH Digital I/O 3U CompactPCI® Card

64-ch Isolated Digital I/O CPCI Card

128-CH Isolated Digital I/O 3U CompactPCI® Card



MIC-3753R/3 MIC-3753/3

Specifications

Digital Input

- **Channels** 72 (shared with output)
- **Compatibility** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
  Logic 1: 2.0 V min.
- **Interrupt Capable Ch.** 6 (2 for each C port)

Digital Output

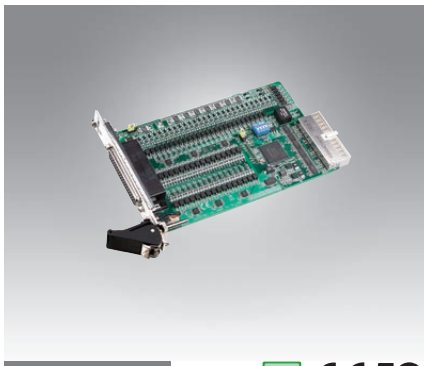
- **Channels** 72 (shared with input)
- **Compatibility** 5 V/TTL
- **Output Voltage** Logic 0: 0.44 V max. @ 24 mA
  Logic 1: 3.76 V min. @ 24 mA
- **Output Capability** Sink: 0.44 V max. @ 24 mA
  Source: 3.76 V min. @ 24 mA

General

- **PICMG Compliance** CompactPCI V2.0, R 2.1 Hot-Swap V2.1, R 2.0
- **Bus Type** CompactPCI
- **I/O Connectors** 1 x 78-pin D-type female connector
- **Dimensions (L x H)** 160 x 100 mm (6.9" x 3.9") with 3UBracket
- **Power Consumption** Typical: +5 V @ 400 mA
  Max.: +5 V @ 0.7 A
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F) (refer to IEC 68-2-1, 2)
- **Operating Humidity** 5 ~ 95% RH, non-condensing (refer to IEC 68-2-3)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Certifications** CE

Ordering Information

- **MIC-3753/3-A1E** 3U CompactPCI 72-ch Digital I/O card
- **MIC-3753R/3-AE** 3U CompactPCI 72-ch Digital I/O card with Rear I/O support
- **PCL-10178-1E** DB-78 cable assembly, 1 m
- **ADAM-3978-AE** DB-78 wiring terminal for DIN-rail mounting



MIC-3756

Specifications

Isolated Digital Input

- **Channels** 32
- **Input Voltage** Logic 0: 3 V max.
  Logic 1: 10 V min.
  (50 V max.)
- **Interrupt Capable** 2 (DI00, DI16)
- **Isolation Protection** 2,500 V_{DC}
- **Opto-Isolator Response** 100 µs
- **Input Current** 24 V_{DC} @ 4.40 mA (typical)

Isolated Digital Output

- **Channels** 32
- **Output Type** Sink (NPN)
- **Isolation Protection** 2,500 V_{DC}
- **Output Voltage** 5 ~ 40 V_{DC}
- **Sink Current** 200 mA max./channel
- **Opto-Isolator Response** 25 µs

General

- **Bus Type** CompactPCI
- **I/O Connectors** 1 x 78-pin D-type female connector
- **Dimensions (L x H)** 160 x 100 mm (6.9" x 3.9") with 3U Bracket
- **Power Consumption** Typical: 5 V @ 285 mA
  Max: 5 V @ 475 mA
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F) (refer to IEC 68-2-1, 2)
- **Operating Humidity** 5 ~ 95% RH, non-condensing (refer to IEC 68-2-3)
- **Storing Temperature** -20 ~ 80 °C (-4 ~ 158 °F)
- **Certifications** CE

Ordering Information

- **MIC-3756-BE** 3U 64-channel isolated digital I/O Card

Accessories

- **PCL-10178-1E** DB-78 cable assembly, 1 m
- **ADAM-3978-AE** DB-78 wiring terminal for DIN-rail mounting



MIC-3758/3

Specifications

Isolated Digital Input

- **Channels** 64
- **Input Voltage** Logic 0: 2.5 V max.
  Logic 1: 5 V min.
  (25 V max)
- **Interrupt Capable Ch.** 64
- **Isolation Protection** 2,500 V_{DC}
- **Opto-Isolator Response** 50 µs
- **Input Resistance** 3 kΩ

Isolated Digital output

- **Channels** 64
- **Output Type** Sink (NPN)
- **Isolation Protection** 2500 V_{DC}
- **Output Voltage** 5 ~ 40 V_{DC}
- **Sink Current** 90 mA max./Channel
- **Opto-isolator Response** 50 µs

General

- **Bus Type** CPCI bus spec. 2.1 compliant
- **I/O Connectors** 1 x MINI-SCSII HDRA-E100 Female
- **Dimensions (L x H)** 160 x 100 mm (6.9" x 3.9") with 3U Bracket
- **Power Consumption** Typical: +5 V @ 800 mA, +3.3 V @ 600 mA
  Max : +5 V @ 1 A, +3.3 V @ 1 A
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F) (IEC 68-2-1,2)
- **Storage Temperature** -20°~ 70 °C (-4°~ 158 °F)
- **Storage Humidity** 5 ~ 95% (IEC 68-2-3) non-condensing

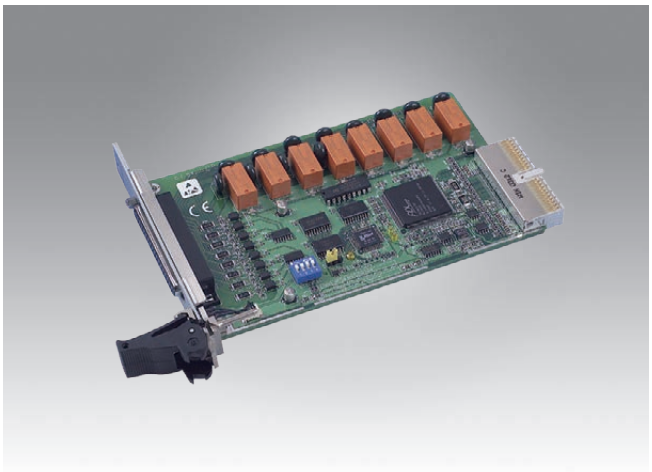
Ordering Information

- **MIC-3758/3-AE** 3U CompactPCI 128-ch isolated Digital I/O card
- **PCL-101100S-1E** 100-pin SCSI Cable, 1 m
- **ADAM-39100-BE** 100-pin SCSI wiring terminal, DIN-rail mounting

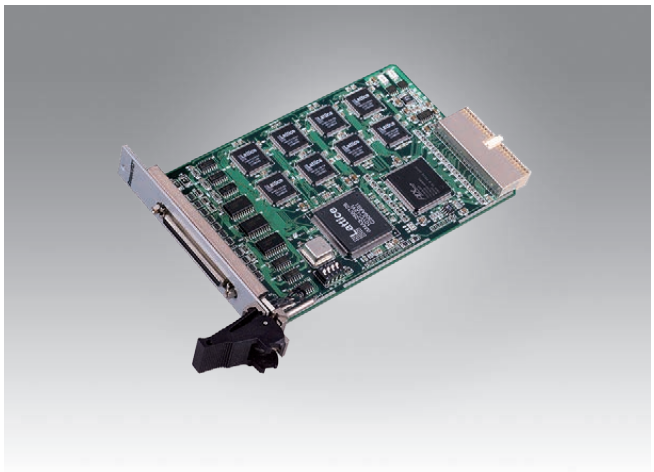
MIC-3761
MIC-3780

8-CH Relay & 8-CH Isolated Digital Input 3U CompactPCI® Card

8-CH, 16-bit Counter/Timer 3U CompactPCI® Card



MIC-3761/3



MIC-3780/3

Specifications

Isolated Digital Input

- **Channels** 8
- **Input Voltage** Logic 0: 3 V max.
  Logic 1: 10 V min.
  (50 V max.)
- **Input Current*** 10 V_{DC} 1.6 mA (typical)
  12 V_{DC} 1.9 mA (typical)
  24 V_{DC} 4.1 mA (typical)
  48 V_{DC} 8.5 mA (typical)
  50 V_{DC} 8.9 mA (typical)
- **Interrupt Capable Ch.** ID0 ~ ID7
- **Isolation Protection** 2,500 V_{DC}
- **Overvoltage Protection** 70 V_{DC}
- **Opto-Isolator Response** 25 µs
- **Input Resistance** 560 Ω

Relay Output

- **Channels** 8
- **Relay Type** SPDT
  (4 Form A, and 4 Form C)
- **Contact Rating** 3 A @ 250 V_{AC} or
  3 A @ 24 V_{DC}
- **Relay on Time** 15 ms max.
- **Relay off Time** 5 ms max.
- **Life Span** Mechanical
  2 x 10^7 ops. min.
  Electrical
  2 x 10^5 ops. min. (contact rating)
- **Resistance** 1 GΩ min. (at 500 V_{DC})

General

- **PICMG Compliance** CompactPCI V2.0, R 3.0
  Hot-Swap V2.1, R 2.0, R 2.1
- **Bus Type** CompactPCI
- **I/O Connectors** 1 x 37-pin D-type female connector
- **Dimensions (L x H)** 160 x 100 mm (6.9" x 3.9") with 3U Bracket
- **Power Consumption** Typical: +5 V @ 220 mA
  Max.: +5 V @ 750 mA
- **Certification** CE

Ordering Information

- **MIC-3761/3-AE** 3U 8-ch Relay Actuator and 8-ch Isolated D/I Card
- **PCL-10137-1E/2E/3E** DB-37 cable assembly, 1, 2 and 3 m
- **ADAM-3937-BE** DB-37 Wiring Terminal for DIN-rail Mounting
- **PCLD-780-BE** Universal Screw Terminal Board

Specifications

Digital Input

- **Channels** 8
- **Compatibility** 5 V/TTL
- **Input Voltage** Logic 0: 0.8 V max.
  Logic 1: 2.4 V min.
- **Interrupt Capable Ch.** 1 (channel 0)

Digital Output

- **Channels** 8
- **Compatibility** 5 V/TTL
- **Output Voltage** Logic 0: 0.5 V max. @ 24 mA
  Logic 1: 2.4 V min. @ -15 mA
- **Output Capability** Sink: 0.5 V max. @ 24 mA
  Source: 2.4 V min. @ -15 mA

Counter/Timer

- **Channels** 8 (independent)
- **Resolution** 16 bits
- **Compatibility** 5 V/TTL
- **Max. Input Frequency** 20 MHz
- **Reference Clock** Internal: 20 MHz
- **Counter Modes** 12 (programmable)
- **Interrupt Capable Ch.** 8

General

- **PICMG Compliance** CompactPCI V2.0, R 3.0
  Hot-Swap V2.1, R 2.0
- **Bus Type** CompactPCI V2.1
- **I/O Connectors** 68-pin SCSI-II female
- **Dimensions (L x H)** 160 x 100 mm (6.3" x 3.9") with 3U Bracket
- **Power Consumption** Typical: +5 V @ 900 mA
  Max: +3.3 V @ 1.2 A
- **Operating Temperature** 0 ~ 60 °C (32 ~ 140 °F) (refer to IEC 68-2-1, 2)
- **Storage Temperature** -20 ~ 70 °C (-4 ~ 158 °F)
- **Relative Humidity** 5 ~ 95 % RH non-condensing (refer to IEC 68-2-3)
- **Certification** CE, FCC Class A

Ordering Information

- **MIC-3780/3-A1E** 3U Compact PCI 8-ch, 16 bit counter/timer card
- **PCL-10168-1E/2E** 68-pin SCSI-II cable with male connectors on both ends and special shielding for noise reduction, 1 and 2 m
- **ADAM-3968-AE** 68-pin SCSI-II Wiring Terminal Board for DIN-rail mounting

MIC-3953

Single PMC Slot Carrier 3U CompactPCI® Card



Features

- Up to 64-bit/66 MHz CompactPCI® Interface
- Supports one single-size PMC site in 4HP width
- Comprehensive EMC shielding

CompactPCI®

Introduction

The MIC-3953 is a 3U CompactPCI carrier board for PCI Mezzanine Cards (PMC) modules. It provides one 32,64-bit/33,66 MHz PMC site in 4HP width for system expansion through different PMC modules. Advantech provides several PMC modules that work with MIC-3953, such as the 10/100 Ethernet module and Gigabit module. It is also compatible with other standardized modules from other manufacturers.

Specifications

Bus	PCI	32/64-bit/33MHz,up to 32/64-bit/66MHz	
Environment		Operating	Non-Operating
	Temperature	0 ~ 60 °C (32 ~ 140 °F)	-40 ~ 85 °C (-40 ~ 185 °F)
	Humidity	95% @ 40 °C, non-condensing	95% @ 60 °C, non-condensing
	Vibration (5~500 Hz)	2.0 Grms	-
Physical Characteristics	Dimensions (W x D)	160.00 x 100.00 mm (6.30" x 3.95")	
	Weight	0.5kg	
Compliance		PICMG 2.0 R3.0 CompactPCI Specification PICMG 2.3 R1.0 CompactPCI PMC I/O Mapping Specification IEEE P1386.1 R2.3 PMC Specification	

Recommended Configurations

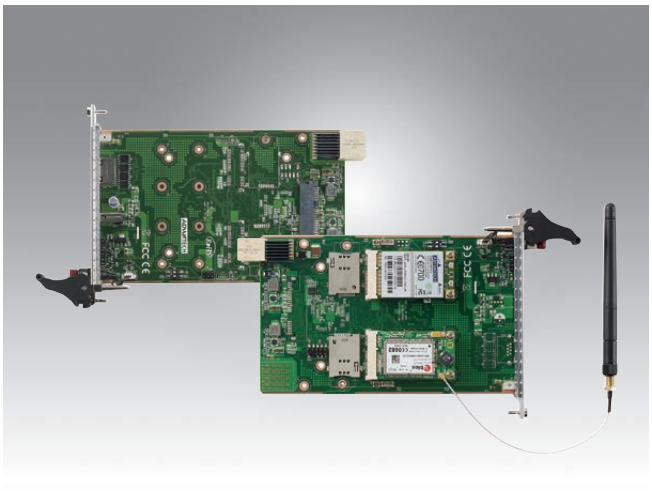
Carrier Board	PMC Module
MIC-3953-AE	MIC-3665-AE MIC-3665-BE

Ordering Information

Part Number	Description
MIC-3953-AE	3U CompactPCI single PMC carrier board

MIC-3954

PCIe® Mini or Storage Carrier 3U CompactPCI® Serial Card



Features

- For card 1 with internal PCIe and USB interface
- For card 2 with SATA interface
- PICMG CPCI-S.0 CompactPCI® Serial

CompactPCI® Serial

Introduction

The MIC-3954 is a rugged single Eurocard CompactPCI® Serial carrier board with two function options; Option 1: Supports the PCI Express® Mini Card, which offers two standard PCI Express® Mini Card slots, with dual on-board SIM slots for 3G module. It allows to use all types of cards for HF applications, for example GPS, WLAN, UMTS, GSM, or HSDPA which is connected to two external SMA antenna connectors; Option 2: Supports the hard disk drive carrier board and one USB connector on front panel. It is designed to carry a 2.5" SATA hard disk drive or a solid state drive.

Specifications

		MIC-3954 PCIe Mini Card Carrier Board	MIC-3954 Storage Carrier Board
Interface		PCIex1 and USB2.0	SATA2.0 and USB2.0
Power		+12 V, power consumption depending on plugged card, 0.1A max. w/o card	+12 V, power consumption depending on plugged HDD/SSD
Environment		Operating	Non-Operating
	Temperature	0 ~ 60 °C (32 ~ 140 °F)	-40 ~ 85 °C (-40 ~ 185 °F)
	Humidity	95% @ 40 °C, non-condensing	95% @ 60 °C, non-condensing
	Vibration (5~500 Hz)	2.0 Grms (With SSD)	-
Physical Characteristics	Dimensions (L x H)	160.00 x 100.00 mm (6.30" x 3.95")	
	Weight	0.5 kg	
Compliance		PICMG CPCI-S.0 CompactPCI® Serial peripheral card	

Recommended Configurations

Carrier Board	CPU Board	Enclosure
MIC-3954-AE MIC-3954-BE	MIC-3328 series	MIC-3022PAE MIC-3022PCE

Ordering Information

Part Number	Description
MIC-3954-AE	3U CompactPCI® Serial PCIe® Mini Card Carrier Board for Wireless Functions
MIC-3954-BE	3U CompactPCI® Serial SATA HDD/SSD Carrier board

Note: Please contact Advantech sales representative for recommended wireless modules.

MIC-3957

GPS Communication 3U CompactPCI® Card



Features

- GPS based on 50 channel u-blox lea-6s module
- 32bit 33/66MHz PCI bus backplane
- UART interface for GPS module
- Accuracy 2.5 m CEP
- PICMG 2.0 Rev. 3.0 compatible

Introduction

The MIC-3957 is a 3U CompactPCI GPS Communication Card. It supports working with 32bit 33MHz or 66MHz PCI frequency. MIC-3957 is designed with u-blox lea-6s GPS module via UART interface. MIC-3957 is capable of massive parallel time/frequency space searches, enabling it to find satellites instantly. Innovative design and technology suppress interference sources and mitigate multipath effects, providing excellent navigation performance even in the most challenging environments in automotive and industrial applications.

Specifications

GPS Interface		UART	
Main chip		u-blox lea-6s	
Antenna		GPS antenna 1575MHz	
Receiver Type		50 Channels GPS L1 frequency, C/A code GALILEO Open Service capable SBAS:WAAS,EGNOS, MSAS, GAGAN	
Time-To-First-Fix		Cold Start: 29 s Warm Start: 29 s Hot Start: < 1 s	
Sensitivity		Tracking & Navigation: -160 dBm Reacquisition: -160 dBm Cold Start: -147 dBm	
Horizontal Position Accuracy		Autonomous: < 2.5 m SBAS: < 2.0 m	
Max Navigation Update Rate		< 5 Hz	
Velocity Accuracy		0.1 m/s	
Heading Accuracy		0.5 degrees	
Operational Limits	Dynamics	< 4 g	
	Altitude	50,000m	
	Velocity	515 m/s	
OS support		Windows XP, Windows 7, Linux CentOS6.6	
Power consumption		2.5W	
Environment	Temperature	-25 ~ 55 °C (-13 ~ 131 °F)	-40 ~ 80 °C (-40 ~ 176 °F)
	Humidity	10 ~ 95% @ 40 °C, non-condensing	10 ~ 95% @ 60 °C, non-condensing
	Shock	10 G	20 G
	Vibration (5 ~ 500 Hz)	1.06 Grms	2 Grms
Physical Characteristics	PCB Dimensions (L x H)	160 x 100 mm (6.3" x 3.9"),	
	Weight	0.4 kg	
Reliability	MTBF	-	

Related Products

Part Number	Description
MIC-3328	3U CompactPCI Intel® third generation Ivy bridge™ Processor Blade
MIC-3023D1-A1E	3U CPCI fanless enclosure dual system with 2 backplane, 2 AC-In panel
MIC-3023S1-D1E	3U CPCI fanless enclosure single system with 1 back plane, 2 CPCI power connecter for DC-Input power

Ordering Information

Part Number	PCI	PICMG 2.0	Description
MIC-3957A1-S1E	Yes	Yes	3U CPCI GPS communication board

Accessories

Part Number	Description
1750006432	GPS antenna 5000mm AG1575-0250SM-UL

MIC-3958

4 RJ45 Port Gigabit Ethernet 3U CompactPCI® Card



Features

- Standard 3U 4HP CompactPCI® form factor
- Up to four Intel® i210 Ethernet controllers with fully MAC & PHY
- Four or two 10/100/1000BASE-T Ethernet ports via RJ-45 connectors
- Two LAN ports switchable to rear (MIC-3958R)
- Compliant PICMG2.0 R3.0

Introduction

Advantech MIC-3958 Series, a 3U height 4HP CompactPCI® peripheral card, using Intel® latest industry i210 Ethernet controller, to support up to four RJ45 Gigabit lan connectors, two switchable with rear transition module; MIC-3958A provides four RJ45 lan ports on front panel, MIC-3958R provides two RJ45 lan ports on rear IO panel. Its ideal power solution make it perfect for all fanless system applications.

Specifications

Bus	PCI	32bit, up to 33/66MHz	
	PCI-to-PCIe Bridge	PI7C9X130	
	J2 Connector	RTM	
Ethernet	Controller	Intel® Industry I210IT Ethernet Controller	
	Interface	PCIe 1.0x1, 10/100/1000 Base TX Ethernet	
	I/O Connector	4x RJ45 to 4HP front (2x RJ45 Switchable with RIO 4HP)	
	LED	LAN Speed LED Status (Dual-Color)=>10Mb/s :off, 100Mb/s: Green, 1000Mb/s: Orange LAN Link/ACT LED status=> Link: Green, Activity: Green Blink	
Operating System	Compatibility	Windows7, Windows8, Linux CentOS6.5/6.6	
Max Power Consumption	Max./Typ.	4x LAN ports: 9.5W (5V@1.9A) 2x LAN ports: 7.1W (5V@1.42A)	
Physical	Dimensions (L x H)	100 x 160 mm (6.30" x 3.95")	
Environment		Operating	Non-Operating
	Temperature	-40 ~ 55 °C (-40 ~ 122 °F) Fanless	-40 ~ 85 °C (-40 ~ 185 °F)
	Humidity	95 % @ 40 °C, non-condensing	95 % @ 60 °C, non-condensing
	Vibration	2 Grms	-
Compliance	Standards	PICMG2.0 R3.0	



Front Board



RIO board

Related Products

I/O Board	CPU Board	Enclosure
MIC-3958 series	MIC-3325 series / MIC-3328 series / MIC-3329 series	MIC-3022 series / MIC-3023 series

Ordering Information

Part Number	Description
MIC-3958A1-S1E	3U CompactPCI peripheral card w./ 4xRJ45 Gigabit Ethernet Connectors on front panel
MIC-3958B1-S1E	3U CompactPCI Peripheral card w./ 4 M12 Gigabit Ethernet connector on front panel
MIC-3958R1-S1E	3U CompactPCI RIO peripheral card w./2xRJ45 Gigabit Ethernet Connectors on rear panel

*Note: MIC-3958R is switchable w./ MIC-3958A by switch setting on front board.

14

Industrial Computer Peripherals

Power Supplies	14-2
CPU Coolers	14-5
Keyboards	14-7
Accessories	14-8

To view all of Advantech's Peripherals, please visit www.advantech.com/products.



Power Supplies

80 Plus PS/2 Single Power Supplies



Part Number	PS8-250ATX-ZE	PS8-300ATX-ZBE	PS8-400ATX-ZE	PS8-500ATX-ZE	PS8-700ATX-ZE
Form Factor	PS/2	PS/2	PS/2	PS/2	PS/2
Wattage	250W	300W	400W	500W	700W
80 Plus Grade	Bronze	Bronze	Bronze	Bronze	Bronze
Input Range	90 ~ 264 V_{AC}	90 ~ 264 V_{AC}	90 ~ 264 V_{AC}	90 ~ 264 V_{AC}	90 ~ 264 V_{AC}
Output Range	+3.3V @ 20 A +5 V @ 21 A +12 V1 @ 16 A +12 V2 @ 16 A -12 V @ 0.3 A -5 V @ 0.3A +5 Vsb @ 2.5 A	+3.3V @ 11.12 A +5 V @ 13.2 A +12 V @ 7.64 A +12 VCPU @ 8 A -12 V @ 0.1 A -5V @ 0.05 A +5 Vsb @ 1.39 A	+3.3V @ 21 A +5 V @ 20 A +12 V1 @ 16 A +12 V2 @ 16 A -12 V @ 0.5 A -5V @ 0.3 A +5 Vsb @ 3 A	+3.3V @ 24 A +5 V @ 20 A +12 V1 @ 16 A +12 V2 @ 16 A -12 V @ 0.5 A -5V @ 0.3 A +5 Vsb @ 3 A	+3.3V @ 24 A +5 V @ 30 A +12 V1 @ 16 A +12 V2 @ 16 A +12 V3 @ 16 A +12 V4 @ 16 A -12 V @ 0.5 A -5V @ 0.5 A +5 Vsb @ 4 A
MTBF(hrs)	100,000 @ 25° C	100,000 @ 25° C	100,000 @ 25° C	100,000 @ 25° C	100,000 @ 25° C
Dimensions (W x H x D)	150 x 86 x 140 mm (5.91" x 3.39" x 5.51")	150 x 86 x 140 mm (5.91" x 3.39" x 5.51")	150 x 86 x 140 mm (5.91" x 3.39" x 5.51")	150 x 86 x 140 mm (5.91" x 3.39" x 5.51")	150 x 86 x 140 mm (5.91" x 3.39" x 5.51")
Safety	CE, FCC, UL, CB, TUV, CCC, KC	CE, FCC, UL, CB, TUV, CCC, KC, BSMI	CE, FCC, UL, CB, TUV, CCC, KC	CE, FCC, UL, CB, TUV, CCC, KC	CE, FCC, UL, CB, TUV, CCC, KC
Compatible Chassis	ACP-2000/IPC-602, ACP-4000, ACP-4010, ACP-4020, ACP-4320, ACP-4340, ACP-4360 IPC-6606, IPC-6608, IPC-5122, IPC-7130, IPC-7130L, IPC-7132, IPC-7220, IPC-510, IPC-610-F, IPC-610-H, IPC-610-L, IPC-611, IPC-619	ACP-2000/IPC-602, ACP-4000, ACP-4010, ACP-4020, ACP-4320, ACP-4340, ACP-4360 IPC-6606, IPC-6608, IPC-5122, IPC-7130, IPC-7130L, IPC-7132, IPC-7220, IPC-510, IPC-610-F, IPC-610-H, IPC-610-L, IPC-611, IPC-619, HPC-5000	ACP-2000/IPC-602, ACP-4000, ACP-4010, ACP-4020, ACP-4320, ACP-4340, ACP-4360 IPC-6606, IPC-6608, IPC-5122, IPC-7130, IPC-7130L, IPC-7132, IPC-7220, IPC-510, IPC-610-F, IPC-610-H, IPC-610-L, IPC-611, IPC-619, HPC-7442	ACP-2000/IPC-602, ACP-4000, ACP-4010, ACP-4020, ACP-4320, ACP-4340, ACP-4360 IPC-6606, IPC-6608, IPC-5122, IPC-7130, IPC-7130L, IPC-7132, IPC-7220, IPC-510, IPC-610-F, IPC-610-H, IPC-610-L, IPC-611, IPC-619, IPC-631, HPC-7442	ACP-2000/IPC-602, ACP-4000, ACP-4010, ACP-4020, ACP-4320, ACP-4340, ACP-4360, IPC-510 , IPC-610-F, IPC-610-H , IPC-610-L, IPC-611, IPC-619 HPC-7442

PS/2 DC Power Supplies



Model Name	PS-300ATX-DC48E
Wattage	300W
Input Range	72 ~ 36 V_{DC}, 15 A
Outputs	+5 V @ 30 A (0.3 A min) +3.3 V @ 28 A (0.3 A min) +12 V @ 15 A (0.2 A min) -12 V @ 0.8 A, -5 V @ 0.3 A, +5 Vsb @ 2 A
MTBF (hrs)	100,000 @ 25° C
Dimensions (W x H x D)	150 x 86 x 140 mm (5.91" x 3.39" x 5.51")
Safety	UL, TUV, CB, CCC
Compatible Chassis	ACP-2000, ACP-4000, ACP-4010, ACP-4020, ACP-4320, ACP-4340, ACP-4360, IPC-602, IPC-610

80 Plus 1U/2U Single Power Supplies





Part Number	PS8-500U2-XE	96PS-A700W1U
Form Factor	2U	1U
Wattage	500W	700W
80 Plus Grade	Bronze	Bronze
Input Range	90 ~ 264 V_{AC}	90 ~ 264 V_{AC}
Output Range	+3.3V @ 20 A, +5 V @ 20 A +12 V1 @ 16 A, +12 V1 @ 16 A +12 V3 @ 16 A, -12 V @ 0.5A +5 Vsb @ 3 A	+3.3V @ 24 A, +5 V @ 30 A +12 V1 @ 16 A, +12 V2 @ 16 A +12 V3 @ 16 A, +12 V4 @ 16 A -12V @ 0.5 A, +5 Vsb @ 4 A
MTBF(hrs)	100,000 @ 25° C	100,000 @ 25° C
Dimensions (W x H x D)	70 x 100 x 240 mm (2.75" x 3.93" x 9.44")	40 x 100 x 250 mm (1.57" x 3.93" x 9.84")
Safety	CE, FCC, UL, CB, TUV, CCC, KC	CE, FCC, UL, CB, TUV, CCC, KC
Compatible Chassis	HPC-7242, HPC-7282, HPC-7320, HPC-8316	HPC-7320, HPC-7400, HPC-8316

80 Plus Flex ATX Power Supplies





Part Number	PS8-250FATX-XE	PS8-350FATX-XE
Form Factor	Flex ATX	Flex ATX
Wattage	250W	350W
80 Plus Grade	Bronze	Bronze
Input Range	90 ~ 264 V_{AC}	90 ~ 264 V_{AC}
Output Range	+3.3V @ 12 A +5 V @ 14 A +12 V @ 18 A -12 V @ 0.3 A +5 Vsb @ 2.5 A	+3.3V @16A +5 V @ 16 A +12 V1 @ 18 A +12 V2 @ 18 A -12 V @ 0.3A +5 Vsb @ 3 A
MTBF(hrs)	100,000 @ 25° C	100,000 @ 25° C
Dimensions (W x H x D)	81.5 x 40.5 x 150 mm (3.2" x 1.59" x 5.9")	81.5 x 40.5 x 150 mm (3.2" x 1.59" x 5.9")
Safety	CE, FCC, UL, CB, TUV, CCC, KC	CE, FCC, UL, CB, TUV, CCC, KC, BSMI
Compatible Chassis	ACP-1010/ACP-1320, ACP-2010/ACP-2320, ACP-4D00, IPC-3012, IPC-6806S, IPC-6806S-D, IPC-6806, IPC-5120, IPC-7120	ACP-1010/ACP-1320, ACP-2010/ACP-2320, ACP-4D00, IPC-603, IPC-3012, IPC-6806S, IPC-6806S-D, IPC-6806, IPC-5120, IPC-7120, ACP-2020

Power Supplies

80 Plus Redundant Power Supplies



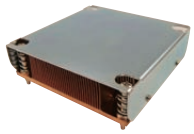




Part Number	RPS8-350ATX-XE	RPS8-500ATX-XE	RPS8-750ATX-XE	RPS8-500U2-XE	RPS8-700U2-XE
Form Factor	Mini Redundant	Mini Redundant	Mini Redundant	2U Redundant	CRPS
Wattage	350W 1+1	500W 1+1	750W 1+1	500W 1+1	700W 1+1
80 Plus Grade	Gold	Gold	Gold	Bronze	Gold
PMBus	Ver. 1.2	Ver. 1.2	Ver. 1.2	-	Ver. 1.2
Input Range	90 ~ 264 V_{AC}	90 ~ 264 V_{AC}	90 ~ 264 V_{AC}	90 ~ 264 V_{AC}	90 ~ 264 V_{AC}
Output Range	+3.3V @ 20 A +5 V @ 20 A +12 V1 @ 29 A -5 V @ 0.3 A -12 V@ 0.5 A +5 Vsb @ 2 A	+3.3V @ 20 A +5 V @ 20 A +12 V1 @ 16 A +12 V2 @ 16A +12 V3 @ 16A -5 V @ 0.3 A -12 V@ 0.5 A +5 Vsb @3 A	+3.3V @ 24 A +5 V @ 30 A +12 V @ 60.9 A -12 V@ 0.5 A +5 Vsb @ 4 A	+3.3V @ 20 A +5 V @ 25 A +12 V @ 40.2 A -12 V@ 0.5 A +5 Vsb @3.52 A	+3.3V @ 25 A +5 V @ 25 A +12 V @ 57 A -12 V@ 0.3 A +5 Vsb @4.5 A
MTBF(hrs)	100,000 @ 25° C	100,000 @ 25° C	100,000 @ 25° C	100,000 @ 25° C	100,000 @ 25° C
Dimensions (W x H x D)	150 x 84 x 190 mm (5.9" x 3.3" x 7.48")	150 x 84 x 190 mm (5.9" x 3.3" x 7.48")	150 x 84 x 200 mm (5.9" x 3.3" x 7.87")	85 x 86.6 x 217 mm (3.34" x 3.4" x 8.54")	75.6 x 83.8 x 250 mm (2.97" x 3.29" x 9.84")
Safety	CE , FCC, UL , CB, TUV, CCC, KC	CE , FCC, UL , CB, TUV, CCC, KC	CE , FCC, UL , CB, TUV, CCC, KC	CE , FCC, UL , CB, TUV, CCC, KC	CE , FCC, UL , CB, TUV, CCC, KC
Compatible Chassis	IPC-7130, IPC-7130L, IPC-7220, IPC-610, IPC-611,ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-622, HPC-7442	IPC-7130, IPC-7130L, IPC-7220, IPC-610, IPC-611,ACP-4000, ACP-4010, ACP-4320, ACP-4340, ACP-4360, IPC-622, HPC-7442, IPC-631	ACP-4000, ACP-4010, IPC-622, HPC-7442	HPC-7242, HPC-7282, HPC-7320, HPC-8316, ACP-2020	HPC-7242, HPC-7282, HPC-7320, HPC-8316
Single Module Part Number	96PRSM-A350WMIN	96PSRM-A500W1U-2	96PSRM-A750W1U	96PSRM-A500WFX	-

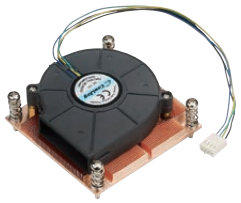
CPU Coolers

Intel® LGA1150/1151/1155/1156






Model Name	1960049408N001	1960047831N001	1960052651N021	1960047669N001
Thermal Dispatch Performance	Intel LGA1156/1155/1150/1151 84W	Intel LGA1156/1155/1150/1151 95W	Intel LGA 1156/1155/1150/1151 80W	Intel LGA1156/1155/1150/1151 95W
Fan	-	7 cm/35.5CFM 5400+/- 10% RPM	6 cm/28.77 CFM 5800 +/- 10% RPM	8 cm/57.5 CFM 4500+/- 10% RPM
Heatsink Material	Copper	Copper	Aluminum	Aluminum & Copper heart
Heatsink Dimensions	85 × 85 × 26 mm (3.35" x 3.35" x 1.02")	83 x 83 x 39.26 mm (3.27" x 3.27" x 1.54")	90x 90x 68 mm (3.54" x 3.54" x 2.68")	90 x 90 x 35 mm (3.54" x 3.54"x 1.38")
Dimensions	-	83 x 83 x 55.73mm (3.27" x 3.27" x 2.17")	90x 90x 68 mm (3.54" x 3.54" x 2.68")	120 x 120 x 77 mm (4.72" x 4.72" x 3.03")
Weight	611 g	582 g	417g	500 g
Minimum Chassis Height	1U	2U	2U/4U	4U
Recommended Chassis	ACP-1010/1320 HPC-7140/7180	Backplane version of chassis	Motherboard/ backplane version of chassis	Motherboard version of chassis
Supported Boards	AIMB-580/701/780/781/782/784; PCE-5125/5126/5127/7127/5026 ASMB-584/585/781/782/784/785	AIMB-580/581/582; PCE-5125/5126/5127/ 5026/7127/5128/7128	AIMB-705/785 PCE-5029/5129/7129/3029/4129 ASMB-584/585/781/782/784/785	AIMB-580/581/582/701/780/ 781/782/784



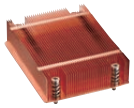
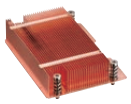

Model Name	1960053065N001	1960053207N001
Thermal Dispatch Performance	Intel LGA1155/1150/1151 55W Up to Core i3	Intel LGA1155/1150/1151 65W Up to Core i7
Fan	77 x 75 x 15.4 mm/11.83 CFM 5500+/- 10% RPM	9 cm/45.09 CFM 4400 +/- 10% RPM
Heatsink Material	Copper	Aluminum & Copper
Heatsink Dimensions	84 x 84 x 13 mm (3.32" x 3.32" x 0.51")	92.9 x 92.2 x 46 mm (3.67" x 3.67" x 1.82")
Dimensions	84 x 84 x 28 mm (3.32" x 3.32" x 1.11")	92.9 x 92.2 x 46 mm (3.67" x 3.67" x 1.82")
Weight	382g	250g
Minimum Chassis Height	1U	1.5U
Recommended Chassis	IPC-3026, IPC-3012	IPC-3026, IPC-3012
Supported Board	PCE-3026/3028/3029/4128/4129 AIMC-3200/3201/3420/3421/3202/3422	PCE-3026/3028/3029/4128/4129 AIMC-3200/3420/3201/3421/3202/3422

CPU Coolers

Intel® Xeon® LGA2011

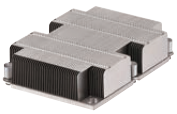





Part number	1960055362N001	1960065684N001	1960063011N001	1960063011N011	1960065593N001	1960065591N001	1960057226N001
Thermal Dispatch Performance	Up to 145W	Up to 160W	Up to 135W	Up to 120W	Up to 135W	Up to 135W	Up to 95W
Fan	6cm / 38.8CFM 6800 ± 10% RPM	9cm/108.08CFM 5000 ± 10% RPM	6cm/50.40CFM 9000± 10% RPM	6cm/50.40CFM 9000+/- 10% RPM(Puller Fan)	-	-	-
Heatsink Material	Aluminum Fins & Cu Block with 3 Heat Pipes	Aluminum Fins & Copper base with 3 Heat Pipes	Aluminum fins soldered Copper base with Heatpipe	Aluminum fins soldered Copper base with Heatpipe	Copper with vapor chamber	Copper with vapor chamber	Aluminum fins soldered Copper base with Heatpipe
Heatsink Dimensions (L x W x H)	90.0 x 90.0 x 63.9 mm (3.54" x 3.54" x 2.51")	88.2 x 88.2 x 112.15 mm (3.47" x 3.47" x 4.41")	107 x 70 x 64.0 mm (4.21" x 2.75" x 2.51")	107 x 70 x 64.0 mm (4.21" x 2.75" x 2.51")	106 x 82 x 27 mm (4.17" x 3.22" x 1.06")	106 x 82 x 27 mm (4.17" x 3.22" x 1.06")	90 x 90 x 25.5 mm (3.54" x 3.54" x 1")
Dimensions	90.0 x 90.0 x 65.6 mm (3.54" x 3.54" x 2.58")	88.2 x 88.2 x 112.15 mm (3.47" x 3.47" x 4.41")	94.0 x 70.0 x 64.0 mm (3.7" x 2.75" x 2.51")	94.0 x 70.0 x 64.0 mm (3.7" x 2.75" x 2.51")	106 x 82 x 27 mm (4.17" x 3.22" x 1.06")	106 x 82 x 27 mm (4.17" x 3.22" x 1.06")	90 x 90 x 25.5 mm (3.54" x 3.54" x 1")
Weight	413g	583g	319g	319g	405g	385g	197g
Minimum Chassis Height	2U	4U	2U	2U	1U	1U	1U
Supported Boards	ASMB-823/913/ 920/923	ASMB-823/913/ 920/923	ASMB-822/922/ 813	PCE-9228	ASMB-822/813 & 922 (For CPU1)	ASMB-922 (For CPU0)	ASMB-823/913/ 920/923
Remark	Square Type	Square Type	Narrow Type	Narrow Type	Narrow Type	Narrow Type	Square Type

Intel® Xeon® LGA3647

Part number	1960081603N001	1960081155N001
Thermal Dispatch Performance	Up to 205W	Up to 165W
Fan	6 cm/50.4 CFM 9000 ± 10% RPM	-
Heatsink Material	Aluminum Stack Fin & CU Block with heatpipe	Aluminum Stack Fin & CU Block with Heatpipe
Heatsink Dimensions (L x W x H)	108 x 78 x 64 mm (4.25" x 3.07" x 2.51")	107.75 x 78 x 25.5 mm (4.24" x 3.07" x 1")
Dimensions	108 x 78 x 64 mm (4.25" x 3.07" x 2.51")	107.75 x 78 x 25.5 mm (4.24" x 3.07" x 1")
Weight	464g	257.6g
Minimum Chassis Height	2U	1U
Supported Boards	ASMB-815/825/925/975	ASMB-815/825/925/975
Remark	Narrow Type	Narrow Type

Keyboards



IPC-KB-6302

Compact 104-key Keyboard

- 104-key with tactile response
- AT & PS/2 compatible
- Over 20 million life cycles
- Spiral cable with 6-pin PS/2 keyboard connector (not including PS/2 to 5-pin DIN PC/AT adapter)
- Dimensions (W x H x D): 400 × 40 × 188 mm (15.7" × 1.6" × 7.4")
- Language: English
- P/N: IPC-KB-6302



IPC-KB-6304

Compact 88-key Keyboard

- 88-key with membrane structure
- PC/AT, PS/2, DOSV compatible
- 5 million life cycles
- Spiral cable with 6-pin PS/2 keyboard connector (not including PS/2 to 5-pin DIN PC/AT adapter)
- Dimensions (W x H x D): 287 x 29 x 140 mm (11.3" × 1.14" × 5.5")
- Weight: 0.5 kg (1.1 lb)
- CE, FCC, UL, CSA, CNS compliant
- Language: English
- P/N: IPC-KB-6304



IPC-KB-6305

Compact 88-key Keyboard with Touchpad

- 88-key with membrane structure
- PC/AT, PS/2, DOSV compatible
- Built-in touchpad for pointing input device
- 5 million life cycles
- Spiral cable with PS/2 keyboard & mouse connector (not Including PS/2 to PC/AT and PS/2 to DB-9 adapters)
- Dimensions (W x H x D): 289 x 27 x 227 mm (11.4" × 1.06" × 8.9")
- Weight: 0.8 kg (1.76 lb)
- CE, FCC, UL, CSA, CNS compliant
- Language: English
- P/N: IPC-KB-6305

Accessories

Slide Rail



For 1U rackmount chassis

- 26" P/N: 9680009153
- Maximum acceptable load: 25kg
- 1 pair included



For 2U and higher rackmount chassis

- 26" P/N: 9680006905
- Maximum acceptable load: 45kg
- 1 pair included

Industrial Disk Tray/Bay



IPC-DT-5121/ IPC-DT-5121B

Shockproof industrial hard disk drive tray with cooling fan and optional front USB and PS/2 interfaces

- Accepted Device: 1 x 3.5" HDD (only for 9.5mm thickness)
- Cooling Fan: 1 x 4 cm
- Color (Codes): Gray (414U), Black (4C2X)
- Dimensions (W x H x D): 148.5 x 42.6 x 171 mm³ (5.84" x 1.67" x 6.73")



IPC-DT-3120E

Mobile rack for converting a 3.5" drive bay to dual 2.5" SATA HDD/SSD trays

- Accepted Device: 2 x 2.5" SATA HDD/SSD (only for HDD/SSD thickness less than 9.6 mm)
- Dimensions (W x H x D): 101.6 x 25.4 x 139 mm³ (4" x 1" x 5.47")



9892200013E

Module to convert a 5.25" drive bay to a slim ODD and a 3.5" drive bay

- Accepted Device: 3.5" device x 1, slim ODD x 1



IPC-DT-5230E

Mobile rack for converting dual 5.25" drive bays to three 3.5" SATA HDD trays

- Accepted Device: 3.5" SATA HDD x 3 or 2.5" SATA HDD/SSD x3
- Cooling Fan: 1 x 8 cm
- Dimensions (W x H x D): 146.5 x 86 x 225 mm³ (5.76" x 3.38" x 8.85")



989K008733

A frame to securely fix a 3.5" HDD in a 5.25" drive bay

- Accepted Device: 3.5" HDD x 1



989K008734

A frame to securely fix two 2.5" HDDs/SSDs in a 3.5" drive bay

- Accepted Device: 2.5" SATA HDD/SSD x 2 (only for HDD thickness less than 9.6 mm)



96RACK-5SS-CAGE-CR

Mobile rack for converting one 5.25" drive bay to four 2.5" SAS/SATA HDD/SSD trays

- Accepted Device: 2.5" SAS/SATA HDD/SSD x 4
- Dimension (W x H x D): 146 x 41 x 170 mm³ (5.74" x 1.61" x 6.69")



96RACK-5-SS-CR-B2

Mobile rack for converting one 5.25" drive bay to one slim ODD and two 2.5" SAS/SATA HSS/SSD trays

- Accepted Device : slim ODD x 1 , 2.5" SAS/ SATA HDD/SSD x 2
- Dimension (W x H x D): 146 x 41.3 x 170 mm³ (5.74" x 1.62" x 6.69")

Add-on Card Hold Down Kit



98RKBTOS09E

Add-on card hold down kit (short)

- Bracket Q'ty of each kit : 5 pcs
- For PCI add-on card with height 72.3mm ~ 87.3mm and PCIe add-on card with height 81.7mm ~ 91.8mm



98RKBTOS10E

Add-on card hold down kit (long)

- Bracket Q'ty of each kit : 5 pcs
- For PCI add-on card with height 54.8mm ~ 75.7mm and PCIe add-on card with height 59.3mm ~ 80.2mm

Accessories

USB Cables



Part Number	1700008461	1700003195	1700002204	1700014398	1700020277-01
Description	USB 2.0 cable with 4 ports	USB 2.0 cable with 2 ports	USB 2.0 cable with 2 ports	USB 2.0 cable with 4 ports	USB 3.0 cable with 2 ports
Cable Length	30.5 cm (12.01")	17.5 cm (6.89")	27 cm (11.92")	30.5 cm (12.01")	30 cm (11.81")
Remark	For ATX/Micro-ATX MB, full-sized SBC			For half-sized SBC	For ATX/Micro-ATX MB, full/half-sized SBC

SATA Cables



Part Number	96CB-SATAPOWER-6P2	1700022749-11	1700019381	1700007351	1700003194
Description	SATA power cable for slim ODD	SATA power cable for HDD/SSD	SATA data cable (right angle)	SATA data cable (right angle)	SATA data cable
Cable Length	10 cm (3.94")	10 cm (3.94")	55 cm (21.65")	40 cm (15.75")	60 cm (23.62")
Remark	Big 4 P to SATA power cable for Slim ODD	Big 4 P to SATA power cable for HDD/SSD	SATA data cable with 1 right angle and 1 vertical connectors	SATA data cable with 1 right angle and 1 vertical connectors	SATA data cable with vertical connectors with locks

COM and Printer Ports Cables



Part Number	1701092300	1701090401	1700020294-01	1700008762
Description	COM cable with 2 ports	COM cable with 1 port	Printer (Parallel) port cable	COM cable with 2 ports
Cable Length	28.5 cm (11.22")	40 cm (15.75")	42.0 cm (16.54")	22.5 cm (8.86")
Remark	For ATX/Micro-ATX MB, full-sized SBC		For ATX/Micro-ATX MB, full-sized SBC	For half-sized SBC

Accessories

Video Cables





Part Number	PCE-DP10-00A1E	1700021831-01	1700008822-11
Description	Display port cable	DP to DVI port cable	DVI to DVI port cable
Cable Length	25 cm (9.84")	30 cm (11.81")	30 cm (11.81")
Remark	Video cable for converting on board DP connector to external DP port supporting DP 1.1a/1.2 signaling	Video cable for converting on board DP connector to external DVI-D port	Video cable for converting on board DVI connector to external DVI-D port

Other Cables





Part Number	1700006915	1700006916	1700024754-01
Description	Cable for ACP-4000MB front LED board	Cable for IPC-610MB-H front LED board	Power cable for GPU card
Cable Length	60 cm (23.62")	60 cm (23.62")	10 cm (3.93")
Remark	For those Advantech motherboards with VOLT1 connector too far away from the chassis LED board		2*B4P Molex power connector to 6+2P PCIe power cable for GPU card

15

Industrial Ethernet Solutions

EN50155 Switches		
EKI-6558TI **EKI-6559TMI**	EN50155 IP67 8-port M12 Managed Ethernet Switch with Wide Temperature EN50155 IP67 8-port M12 + 2-port Fiber Optic Managed Ethernet Switch with Wide Temperature	*15-2*
EKI-6528TI **EKI-6528TPI**	EN50155 8-port M12 Unmanaged Switch with Wide Temperature EN50155 8-port M12 Unmanaged PoE Switch with Wide Temperature	*15-3*
EKI-9516-WV	EN 50155 16-port Full Gigabit Managed Ethernet Switch	*15-4*
EKI-9516P	EN 50155 16-port Full Gigabit Managed Ethernet Switch with PoE/PoE+	*15-5*
PoE Switches		
EKI-7710E-2CP **EKI-7710E-2CPI**	8FE+2G Port Gigabit Managed Redundant Industrial PoE Switch	*15-6*
EKI-7712E-4FP **EKI-7712E-4FPI**	8FE+4SFP Port Gigabit Managed Redundant Industrial PoE Switch	*15-7*
EKI-2706E-1GFP/I **EKI-2706G-1GFP/I**	4FE+1GE+1G SFP Unmanaged Industrial PoE Switch 5GE+1G SFP Unmanaged Industrial PoE Switch	*15-8*
EKI-2701HPI	IEEE 802.3af/at Gigabit PoE+ Injector with Wide Temperature	*15-9*
Industrial Protocol Managed Ethernet Switches		
EKI-5528-PNMA	8 Port Entry-Level Managed Switch Supporting PROFINET MRP Master	*15-10*
EKI-5526/I-EI **EKI-5528/I-EI**	16 port Entry-Level Managed Switch Supporting EtherNet/IP 8 port Entry-Level Managed Switch Supporting EtherNet/IP	*15-11*
EKI-5626C/CI-MB **EKI-5629C/CI-MB**	16 + 2G Combo ports Entry-Level Managed Switch Supporting Modbus/TCP 8 + 2G Combo ports Entry-Level Managed Switch Supporting Modbus/TCP	*15-12*
Managed Switches		
EKI-7710E-2C **EKI-7710E-2CI**	8FE+2G Port Gigabit Managed Redundant Industrial Switch	*15-13*
EKI-7712E-4F **EKI-7712E-4FI**	8FE+4SFP Port Gigabit Managed Redundant Industrial Switch	*15-14*
EKI-7720E-4F **EKI-7720E-4FI**	16FE+4SFP Port Gigabit Managed Redundant Industrial Switch	*15-15*
Unmanaged Ethernet Switches		
EKI-7629C/CI	8+2G Combo Port Gigabit Unmanaged Industrial Ethernet Switch	*15-16*
EKI-2525/I **EKI-2528/I**	5-port Unmanaged Industrial Ethernet Switch 8-port Unmanaged Industrial Ethernet Switch	*15-17*
EKI-2728MI	6G+2G Multi-Mode Unmanaged Ethernet Switch with Wide Temperature	*15-18*
Serial Device Servers		
EKI-1521/CI/I **EKI-1522/CI/I** **EKI-1524/CI/I**	1-port RS-232/422/485 Serial Device Server 2-port RS-232/422/485 Serial Device Server 4-port RS-232/422/485 Serial Device Server	*15-19*
EKI-1528/I/TI **EKI-1526/I/TI**	8-port RS-232/422/485 Serial Device Server 16-port RS-232/422/485 Serial Device Server	*15-20*
Modbus Gateways		
EKI-1221/CI/I **EKI-1222/CI/I** **EKI-1224/CI/I**	1-port Modbus Gateway 2-port Modbus Gateway 4-port Modbus Gateway	*15-21*
Wireless Serial Device Servers/Modbus Gateways		
EKI-1361 **EKI-1362** **EKI-1361-MB** **EKI-1362-MB**	1-port RS-232/422/485 to 802.11a/b/g/n WLAN Serial Device Server 2-port RS-232/422/485 to 802.11a/b/g/n WLAN Serial Device Server 1-port RS-232/422/485 to 802.11a/b/g/n WLAN Modbus Gateway 2-port RS-232/422/485 to 802.11a/b/g/n WLAN Modbus Gateway	*15-22*
Industrial Protocol Gateways		
EKI-1222EIMS	Modbus RTU/TCP to EtherNet/IP Protocol Gateway	*15-23*
EKI-1222PNMS	Modbus RTU/TCP to PROFINET Protocol Gateway	*15-24*
EKI-1222ECMS	Modbus RTU/TCP to EtherCAT Protocol Gateway	*15-25*
Cellular Routers/Gateways		
EKI-1331	1-port RS-232/485 to HSPA+ IP Gateway	*15-26*
SmartStart	Intelligent 4G LTE Router & Gateway	*15-27*
SmartFlex	Flexible, Modular LTE Router	*15-28*
SmartMotion™	Twin Module Cellular Router for Redundant Reliability	*15-29*
LoRa Gateways/Nodes		
SmartSwarm 243	LoRa Gateway	*15-30*
BB-WSL1/2C2112T **BB-WSL1/2C31000** **BB-WSL1/2M31000**	Industrial LoRa Private Node	*15-31*
IoT and Network Edge Platfrom		
SmartSwarm 341	Asset Integration Gateway	*15-32*
SmartSwarm 351	Modbus Eavesdrop to MQTT IIoT Gateway	*15-33*
WzzardC™ Intelligent Edge Node	With SmartMesh IP and Bluetooth LE	*15-34*
Wzzard™ Intelligent Edge Node	With SmartMesh IP and Bluetooth LE	*15-35*
Wireless Access Points/CPE		
EKI-6331AN	IEEE 802.11 a/n Wi-Fi AP/Client	*15-36*
EKI-6332GN	IEEE 802.11 b/g/n Wi-Fi AP/Client	*15-37*



To view all of Advantech's Industrial Ethernet Solutions, please visit www.advantech.com/products.

EKI-6558TI
EKI-6559TMI

EN50155 IP67 8-port M12 Managed Ethernet Switch with Wide Temperature Support

EN50155 IP67 8-port M12 + 2-port Fiber Optic Managed Ethernet Switch with Wide Temperature Support



Features

- EN50155 certified
- Supports X-Ring Pro function (ultra high-speed recovery time < 20 ms)
- Wide redundant power design
- Provides M12 connector with IP67 protection
- Provides Waterproof fiber optic connector
- TFTP firmware updates and system configure restore and backup
- Dual 12 ~ 48 V_{DC} power input and 1 relay output
- Supports wide operating temperature -40 ~ 75 °C
- Provides 100 Mbps LC type connector

Introduction

The EKI-6558TI and EKI-6559TMI are EN50155 certified IP67 wide temperature industrial switches which are especially designed for railway industry and harsh environments. M12 connectors secure highly reliable connectivity for industrial communication applications. EN50155 certification ensures use for railway application. EKI-6559TMI also provides two additional fiber optic ports to extend communication range. Both EKI-6558TI and EKI-6559TMI provide Advantech's X-Ring Pro protocol, which enables users to establish a redundant Ethernet network with ultra high-speed recovery (less than 20 ms). They also support advanced network standards to optimize network performance, reduce maintenance cost, and secure network safety.

Specifications

Communications

Standard	IEEE 802.3, 802.3u, 802.3x, 802.3ad, 802.1D, 802.1w, 802.1p, 802.1Q, 802.1X
LAN	10/100Base-T (X), 100Base-FX
Transmission Speed	Up to 100 Mbps

Interface

Ethernet	M12, 4-pole D-coded, Female x 8
Fiber Optic	LC type waterproof x 2, Multi-mode (EKI-6559TMI)
Console	M12, 8-pole A-coded, Female x 1

Network Management

Configuration	Web browser, Telnet, Serial console, TFTP, SNMPv1/v2c/v3, Port Speed/Duplex Configuration, IPv6
VLAN	IEEE 802.1Q, GVRP, Port-based VLAN
Redundancy	Advantech X-Ring Pro (Recovery time < 20 ms at 250 pcs full loading ring structure), Dual Homing, Dual Ring, Couple Ring, 802.1w/D RSTP/STP
Security	IP Access security, port security, DHCP Server, Port and IP Binding, 802.1X Port Access Control, SSL
Traffic Control	IGMP Snooping/Query for multicast group management, Port Trunking, Static/802.3ad, LACP Rate limit and storm control, IEEE 802.1p QoS CoS/TOS/DSCP priority queuing, IEEE 802.3x flow control
Diagnostics	Port Mirroring, Real-time traffic statistic, MAC Address Table, SNTP, Syslog, Email Alert, SNMP Trap, RMON

Mechanism

Enclosure	IP67, aluminum shell with solid mounting kits
Dimensions (W x H x D)	193 x 176 x 62.5 mm (7.59" x 6.93" x 2.46")
Mounting	Wall

Power

Power Consumption	Max. 8.1 W
Power Input	12 ~ 48 V_{DC}, redundant dual inputs
Power Connector	M12, 5-pole A-coded, male x 1
P-Fail Output	1A @ 24 V_{DC}
P-Fail Connector	M12, 8-pole A-coded, Female x 1

Protection

Power Reverse	Present

Environment

Operating Temperature	-40 ~ 75 °C (-40 ~ 167 °F)
Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
Operating Humidity	5 ~ 95% (non-condensing)
Storage Humidity	0 ~ 95% (non-condensing)
MTBF	388,201 hours (EKI-6558TI) 320,420 hours (EKI-6559TMI)

Certification

Safety	UL 508
EMI	FCC Part 15 Subpart B Class A, EN 55022 Class A
EMS	EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8
Shock	IEC 61373
Freefall	IEC 60068-2-32
Vibration	IEC 61373
Railway	EN50155, EN 50121-3-2, EN 50121-4

Ordering Information

EKI-6558TI	EN50155 8-port M12 Managed Ethernet Switch
EKI-6559TMI	EN50155 8-port M12+ 2-port FX Managed Ethernet Switch

EKI-6528TI
EKI-6528TPI

EN50155 8-port M12 Unmanaged Switch with Wide Temperature Support

EN50155 8-port M12 Unmanaged PoE Switch with Wide Temperature Support



Features

- Auto Bypass between Port 1 and Port 2
- EN50155 certified
- Wide redundant power design
- 8-port 10/100 Mbps M12 type connector with IP40 protection
- 4-port PoE type M12 (EKI-6528TPI)
- Dual redundant power input
- Supports wide operating temperature -40 ~ 75 °C

Introduction

The EKI-6528TI and EKI-6528TPI are EN50155 certified industrial switches with IP40 protection and wide temperature support designed for railway applications. EKI-6528TPI provides four PoE ports that support IEEE 802.3af and can provide up to 15.4 watts of power per port. M12 connectors ensure highly reliable connectivity for industrial communication applications. With IP40 compact metal housings, these switches are protected against dusty environments and are a good fit for many industrial applications. Under no-power condition, 'Auto Bypass' function ensures the Ethernet signal connection through internal circuitry. This feature provides non-stop communication to rolling stock even if no power exists in some of the carriages.

Specifications

Communications

- **Standard** IEEE 802.3
IEEE 802.3u
IEEE 802.3x
IEEE 802.3af
- **LAN** 10/100Base-T (X)
- **Transmission Speed** Up to 100 Mbps

Interface

- **Ethernet** M12, 4-pole D-coded, Female x 8

Mechanism

- **Enclosure** IP40 protected metal shell
- **Dimensions (W x H x D)** 92 x 180 x 42 mm (3.62" x 7.08" x 1.65")
- **Mounting** DIN-rail, Wall

Power

- **Power Consumption** Max. 3.36 W (EKI-6528TI)
Max. 72 W (EKI-6528TPI)
- **Power Input** 24 ~ 48 V_{DC}, redundant dual inputs (for EKI-6528TPI)
12 ~ 48 V_{DC}, redundant dual inputs (for EKI-6528TI)
- **Power Connector** M12, 5-pole A-coded, male x 1
- **P-Fail Output** 1A @ 24 V_{DC}
- **P-Fail Connector** M12, 8-pole A-coded, Female x 1

Protection

- **Power Reverse** Present
- **Overload Current** Present

Environment

- **Operating Temperature** -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 391,307 hours (EKI-6528TI)
348,384 hours (EKI-6528TPI)

Certification

- **Safety** UL 60950-1
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 Class A
- **EMS** EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
- **Shock** IEC 61373
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 61373
- **Railway** EN50155, EN 50121-3-2, EN 50121-4
- **Patent** http://www.advantech.com/legal/patent

Ordering Information

- **EKI-6528TI** EN50155 8-port M12 Unmanaged Ethernet Switch
- **EKI-6528TPI** EN50155 8-port M12 Unmanaged PoE Switch

EKI-9516-WV

EN 50155 16-port Full Gigabit Managed Ethernet Switch



Features

- Complies with EN50155
- All Gigabit connections support dual ring protection and non-blocking traffic forwarding
- 12 x M12 Gigabit ports and 2 pairs M12 Gigabit ports with bypass relay function
- X-Ring Pro supports rapid and predictable convergence
- Provides M12 connector with IP67 protection
- Operating Temperature: -40 ~ 70 °C
- Wide Range Power Input (24/36/48/72/96/110 V_{DC})

Introduction

EKI-9516 M12 Managed Ethernet Switch is designed for railway applications, including rolling stock. EKI-9516 switch uses M12 connectors to ensure tight, robust connections, and to guarantee reliable operation against environmental disturbances, such as vibration and shock. EKI-9516 provides 16 Gigabit Ethernet M12 ports. In addition, EKI-9516 provides a wide power input range of 24/36/48/72/96/110 V_{DC}; the dual, isolated power input increases the reliability of your communications system. The -40 to 70 °C operating temperature and IP67-rated waterproof enclosure allow deployment in harsh environments. EKI-9516 is compliant with the essential sections of the European railway standard EN 50155, EN50121-3-2 covering operating temperature, power input voltage, surge, ESD, and vibration, making the switches suitable for a variety of industrial applications.

Specifications

Interface

I/O Port	16 x 10/100/1000Base-T M12 X-Code
Console Port	M12 A-Code
F/W Backup Port	USB (M12 A-Code)
Power Connector	M23 6 pin

Physical

Enclosure	Aluminum Shell
Protection Class	IP 67
Installation	Wall Mount, DIN Rail (Optional)
Dimensions (W x D x H)	254 x 174 x 64.5 mm (10" x 6.85" x 2.54")
Weight	3.6 kg

LED Display

System LEDs	PWR1, PWR2, SYS, CFG, ALM
Port LED	Data

Environment

Operating Temperature	-40 ~ 70 °C (-40 ~ 158 °F)
Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
Ambient Relative Humidity	5 ~ 95% (non-condensing)

Power

Power Consumption	~ 26.4 Watts (System)
Power Input	24/36/48/72/96/110 V_{DC} dual inputs Supports Overload Current Protection Supports Reverse Polarity Protection

Certification

EMI	FCC Part 15 Subpart B Class A CE EN55022 (CISPR) EN55024 Class A
EMS	EN61000-4-2 (ESD); EN61000-4-3 (RS); EN61000-4-4 (EFT); EN61000-4-5 (Surge); EN61000-4-6 (CS)
Shock	IEC 61373
Freefall	IEC 60068-2-32
Vibration	IEC 61373
Rail Traffic	EN 50155; EN50121-3-2

L2 Features

L2 MAC Address	16K
Jumbo Frame	9KB
VLAN Group	4093 (VLAN ID 1~4093)
VLAN	Mac based VLAN, Protocol based VLAN, IP subnet based VLAN, Port based VLAN, GVRP
Port Mirroring	Per port, Multi-source port
IP Multicast	IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
Storm Control	Broadcast, Multicast, Unknown unicast
Spanning Tree	IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring Pro

QoS

Priority Queue Scheduling	WRR (Weighted Round Robin), SP (Strict Priority)
Class of Service	IEEE 802.1p based CoS, IP TOS, DSCP based CoS
Rate Limiting	Egress Rate limit, Ingress Rate limit
Link Aggregation	IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

Security

Port Security	Static, Dynamic
Authentication	802.1x (Port-Based), RADIUS, TACACS+
ACL	550 rules
Advanced Security	IP Source Guard

Management

DHCP	Client, Server, Relay, Option 66/67
Access	SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
Security Access	SSH 2.0, SSL
Software Upgrade	TFTP, HTTP, Dual Image
NTP	NTP client

Ordering Information

EKI-9516-C0IDW10E	16x M12 GbE Managed Ethernet Switch including 24/36/48/72/96/110 V_{DC} dual power inputs

EKI-9516P

EN 50155 16-port Full Gigabit Managed Ethernet Switch with PoE/PoE+



Features

- Complies with EN50155
- All Gigabit connections support dual ring protection and non-blocking traffic forwarding
- 12 x M12 Gigabit ports and 2 pairs M12 Gigabit ports with bypass relay function
- X-Ring Pro supports rapid and predictable convergence
- IEEE 802.3at PoE+ to supply 30W power
- IEEE 802.3af PoE to supply 15.4 power
- IEEE 802.3af/802.3at per port with system PoE power management
- Provides M12 connector with IP67 protection
- Operating Temperature: -40 ~ 70 °C

Introduction

EKI-9516P M12 Managed Ethernet Switch is designed for railway applications, including rolling stock. EKI-9516P switch uses M12 connectors to ensure tight, robust connections, and to guarantee reliable operation against environmental disturbances, such as vibration and shock. EKI-9516P provides 16 Gigabit Ethernet M12 ports with 12 IEEE 802.3at/af compliant PoE+/PoE ports. The PoE+/PoE switch is classified as power source equipment (PSE) and provides up to 90 watts of power per system, and can be used for IEEE 802.3at/af compliant powered devices (PDs), such as IP cameras, wireless access points, and IP phones. In addition, EKI-9516P provides a wide power input range of 24/36/48 V_{DC}, 72/96/110 V_{DC}; the dual, isolated power input increases the reliability of your communications system. The -40 to 70 °C operating temperature and IP67-rated waterproof enclosure allow deployment in harsh environments. EKI-9516P is compliant with the essential sections of the European railway standard EN 50155, EN50121-3-2 covering operating temperature, power input voltage, surge, ESD, and vibration, making the switches suitable for a variety of industrial applications.

Specifications

Interface

- **I/O Port** 16 x 10/100/1000BaseT M12 X-Code
- **Console Port** M12 A-Code
- **F/W Backup Port** USB (M12 A-Code)
- **Power Connector** M23 6 pin

Physical

- **Enclosure** Aluminum Shell
- **Protection Class** IP 67
- **Installation** Wall Mount, DIN Rail (Optional)
- **Dimensions (W x D x H)** 254 x 174 x 64.5 mm (10" x 6.85" x 2.54")
- **Weight** 3.6 kg

LED Display

- **System LEDs** PWR1, PWR2, SYS, CFG, ALM
- **Port LED** Data, PoE

Environment

- **Operating Temperature** -40 ~ 70 °C (-40 ~ 158 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Ambient Relative Humidity** 5 ~ 95% (non-condensing)

Power

- **Power Consumption** ~ 26.4 Watts (System)
  ~90 Watts (Power Source Equipment)
  Supports up to 12 ports PoE/PoE+
- **Power Input** 24 / 36 / 48 V_{DC} dual inputs (EKI-9516P-LV)
  72 / 96 / 110 V_{DC} dual inputs (EKI-9516P-HV)
  Supports Overload Current Protection
  Supports Reverse Polarity Protection

Certification

- **EMI** FCC Part 15 Subpart B Class A
  CE EN55022 (CISPR)
  EN55024 Class A
- **EMS** EN61000-4-2 (ESD); EN61000-4-3 (RS); EN61000-4-4 (EFT); EN61000-4-5 (Surge); EN61000-4-6 (CS)
- **Shock** IEC 61373
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 61373
- **Rail Traffic** EN 50155; EN50121-3-2
- **Patent** http://www.advantech.com/legal/patent

L2 Features

- **L2 MAC Address** 16K
- **Jumbo Frame** 9KB
- **VLAN Group** 4093 (VLAN ID 1~4093)
- **VLAN** Mac based VLAN, Protocol based VLAN, IP subnet based VLAN, Port based VLAN, GVRP
- **Port Mirroring** Per port, Multi-source port
- **IP Multicast** IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- **Storm Control** Broadcast, Multicast, Unknown unicast
- **Spanning Tree** IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring Pro

QoS

- **Priority Queue Scheduling** WRR (Weighted Round Robin), SP (Strict Priority)
- **Class of Service** IEEE 802.1p based CoS, IP TOS, DSCP based CoS
- **Rate Limiting** Egress Rate limit, Ingress Rate limit
- **Link Aggregation** IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

Security

- **Port Security** Static, Dynamic
- **Authentication** 802.1x (Port-Based), RADIUS, TACACS+
- **ACL** 550 rules
- **Advanced Security** IP Source Guard

Management

- **DHCP** Client, Server, Relay, Option 66/67
- **Access** SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security Access** SSH 2.0, SSL
- **Software Upgrade** TFTP, HTTP, Dual Image
- **NTP** NTP client

Ordering Information

- **EKI-9516-P0IDL10E** 16 x M12 Managed Ethernet Switch with PoE/PoE +, including 24/36/48 V_{DC} dual power inputs
- **EKI-9516-P0IDH10E** 16 x M12 Managed Ethernet Switch with PoE/PoE +, including 72/96/110 V_{DC} dual power inputs

EKI-7710E-2CP
EKI-7710E-2CPI

8FE+2G Port Gigabit Managed Redundant Industrial PoE Switch



Features

- 8 x IEEE 802.3 af/at PoE Fast Ethernet ports + 2 x Gigabit Copper/SFP combo ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- IXM function enables fast deployment
- Security: 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption), RADIUS
- Management: SNMP v1/v2c/v3, WEB, Telnet, Standard MIB, Private MIB
- -40 ~ 75 °C wide-range operating temperature (EKI-7710E-2CPI)
- Dual 24 ~ 48 V_{DC} power input and 1 relay output

Introduction

The EKI-7710E-2CP/2CPI supports eight Power over Ethernet (PoE) ports and two Gigabit combo ports. It can provide up to 30 watts per port to fulfill high power consumption PD (Power Device). It features Advantech's IXM function, this can benefit users with fast deployment and can dramatically save engineers time and cost. The EKI-7710E series also supports NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7710E series is equipped with X-Ring Pro which can achieve ultra high speed recovery times of less than 20ms to ensure network stability.

Specifications

Interface

- **I/O Port** 8 x 10/100Base-T/TX RJ-45
  2 x RJ-45/SFP(mini-GBIC)Combo port
- **Console port** RS-232 (RJ45)
- **Power Connector** 6-pin screw Terminal Block (including relay)

Physical

- **Enclosure** Metal Shell
- **Protection Class** IP 30
- **Installation** DIN-Rail
- **Dimensions (W x H x D)** 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

LED Display

- **System LED** PWR1, PWR2, SYS, Alarm and R.M.
- **Port LED** Link / Speed / Activity / PoE

Environment

- **Operating Temperature** -40 ~ 75 °C (-40 ~ 167 °F) 7710E-2CPI
  -10 ~ 60 °C (-40 ~ 140 °F) 7710E-2CP
- **Storage Temperature** -40 ~ 85 °C
- **Ambient Relative Humidity** 10 ~ 95% (non-condensing)
- **Humidity** 10 ~ 95% (non-condensing)

Power

- **Power Consumption** 12.1W @ 48V_{DC} (System)
- **Power Input** 24 ~ 48 V_{DC}, redundant dual power input
- **Power Budget** 120W
- **Fault Output** 1 Relay Output

Certification

- **EMI** CE, FCC Class A
- **Safety** UL508
  UL60950*, C1D2*
- **EMC** EN 61000-4-2
  EN 61000-4-3
  EN 61000-4-4
  EN 61000-4-5
  EN 61000-4-6
  EN 61000-4-8
  EN50121-4*
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6
- **Traffic control** NEMA TS2*

*= Compliant

- **Patent** http://www.advantech.com/legal/patent

L2 Features

- **L2 MAC Address** 8K
- **Jumbo Frame** 9216 Bytes
- **VLAN Group** 256 (VLAN ID 1 ~ 4094)
- **VLAN Arrange** Port based VLAN, Q-in-Q (VLAN Stacking), GVRP
- **Port Mirroring** Per port, Multi-source port,
- **IP Multicast** IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- **Storm Control** Broadcast, Multicast, Unknown unicast
- **Redundancy** IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring Pro, with ultra high-speed recovery time less than 20ms

QoS

- **Priority Queue Scheduling** WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
- **Class of Service** IEEE 802.1p Based CoS, IP TOS, DSCP based CoS
- **Rate Limiting** Ingress Rate limit, Egress Rate limit
- **Link Aggregation** IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

Security

- **Port Security** Static, Dynamic
- **Authentication** 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

- **DHCP** Client, Server, Option66/67/82
- **Access** SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security access** SSH2.0, SSL
- **Software upgrade** TFTP, HTTP, Dual Image
- **NTP** SNTP client

Ordering Information

- **EKI-7710E-2CPI-AE** 8FE + 2G Combo Port Managed PoE Ethernet Switch w/Wide Temp
- **EKI-7710E-2CP-AE** 8FE + 2G Combo Port Managed PoE Ethernet Switch

EKI-7712E-4FP
EKI-7712E-4FPI

8FE+4SFP Port Gigabit Managed Redundant Industrial PoE Switch



Features

- 8 x IEEE 802.3 af/at PoE Fast Ethernet ports + 4 SFP ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- IXM function enables fast deployment
- Security: 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption), RADIUS
- Management: SNMP v1/v2c/v3, WEB, Telnet, Standard MIB, Private MIB
- NEMA TS2 for Traffic Control
- EN50121-4 approval for Railway trackside deployment
- -40 ~ 75 °C wide-range operating temperature (EKI-7712E-4FPI)
- Dual 48 V_{DC} power input and 1 relay output

Introduction

EKI-7712E-4FP/4FPI supports 8 Fast Ethernet IEEE 802.3 af/at PoE ports and 4 SFP (mini-GBIC) ports. They can provide up to 30 watts per port to fulfill high power consumption PD (Power Device) requirements. They are embedded with Advantech's IXM function, which can benefit users for fast deployment and can dramatically save engineers time and cost. The EKI-7712E series also supports NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7712E series is equipped with X-Ring Pro which can achieve ultra high speed recovery times of less than 20 ms to ensure network stability. The switch also features a wide -40° to 75 °C operating temperature (EKI-7712E-4FPI) and NEMA TS2 rating, making the switch an ideal solution for use in traffic applications. EKI-7712E-4FP/4FPI has successfully passed the EN50121-4 European railway standard requirements for emissions and railway platform and trackside deployment.

Specifications

Interface

- **I/O Port** 8 x 10/100Base-T/TX RJ-45
  4 x SFP (mini-GBIC) port
- **Console port** RS-232 (RJ45)
- **Power Connector** 6-pin screw Terminal Block (including relay)

Physical

- **Enclosure** Metal Shell
- **Protection Class** IP 30
- **Installation** DIN-Rail
- **Dimensions (W x H x D)** 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

LED Display

- **System LED** PWR1, PWR2, SYS, Alarm and R.M.
- **Port LED** Link / Speed / Activity

Environment

- **Operating Temperature** -40 ~ 75 °C (-40 ~ 167 °F) (7712E-4FPI)
  -10 ~ 60 °C (-40 ~ 140 °F) (7712E-4FP)
- **Storage Temperature** -40 ~ 85 °C
- **Ambient Relative Humidity** 10 ~ 95% (non-condensing)
- **Humidity** 10 ~ 95% (non-condensing)

Power

- **Power Consumption** 12.1W @ 48V_{DC} (System)
- **Power Input** 48 V_{DC} (46 to 57 V_{DC}),
  53 -57 V_{DC} is recommended for 802.3at,
  redundant dual power input
- **Power Budget** 240W
- **Fault Output** 1 Relay Output

Certification

- **EMI** CE, FCC Class A
- **Safety** UL61010-2-201
  IEC60950*
- **EMC** EN 61000-4-2
  EN 61000-4-3
  EN 61000-4-4
  EN 61000-4-5
  EN 61000-4-6
  EN 61000-4-8
  EN50121-4
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6
- **Traffic control** NEMA TS2
  *= Compliant
- **Patent** http://www.advantech.com/legal/patent

L2 Features

- **L2 MAC Address** 8K
- **Jumbo Frame** 9216 Bytes
- **VLAN Group** 256 (VLAN ID 1 ~ 4094)
- **VLAN Arrange** Port based VLAN, Q-in-Q (VLAN Stacking), GVRP
- **Port Mirroring** Per port, Multi-source port,
- **IP Multicast** IGMP Snooping v1/v2/v3, MLD
  Snooping, IGMP Immediate leave
- **Storm Control** Broadcast, Multicast, Unknown unicast
- **Redundancy** IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring Pro, with ultra high-speed recovery time less than 20ms

QoS

- **Priority Queue Scheduling** WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
- **Class of Service** IEEE 802.1p Based CoS, IP TOS, DSCP based CoS
- **Rate Limiting** Ingress Rate limit, Egress Rate limit
- **Link Aggregation** IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

Security

- **Port Security** Static, Dynamic
- **Authentication** 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

- **DHCP** Client, Server, Option66/67/82
- **Access** SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security access** SSH2.0, SSL
- **Software upgrade** TFTP, HTTP, Dual Image
- **NTP** SNTP client

Ordering Information

- **EKI-7712E-4FPI-AE** 8FE + 4SFP Port Managed PoE Ethernet Switch w/Wide Temp
- **EKI-7712E-4FP-AE** 8FE + 4SFP Port Managed PoE Ethernet Switch

EKI-2706E-1GFP/I
EKI-2706G-1GFP/I

4FE+1GE+1G SFP Unmanaged Industrial PoE Switch
5GE+1G SFP Unmanaged Industrial PoE Switch



Features

- Supports 10/100/1000 Mbps Auto Negotiation (EKI-2706G)
- Supports jumbo frame transmission up to 9 kbytes
- DIN-rail with IP30 metal mechanism
- Redundant 48 V_{DC} power input
- Provides broadcast storm protection
- 4 x IEEE 802.3 af/at PoE /PoE+ ports + 1 x Gigabit Copper + 1 Gigabit SFP ports

Introduction

The EKI-2706 series supports 48V_{DC} redundant power input and is secured with a double protection mechanism: Power Polarity Reverse Protection and an Overload Current Fuse. The EKI-2706 series supports up to 4-port IEEE 802.3 af/at PoE /PoE+ ports. Each port of EKI-2706 has two LED's to show the link status, transmission speed, and collision status. It also provides a relay output for an event alarm. In the event of a power failure, the built-in LED will activate the alarm to notify, administrators. Engineers can simply verify the hardware status by checking the LED to make troubleshooting quick and easy. EKI-2706 comes with a compact metal housing rated at IP30 to protect against dusty industrial environments.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.1ab, 802.1z
- **LAN** EKI-2706E-1GFP/I :
  4 x 10/100Mbps(RJ-45)+1 x 100/1000Mbps(RJ-45)+1 x 100/1000Mbps(SFP)
  EKI-2706G-1GFP/I :
  5 x 100/1000Mbps(RJ-45)+1 x 100/1000Mbps(SFP)
- **Transmission Distance** Ethernet: Up to 100 m (4-wire Cat.5e, Cat.6 RJ45 cable)
  SFP: Up to 110 km (depends on SFP)
- **Transmission Speed** Ethernet: 10/100 Mbps Auto-Negotiation
  Gigabit Copper: 10/100/1000 Mbps, Auto-Negotiation
  Gigabit Fiber: Up to 1000 Mbps

Interface

- **Connectors** 5 x RJ-45 + 1 x SFP
  6-pin removable screw terminal (power & relay)
- **LED Indicators** P1, P2, P-Fail
  Link / Speed / Activity

Power

- **Power Consumption** Max. 2 W
- **Power Input** 48 V_{DC}
- **Fault Output** 1 Relay Output, 1 A @ 24 V_{DC}
- **Power Budget** 90W

Mechanism

- **Dimensions (W x H x D)** 30 x 140 x 95 mm (1.18" x 5.51" x 3.74")
- **Enclosure** IP30, metal shell with solid mounting kits
- **Mounting** DIN-rail, Wall

Protection

- **Power Reverse** Present
- **Overload current** Present

Environment

- **Operating Temperature** EKI-2706E-1GFP & EKI-2706G-1G1FP :
  -10 ~ 60 °C (-40 ~ 140 °F)
  EKI-2706E-1GFPI & EKI-2706G-1G1FPI :
  -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 10 ~ 95% (non-condensing)
- **Storage Humidity** 10 ~ 95% (non-condensing)
- **MTBF** 1,697,086 hours

Certification

- **Safety** UL 60950
- **EMI** CE, FCC Class A
- **EMS** EN 61000-4-2
  EN 61000-4-3
  EN 61000-4-4
  EN 61000-4-5
  EN 61000-4-6
  EN 61000-4-8
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6
- **Patent** http://www.advantech.com/legal/patent

Ordering Information

- **EKI-2706E-1GFP-AE** 4FE+1GE+1G SFP Unmanaged Industrial PoE Switch
- **EKI-2706E-1GFPI-AE** 4FE+1GE+1G SFP Unmanaged Industrial PoE Switch w/Wide temp.
- **EKI-2706G-1GFP-AE** 5GE+1G SFP Unmanaged Industrial PoE Switch
- **EKI-2706G-1GFPI-AE** 5GE+1G SFP Unmanaged Industrial PoE Switch w/ Wide temp.

EKI-2701HPI

IEEE 802.3af/at Gigabit PoE+ Injector with Wide Temperature Support



Features

- Supports 10/100/1000Base-T (X) for PoE+ OUT and Data IN
- IEEE 802.3af/at compliant, supports a full 30 watt output
- Power input (24 ~ 48 V_{DC}), inject 30 W for each port
- Provides slim size and DIN-rail/Wall mount with IP30 metal mechanism
- Supports operating temperatures from -40 to 75 °C

Introduction

With PoE (Power over Ethernet) technology, both data and electrical power can be transferred to Ethernet-enabled devices using a standard CAT5 cable. EKI-2701HPI is compliant with IEEE 802.3af/at and inputs 30W for PD device. This product can operate in a wide temperature range between -40 to 75 °C and support wide power input range between 24 to 48 V_{DC} .

Specifications

Communications	Standard	IEEE 802.3, 802.3u, 802.3x, 802.3af/at, 802.3ab
	LAN	10/100/1000Base-T (X)
	Transmission Distance	Up to 100 m
	Transmission Speed	up to 1000 Mbps
Interface	Connectors	PoE OUT: RJ45 DATA IN: RJ45 6-pin removable screw terminal
	LED Indicators	PWR1, PWR2, PoE status, Link/Activity
Power	Power Consumption	Max. 33.36 W @ 24 V_{DC} (Full load PoE)
	Power Input	24 ~ 48 V_{DC}, redundant dual power inputs
	Power Output	30 W @ 24 V_{DC}
Mechanism	Dimensions (W x H x D)	37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
	Enclosure	IP30, Metal shell with solid mounting kits
	Mounting	DIN-rail, Wall
Protection	Reverse	Present
	Overload Current	Present
Environment	Operating Temperature	-40 ~ 75 °C (-40 ~ 167 °F)
	Storage Temperature	-40 ~ 85 °C (-40 ~ 185 °F)
	Operating Humidity	5 ~ 95% (non-condensing)
	Storage Humidity	0 ~ 95% (non-condensing)
	MTBF	1,419,817 hours
Certification	Safety	UL508
	EMI	FCC Part 15 Subpart B Class A, EN 55022 Class A
	EMS	EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8
	Shock	IEC 60068-2-27
	Freefall	IEC 60068-2-32
	Vibration	IEC 60068-2-6

Ordering Information

Part Number	Description
EKI-2701HPI	PoE+ Injector, support a full 30 W output

EKI-5528-PNMA

8 Port Entry-Level Managed Switch Supporting PROFINET MRP Master



Features

- 8 ports Fast Ethernet RJ-45
- Entry-Level Managed Switch
- IXM function enables fast deployment
- Provides GSDML files
- Management: SNMP v1/v2c/v3, WEB, Standard MIB, Private MIB
- Supports Media Redundancy Protocol (MRP Master)

Introduction

The EKI-5528-PNMA is a new generation of entry-level managed switch products. They support media redundancy protocol master and meet the PROFINET real time standard. The devices come with a compact metal housing that is IP30 rated to protect against dusty industrial environments. The wide power input power (8.4 to 52.8 V_{DC}) is dedicated to operating in areas of unstable power and rugged environments.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.1D, 802.1w,802.1p, 802.1Q, 802.1X, 802.3AD,802.3az
- **LAN** 10/100Base-T (X)
- **Transmission Distance** Ethernet: Up to 100 m
- **Transmission Speed Ethernet** 10/100 Mbps Auto-Negotiation

Interface

- **I/O Port** 8 x RJ-45
- **Power Connector** 6-pin screw Terminal Block (including relay)

Physical

- **Enclosure** Metal Shell
- **Protection Class** IP 30
- **Installation** DIN-Rail
- **Dimensions (W x H x D)** 43 x 120 x 84 mm (1.69" x 4.72" x 3.30")

LED Display

- **System LED** PWR1, PWR2, P-Fail, Loop / Status
- **Port LED** Link / Speed / Activity

Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
- **Storage Temperature** -40 ~ 85 °C
- **Ambient Relative Humidity** 10 ~ 95% (non-condensing)
- **Humidity** 10 ~ 95% (non-condensing)
- **MTBF** 4,176,861 hours

Power

- **Power Consumption** Max. 5.2 W
- **Power Input** 12 ~ 48 V_{DC} (8.4~52.8 V_{DC}), redundant dual power input
- **Fault Output** 1 Relay Output

Certification

- **EMI** CE, FCC Class A
- **Safety** UL508, Class 1 Division 2, ATEX
- **EMC** EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-8
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6

L2 Features

- **L2 MAC Address** 8K
- **Jumbo Frame** 9216 Bytes
- **VLAN Group** 256 (VLAN ID 1~4094)
- **VLAN Arrange** Port based VLAN, GVRP
- **Port Mirroring** Per port, Multi-source port,
- **IP Multicast** IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- **Storm Control** Broadcast, Multicast, Unknown unicast
- **Redundancy** IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring, with ultra high-speed recovery time less than 20ms

QoS

- **Priority Queue** WRR (Weighted Round Robin), SP (Strict Scheduling
- **Scheduling** Priority) Hybrid Priority
- **Class of Service** IEEE 802.1p Based CoS, IP TOS, DSCP based CoS
- **Rate Limiting** Ingress Rate limit, Egress Rate limit
- **Link Aggregation** IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

Security

- **Port Security** Static, Dynamic, MAC address filtering
- **Authentication** 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

- **Access** SNMP v1/v2c/v3, WEB, Standard MIB, Private MIB
- **Software upgrade** TFTP, HTTP, Dual Image
- **NTP** SNTP client
- **Data** Syslog
- **Protocols** IPV6, LLDP, PROFINET, Media Redundancy Protocol Master

Ordering Information

- **EKI-5528-PNMA-AE** 8 port entry-level managed switch supports PROFINET MRP Master

EKI-5526/I-EI
EKI-5528/I-EI

16 port Entry-Level Managed Switch Supporting EtherNet/IP

8 port Entry-Level Managed Switch Supporting EtherNet/IP



Features

- 16 ports Fast Ethernet RJ-45 (EKI-5526/I-EI) & 8 ports Fast Ethernet RJ-45 (EKI-5528/I-EI)
- Entry-Level Managed Switch
- IXM function enables fast deployment
- Provides EtherNet/IP EDS (Electronic Data Sheet) file, AOI (Add-On Instructions) file, and FactoryTalk® View faceplate
- Management: SNMP v1/v2c/v3, WEB, Standard MIB, Private MIB

Introduction

EKI-5526/I-EI and EKI-5528/I-EI are a new generation of entry-level managed switch products. They support the EtherNet/IP protocol to communicate with Ethernet/IP based PLCs. Advantech also provides FactoryTalk® View compliant faceplate, so users can easily integrate the switch with Allen-Bradley® PLCs. "Electronic Data Sheet" (EDS files) are also available for users to customize their faceplate. The devices come in a compact metal housing that is IP30 rated to protect against dusty industrial environments. The wide power input power (8.4 to 52.8 V_{DC}) is dedicated to operating in areas of unstable power and rugged environments.

Specifications

Communications

Standard	IEEE 802.3, 802.3u, 802.3x, 802.1D, 802.1w,802.1p, 802.1Q, 802.1X, 802.3AD,802.3az
LAN	10/100Base-T (X),
Transmission Distance	Ethernet: Up to 100 m
Transmission Speed Ethernet	10/100 Mbps Auto-Negotiation

Interface

I/O Port	EKI-5526/I-EI: 16 x RJ-45 EKI-5528/I-EI: 8 x RJ-45
Power Connector	6-pin screw Terminal Block (including relay)

Physical

Enclosure	Metal Shell
Protection Class	IP 30
Installation	DIN-Rail
Dimensions (W x H x D)	EKI-5526/I-EI: 74 x 120 x 84 mm (2.91" x 4.72" x 3.31") EKI-5528/I-EI: 43 x 120 x 84 mm (1.69" x 4.72" x 3.31")

LED Display

System LED	PWR1, PWR2, P-Fail, Loop detection
Port LED	Link / Speed / Activity

Environment

Operating Temperature	EKI-5526I-EI & EKI-5528I-EI: -40 ~ 75 °C (-40 ~ 167 °F) EKI-5526-EI & EKI-5528-EI: -10 ~ 60 °C (14 ~ 140 °F)
Storage Temperature	-40 ~ 85 °C
Ambient Relative Humidity	10 ~ 95% (non-condensing)
Humidity	10 ~ 95% (non-condensing)
MTBF	EKI-5528/I-EI: 4,176,861 hours EKI-5526/I-EI: 2,788,343 hours

Power

Power Consumption	EKI-5526/I-EI: Max. 8 W EKI-5528/I-EI: Max. 5.2 W
Power Input	12 ~ 48 V_{DC} (8.4 ~ 52.8 V_{DC}), redundant dual power input
Fault Output	1 Relay Output

Certification

EMI	CE, FCC Class A
Safety	UL508, Class 1 Division 2, ATEX
EMC	EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-8
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

L2 Features

L2 MAC Address	8K
Jumbo Frame	9216 Bytes
VLAN Group	256 (VLAN ID 1 ~ 4094)
VLAN Arrange	Port based VLAN, GVRP
Port Mirroring	Per port, Multi-source port,
IP Multicast	IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
Storm Control	Broadcast, Multicast, Unknown unicast
Redundancy	IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring, with ultra high-speed recovery time less than 20ms

QoS

Priority Queue Scheduling	WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
Class of Service	IEEE 802.1p Based CoS, IP TOS, DSCP based CoS
Rate Limiting	Ingress Rate limit, Egress Rate limit
Link Aggregation	IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

Security

Port Security	Static, Dynamic, MAC address filtering
Authentication	802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

DHCP	Client, Option 82
Access	SNMP v1/v2c/v3, WEB, Standard MIB, Private MIB
Software upgrade	TFTP, HTTP, Dual Image
NTP	SNTP client
Data	Syslog
Protocols	IPV6, LLDP, EtherNet/IP

Ordering Information

EKI-5526-EI-AE	16 port entry-level managed switch support EtherNet/IP
EKI-5526I-EI-AE	16 port entry-level managed switch support EtherNet/IP w/wide temp.
EKI-5528-EI-AE	8 port entry-level managed switch support EtherNet/IP
EKI-5528I-EI-AE	8 port entry-level managed switch support EtherNet/IP w/wide temp.

EKI-5626C/CI-MB
EKI-5629C/CI-MB

16 + 2G Combo ports Entry-Level Managed Switch Supporting Modbus/TCP
8 + 2G Combo ports Entry-Level Managed Switch Supporting Modbus/TCP



Features

- 16 Fast Ethernet ports + 2 Gigabit Copper/SFP combo ports (EKI-5626C/CI-MB) & 8 Fast Ethernet ports + 2 Gigabit Copper/SFP combo ports (EKI-5629C/CI-MB)
- Entry-Level Managed Switch
- IXM function enables fast deployment
- Management: SNMP v1/v2c/v3, WEB, Standard MIB, Private MIB

Introduction

The EKI-5626C/CI-MB and EKI-5629C/CI-MB are a new generation of entry-level managed switch products. They support basic Layer 2 managed functions such as Ring, SNMP, IGMP etc. They also support Modbus/TCP and can easily integrate with SCADA. The devices come with a compact metal housing that is IP30 rated to protect against dusty industrial environments. The wide power input (8.4 to 52.8 V_{DC}) is designed to operate in areas of unstable power and rugged environments.

Specifications

Communications

Standard	IEEE 802.3, 802.3u, 802.3x, 802.1D, 802.1w,802.1p, 802.1Q, 802.1X, 802.3AD,802.3az
LAN	10/100Base-T (X),
Transmission Distance	Ethernet: UP to 100m (4-wire Cat.5e, Cat.6 RJ-45 cable suggested for Gigabit port) SFP: UP to 110km (depends on SFP)
Transmission Speed Ethernet	Ethernet: 10/100Mbps Auto-Negotiation Gigabit Copper: 10/100/1000Mbps, Auto-Negotiation Gigabit Fiber: UP to 1000Mbps

Interface

I/O Port	EKI-5626C/CI-MB: 16 x RJ-45 + 2 x RJ-45/SFP combo ports EKI-5629C/CI-MB: 8 x RJ-45 + 2 x RJ-45/SFP combo ports
Power Connector	6-pin screw Terminal Block (including relay)

Physical

Enclosure	Metal Shell
Protection Class	IP 30
Installation	DIN-Rail
Dimensions (W x H x D)	74 x 120 x 84 mm (2.91" x 4.72" x 3.31")

LED Display

System LED	PWR1, PWR2, P-Fail, Loop detection
Port LED	Link / Speed / Activity

Environment

Operating Temperature	EKI-5626CI-MB & EKI-5629CI-MB: -40 ~ 75 °C (-40 ~ 167 °F) EKI-5626C-MB & EKI-5629C-MB: -10 ~ 60 °C (14 ~ 140 °F)
Storage Temperature	-40 ~ 85 °C
Ambient Relative Humidity	10 ~ 95% (non-condensing)
Humidity	10 ~ 95% (non-condensing)
MTBF	EKI-5626C/CI-MB: 2,825,281 hours EKI-5629C/CI-MB: 3,183,604 hours

Power

Power Consumption	EKI-5626C/CI-MB: Max 8.2W EKI-5629C/CI-MB: Max 5.8W
Power Input	12 ~ 48 V_{DC} (8.4 ~ 52.8 V_{DC}), redundant dual power input
Fault Output	1 Relay Output

Certification

EMI	CE, FCC Class A
Safety	UL508, Class 1 Division 2, ATEX
EMC	EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-8
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

L2 Features

L2 MAC Address	8K
Jumbo Frame	9216 Bytes
VLAN Group	256 (VLAN ID 1 ~ 4094)
VLAN Arrange	Port based VLAN, GVRP
Port Mirroring	Per port, Multi-source port,
IP Multicast	IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
Storm Control	Broadcast, Multicast, Unknown unicast
Redundancy	IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring, with ultra high-speed recovery time less than 20ms

QoS

Priority Queue Scheduling	WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
Class of Service	IEEE 802.1p Based CoS, IP TOS, DSCP based CoS
Rate Limiting	Ingress Rate limit, Egress Rate limit
Link Aggregation	IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

Security

Port Security	Static, Dynamic, MAC address filtering
Authentication	802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

DHCP	Client, Option 82
Access	SNMP v1/v2c/v3, WEB, Standard MIB, Private MIB
Software upgrade	TFTP, HTTP, Dual Image
NTP	SNTP client
Data	Syslog
Protocols	IPV6, LLDP, Modbus/TCP

Ordering Information

EKI-5626C-MB-AE	16 + 2G Combo ports entry-level managed switch Support Modbus/TCP
EKI-5626CI-MB-AE	16 + 2G Combo ports entry-level managed switch support Modbus/TCP w/wide temp.
EKI-5629C-MB-AE	8 + 2G Combo ports entry-level managed switch support Modbus/TCP
EKI-5629CI-MB-AE	8 + 2G Combo ports entry-level managed switch support Modbus/TCP w/wide temp.

EKI-7710E-2C
EKI-7710E-2CI

8FE+2G Port Gigabit Managed Redundant Industrial Switch



Features

- 8 Fast Ethernet ports + 2 Gigabit Copper/SFP combo ports
- SFP socket for easy and flexible fiber expansion
- Redundancy: X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- IXM function enables fast deployment
- Security: 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption), RADIUS
- Management: SNMP v1/v2c/v3, WEB, Telnet, Standard MIB, Private MIB
- -40 ~ 75 °C wide-range operating temperature (EKI-7710E-2CI)
- Dual 12 ~ 48 V_{DC} power input and 1 relay output

Introduction

EKI-7710E-2C/2CI supports 8 Fast Ethernet ports and 2 Gigabit combo ports. It is embedded with Advantech's IXM function for fast deployment that can dramatically save engineers time and cost. The EKI-7710E series also support NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7710E series is equipped with X-Ring Pro which can achieve ultra high-speed recovery times of less than 20 ms to ensure network stability.

Specifications

Interface

- **I/O Port**: 8 x 10/100Base-T/TX RJ-45
2 x RJ-45/SFP (mini-GBIC) Combo port
- **Console port**: RS-232 (RJ45)
- **Power Connector**: 6-pin screw Terminal Block (including relay)

Physical

- **Enclosure**: Metal Shell
- **Protection Class**: IP 30
- **Installation**: DIN-Rail
- **Dimensions (W x H x D)**: 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

LED Displa

- **System LED**: PWR1, PWR2, SYS, Alarm and R.M.
- **Port LED**: Link / Speed / Activity

Environment

- **Operating Temperature**: -40 ~ 75 °C (-40 ~ 167 °F) 7710E-2CI
-10 ~ 60 °C (-40 ~ 140 °F) 7710E-2C
- **Storage Temperature**: -40 ~ 85 °C
- **Ambient Relative Humidity**: 10 ~ 95% (non-condensing)
- **Humidity**: 10 ~ 95% (non-condensing)

Power

- **Power Consumption**: 12.1W @ 48V_{DC} (System)
- **Power Input**: 12 ~ 48 V_{DC}, redundant dual power input
- **Fault Output**: 1 Relay Output

Certification

- **EMI**: CE, FCC Class A
- **Safety**: UL508
UL60950*, C1D2*
- **EMC**: EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
EN50121-4*
- **Shock**: IEC 60068-2-27
- **Freefall**: IEC 60068-2-32
- **Vibration**: IEC 60068-2-6
- **Traffic control**: NEMA TS2*

*= Compliant

L2 Features

- **L2 MAC Address**: 8K
- **Jumbo Frame**: 9216 Bytes
- **VLAN Group**: 256 (VLAN ID 1 ~ 4094)
- **VLAN Arrange**: Port based VLAN, Q-in-Q (VLAN Stacking), GVRP
- **Port Mirroring**: Per port, Multi-source port,
- **IP Multicast**: IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- **Storm Control**: Broadcast, Multicast, Unknown unicast
- **Redundancy**: IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring Pro, with ultra high-speed recovery time less than 20ms

QoS

- **Priority Queue Scheduling**: WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
- **Class of Service**: IEEE 802.1p Based CoS, IP TOS, DSCP based CoS
- **Rate Limiting**: Ingress Rate limit, Egress Rate limit
- **Link Aggregation**: IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

Security

- **Port Security**: Static, Dynamic
- **Authentication**: 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

- **DHCP**: Client, Server, Option66/67/82
- **Access**: SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security access**: SSH2.0, SSL
- **Software upgrade**: TFTP, HTTP, Dual Image
- **NTP**: SNTP client

Ordering Information

- **EKI-7710E-2CI-AE**: 8FE + 2G Combo Port Managed Ethernet Switch w/Wide Temp
- **EKI-7710E-2C-AE**: 8FE + 2G Combo Port Managed Ethernet Switch

EKI-7712E-4F
EKI-7712E-4FI

8FE+4SFP Port Gigabit Managed Redundant Industrial Switch



Features

- 8 Fast Ethernet ports + 4 SFP ports
- SFP socket for Easy and Flexible Fiber Expansion
- Redundancy: X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- IXM function enables fast deployment
- Security: 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption), RADIUS
- Management: SNMP v1/v2c/v3, WEB, Telnet, Standard MIB, Private MIB
- NEMA TS2 for Traffic Control
- EN50121-4 approval for Railway trackside deployment
- -40 ~ 75 °C wide-range operating temperature (EKI-7712E-4FI)
- Dual 12 ~ 48 V_{DC} power input and 1 relay output

Introduction

EKI-7712E-4F/4FI provides abundant ports to connect to many devices with 8 Fast Ethernet ports and 4 SFP (mini-GBIC) ports. It is embedded with Advantech's IXM function for fast deployment, which can dramatically save engineers time and cost. The EKI-7712E series also supports NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7712E series is equipped with X-Ring Pro which can achieve ultra high-speed recovery times of less than 20 ms to ensure network stability. The switch also features a wide -40 to 75 °C operating temperature (EKI-7712G-4FI) and NEMA TS2 rating, making the switch an ideal solution for use in traffic applications. EKI-7712E-4F/4FI has successfully passed the EN50121-4 European railway standard requirements for emissions and railway platform and trackside deployment.

Specifications

Interface

- **I/O Port**: 8 x 10/100Base-T/TX RJ-45; 4 x SFP (mini-GBIC) port
- **Console port**: RS-232 (RJ45)
- **Power Connector**: 6-pin screw Terminal Block (including relay)

Physical

- **Enclosure**: Metal Shell
- **Protection Class**: IP 30
- **Installation**: DIN-Rail
- **Dimensions (W x H x D)**: 74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

LED Display

- **System LED**: PWR1, PWR2, SYS, Alarm and R.M.
- **Port LED**: Link / Speed / Activity

Environment

- **Operating Temperature**: -40 ~ 75 °C (-40 ~ 167 °F) (7712E-4FI); -10 ~ 60 °C (-40 ~ 140 °F) (7712E-4F)
- **Storage Temperature**: -40 ~ 85 °C
- **Ambient Relative Humidity**: 10 ~ 95% (non-condensing)
- **Humidity**: 10 ~ 95% (non-condensing)

Power

- **Power Consumption**: 12.1W @ 48V_{DC} (System)
- **Power Input**: 12 ~ 48 V_{DC}, redundant dual power input
- **Fault Output**: 1 Relay Output

Certification

- **EMI**: CE, FCC Class A
- **Safety**: UL61010-2-201; IEC60950*
- **EMC**: EN 61000-4-2; EN 61000-4-3; EN 61000-4-4; EN 61000-4-5; EN 61000-4-6; EN 61000-4-8; EN50121-4*
- **Shock**: IEC 60068-2-27
- **Freefall**: IEC 60068-2-32
- **Vibration**: IEC 60068-2-6
- **Traffic control**: NEMA TS2*

*= Compliant

L2 Features

- **L2 MAC Address**: 8K
- **Jumbo Frame**: 9216 Bytes
- **VLAN Group**: 256 (VLAN ID 1 ~ 4094)
- **VLAN Arrange**: Port based VLAN, Q-in-Q (VLAN Stacking), GVRP
- **Port Mirroring**: Per port, Multi-source port,
- **IP Multicast**: IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- **Storm Control**: Broadcast, Multicast, Unknown unicast
- **Redundancy**: IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring Pro, with ultra high-speed recovery time less than 20ms

QoS

- **Priority Queue Scheduling**: WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
- **Class of Service**: IEEE 802.1p Based CoS, IP TOS, DSCP based CoS
- **Rate Limiting**: Ingress Rate limit, Egress Rate limit
- **Link Aggregation**: IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

Security

- **Port Security**: Static, Dynamic
- **Authentication**: 802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

- **DHCP**: Client, Server, Option66/67/82
- **Access**: SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
- **Security access**: SSH2.0, SSL
- **Software upgrade**: TFTP, HTTP, Dual Image
- **NTP**: SNTP client

Ordering Information

- **EKI-7712E-4FI-AE**: 8FE + 4SFP Port Managed Ethernet Switch w/Wide Temp
- **EKI-7712E-4F-AE**: 8FE + 4SFP Port Managed Ethernet Switch

EKI-7720E-4F
EKI-7720E-4FI

16FE+4SFP Port Gigabit Managed Redundant Industrial Switch



Features

- 16 Fast Ethernet ports + 4 SFP ports
- SFP socket for easy and flexible fiber expansion
- Redundancy: X-Ring Pro (ultra high-speed recovery time < 20 ms), RSTP/STP (802.1w/1D)
- IXM function enables fast deployment
- Security: 802.1x (port-based, MD5/TLS/TTLS/PEAP encryption),, RADIUS
- Management: SNMP v1/v2c/v3, WEB, Telnet, standard MIB, private MIB
- NEMA TS2 for traffic control
- EN50121-4 approval for railway trackside deployment
- -40 ~ 75 °C wide-range operating temperature (EKI-7720E-4FI)
- Dual 12 ~ 48 V_{DC} power input and 1 relay output

Introduction

EKI-7720E-4F/4FI provides users with abundant ports to connect to many devices with 16 Fast Ethernet ports and 4 SFP (mini-GBIC) ports. It is embedded with Advantech's IXM function, which can benefit users for fast deployment and can dramatically save engineers time and cost. The EKI-7720E series also supports NMS to help IT managers with networking maintenance and failure prevention. Finally, the EKI-7720E series is equipped with X-Ring Pro which can achieve ultra high speed recovery time of less than 20 ms to ensure network stability. The switch also features a wide -40° to 75 °C operating temperature (EKI-7720E-4FI).

Specifications

Interface

I/O Port	16 x 10/100Base-T/TX RJ-45 4 x SFP (mini-GBIC) port
Console port	RS-232 (RJ45)
Power Connector	6-pin screw Terminal Block (including relay)

Physical

Enclosure	Metal Shell
Protection Class	IP 30
Installation	DIN-Rail
Dimensions (W x H x D)	74 x 152 x 105 mm (2.91" x 5.98" x 4.13")

LED Display

System LED	PWR1, PWR2, SYS, Alarm and R.M.
Port LED	Link / Speed / Activity

Environment

Operating Temperature	-40 ~ 75 °C (-40 ~ 167 °F) (7720E-4FI) -10 ~ 60 °C (-40 ~ 140 °F) (7720E-4F)
Storage Temperature	-40 ~ 85 °C
Ambient Relative Humidity	10 ~ 95% (non-condensing)
Humidity	10 ~ 95% (non-condensing)

Power

Power Consumption	TBC
Power Input	12 ~ 48 V_{DC}, redundant dual power input
Fault Output	1 Relay Output

Certification

EMI	CE, FCC Class A
Safety	UL61010-2-201 IEC60950*
EMC	EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8 EN50121-4
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Traffic control	NEMA TS2

*= Compliant

L2 Features

L2 MAC Address	8K
Jumbo Frame	9216 Bytes
VLAN Group	256 (VLAN ID 1 ~ 4094)
VLAN Arrange	Port based VLAN, Q-in-Q (VLAN Stacking), GVRP
Port Mirroring	Per port, Multi-source port,
IP Multicast	IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
Storm Control	Broadcast, Multicast, Unknown unicast
Redundancy	IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring Pro, with ultra high-speed recovery time less than 20ms

QoS

Priority Queue Scheduling	WRR (Weighted Round Robin), SP (Strict Scheduling Priority) Hybrid Priority
Class of Service	IEEE 802.1p Based CoS, IP TOS, DSCP based CoS
Rate Limiting	Ingress Rate limit, Egress Rate limit
Link Aggregation	IEEE 802.3ad Dynamic Port Trunking, Static Port Trunking

Security

Port Security	Static, Dynamic
Authentication	802.1x (Port-Based, MD5/TLS/TTLS/PEAP Encryption)

Management

DHCP	Client, Server, Option66/67/82
Access	SNMP v1/v2c/v3, WEB, Telnet, RMON, Standard MIB, Private MIB
Security access	SSH2.0, SSL
Software upgrade	TFTP, HTTP, Dual Image
NTP	SNTP client

Ordering Information

EKI-7720E-4FI-AE	16FE + 4SFP Port Managed Ethernet Switch w/Wide Temp
EKI-7720E-4F-AE	16FE + 4SFP Port Managed Ethernet Switch

EKI-7629C/CI

8+2G Combo Port Gigabit Unmanaged Industrial Ethernet Switch



Features

- Provides 2 Gigabit Copper/SFP combo port plus 8 Fast Ethernet ports (EKI-7629C/CI)
- SFP socket for easy and flexible fiber expansion
- Supports Auto Negotiation and Auto MDI/MDI-X
- Provides flexible mounting: DIN-rail and Wall mount
- Supports Dual 12 ~ 48 V_{DC} power input and 1 relay output
- Supports wide operating temperatures from -40 to 75 °C (EKI-7629CI)

Introduction

Apart from the 2 Gbit fiber optic/copper combo ports, EKI-7629C/CI comes equipped with 8 x 10/100Base-TX fast Ethernet ports. Traditional RJ45 ports can be used for up-linking wide-band paths over short distances (< 100 m), or a replaceable SFP module can be used for networking and long distance transmissions. Long MTBF ensures low operation and maintenance cost. EKI-7629C/CI includes a switch controller that can automatically sense transmission speeds (10/100 Mbps). The RJ45 interface can also be auto-detected, so MDI or MDI-X is automatically selected and a cross-over cable is not required. All Ethernet ports have a memory buffer that supports store-and-forward mechanism, which assures that data can be transmitted properly.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3ab, 802.3u, 802.3x, 802.3z
- **LAN** 100Base-TX, 10/1000Base-T, Optional 100Base-FX, 1000Base-SX/LX/LHX/XD/ZX/EZX
- **Transmission Distance** Ethernet: Up to 100 m (4- wire Cat.5e, Cat.6 RJ45 cable suggested for Gigabit port)
  Gigabit Fiber: Up to 110 km (depending on SFP)
- **Transmission Speed** Ethernet: 10/100 Mbps Auto-Negotiation
  Gigabit Copper: 10/100/1000 Mbps, Auto-Negotiation
  SFP: Up to 1000 Mbps

Interface

- **Connectors** 8 x RJ45 (Ethernet) with 2 x RJ45/SFP (mini-GBIC) combo ports (EKI-7629C/CI)
  6-pin removable screw terminal (Power & Relay)
- **LED Indicators** System: PWR1, PWR2, P-Fail
  Gigabit Copper: Link/Activity, Speed (1000 Mbps)
  Gigabit SFP: Link/Activity

Power

- **Power Consumption** Max. 6.5 W
- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Fault Output** 1 Relay Output

Mechanism

- **Dimensions (W x H x D)** 79 x 152 x 105 mm (3.11" x 5.98" x 4.13")
- **Enclosure** IP30, Metal shell with solid mounting kits
- **Mounting** DIN-rail, Wall

Protection

- **Reverse Polarity** Present
- **Overload Current** Present

Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
  Wide Temp. Model -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 295,000 hours

Certification

- **Safety** UL 60950-1, CAN/CSA-C22.2 No.60950
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 Class A
- **EMS** EN 61000-4-2
  EN 61000-4-3
  EN 61000-4-4
  EN 61000-4-5
  EN 61000-4-6
  EN 61000-4-8
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6

Ordering Information

- **EKI-7629C** 8+2G Combo Port Unmanaged Ethernet Switch
- **EKI-7629CI** 8+2G Combo Port Unmanaged Ethernet Switch w/ Wide Temp

EKI-2525/I
EKI-2528/I

5-port Unmanaged Industrial Ethernet Switch

8-port Unmanaged Industrial Ethernet Switch



Features

- Provides 5/8 Fast Ethernet ports with Auto MDI/MDI-X
- Supports 10/100 Mbps Auto-Negotiation
- Provides broadcast storm protection
- Provides compact size with DIN-rail/Wall mount, and IP30 metal mechanism
- Supports redundant 12 ~ 48 V_{DC} power input and P-Fail relay
- Supports wide operating temperatures from -40 to 75 °C (EKI-2525I/EKI-2528I)

Introduction

The EKI-2525/2528 is a Fast Ethernet solution. Power is a +12 ~ 48 V^{DC} redundant input design, and is secured with a double protection mechanism: Power Polarity Reverse Protection and Overload Current Resetable Fuse. The former tolerates reverse power switching while the later secures the system from overload currents. As the power supply turns normal, EKI-2525/2528 will automatically get back to work. Each EKI-2525/2528 port has 2 LED's to show the link status transmission speed and collision status. It also provides a relay output for an event alarm. In the event of a power failure, the built-in LED will activate the alarm to notify administrators. Engineers can simply verify the hardware status by checking the LED, which makes troubleshooting quick and easy. EKI-2525/2528 comes with a compact metal IP30 rated housing to protect against dusty industrial environments.

Specifications

Communications

- **Standard IEEE** 802.3, 802.3u, 802.3x
- **LAN** 10/100Base-T (X)
- **Transmission Distance** Up to 100 m
- **Transmission Speed** Up to 100 Mbps

Interface

- **Connectors** 8 x RJ45 (EKI-2528) or 5 x RJ45 (EKI-2525)
  6-pin removable screw terminal (power & relay)
- **LED Indicators** P1, P2, P-Fail
  10/100T (X): Link/Activity, Duplex/Collision

Power

- **Power Consumption** EKI-2525/I: 2.88 Watts
  EKI-2528/I: 4.71 Watts
- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Fault Output** 1 Relay Output

Mechanism

- **Dimensions (W x H x D)** EKI-2525: 30 x 120 x 95 mm (1.18" x 4.72" x 3.74)
  EKI-2528: 30 x 140 x 95 mm (1.18" x 5.51" x 3.74)
- **Enclosure** IP30, Metal shell with solid mounting kits
- **Mounting** DIN-rail, Wall

Protection

- **Reverse Polarity** Present
- **Overload current** Present

Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
  -40 ~ 75 °C (-40 ~ 167 °F), (EKI-2525I and EKI-2528I)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 10 ~ 95% (non-condensing)
- **Storage Humidity** 10 ~ 95% (non-condensing)
- **MTBF** 388,566 hours (EKI-2528)
  412,590 hours (EKI-2525)

Certification

- **Safety** EKI-2525/I: UL/cUL 60950
  EKI-2528/I: UL/cUL 60950 Class I, Division 2, Groups A, B, C and D
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 Class A
- **EMS** EN 61000-4-2
  EN 61000-4-3
  EN 61000-4-4
  EN 61000-4-5
  EN 61000-4-6
  EN 61000-4-8
  Shock IEC 60068-2-27
  Freefall IEC 60068-2-32
  Vibration IEC 60068-2-6

Ordering Information

- **EKI-2525-BE** 5-port Ethernet Switch
- **EKI-2525I-BE** 5-port Ethernet Switch w/ Wide Temp
- **EKI-2528-BE** 8-port Ethernet Switch
- **EKI-2528I-BE** 8-port Ethernet Switch w/ Wide Temp

EKI-2728MI

6G+2G Multi-Mode Unmanaged Ethernet Switch with Wide Temperature Support



Features

- Supports 10/100/1000 Mbps Auto Negotiation
- Supports jumbo frame transmission up to 9kbytes
- Provides Slim size, DIN-rail with IP30 metal mechanism
- Provides broadcast storm protection
- Redundant DC power supply and one removable AC power input

Introduction

EKI-2728MI is a cost effective unmanaged industrial Ethernet switch which supports Gigabit Ethernet. It supports green power requirements and also supports advanced network standards to optimize network performance, reduce maintenance cost, and secure network safety.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.1ab, 802.1z
- **LAN** 10/100/1000Base-Tx
- **Transmission Distance** Ethernet: Up to 100 m
Fiber: Up to 2 km
- **Transmission Speed** Up to 1000 Mbps

Interface

- **Connectors** 6 x RJ45 ports
2 x SC type fiber optic
- **LED Indicators** System: PWR1, PWR2, P-Fail
Gigabit Ethernet copper: Link/Activity, speed (10/100/1000 Mbps)
Fiber SC: Link/Activity

Mechanism

- **Enclosure** IP30, metal shell with solid mounting kits
- **Dimensions (W x H x D)** 59.6 x 152 x 105 mm (2.35" x 5.98" x 4.13")
- **Mounting** DIN-rail, Wall

Power

- **Power Consumption** Max. 10.2 W
- **Power Input** 12 ~ 48 V_{DC}, 24 V_{AC} (18 ~ 30 V_{AC})
- **Fault Output** 1 Relay Output, 1 A @ 24 V_{DC}

Protection

- **Power Reverse** Present

Environment

- **Operating Temperature** -40 ~ 75 °C (-40 ~ 167 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 505,863 hours

Certifications

- **Safety** UL 508, Class I, Division 2
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 Class A
- **EMS** EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6

Ordering Information

- **EKI-2728MI** 6Gx+2 Multi-mode Fiber Unmanaged Ethernet Switch w/ Wide Temp

EKI-1521/CI/I
EKI-1522/CI/I
EKI-1524/CI/I

1-port RS-232/422/485 Serial Device Server

2-port RS-232/422/485 Serial Device Server

4-port RS-232/422/485 Serial Device Server



EKI-1521 | EKI-1522 | EKI-1524

Features

- Provides 2 x 10/100 Mbps Ethernet ports for LAN redundancy
- Provides COM port redirection (Virtual COM), TCP and UDP operation modes
- Supports up to 921.6 kbps, and any baud rate setting
- Allows a max. of 5 hosts to access one serial port
- Allows a max. of 16 hosts to be accessed as TCP client mode
- Built-in 15 KV ESD protection for all serial signals
- Provides rich configuration methods including Windows utility, Telnet console, and Web Browser
- Supports 32-bit/64-bit Windows 2000/XP/Vista/7/8/8.1, Windows Server 2003/2008/2012, Windows CE 5.0, and Linux
- Automatic RS-485 data flow control
- Supports line to line 4 KV, line to ground 8 KV surge protection
- 'I' models support a wide operating temperature
- 'CI' models support isolation and wide operating temperature

Introduction

EKI-1521, EKI-1522 and EKI-1524 feature two independent Ethernet ports and MAC addresses to provide a redundant network mechanism to guarantee Ethernet network reliability. EKI-1521, EKI-1522 and EKI-1524 are serial device servers that connect RS-232/422/485 serial devices, such as PLC, meters, sensors, and barcode readers to an IP-based Ethernet LAN. They allow nearly any device with serial ports to connect and share an Ethernet network. EKI-1521, EKI-1522 and EKI-1524 provide various operations: COM port redirection (Virtual COMport), TCP Server, TCP Client and UDP mode. With COM port redirection mode, standard serial operation calls are transparently redirected to the EKI-1521, EKI-1522 and EKI-1524, guaranteeing compatibility with legacy serial devices and enabling backward compatibility with existing software. With TCP server, TCP client, and UDP modes, EKI- 1521, EKI-1522 and EKI-1524 ensure the compatibility of network software that uses a standard network API. Moreover, you can make serial devices communicate with other devices peer-to-peer, without any intermediate host PCs and software programming.

Specifications

Ethernet Communications

- **Compatibility** IEEE 802.3, IEEE 802.3u
- **Speed** 10/100 Mbps
- **No. of Ports** 2
- **Port Connector** 8-pin RJ45
- **Protection** Built-in 1.5 KV magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485, software selectable
- **No. of Ports** EKI-1521: 1/EKI-1522: 2/EKI-1524: 4
- **Port Connector** DB9 male
- **Data Bits** 5, 6, 7, 8
- **Stop Bits** 1, 1.5, 2
- **Parity** None, Odd, Even, Space, Mark
- **Flow Control** XON/XOFF, RTS/CTS, DTR/DSR
- **Baud Rate** 50 bps ~ 921.6 kbps, any baud rate setting
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DTR, DSR, DCD, RI, GND
RS-422: TxD+, TxD-, RxD+, RxD-, GND
RS-485: Data+, Data-, GND
- **Protection** Built-in 15 KV ESD for all signals

Software

- **Driver Support** 32-bit/64-bit Windows 2000/XP/Vista/7/8/8.1, Windows Server 2003/2008/2012, Windows CE 5.0, and Linux
- **Operation Modes** COM port redirection mode (Virtual COM)
TCP/UDP server (polling) mode
TCP/UDP client (event handling) mode
Pair connection (peer to peer) mode
- **Configuration** Windows utility, Telnet console, Web Browser
- **Management** SNMP MIB-II

Mechanics

- **Dimensions (W x H x D)** 36.6 x 140 x 95 mm (1.44" x 5.51" x 3.74")
EKI-1524: 48.6 x 140 x 95 mm (1.91" x 5.51" x 3.74")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** EKI-1521: 612g/EKI-1522: 620g/EKI-1524: 690g

General

- **LED Indicators** System: Power, System Status/LAN: Speed, Link/Active
Serial: Tx, Rx

Power Requirements

- **Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Connector** Terminal block
- **Consumption** EKI-1521: 5.2 W
EKI-1522: 5.2 W
EKI-1524: 6.3 W

Environment

- **Operating Temperature** EKI-1521/EKI-1522/EKI-1524: -10 ~ 60 °C (14 ~ 140 °F) 'CI & I' models: -40 ~ 70 °C (-40 ~ 158 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 5 ~ 95% RH

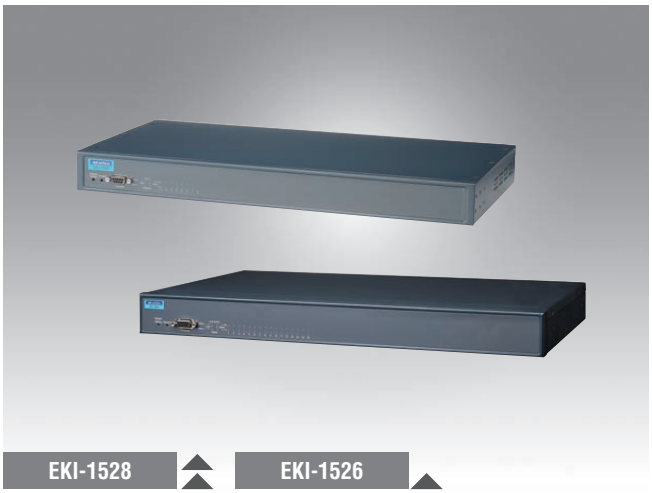
Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)

Ordering Information

- **EKI-1521** 1-port RS-232/422/485 Serial Device Server
- **EKI-1522** 2-port RS-232/422/485 Serial Device Server
- **EKI-1524** 4-port RS-232/422/485 Serial Device Server
- **EKI-1521I** 1-port RS-232/422/485 Serial Device Server with wide operating temperature
- **EKI-1522I** 2-port RS-232/422/485 Serial Device Server with wide operating temperature
- **EKI-1524I** 4-port RS-232/422/485 Serial Device Server with wide operating temperature
- **EKI-1521CI** 1-port RS-422/485 Serial Device Server with wide operation temperature and isolation
- **EKI-1522CI** 2-port RS-422/485 Serial Device Server with wide operation temperature and isolation
- **EKI-1524CI** 4-port RS-422/485 Serial Device Server with wide operation temperature and isolation
- **OPT1-DB9** D-Sub9 to Terminal Converter

EKI-1528/I/TI 8-port RS-232/422/485 Serial Device Server
EKI-1526/I/TI 16-port RS-232/422/485 Serial Device Server



EKI-1528 EKI-1526

Features

- 8 or 16-port RS-232/422/485 serial communication
- Provides 2 x 10/100/1000 Mbps Ethernet ports for LAN redundancy
- Supports up to 976.5 kbps, and any baud rate setting
- Provides COM port redirection (Virtual COM), TCP and UDP operation modes
- Provides rich configuration methods: Windows utility, Telnet console, Web Browser, and serial console
- Built-in 15 KV ESD protection for all serial signals
- SNMP MIB-II for network management
- Built-in buzzer for easy location
- Standard 1U rackmount size
- Rear wiring
- Automatic RS-485 data flow control

Introduction

The EKI-1528 and EKI-1526 are industrial-grade network-based serial device servers for connecting up to 8 or 16 serial RS-232/422/485 devices, such as CNCs, PLCs, scales, and scanners, directly to a TCP/IP network. The EKI-1528 and EKI-1526 feature two independent Ethernet ports and MAC addresses to provide a redundant network mechanism to guarantee Ethernet network reliability. The EKI-1528 and EKI-1526 provide a simple and cost-effective way to bring the advantages of remote management and data accessibility to thousands of devices that can't connect to an Ethernet network. The EKI-1528 and EKI-1526 offer multiple ways to be configured through a Windows utility, web browser, serial console or Telnet console, these methods make it easy manage many EKI-1528 and EKI-1526 or serial devices on your network.

Specifications

Ethernet Communications

Compatibility	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab
Speed	10/100/1000 Mbps, auto MDI/MDIX
No. of Ports	2
Port Connector	8-pin RJ45
Protection	Built-in 1.5 KV magnetic isolation

Serial Communications

Port Type	RS-232/422/485, software selectable
No. of Ports	EKI-1528/EKI-1528I/EKI-1528TI: 8 EKI-1526/EKI-1526I/EKI-1526TI: 16
Port Connector	DB9 male
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Odd, Even, Space, Mark
Flow Control	XON/XOFF, RTS/CTS, DTR/DSR
Baud Rate	50 bps ~ 976.5 kbps, any baud rate setting 16 ports up to 230.4 kbps simultaneously
Serial Signals	RS-232: TxD, RxD, CTS, RTS, DTR, DSR, DCD, GND, RI RS-422: TxD+, TxD-, RxD+, RxD-, GND RS-485: Data+, Data-, GND
Protection	15 KV ESD for all signals

Software

Driver Support	32-bit/64-bit Windows 2000/XP/Vista/7/ 8/8.1/10, Windows Server 2003/2008/2012, and Linux
Utility Software	Advantech EKI Device Configuration Utility
Operation Modes	COM port redirection mode (Virtual COM) TCP/UDP server (polling) mode TCP/UDP client (event handling) mode Pair connection (peer to peer) mode RFC2217 mode
Configuration	Windows utility, Telnet console, Web Browser, serial console
Protocols	ARP, ICMP, IPv6, TCP, UDP, BOOTP/DHCP Client, Auto IP, Telnet, SNMP, HTTP, DNS, SMTP, NTP
Management	SNMP MIB-II

Mechanics

Dimensions (W x H x D)	438 x 43.6 x 259.2 mm (17.24" x 1.71" x 10.2")
Enclosure	SECC chassis
Mounting	Rack

General

LED Indicators	System: Power, System Status LAN: Speed, Link/Active Serial: Tx, Rx
Alert Tools	Built-in buzzer and RTC (real time clock)
Reboot Trigger	Built-in WDT and push button for hardware reboot

Power Requirements

Power Input	EKI-1528(I)/EKI-1526(I): 100 ~ 240 V_{AC} , 50 ~ 60 Hz EKI-1528T(I)/EKI-1526T(I): 12 ~ 48 V_{DC}, Terminal Block
Power Consumption	5.6 W

Environment

Operating Temperature	-10 ~ 60 °C (14 ~ 140 °F) "I" Model: -40 ~ 75 °C (-40 ~ 167 °F)
Storage Temperature	-20 ~ 80 °C (-4 ~ 176 °F)
Operating Humidity	10 ~ 95% RH

Regulatory Approvals

EMC	CE, FCC Part 15 Subpart B (Class A)

Ordering Information

EKI-1528	8-port RS-232/422/485 Serial Device Server
EKI-1526	16-port RS-232/422/485 Serial Device Server
EKI-1528T-VDC	8-port RS-232/422/485 Serial Device Server w/ DC Input
EKI-1526T-VDC	16-port RS-232/422/485 Serial Device Server w/ DC Input
EKI-1528I	8-port RS-232/422/485 Serial Device Server W/T
EKI-1526I	16-port RS-232/422/485 Serial Device Server W/T
EKI-1528TI-VDC	8-port RS-232/422/485 Serial Device Server w/ DC W/T Input
EKI-1526TI-VDC	16-port RS-232/422/485 Serial Device Server w/ DC W/T Input

EKI-1221/CI/I
EKI-1222/CI/I
EKI-1224/CI/I

1-port Modbus Gateway

2-port Modbus Gateway

4-port Modbus Gateway



EKI-1221 | EKI-1222 | EKI-1224

Features

- Provides 2 x 10/100 Mbps Ethernet ports for LAN redundancy
- Integration of Modbus TCP and Modbus RTU/ASCII networks
- Supports up to 921.6 kbps, and any baud rate setting
- Supports up to 16 connections and 32 requests simultaneously
- Auto searching slave ID over configuration utility
- Software selectable RS-232/422/485 communication
- Mounts on DIN-rail and Wall mount
- Built-in 15 KV ESD protection for all serial signals
- Automatic RS-485 data flow control
- Supports surge protection for D.C. power ports with line to line 2 KV, and line to earth 4 KV; for signal ports with 4 KV.
- 'I' models support a wide operating temperature
- 'CI' models support isolation and wide operating temperature

Introduction

The EKI-1200 series Modbus gateways are bi-directional gateways for integrating new and existing Modbus/RTU and Modbus/ASCII serial devices to newer TCP/IP networked-based devices. The EKI-1221/1222/1224 feature two independent Ethernet ports and MAC addresses to provide redundancy and reliability. They provide a simple and cost-effective way to bring remote management and data accessibility to thousands of devices that cannot connect to a network. EKI-1221/1222/1224 provide a feature that can allow users to select master or slave operation mode for each serial port. They not only allow an Ethernet master to control serial slaves, but also allow serial masters to control Ethernet slaves.

Specifications

Ethernet Communications

Compatibility	IEEE 802.3, IEEE 802.3u
Speed	10/100 Mbps
No. of Ports	2
Port Connector	8-pin RJ45
Protection	Built-in 1.5 KV magnetic isolation

Serial Communications

Port Type	RS-232/422/485, software selectable
No. of Ports	EKI-1221: 1 EKI-1222: 2 EKI-1224: 4
Port Connector	DB9 male
Data Bits	7, 8
Stop Bits	1, 2
Parity	None, Odd, Even, Space, Mark
Flow Control	XON/XOFF, RTS/CTS, DTR/DSR
Baud Rate	50 bps ~ 921.6 kbps, any baud rate setting
Serial Signals	RS-232: TxD, RxD, CTS, RTS, DTR, DSR, DCD, RI, GND RS-422: TxD+, TxD-, RxD+, RxD-, GND RS-485: Data+, Data-, GND
Protection	15 KV ESD for all signals 'CI' models: 2KV Isolation for RS-422/485 signals

Software

OS Support	32-bit/64-bit Windows XP/Vista/7/8/8.1, Windows Server 2003/2008/2008 R2/2012/2012 R2, Windows CE 5.0, and Linux
Utility Software	Advantech EKI Device Configuration Utility
Operation Modes	Modbus RTU Master/Slave mode Modbus ASCII Master/Slave mode
Configuration	Windows Utility, Web Browser
Protocols	Modbus RTU, Modbus TCP, Modbus ASCII

General

LED Indicators	System: Power, System Status LAN: Speed, Link/Active Serial: Tx, Rx
Reboot Trigger	Built-in WDT (watchdog timer)

Mechanics

Dimensions (W x H x D)	EKI-1221/1222: 37 x 140 x 95 mm (1.46" x 5.51" x 3.74") EKI-1224: 55 x 140 x 95 mm (2.17" x 5.51" x 3.74")
Enclosure	Metal with solid mounting hardware
Mounting	DIN-rail, Wall
Weight	EKI-1221: 0.592 Kg EKI-1222: 0.6 Kg EKI-1224: 0.668 Kg

Power Requirements

Power Input	12 ~ 48 V_{DC}, redundant dual inputs
Power Connector	Terminal block
Power Consumption	EKI-1221: 5.2 W EKI-1222: 5.2 W EKI-1224: 6.3 W

Environment

Operating Temperature	EKI-1221/EKI-1222/EKI-1224: -10 ~ 60 °C (14 ~ 140 °F) 'CI & I' models: -40 ~ 70 °C (-40 ~ 158 °F)
Storage Temperature	-20 ~ 80 °C (-4 ~ 176 °F)
Operating Humidity	5 ~ 95% RH

Regulatory Approvals

EMC	CE, FCC Part 15 Subpart B (Class A)

Ordering Information

EKI-1221	1-port RS-232/422/485 Modbus Gateway
EKI-1222	2-port RS-232/422/485 Modbus Gateway
EKI-1224	4-port RS-232/422/485 Modbus Gateway
EKI-1221I	1-port RS-232/422/485 Modbus Gateway with Wide Operating Temperature
EKI-1222I	2-port RS-232/422/485 Modbus Gateway with Wide Operating Temperature
EKI-1224I	4-port RS-232/422/485 Modbus Gateway with Wide Operating Temperature
EKI-1221CI	1-port RS-422/485 Modbus Gateway with Wide Operation Temperature and Isolation
EKI-1222CI	2-port RS-422/485 Modbus Gateway with Wide Operation Temperature and Isolation
EKI-1224CI	4-port RS-422/485 Modbus Gateway with Wide Operation Temperature and Isolation
OPT1-DB9	D-Sub9 to Terminal Converter

EKI-1361
EKI-1362
EKI-1361-MB
EKI-1362-MB

1-port RS-232/422/485 to 802.11a/b/g/n WLAN Serial Device Server
2-port RS-232/422/485 to 802.11a/b/g/n WLAN Serial Device Server
1-port RS-232/422/485 to 802.11a/b/g/n WLAN Modbus Gateway
2-port RS-232/422/485 to 802.11a/b/g/n WLAN Modbus Gateway



Features

- Link any serial device to an IEEE 802.11a/b/g/n network
- Support 802.11n MIMO 2T2R
- WLAN transmision rate up to 300 Mbps
- Supports secure access with WEP, WPA/WPA2-Personal, WPA/WPA2-Enterprise
- Provides COM port redirection, TCP, UDP, and pair connection modes
- Supports up to 921.6 kbps, and any baud rate setting
- Provides Web-based configuration and Windows utility
- Allows a max. of 5 hosts to access one serial port
- Supports Modbus TCP and Modbus RTU
- Support Dual band 2.4G/5G selective

Introduction

EKI-1361 and EKI-1362 wireless serial device servers bring RS-232/422/485 to wireless LAN. They allow nearly any device with serial ports to connect and share a WLAN network. EKI-1361 and EKI-1362 provide a quick, simple and cost-effective way to bring remote management and data accessibility to thousands of devices that cannot connect to a network. With EKI-1361 and EKI-1362, your existing serial devices can be used with the most common OS. There is no need to write special drivers for specific OS. Moreover, you can make serial devices communicate with other devices peer-to-peer, without any intermediate host PCs and software programming. That saves a lot of cost and effort. In addition, you can actively request data or issue commands from the RS-232/422/485 side or wireless LAN side. This data can be sent bilaterally. Thus, the EKI-1361 and EKI-1362 are especially suitable for remote monitoring environments such as security systems, factory automation, SCADA, transportation and more.

Specifications

Ethernet Communications

Port Type	RJ45
No. of Ports	1
Speed	10/100/1000 Mbps

Wireless LAN Communications

Compatibility	IEEE 802.11a/b/g/n
Speed	Up to 300Mbps
Network Mode	Infrastructure
Antenna Connector	Reverse SMA
No. of Antenna	2 (supports 2T2R)
Free Space Range	Open space 100 m
Wireless Security	WEP, WPA/WPA2-Personal, WPA/WPA2-Enterprise

Serial Communications

Port Type	RS-232/422/485, software selectable
No. of Ports	EKI-1361: 1 EKI-1362: 2
Port Connector	DB9 male
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Odd, Even, Space, Mark
Baud Rate	50 bps ~ 921.6 kbps, any baud rate setting
Serial Signals	RS-232: TxD, RxD, CTS, RTS, DTR, DSR, DCD, RI, GND RS-422: TxD+, TxD-, RxD+, RxD-, GND RS-485: Data+, Data-, GND
Protection	15 KV ESD for all signals

Software

OS Support	32-bit/64-bit Windows XP/Vista/7/8/8.1/10, Windows Server 2003/2008/2008 R2/2012/2012 R2 and Linux
Utility Software	Advantech EKI Device Configuration Utility
Operation Modes	Access Point mode/Station mode Pair connection without AP (peer to peer) mode **EKI-1361/2** COM port redirection mode (Virtual COM) TCP/UDP server (polling) mode TCP/UDP client (event handling) mode **EKI-1361/2-MB** Modbus RTU Master/Slave Modbus ASCII Master/Slave
Configuration	Windows utility, Telnet console, Web Browser
Protocol	ARP, ICMP, IPv4, IPv6, TCP, UDP, BOOTP, DHCP Client, Auto IP, Telnet, DNS, SNMP, HTTP, SMTP, SNTP

Mechanics

Enclosure	Metal shell with solid mounting kits
Mounting	DIN-rail, Wall
Dimensions (W x H x D)	28.5 x 120 x 85.3 mm (1.12" x 4.72" x 3.36")
Weight	0.5 Kg

General

LED Indicators	System: Power, System Status WLAN: Quality, Link/Active LAN: Link/Active Serial: Tx, Rx
Reboot Trigger	Built-in WDT (watchdog timer)

Power Requirements

Power Input	12 ~ 48 V_{DC}, redundant dual inputs
Power Connector	Terminal block
Power Consumption	EKI-1361: 8W EKI-1362: 9W

Environment

Operating Temperature	-30 ~ 65 °C (-22 ~ 149 °F)
Storage Temperature	-40 ~ 80 °C (-40 ~ 176 °F)
Operating Humidity	10 ~ 95% RH

Regulatory Approvals

EMC	CE, FCC Part 15 Subpart B (Class B)

Ordering Information

EKI-1361	1-port 802.11a/b/g/n WLAN Serial Device Server
EKI-1362	2-port 802.11a/b/g/n WLAN Serial Device Server
EKI-1361-MB	1-port 802.11a/b/g/n WLAN Modbus Gateway
EKI-1362-MB	2-port 802.11a/b/g/n WLAN Modbus Gateway
OPT1-DB9	D-Sub9 to Terminal Converter

EKI-1222EIMS

Modbus RTU/TCP to EtherNet/IP Protocol Gateway



Features

- Supports dual power input for power redundancy
- Seamless integrate Modbus RTU/TCP and EtherNET/IP communication
- Modbus TCP Master mode supports 64 connections
- Mounts on DIN-rail and Wall mount
- Designed for protocol extensibility and adaption
- Built-in real time diagnostic to increase highly efficiency of device management

Introduction

The EKI-1222EIMS Industrial Protocol gateway providing seamless communication between Fieldbus and Industrial Ethernet and supports different protocol devices and integrates new and existing Modbus RTU/TCP devices to the EtherNet/IP network. To collect data and exchange data between Modbus RTU/TCP to EtherNet/IP. EKI-1222EIMS is a simple and cost-effective way to bring the advantages of fast data transmissions between different devices.

Specifications

Ethernet Communication

- **Protocols** EtherNet/IP, Modbus RTU/TCP
- **Number of Ports** 4
- **Speed** 10/100 Mbps, Auto MDI/MDIX
- **Connector** 8-pin RJ45
- **Protection** Built-in 1.5 KV magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485, software selectable
- **No. of Ports** 2
- **Port Connector** DB9 male
- **Data Bits** 7, 8
- **Stop Bits** 1, 2
- **Parity** None, Odd, Even, Space, Mark
- **Flow Control** XON/XOFF, RTS/CTS, DTR/DSR
- **Baud Rate** 50 bps ~ 921.6 kbps, any baud rate setting
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DTR, DSR, DCD, RI, GND
  RS-422: TxD+, TxD-, RxD+, RxD-, GND
  RS-485: Data+, Data-, GND

Software

- **Modbus RTU/TCP**
  - Mode: Master
  - Functions Support: 1, 2, 3, 4, 5, 6, 15, 16, 23
  - Max. Number of Connections: 64 connections
- **EtherNet/IP**
  - Class: Adapter
  - Max. Number of Connections: 32 explicit messaging, 5 implicit messaging
  - Max. Total I/O Data Size: Input: 496 bytes
    Output: 496 bytes

General

- **LED Indicators** System: Power, Syste, Protocol Status
  LAN: Speed, Link/Active, Error
- **Reboot Trigger** Built-in WDT (watchdog timer)
- **MicroSD Card** Configuration backup and restore

Mechanics

- **Dimensions (W x H x D)** 42 x 140 x 95 mm (1.66" x 5.52" x 3.75")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** 0.592 Kg

Power Requirements

- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** 5.2 W

Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
- **Storage Temperature** -20 ~ 80 °C (-4 ~ 176 °F)
- **Operating Humidity** 10 ~ 95% RH

Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)

Ordering Information

- **EKI-1222EIMS** Modbus RTU/TCP to EtherNet/IP Protocol Gateway

EKI-1222PNMS

Modbus RTU/TCP to PROFINET Protocol Gateway



Features

- Supports dual power input for power redundancy
- Seamless integrate Modbus RTU/TCP and PROFINET communication
- Modbus TCP Master mode supports 64 connections
- Mounts on DIN-rail and Wall mount
- Designed for protocol extensibility and adaption
- Built-in real time diagnostic to increase highly efficiency of device management

Introduction

The EKI-1222PNMS Industrial Protocol gateway provides seamless communication between Fieldbus and Industrial Ethernet and supports different protocol devices integrating new and existing Modbus RTU/TCP devices with EtherCAT networks. EKI-1222PNMS is a simple and cost-effective way to bring the advantage of fast I/O data transfers between devices.

Specifications

Ethernet Communication

- **Protocols** PROFINET, Modbus TCP
- **Number of Ports** 4
- **Speed** 10/100 Mbps, Auto MDI/MDIX
- **Connector** 8-pin RJ45
- **Protection** Built-in 1.5 KV magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485, software selectable
- **No. of Ports** 2
- **Port Connector** DB9 male
- **Data Bits** 7, 8
- **Stop Bits** 1, 2
- **Parity** None, Odd, Even, Space, Mark
- **Flow Control** XON/XOFF, RTS/CTS, DTR/DSR
- **Baud Rate** 50 bps ~ 921.6 kbps, any baud rate setting
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DTR, DSR, DCD, RI, GND
  RS-422: TxD+, TxD-, RxD+, RxD-, GND
  RS-485: Data+, Data-, GND

Software

- **Modbus RTU/TCP**
  Mode: Master
  Functions Support: 1, 2, 3, 4, 5, 6, 15, 16, 23
  Max. Number of Connections: 64 connections
- **PROFINET**
  Type: Slave
  Slot: 64
  Cyclic data exchange: 64 ms cycle time

General

- **LED Indicators** System: Power, Syste, Protocol Status
  LAN: Speed, Link/Active, Error
- **Reboot Trigger** Built-in WDT (watchdog timer)
- **MicroSD Card** Configuration backup and restore

Mechanics

- **Dimensions (W x H x D)** 42 x 140 x 95 mm (1.66" x 5.52" x 3.75")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** 0.592 Kg

Power Requirements

- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** 5.2 W

Environment

- **Operating Temperature** -10 ~ 60 °C (14 ~ 140 °F)
- **Storage Temperature** -20 ~ 80 °C (-4 ~ 176 °F)
- **Operating Humidity** 10 ~ 95% RH

Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)

Ordering Information

- **EKI-1222PNMS** Modbus RTU/TCP to PROFINET Protocol Gateway

EKI-1222ECMS

Modbus RTU/TCP to EtherCAT Protocol Gateway



Features

- Supports dual power input for power redundancy
- Seamless integrate Modbus RTU/TCP and EtherCAT communication
- Modbus TCP Master mode supports 64 connections
- Mounts on DIN-rail and Wall mount
- Designed for protocol extensibility and adaption
- Built-in real time diagnostic to increase highly efficiency of device management

Introduction

The EKI-1222ECMS Industrial Protocol gateway provides seamless communication between Fieldbus and Industrial Ethernet and supports different protocol devices integrating new and existing Modbus RTU/TCP devices with EtherCAT networks. EKI-1222ECMS is a simple and cost-effective way to bring the advantage of fast I/O data transfers between devices.

Specifications

Ethernet Communication

- **Protocols** EtherCAT, Modbus RTU/TCP
- **Number of Ports** 4
- **Speed** 10/100 Mbps, Auto MDI/MDIX
- **Connector** 8-pin RJ45
- **Protection** Built-in 1.5 KV magnetic isolation

Serial Communications

- **Port Type** RS-232/422/485, software selectable
- **No. of Ports** 2
- **Port Connector** DB9 male
- **Data Bits** 7, 8
- **Stop Bits** 1, 2
- **Parity** None, Odd, Even, Space, Mark
- **Flow Control** XON/XOFF, RTS/CTS, DTR/DSR
- **Baud Rate** 50 bps ~ 921.6 kbps, any baud rate setting
- **Serial Signals** RS-232: TxD, RxD, CTS, RTS, DTR, DSR, DCD, RI, GND
  RS-422: TxD+, TxD-, RxD+, RxD-, GND
  RS-485: Data+, Data-, GND

Software

- **Modbus RTU/TCP**
  Mode Master
  Functions Support 1, 2, 3, 4, 5, 6, 15, 16, 23
  Max. Number of Connections 64 connections
- **EtherCAT**
  Type Slave
  Max. Total I/O Data Size (SDO&PDO objects)
  Input 512 bytes
  Output 512 bytes
  Fmmu Channel 4

General

- **LED Indicators** System: Power, System Status, Protocol status
  LAN: Speed, Link/Active, Error
- **Reboot Trigger** Built-in WDT (watchdog timer)
- **MicroSD Card** Configuration backup and restore

Mechanics

- **Dimensions (W x H x D)** 42 x 140 x 95 mm (1.66" x 5.52" x 3.75")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** 0.592 Kg

Power Requirements

- **Power Input** 12 ~ 48 V_{DC}, redundant dual inputs
- **Power Connector** Terminal block
- **Power Consumption** 5.2 W

Environment

- **Operating Temperature** -10 ~ 60 °C (-14 ~ 140 °F)
- **Storage Temperature** -20 ~ 80 °C (-4 ~ 176 °F)
- **Operating Humidity** 10 ~ 95% RH

Regulatory Approvals

- **EMC** CE, FCC Part 15 Subpart B (Class A)

Ordering Information

- **EKI-1222ECMS** Modbus RTU/TCP to EtherCAT Protocol Gateway

EKI-1331

1-port RS-232/485 to HSPA+ IP Gateway



Features

- Universal five-band UMTS/HSPA+ 850/900/1800/1900/2100 MHz
- Universal quad-band GSM/GPRS 850/900/1800/1900 MHz
- Connect Ethernet and Serial Devices over VPN
- Protocols converting between serial and Ethernet: Modbus RTU & TCP
- EMC Level III for industrial standards
- Built-in 15 KV ESD protection for all serial signals
- Multiple configuration methods: Serial Console, Telnet, and Web console

Introduction

EKI-1331 cellular gateways can transparently integrate RS-232/485 or Ethernet devices onto a cellular network. They allow nearly any device with serial or Ethernet ports to connect and share a cellular network with easy and simple configuration. EKI-1331 cellular IP Gateway's are compact, and can be DIN-rail or wall mounted with front panel LED displays for easy identification. They come with DC power input from 12-24 V_{DC} and have 2 KV EFT/Surge protection to prevent damage from various power sources. The serial ports are also protected by a 15 KV ESD line to keep the system safe from unexpected electrical discharges. From the rugged design to the built in automatic recovery mechanisms, EKI-1331 ensures critical applications stay connected. While providing a suite of VPN features, the EKI-1331 guarantees data security.

Specifications

LAN Interface

- **Ethernet** 10/100 Mbps, auto MDI/MDIX
- **Connector** RJ45
- **Protection** 1.5 KV built-in magnetic isolation protection

Cellular Interface

- **Standards** HSPA+/UMTS/GPRS/GSM
- **Band Option** 850/900/1800/1900/2100 MHz
- **No. of SIM** 1
- **SIM Control** 3 V
- **SMA Connector** SMA Female with inner pin

Serial Communications

- **Port Type** RS-232/485
- **No. of Ports** 1
- **Port Connector** 5-pin Terminal block
- **Data Bits** 6, 7, 8
- **Stop Bits** 1, 2
- **Parity** None, Odd, Even
- **Baud Rates** 300/600/1200/2400/4800/9600/19200/38400/57600/115200 bps
- **Serial Signals** RS-232: Tx, Rx, GND
RS-485: Data+, Data-, GND
- **Protection** 15 KV ESD for all signals

General

- **LED Indicators** System: Power, Status, Warn, Error, Modem, Cellular: SIM, Three Levels of Cellular Signal Strength
- **Reboot Trigger** Built-in WDT (watchdog timer)

Software

- **Operating Modes** TCP/UDP server mode, TCP/UDP client mode, IP Gateway w/ VPN
- **Configuration** Telnet console, Web Browser
- **Protocols** ARP, ICMP, IPv4, TCP, UDP, BOOTP, DHCP Client, DHCP Server, Auto IP, SNTP, SMTP, Ping, Trace, DNS Relay, DDNS, Telnet, HTTP, HTTPS
- **Network Security** SPI, DDoS protection, Stateless Packet Inspection, Filtering Multicast/Ping package, Access Control List (ACL), NAT, DMZ, Port mapping, GRE, L2TP,PPTP, IPSec, OpenVPN

Mechanics

- **Dimensions (W x H x D)** 80 x 45 x 90 mm (3.1" x 1.8" x 3.5")
- **Enclosure** Metal with solid mounting hardware
- **Mounting** DIN-rail, Wall
- **Weight** 0.34 Kg

Power Requirements

- **Power Input** 12 ~ 24 V_{DC}
- **Power Connector** Terminal block
- **Power Consumption** 2.16W
- **Power EFT/Surge Prot.** 2 KV

Environment

- **Operating Temperature** -20 ~ 70 °C (-5 ~ 160 °F)
- **Storage Temperature** -40 ~ 85 °C (-40 ~ 185 °F)
- **Operating Humidity** 5 ~ 95% RH

Regulatory Approvals

- **EMC** EN61000-4-2,level 3
EN61000-4-3,level 3
EN61000-4-4,level 3
EN61000-4-5,level 3
EN61000-4-6,level 3
EN61000-4-12, level 3
EN61000-4-11, Voltage Dip: 70%
- **Shock** IEC60068-2-27
- **Free Fall** IEC60068-2-32
- **Vibration** IEC60068-2-6

Ordering Information

- **EKI-1331** 1-Port HSPA+ IP Gateway

SmartStart

Intelligent 4G LTE Router & Gateway



Features

- For industrial IoT and consumer focused high speed data applications
- Ethernet, serial RS-232 and I/O for connecting a wide array of field assets with DIN rail or wall mounting
- Low power consumption for solar and battery power applications
- Exceptionally resilient wireless and wired connection
- Enhanced memory to host custom software applications and a wide variety of protocols
- Easy deployment, mass maintenance and troubleshooting with B+B SmartWorx remote management and monitoring tools
- Loaded with advanced features to secure your data

Introduction

The SmartStart™ LTE family of cellular routers and gateways are the perfect way to connect RS-232 and Ethernet devices to a cellular network. Industrial M2M and IoT applications include Ethernet lottery machines, ATM stations, kiosks, gaming terminals along with RS-232 traffic controllers, meters, UPS systems, PLCs and much more.

SmartStart™ combines best-in-class power consumption with LTE performance and is optimized for solar and battery powered applications. Low Power Mode extends battery life by dropping power consumption to 40 mW, and can be triggered by timers, low voltage detection or I/O. SmartStart™ is the industry's only cellular gateway with power consumption equivalent to 2G devices. It is DIN rail and panel mountable.

The router supports VPN tunnel creation using various protocols to ensure safe communications. The router provides diagnostic functions which include automatic monitoring of the wireless and wired connections, automatic restart in case of connection losses, and a hardware watchdog that monitors the router status.

Specifications

- **Network and Routing** DHCP Server, NAT/PAT, VRRP, Dynamic DNS client, DNS proxy, VLAN, QoS, DMVPN, NTP Client/ Server, IGMP, BGP, OSPF, RIP, SMTP, SMTPS, SNMP v1/ v2c/ v3, Backup Routers, PPP, PPPoE, SSL, Port Forwarding, Host Port Routing, Ethernet Bridging
- **Security** HTTPS, SSH, VPN tunnels, SFTP, DMZ, Firewall (IP Filtering, MAC address filtering, Inbound and outbound Port filtering)
- **VPN Tunnelling** Open VPN client and server and P2P, L2TP, PPTP, GRE, EasyVPN, IPSec with IKEv1 and IKEv2
- **Configuration** Web server, SSH, Four configuration switchable profiles, Automatic configuration update from server, Backup configuration, Restore configuration
- **Firmware Management** Automatic firmware update from server, Locally via LAN or remotely OTA (HTTP, HTTPS), Over-the-Air software updates, Over-the-Air cellular module update from FW
- **Diagnostic** One CLICK report - current configuration / factory identification/ system log / kernel log / reboot log / routing table, Remote diagnostics possible via SSH
- **Status** Network Status, DHCP Status, IPSec Status, Statistics history for last 60days
- **Log** System Log, Reboot Log, Kernel Log
- **Controlling and Diagnostic** SMS, SNMP v1/v2c/v3, Statuses
- **Event Engine** StartUp script & Up/Down script (Bash, Python), Digital Input, Network Parameters, Data Usage, Timer, Power, Device Temperature. Report Types: RAP, SMS, email, SNMP Trap, TCP (csv, xml, binary)
- **Other** Support of IPv6

Ports, LED, Antennas

- **Ethernet** RJ45, 10/100 Mbps, 1.5kV RMS
- **SIM NAM/EMEA** 1/2 Mini SIMs (2FF)
- **LED ndicators** PWR, DAT, WAN, ETH
- **2x ANT** SMA connectors
- **WiFi antenna-*optional** R-SMA connector
- **RS232** DB9 Female
- **I/O** 1x Digital Input On Voltage: 2.7V to 36V_{DC} (4-Way Molex moni-fit connector)

Mechanical

- **Plastic case with metal DIN rail** Plastic
- **Enclosure Dimensions** 87 x 30 x 127 mm (3.43 x 1.18 x 5) (150 mm including wall mount sides)
- **Weight** 187 g

Power, Consumption, Environmental, Ip Cover

- **Power Supply** 9 ~ 36 V_{DC} (4-Way Molex moni- fit connector)
- **Power Consumption with WiFi - Average/Peak/Sleep Mode** 2,7 / 5.5 W / 40 mW
- **Temperature Range with WiFi – Operating / Storage** -25 to +55 °C / -40 to +85 °C
- **Temperature Range without WiFi – Operating / Storage** -40 to +75 °C / -40 to +85 °C
- **Humidity – Operating / Storage (noncondensing)** 0 to 95 % / 0 to 95 %
- **Enclosure Rating** IP30

WI-FI

- **Antenna Connector** R-SMA – 50 Ohms
- **Supported WiFi Band** 2.4 GHz - Number of clients: 55
- **Standards** 802.11b, 802.11g, 802.11n
- **Encryption** None, WEP, TKIP, AES
- **Authentication** Open, Shared, WPA–PSK, WPA2–PSK, WPA2-Enterprise, 802.1 - RADIUS
- **2.4 GHz Supported Channels** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11
- **Type of Device** Access point, Client

Industry Certifications & Approvals

- **Emissions/ Immunity** EN 55022, EN 61000-6-2, ETSI EN 301 489-1 V1.9.2, FCC part 15 class B (all pending)
- **Safety** Hazardous Locations: EN 60950 Power: EN 61131-2
- Vehicle Usage: E-Mark Environmental: RoHS, REACH, WEEE

Ordering Information

- **BB-SL30200110-SWH** LTE FDD Cat.1 AT&T, T-Mobile, Canada, UMTS without WiFi
- **BB-SL30210110-SWH** LTE FDD Cat.1 AT&T, T-Mobile, Canada, UMTS with WiFi
- **BB-SL30400110-SWH** EMEA: LTE FDD Cat.4, UMTS, GPRS,EDGE without WiFi
- **BB-SL30410110-SWH** EMEA: LTE FDD Cat.4, UMTS, GPRS,EDGE with WiFi
- **BB-SL30600110-SWH** APAC: LTE FDD Cat.4 LTE, UMTS, GPRS,EDGE, 1 x ETH, 1 x RS232, DI/DO, 2 x SIM, SmartWorx HUB
- **BB-SL30610110-SWH** APAC: LTE FDD Cat.4 LTE, UMTS, GPRS,EDGE, 1 x ETH, 1 x RS232, DI/DO, 2 x SIM, WiFi, SmartWorx HUB

SmartFlex

Flexible, Modular LTE Router



Features

- Powerful CPU and enhanced memory
- Extended operational temperature range from -40 °C to +75 °C
- 10 ~ 60 V_{DC} operated with transient and reverse polarity voltage protection
- Flexible Port options, such as 3-port Switch, Ethernet and S232/422/485 serial ports with isolation
- GPS and GLONASS support
- MicroSD card holder
- Low power consumption mode for solar and battery power applications
- Optional industrial grade Wi-Fi
- PoE PD, PoE PSE, In/Out, USB Host
- Advanced security features

Introduction

The SmartFlex™ cellular router provides secure Internet connectivity for devices and LANs via cellular networks. It can be used to provide automatic wireless failover for wired networks, wireless connectivity for devices in remote locations where cable connections are impractical, and wireless connectivity for mobile assets. With upload speeds of up to 50 Mbit/s and download speeds of up to 100 Mbps, SmartFlex provides ample bandwidth, even for applications that require video.

Features

Software

- **Network and Routing** DHCP Server, , DHCP Client, NAT/PAT, VRRP, Dynamic DNS client, DNS proxy, VLAN, QoS, NTP Client/ Server, IGMP, BGP, OSPF, RIP, SMTP, SMTPS, SNMP v1/ v2c/ v3, Backup routes, PPP, PPPoE, SSL, Port Forwarding, Host Port Routing, Ethernet Bridging
- **Security** HTTPS, SSH, VPN tunnels, SFTP, Firewall (IP Filtering, MAC address filtering, Inbound and outbound Port filtering)
- **VPN tunneling** Open VPN client and server and P2P, L2TP, PPTP, GRE, EasyVPN, DMVPN, IPSec with IKEv1 and IKEv2
- **Configuration** Web server, SSH, Four configuration switchable profiles, Automatic configurationupdate from server Backup configuration, Restore configuration
- **Firmware Management** Automatic firmware update from server, Locally via LAN and USB or remotely OTA (HTTP, HTTPS), Over-the-Air software updates, Over-the-Air cellular module update from FW
- **Diagnostic** One CLICK report – current configuration / factory identification / system log / kernel log / reboot log / routing table, Remote diagnostics possible via SSH
- **Status** Network Status, DHCP Status, IPSec Status, Statistics history for last 60 days
- **Log** System Log, Reboot Log, Kernel Log
- **Controlling and diagnostic** SMS, SNMP v1/v2c/v3, Statuses, Log
- **Event Engine** StartUp script & Up/Down script (Bash), Digital Input, Network Parameters, Data Usage, Timer, Power, Device Temperature Report Types: RAP, SMS, email, SNMP Trap, TCP (csv, xml, binary)
- **Other** IPv6 support

Ports, LED, Antennas

- **Up to 5x ETH ports** RJ45, 10/100 Mbps
- **SIM** 2 Mini SIMs (2FF) (rear panel)
- **LED Indicators** PWR, DAT, WAN, ETH, SIM, USR, POE, IN0, IN1, OUT
- **3x ANT - ANT, DIV, GPS (no for LTE450 model)** SMA connectors
- **Wi-Fi Antenna-*optional** R-SMA connector
- **USB** USB Host connector 2.0
- **SD Card** 1x Micro SD Card slot (rear panel)
- **RST** RESET button (rear panel)

*Optional 3-port SWITCH 3x RJ45, 10/100 Mbps
*Optional ETH - R232 - RS485 RJ45, 4-pin terminal block, 3-pin terminal block connectors – Isolation up to 2.5 kV
*Optional RS232 - RS485 5-pin terminal block, 4-pin terminal block connectors – Isolation up to 2.5 kV
*Optional RS232 RJ45

Specifications

Power

- **Power Supply** 10 ~ 60 V_{DC} (2–Way Molex connector)
- **Power Consumption** Idle: 2.5 W
  Average: 4 W
  Peak: 11 W
  Sleep Mode: 10mW

Environmental

- **Temperature Range** Operating: -40 to +75 °C
  Storage: -40 to +85 °C
- **Humidity** Operating: 0 to 95 %
  Storage (Non-condensing): 0 to 95 %
- **Cold Start** -35 °C
- **Ingress Protection** Rating IP30

WI-FI - 802.11 A/B/G/N, AP or Client modes

- **Supported Wi-Fi band** 2.4 GHz, 5.4 GHz
- **Encryption** None, WEP, TKIP, AES
- **5 GHz supported channels** – 36, 40, 44, 48, 52, 56, 60, 64, 149, 153, 157, 161, 165
- **2.4 GHz supported channels** – 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14
- **Number of clients** 10
- **Authentication** Open, Shared, WPA–PSK, WPA2–PSK

Industry Certifications & Approvals

- **Radio for general LTE** ETSI EN 301 511 v9.0.2, ETSI EN 301 908–1 v5.2.1, ETSI EN 301 908-2 v5.2.1, ETSI EN 301 908-13 v5.2.1
- **Emissions/Immunity** IEC 61000-6-2:2005, ETSI EN 301 489-1 v1.9.2, EN 55022:2010
- **Safety** EN 60950-1:06 ed.2 (not Hazardous Locations), EN 62311:2008
- **Vehicle** E8
- **Environmental** RoHS, RoHS2, REACH, WEEE

Mechanical

- **Plastic or metal case with plastic or metal DIN rail**
- **Enclosure Dimensions** 87 x 30 x 127 mm (3.43 x 1.18 x 5) (150 mm including wall month sides)
- **Weight Plastic** 170 g
- **Weight Metal** 375 g

Ordering Information

- **BB-SR30xxxx0xx** SmartFlex without optional interfaces
- **BB-SR30xxxx1xx** SmartFlex with 3xETH
- **BB-SR30xxxx1xx** SmsrtFlex with RS232, RS485
- **BB-SR30xxxx1xx** SmartFlex with RS232, RS485, ETH

SmartMotion™

Twin Module Cellular Router for Redundant Reliability



Features

- Two Independent cellular modules for advanced fail over feature
- Powerful CPU and enhanced memory to support high demand customer applications
- Load Balancing
- Extended operational temperature range from -40 °C to +75 °C
- 10 ~ 60 V_{DC} operated with transient and reverse polarity voltage protection
- GPS and GLONASS support
- Low power consumption mode for solar and battery power applications
- Optional industrial grade WiFi
- PoE PD, PoE PSE, In/Out, USB Host, MicroSD card holder
- Advanced security features

Introduction

The SmartMotion™ cellular router provides a reliable, secure network, with failover protection for devices and LANs. Two interdependent cellular modules with 2 SIMs slots each to support multiple cellular carriers. Business continuity is never a problem with this advanced failover architecture with load balancing features which simultaneously receive Cellular, WiFi and Ethernet data.

Specifications

Power, Consumption, Environmental, IP cover

- **Power Supply** 10 ~ 60 V_{DC} (2–Way Molex connector)
- **Power Consumption – Idle / Average / Peak / Sleep Mode** 2.5 W / 4W / 11 W / 10 mW
- **Temperature Range – Operating / Storage** -40 to +75 °C / -40 to +85 °C
- **Temperature Range LTE450 – Operating / Storage** -20 to +60 °C / -40 to +85 °C
- **Humidity – Operating / Storage (non condensing)** 0 to 95 % / 0 to 95 %
- **Cold Start** -35 °C
- **Operating Altitude** 2000 m / 70 kPa
- **Ingress Protection Rating** IP30

WiFi - 802.11 a/b/g/n, AP or Client modes

- **Supported WiFi band** 2.4 GHz, 5.4 GHz Number of clients: 10
- **Encryption** None, WEP, TKIP, AES Authentication: Open, Shared, WPA–PSK, WPA2–PSK
- **5 GHz supported channels** 36, 40, 44, 48, 52, 56, 60, 64, 149, 153, 157, 161, 165
- **2.4 GHz supported channels** 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14

Industry Certifications & Approvals

- **Radio for general LTE** ETSI EN 301 511 v9.0.2, ETSI EN 301 908–1 v5.2.1, ETSI EN 301 908-2 v5.2.1, ETSI EN 301 908-13 v5.2.1
- **Radio for LTE450** ETSI EN 301 908-1 v6.2.1, ETSI EN 301 908-13 v6.2.1, ETSI EN 301 489-24 v1.5.1
- **Emissions/ Immunity** IEC 61000-6-2:2005, ETSI EN 301 489-1 v1.9.2, EN 55022:2010
- **Safety** EN 60950-1:06 ed.2 (not Hazardous Locations), EN 62311:2008
- **Vehicle** E8
- **Environmental** RoHS, RoHS2, REACH, WEEE

Mechanical

- **Metal case with metal DIN rail** SIMs for secondary module are covered
- **Enclosure Dimensions** 55 x 97 x 125 mm (2.17 x 3.82 x 4.9) (150 mm including wall month sides)
- **Weight** 420 g

Features

- **Network and Routing** DHCP Server, , DHCP Client, NAT/PAT, VRRP, Dynamic DNS client, DNS proxy, VLAN, QoS, NTP Client/ Server, IGMP, BGP, OSPF, RIP, SMTP, SMTPS, SNMP v1/ v2c/ v3, Backup routes, PPP, PPPoE, SSL, Port Forwarding, Host Port Routing, Ethernet Bridging
- **Security** HTTPS, SSH, VPN tunnels, SFTP Firewall (IP Filtering, MAC address filtering, Inbound and outbound Port filtering)
- **VPN tunnelling** Open VPN client and server and P2P, L2TP, PPTP, GRE, EasyVPN, DMVPN IPSec with IKEv1 and IKEv2
- **Configuration** Web server, SSH, Four configuration switchable profiles, Automatic configuration update from server Backup configuration, Restore configuration
- **Firmware Management** Automatic firmware update from server, Locally via LAN and USB or remotely OTA (HTTP, HTTPS), Over-the-Air software updates, Over-the-Air cellular module update from FW
- **Diagnostic** One CLICK report – current configuration / factory identification / system log / kernel log / reboot log / routing table, Remote diagnostics possible via SSH

Ports, LED, Antennas

- **2x ETH** RJ45, 10/100 Mbps, 1.5 kV RMS
- **SIM** 4 Mini SIMs (2FF) (rear panel)
- **LED Indicators** PWR, DAT, WAN, ETH, SIM, USR, POE, IN0, IN1, OUT
- **5x ANT - 2x ANT, 2x DIV, GPS** SMA connectors
- **WiFi antenna - *optional** R-SMA connector
- **USB** USB Host connector 2.0
- **I/O** 6-Way Molex connector - 2x binary input, 1x binary output
- **SD Card** 1x Micro SD Card slot (rear panel)
- **RST** RESET button

Ordering Information

- **BB-ST352xxx25** 2x LTE, UMTS, GSM/GPRS/EDGE, 4xSIM, Metal, Accessories
- **BB-ST355xxx25** LTE, UMTS, GSM/GPRS/EDGE + LTE450, UMTS, GSM/GPRS/EDGE, 4xSIM, Metal, Accessories

SmartSwarm 243

Indsutrial LoRa Private Gateway



Features

- Long Range Wide Area IoT gateway
- LoRa Private protocol for closing system application
- Ethernet and I/O for connecting a wide array of field assets with DIN rail or wall mounting
- Low power consumption for solar and battery power applications

Introduction

SmartSwarm 243 is a high performance LoRa gateway, with reliable connectivity for industrial environments. SmartSwarm 243 supports LoRa protocol for building private LoRa networks. It supports various protocols including MQTT, and its hardware and software flexibility provides rich features to Edge Intelligence Systems. SmartSwarm 243 supports VPN tunnel creation using various protocols to ensure safe communications.

Specification

WSN Support

- **Standard** LoRa Private
- **Frequency** 868/915MHz
- **ANT Connector** SMA Female connector x 1

LAN Interface

- **Ethernet** 10/100 Mbps, auto MDI/MDIX
- **Connector** RJ45 x1
- **Protection** 1.5 KV built-in magnetic isolation protection

Digital I/O

- **Port Type** 1x Digital Input On Voltage: 2.7V to 36V_{DC}
- **Port Connector** 4-Way Molex moni-fit connector

General

- **LED Indicators** PWR, DAT, WAN, ETH
- **Reboot Trigger** Reset Button

Software

- **Network and Routing** DHCP Server, NAT/PAT, VRRP, Dynamic DNS client, DNS proxy, VLAN, QoS, DMVPN, NTP Client/Server, IGMP, BGP, OSPF, RIP, SMTP, SMTPS, SNMP v1/ v2c/ v3, Backup Routers, PPP, PPPoE, SSL, Port Forwarding, Host Port Routing, Ethernet Bridging
- **Configuration** SSH, Web Browser
- **Network Security** HTTPS, SSH, VPN tunnels, SFTP, DMZ, Firewall (IP Filtering, MAC address filtering, Inbound and outbound Port filtering)
- **VPN tunnelling** Open VPN client and server and P2P, L2TP, PPTP, GRE, EasyVPN, IPSec with IKEv1 and IKEv2

Mechanics

- **Dimensions (W x H x D)** 150 x 30 x 83 mm (5.9" x 1.18" x 3.27")
- **Mounting** DIN-rail, Wall
- **Weight** 187 g
- **Enclosure Rating** IP30

Power Requirements

- **Power Input** 9~36 V_{DC}
- **Power Connector** 4-Way Molex moni-fit connector
- **Power Consumption** 2.1 / 4.8 / 40 mW (Average / Peak / Sleep Mode)

Environment

- **Operating Temperature** -40 ~ 75 °C
- **Storage Temperature** -40 ~ 85 °C
- **Operating Humidity** 5 ~ 95% RH

Regulatory Approvals

- **EMC** EN61000-4-2,level 3
  EN61000-4-3,level 3
  EN61000-4-4,level 3
  EN61000-4-5,level 3
  EN61000-4-6,level 3
  EN61000-4-12, level 3
  EN61000-4-11, Voltage Dip: 70%
- **Shock** IEC60068-2-27
- **Free Fall** IEC60068-2-32
- **Vibration** IEC60068-2-6

Ordering Information

- **BB-SG30000115-43** LoRa Gateway w/o LTE

Wzzard LRPv Node

Industrial LoRa Private Node



Features

- Long Range Wide Area IoT gateway
- Low power consumption for solar and battery power applications
- LoRa Private protocol for closing system application
- Ethernet and I/O for connecting a wide array of field assets with DIN rail or wall mounting
- Connect to industry standard analog or digital sensors
- Rugged, IP66-rated, fiber reinforced polyester PBT enclosure
- MQTT and JSON IoT protocol to application platform

Introduction

The Wzzard LoRa private node intelligent sensor platform creates a complete, quick and easy connectivity stack between your sensors and your application, on your network or on the Internet. The platform uses Intelligent Edge Nodes, and a wireless LoRa network to transmit sensor data to the SmartSwarm 243 LoRa Gateway. The SmartSwarm 243 LoRa Gateway can connect to the Internet via wired connections and communicate with application platforms using the MQTT IoT protocol and JSON data formats. Wzzard LoRa Intelligent Edge Nodes accommodate virtually any industry standard external sensors. Connections can be made via conduit fitting, cable gland or M12 connector. The Nodes provide a wide variety of sensor interface options, including general purpose analog inputs, digital input/output and thermocouple.

Specification

Power

- **Internal** (2) 3.6V 2400 mAH Lithium Thionyl Chloride AA batteries
- **Optional External Input Voltage** 6 ~ 12 V_{DC}

Mechanical

- **Physical Connection** M12 Connector
  1/2" (12.7 mm) Conduit, sensor interface cable included; 8 wire, 26 gage, 6 ft. (1.8 m)
- **Sensor Inputs** Analog Input (0 ~ 5 V_{DC}, 0 ~ 20 mA, 4 ~ 20 mA), Digital Input (0 ~ 48 V_{DC})
  Integrated Temperature, Thermocouple K Type
  Digital Output (0 ~ 30 V_{DC})
- **Optional External Antenna** RP-SMA, Omnidirectional, 1.5 dBi, 868~915MHz
  Dimensions 6.69 inches (170 mm)
- **Mounting** Magnetic mounting via internal magnet
  Pull force 4.7 lbs (2.13 kg), (4) Mounting ears, M5 (#10)
- **Enclosure** IP66-rated, fiber reinforced polyester PBT
- **Weight** 0.75 lbs (0.34 kg)

Technology

- **Wireless** LoRa Private 868/915MHz
- **LED** Network Connectivity

Environmental

- **Installation** Indoor or outdoor
- **Operating Temperature** -40 to 75 °C (-40 to 167 °F)
- **Storage Temperature** -40 to 85 °C
- **Operating Humidity** 0 to 95% Non-condensing

Digital Inputs

- **Voltage range** 0 ~ 48 V_{DC}
- **V_{IL}** 0.97 V Maximum
- **V_{IH}** 1.8 V Minimum
- **Pull up current** 32uA
- **Type** Sourcing (PNP)/Sinking (NPN) Software selectable input
- **Isolation** None

Analog Inputs

- **Input ranges** 0 ~ 5 V_{DC}, 0 ~ 20 mA, 4 ~ 20 mA
- **Resolution** 12 bit
- **Input load resistance** 100 Mega ohm (0 ~ 5V_{DC}), 250 ohm (0 ~ 20 ma)
- **Accuracy** Voltage: 0.10% of full scale reading, 0.20% max.
  Current: 0.11% of full scale reading, 0.24% max.

Thermocouple Input

- **Types Supported** K
- **Ranges Supported** Type K -270 to +1,372 °C
- **Resolution** 0.25 °C
- **Accuracy** Typical +/- 2 °C, +/- 6 °C over the temperature range of -40 to 80 °C

Digital Outputs

- **Voltage range** 0 ~ 30 V_{DC}
- **Output Type** Open Drain
- **Output Current** Not to be less than 100ma
- **Protection** Current Limit Protection
- **Isolation** None

Regulatory Approvals

- **Shock** IEC60068-2-27
- **Free Fall** IEC60068-2-32
- **Vibration** IEC60068-2-6

Ordering Information

- **BB-WSL2C2112T-1** LoRa node with Power Monitoring, 2 Thermocouples, 2 AI, 1 DI, 1 DO, Conduit, External Antenna with 915MHz
- **BB-WSL2C2112T-2** LoRa node with Power Monitoring, 2 Thermocouples, 2 AI, 1 DI, 1 DO, Conduit, External Antenna with 868 MHz
- **BB-WSL2C31000-1** LoRa node with Power Monitoring, 3 AI, 1 DI, Conduit, External Antenna with 915 MHz
- **BB-WSL2C31000-2** LoRa node with Power Monitoring, 3 AI, 1 DI, Conduit, External Antenna with 868 MHz
- **BB-WSL2M31000-1** LoRa node with Power Monitoring, 3 AI, 1 DI, M12, External Antenna with 915 MHz
- **BB-WSL2M31000-2** LoRa node with Power Monitoring, 3 AI, 1 DI, M12, External Antenna with 868MHz

SmartSwarm 341

Asset Integration Gateway



Features

- Configurable user business logic data processing & display engine
- Comprehensive data outputs via MQTT, email, SMS and a variety of other services and database connections
- Integrates data from WZZARD, WISE, ADAM & third party devices
- Integrates data from internet feeds
- Cellular or Ethernet connection to IIoT system
- Acts as LAN to WAN bridge for third party device connection
- Cellular (EMEA/NATAM support) and wired models available

Introduction

Seamlessly integrate data from diverse systems, devices and sensors into the IoT

The SmartSwarm 341 IIoT gateway is aimed at owners of remote assets wishing to integrate data from their assets into IIoT applications like dashboarding, analytics or predictive maintenance. Data can be collected from a number of sources, including web feeds, databases and files, as well as from locally connected physical devices and sensors. SmartSwarm 341 includes an interface and manager for B+Bs Wzzard wireless sensor platform that provides robust acquisition and transmission of sensor data without installing cables. For bulk I/O requirements where cabling is not an issue, it is also compatible with WISE and ADAM Ethernet connected I/O modules.

User Applications

SmartSwarm 341 offers flexible data acquisition, processing and handoff via an inbuilt Node-RED user application environment. Node-RED is a powerful, yet simple to use, application programming environment optimized for processing data streams. Users drag and drop function nodes to acquire, processes and output data, via an internal web server interface provided by the SmartSwarm 341. Crucially, the Node-RED environment is contained, meaning that any user error made in programming cannot crash the gateway, which will remain connected and available for remote management in order to correct errors without site visits. In addition to offering local data processing, the Node-RED environment is also able to create and serve local dashboards, providing a mechanism to serve summary data to engineers, managers or operational staff.

Specification

WZZARD RADIO - 802.15.4E, 2.4 GHZ

Number of Channels	15	
Channel Separation	5 MHz	
Channel Clear Frequency	2405 + 5* (k-11) MHz	
Modulation	IEEE 802.15.4 Direct Sequence Spread Spectrum (DSSS)	
Raw Data Rate	250 kbps	
Range (25 °C, 50% RH, +2 dBi omni-directional antenna, antenna 2m)	Indoor	100 m
	Outdoor	300 m
	Free Space	1200 m
Receiver Sensitivity	Packet Data Error Rate (PER) = 1%	-93 dBm
Receiver Sensitivity	Packet Data Error Rate PER = 50%	-95 dBm
Output Power (delivered to a 50 Ω load)	High Calibration Setting	8 dBm
	Low Calibration Setting	0 dBm

Ports, LEDs, Antennas

(2) Ethernet Ports	RJ45, 10/100 Mbps
SIM	(2) Mini SIM, 2FF, 1 supported (rear panel)
LED Indicators	PWR, DAT, WAN, ETH, SIM, USR, POE, IN0, IN1, OUT
Wzzard	R-SMA connector
RST	RESET button (rear panel)
***Optional-3x ANT-ANT, DIV**	SMA connectors
SD	Available for file storage from Node-RED applications
(USB)	(currently unsupported)

Power

***Optional - Power Supply**	10 – 60 V_{DC} (2–Way Molex connector)
Power Consumption	Idle: 2.5 W Average: 4 W Peak: 11 W Sleep Mode: 10mW

Environmental

Temperature Range	Operating: -40 to +75 °C Storage: -40 to +85 °C
Temperature Range LTE450	Operating: -20 to +60 °C Storage: -40 to +85 °C
Humidity	Operating: 0 to 95 % Storage (Non-condensing): 0 to 95 %
Cold Start	-35 °C
Operating Altitude	2000 m / 70 kPa
Ingress Protection Rating	IP30

Mechanical

Metal case with metal DIN rail	
Dimensions	55 x 97 x 125 mm (2.17 x 3.82 x 4.9)
Weight	375 g

Industry Certifications & Approvals

Radio for general LTE	ETSI EN 301 511 v9.0.2, ETSI EN 301 908–1 v5.2.1, ETSI EN 301 908-2 v5.2.1, ETSI EN 301 908-13 v5.2.1
Emissions/ Immunity	IEC 61000-6-2:2005, ETSI EN 301 489-1 v1.9.2, EN 55022:2010
Safety	EN 60950-1:06 ed.2 (not Hazardous Locations), EN 62311:2008
Vehicle	E8
Environmental	RoHS, RoHS2, REACH, WEEE

Ordering Information

BB-SG30000520-41	2 Ethernet, Dust (no power supply)
BB-SG30000525-41	2 Ethernet, Dust, International Power Supply
BB-SG30300520-41	2 Ethernet, LTE-EMEA, Dust (no power supply)
BB-SG30300525-41	2 Ethernet, LTE-EMEA, Dust, International Power Supply
BB-SG30500520-41	2 Ethernet, LTE-NATAM, Dust (no power supply)

SmartSwarm 351

Modbus Eavesdrop to MQTT IIoT Gateway



Features

- Transparently connects to existing serial Modbus RTU networks
- Provides parallel data feed into Enterprise IIoT systems while the existing Modbus network continues to operate
- User configurable data enrichment and event triggers
- Extensive configuration options for interpretation of Modbus data
- Cellular or Ethernet connection to IIoT system
- Also acts as LAN to WAN bridge for 3rd party device connection

Introduction

Seamlessly connect existing Modbus process systems into the IoT

While a number of "Modbus to MQTT" gateways exist, most act as the local Modbus master devices, recovering information from a network of connected slaves. This presents a problem for operators of existing process control systems as a Modbus network can only have a single master device. The SmartSwarm 351 overcomes this limitation by transparently "eavesdropping" on communications between the existing master device and the connected slaves. It non-disruptively derives the I/O status of connected devices and uses this information to provide a real time data feed to a connected IIoT architecture.

Data Filtering

Much of the data that the gateway will see in the Modbus network is of little value. If a temperature reading rarely changes, for example, there is no point in reporting it every time it is sampled. For this reason, in addition to enriching the data, SmartSwarm 351 also allows users to configure the triggers that will cause a monitored value to be published. Users can also configure what is published once an event trigger condition is met – this might be just the changed value, a range of data, or all data from the same register type within the RTU. This lets users optimize the traffic across the communications network. At the same time, the gateway decreases the communications overhead and the processing bandwidth needed to handle it.

Specification

Power

- **Voltage** 10 ~ 60 V_{DC}; PoE PD optional
- **Power** 4W typical; 11W peak

Environmental

- **Operating Temperature** -40 °C to 75 °C (-40 °F to 167 °F)
- **Cold Start Temperature** -35 °C (-31 °F)
- **Storage Temperature** -40 °C to 85 °C (-40 to 185 °F)
- **Operating Humidity** 0% to 95% (non-condensing)
- **Storage Humidity** 0 to 95% non condensing
- **Ingress Protection** IP42

Mechanical

- **Dimensions** 55 x 97 x 125mm (2.17 x 3.82 x 4.9)
- **Weight** 375g
- **Mounting** Flat Surface or DIN rail

Ports & Interfaces

- **Serial Modbus RTU interface** RS-232 or RS-485
- **Ethernet** 2 x 10/100 Mb via RJ45
- **SIM** Mini SIM (2FF)
- **ANT & DIV antennae** SMA
- **Cellular** LTE, UMTS/HSPA+, GPRS/EDGE

Modbus Commands Supported

- **01 Read Coil Status**
- **02 Read Input Status**
- **03 Read Holding Registers**
- **04 Read Input Registers**
- **05 Force Single Coil* ***
- **06 Preset Single Register***
- **15 Force Multiple Coils***
- **16 Preset Multiple Registers***
- **22 Mask Write 4X Register***
- **23 Read/Write 4X Registers***

* Note that for output command types, the unit interprets these as inputs to the IoT enrichment process. It does not support output of data from the IoT system

Modbus Data Types Supported

- **Boolean**
- **Multi-bit Encoded Boolean (e.g. 2 bits provide 4 states for one point)**
- **16 Bit Packed Boolean**
- **16 Bit Integer (signed/ unsigned)**
- **16 Bit Counter**
- **32 Bit Integer (signed/unsigned) (single 32 bit or 2x16 bit registers)**
- **32 Bit Counter (single 32 bit or 2x 16 bit registers)**
- **32 Bit Float (single 32 bit or 2x 16 bit registers)**
- **32 Bit Packed Boolean (single 32 bit or 2x 16 bit registers)**
- **Multi-register Text**
- **Endian order is configurable both within and between registers**

Ordering Information

- **BB-SG30300320-51** EMEA Cellular, no accessories
- **BB-SG30300325-51** EMEA Cellular, with accessories
- **BB-SG30000320-51** no Cellular, no accessories
- **BB-SG30000325-51** no Cellular, with accessories
- **BB-SG30500320-51** NAM (AT&T) Cellular, no accessories

WzzardC™ Intelligent Edge Node

With SmartMesh IP and Bluetooth LE



Features

- Ultra low power 802.15.4e SmartMesh IP technology
- Communicates with Spectre Network Gateway via highly scalable and reliable wireless mesh networks
- Connect to industry standard analog or digital sensors
- Wzzard app lets you read or configure the nodes using Android tablets and smart phones
- MQTT and JSON IoT protocol to application platform

Introduction

Wireless Connectivity Where You Need It

The Wzzard™ intelligent wireless sensor platform creates a complete, quick and easy connectivity stack between your sensors and your application, on your network or on the Internet. The platform uses Intelligent Edge Nodes, a wireless 802.15.4e SmartMesh IP network to transmit sensor data to the Spectre Network Gateway. The Spectre Network Gateway can connect to the Internet via wired connections or the cellular data networks and communicate with application platforms using the MQTT IoT protocol and JSON data formats. Wzzard Intelligent Edge Nodes accommodate virtually any industry- standard external sensors. The Nodes provide a wide variety of sensor interface options, including general purpose analog inputs, digital input/output and thermocouple. They can also contain internal sensors like an accelerometer, depending upon the model number. All 802.15.4e Wzzard Intelligent Edge Nodes contain an internal temperature sensor.

Easy Configuration and Installation

Configuration of the Wzzard sensor platform is easy via Android smart phones or tablets. Using the Wzzard app, your handheld devices can configure the Wzzard Intelligent Edge Nodes over their Bluetooth LE connections. Wzzard Intelligent Edge Nodes can be configured with calibration and scaling information, friendly names, geolocation and other descriptive information. The platform simplifies physical installation as well. Wzzard Intelligent Edge Nodes can be attached to any surface using Velcro with dual lock adhesive or a holster mount.

Specification

Power

- **Internal** (2) 3.6V 2400 mAH Lithium Thionyl Chloride AA batteries
- **Battery Life** Multiyear based on 1 min sensor sampling and reporting
- **Optional External Input Voltage** 3.3 V_{DC} +/- 5%, 0.2 W max

Mechanical

- **Physical Connection** 3.5 mm terminal blocks
- **Sensor Inputs** Analog Input (0 ~ 5 V_{DC}, 0 – 20 mA, 4 – 20 mA)
  Digital Input (0 ~ 48 V_{DC})
  Dgital Input Frequency 1-1K Hz
  Digital Input Counter
  Integrated Temperature
  Thermocouple J Type
  Digital Output (0 ~ 30 V_{DC})
  Velcro with dual lock adhesive
- **Mounting** Holster Mount
- **Weight** 150 g (5.28 oz) with batteries installed

Technology

- **Wireless** 802.15.4e, SmartMesh IP
- **Protocols** MQTT-SN, MQTT, JSON
- **Bluetooth** Bluetooth 4.0 Low Energy (LE)
- **LED** Network Connectivity

Environmental

- **Installation** Indoor
- **Operating Temperature** 0 to 65 °C (32 to 149 °F)
- **Storage Temperature** 0 to 70 °C (32 to 158 °F)
- **Operating Humidity** 0 to 95% Non-condensing

Wireless Security

- **Device Authentication**
- **128 bit AES-based encryption with multiple keys**
- **Message integrity check (MIC)**
- **Synchronized key changeovers**
- **Customized key rotation**

Approvals and Certifications

CE

- **EN55022** CISPR (EN55022) Class A
- **EN 61000-6-1:2007** Generic immunity standard for residential, commercial and light industrial environments
- **EN 61000-6-3:2006+A1:2011** Emission standard for residential, commercial and light-industrial environments
- **EN61000-4-2** ESD +/- 8kV air, +/- 4kV contact
- **EN61000-4-3** RFI
- **EN61000-4-4** EFT
- **EN61000-4-6** CI

FCC/IC

- **FCC Part 15 Class A**
- **FCC - Part 15.247**
- **Industry Canada - RSS210**

Regulatory Approvals

- **ROHS and WEEE Compliant**

Ordering Information

- **BB-WCD1TA3** Wireless Mesh 802.15.4e; 3-Analog Inputs
- **BB-WCD1TD2** Wireless Mesh 802.15.4e; 2-Digital Inputs, 2 Digital Outputs
- **BB-WCD1TTJ** Wireless Mesh 802.15.4e; 2 J-Type Thermocouple

Wzzard™ Intelligent Edge Node

With SmartMesh IP and Bluetooth LE



Features

- Ultra low power 802.15.4e SmartMesh IP technology
- Communicates with Spectre Network Gateway via highly scalable and reliable wireless mesh networks
- Connect to industry standard analog or digital sensors
- Wzzard app lets you read or configure the nodes using Android tablets and smart phones
- Rugged, IP66-rated, fiber reinforced polyester PBT enclosure
- MQTT and JSON IoT protocol to application platform
- Class 1 DIV 2 approved for hazardous locations

Introduction

Wireless Connectivity Where You Need It

The Wzzard™ intelligent wireless sensor platform creates a complete, quick and easy connectivity stack between your sensors and your application, on your network or on the Internet. The platform uses Intelligent Edge Nodes, and a wireless 802.15.4e SmartMesh IP network to transmit sensor data to the Spectre Network Gateway. The Spectre Network Gateway can connect to the Internet via wired connections or the cellular data networks and communicate with application platforms using the MQTT IoT protocol and JSON data formats. Wzzard Intelligent Edge Nodes accommodate virtually any industry- standard external sensor. Connections can be made via conduit fitting, cable gland or an M12 connector. The Nodes provide a wide variety of sensor interface options, including general purpose analog inputs, digital input/outputs and thermocouple. They can also contain internal sensors like an accelerometer, depending upon the model number. All 802.15.4e Wzzard Intelligent Edge Nodes contain an internal temperature sensor.

Easy Configuration and Installation

Configuration of the Wzzard sensor platform is easy via Android smart phones or tablets. Using the Wzzard app, your handheld devices can configure the Wzzard Intelligent Edge Nodes over their Bluetooth LE connections. The Wzzard Intelligent Edge Nodes can be configured with calibration and scaling information, friendly names, geolocation and other descriptive information. The platform simplifies physical installation as well. Wzzard Intelligent Edge Nodes can be attached to any surface using screws or their embedded magnetic bases. The IP66-rated, fiber reinforced polyester PBT housing makes the units deployable in virtually any industrial or commercial environment.

Specification

Power

Internal	(2) 3.6V 2400 mAH Lithium Thionyl Chloride AA batteries
Battery Life	Multiyear based on 1 min sensor sampling and reporting
Optional External Input Voltage	3.3 Vdc +/- 5%

Mechanical

Physical Connection	M12 Connector 1/2" (12.7 mm) Conduit, sensor interface cable included; 8 wire, 26 gage, 6 ft. (1.8 m)
Sensor Inputs	Analog Input (0 ~ 5 Vdc, 0 ~ 20 mA, 4 ~ 20 mA) Digital Input (0 ~ 48 Vdc) Digital Input Frequency 1-1K Hz (Accuracy + or – 1 Hz) Digital Input Counter Integrated Accelerometer 3 Axis Integrated Temperature Thermocouple J, K Type Digital Output (0 ~ 30 Vdc)
Optional External Antenna	RP-SMA, Omnidirectional, 3.8 dBi, 2.4 GHz Dimensions 7.64 inches (194 mm)
Mounting	Magnetic mounting via internal magnet Pull force 4.7 lbs (2.13 kg) (4) Mounting ears, M5 (#10)
Enclosure	IP66-rated, fiber reinforced polyester PBT
Weight	0.75 lbs (0.34 kg)

Technology

Wireless	802.15.4e, SmartMesh IP
Protocols	MQTT-SN, MQTT, JSON
Bluetooth	Bluetooth 4.0 Low Energy (LE)
LED	Network Connectivity

Environmental

Installation	Indoor or outdoor
Operating Temperature	-40 to 80 °C (-40 to 176 °F)
Storage Temperature	-40 to 85 °C
Operating Humidity	0 to 95% Non-condensing

Wireless Security

- **Device Authentication**
- **128 bit AES-based encryption with multiple keys**
- **Message integrity check (MIC)**
- **Synchronized key changeovers**
- **Customized key rotation**

Approvals and Certifications

CE

EN55022	CISPR (EN55022) Class A
EN 61000-6-2:2005	Generic immunity standard for (heavy) industrial environments
EN 61000-6-4:2006+A1:2011	Emission standard for (heavy) industrial environments
EN61000-4-2	ESD +/- 8kV air, +/- 4kV contact
EN61000-4-3	RFI
EN61000-4-4	EFT
EN61000-4-5	Surge
EN61000-4-6	CI
EN60255-21-1	Vibration, 2g, 10-500Hz 0.3mm displacement
EN60255-21-2	Shock, 50g, 11ms half sine wave, 18 shocks

Environmental

IEC 60068-2-6:2007	Vibration, 2g, 10-500 Hz,1.5mm displacement
IEC 60068-2-27:2008	Shock, 50g, 11ms half sine wave, 18 shocks

FCC/IC

- **FCC Part 15 Class A**
- **FCC - Part 15.247**
- **Industry Canada - RSS210**

Safety

- **UL/CSA Class 1, Division 2 Group A, B, C, D**

Regulatory Approvals

- **ROHS and WEEE Compliant**

Ordering Information

BB-WSD2CTJ	Wireless Mesh 802.15.4e, 2 Thermocouple J-type Inputs, 1 Digital Output; External Antenna, Conduit Connector
BB-WSD1CTJ	Wireless Mesh 802.15.4e, 2 Thermocouple J-type Inputs, 1 Digital Output; Internal Antenna, Conduit Connector
BB-WSD2CTK	Wireless Mesh 802.15.4e, 2 Thermocouple K-type Inputs, 1 Digital Output; External Antenna, Conduit Connector
BB-WSD1CTK	Wireless Mesh 802.15.4e, 2 Thermocouple K-type Inputs, 1 Digital Output; Internal Antenna, Conduit Connector
BB-WSD2XV0	Wireless Mesh 802.15.4e Integrated Accelerometer; External Antenna
BB-WSD1XV0	Wireless Mesh 802.15.4e Integrated Accelerometer; Internal Antenna
BB-WSD2MA2	Wireless Mesh 802.15.4e; 2 Analog Inputs, 1 Digital Output; External Antenna, M12 Connector
BB-WSD1MA2	Wireless Mesh 802.15.4e; 2 Analog Inputs, 1 Digital Output; Internal Antenna, M12 Connector
BB-WSD2CA2	Wireless Mesh 802.15.4e; 2 Analog Inputs, 1 Digital Output; External Antenna, Conduit Connector
BB-WSD1CA2	Wireless Mesh 802.15.4e; 2 Analog Inputs, 1 Digital Output; Internal Antenna, Conduit Connector
BB-WSD2CJA	Wireless Mesh 802.15.4e; 2 Analog Inputs, 1 Digital Output, 2 Thermocouple J-type Inputs; External Antenna, Conduit Connector
BB-WSD2MA3	Wireless Mesh 802.15.4e; 3 Analog Inputs; External Antenna, M12 Connector
BB-WSD1MA3	Wireless Mesh 802.15.4e; 3 Analog Inputs; Internal Antenna, M12 Connector
BB-WSD2CA3	Wireless Mesh 802.15.4e; 3 Analog Inputs; External Antenna, Conduit Connector
BB-WSD1CA3	Wireless Mesh 802.15.4e; 3 Analog Inputs; Internal Antenna, Conduit Connector
BB-WSD2MD2	Wireless Mesh 802.15.4e; 2 Digital Inputs, 2 Digital Outputs; External Antenna, M12 Connector
BB-WSD1MD2	Wireless Mesh 802.15.4e; 2 Digital Inputs, 2 Digital Outputs; Internal Antenna, M12 Connector
BB-WSD2CD2	Wireless Mesh 802.15.4e; 2 Digital Inputs, 2 Digital Outputs; External Antenna, Conduit Connector
BB-WSD1CD2	Wireless Mesh 802.15.4e; 2 Digital Inputs, 2 Digital Outputs; Internal Antenna, Conduit Connector

EKI-6331AN

IEEE 802.11 a/n Wi-Fi AP/Client



Features

- Compliant with IEEE 802.11 a/n
- IP55 waterproof certification
- MIMO 2 x 2 11n
- External RP-SMA connectors for 2T2R antennae
- High output power
- Passive 24 V PoE
- WPA/WPA2-Enterprise encryption for a highly secure wireless network
- WEP/WPA/WPA2/ IEEE 802.1 x authentication support
- IGMP snooping protocol support

Introduction

The EKI-6331AN is a feature rich wireless AP/Client which provides a reliable 5GHz wireless connectivity for industrial environments. The PoE injector enhances flexibility in deployment of this AP/Client even where the DC power supply is hard to fulfill. As an 802.11n compliant device, EKI-6331AN provides 6 times higher data rates than legacy 802.11a devices. With MIMO 2 x 2 technology, EKI-6331AN provides both robust wireless connectivity as well as high throughput rate in wireless transmission. With the support of WMM and IGMP snooping protocols, EKI-6331AN effectively improves the reliability of wireless connectivity, especially in applications that need high reliability and high throughput data transmission. To secure wireless connections, EKI-6331AN implements the latest encryption technologies including WPA2/WPA/802.1x for powerful security authentication.

Specifications

Standard Support

- **Wireless** IEEE 802.11 a/n
- **Ethernet** IEEE 802.3u MDI / MDIX 10/100 Fast Ethernet
- **LAN** IEEE 802.11a wireless LAN interface
  IEEE 802.11n wireless LAN standard
  Passive 24 V PoE, max. distance: 50 meters
- **Certification** FCC 15B/C
  EN300328 V17.1
  EN301489 -1/-17
  EN55022/24
  EN60950
  Telec
- **Data Rates** 11a: 54M, 48M, 36M, 24M, 18M, 12M, 9M, 6Mbps auto fallback
  11n: HT20 MCS0 ~ 15 / HT40 MCS0 ~ 15

Physical Specifications

- **Power** DC 24 V / 1A; AC Adapter 100 V ~ 240 V
- **Dimensions (W x H x D)** 111 x 256 x 48 mm (4.37" x 10.08" x 1.89")
- **Mounting** Wall, Pole
- **Weight** 0.5 Kg

Environment

- **Operating Temp.** -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Temperature** -40 ~ 70 °C (-40 ~ 158 °F)
- **Humidity** 10% ~ 95% non-condensing

Interface Operation Modes

- Access Point (AP) / Client

Antenna

- Default external 5 dBi Omni antenna
- 2 x RP-SMA connectors (female) for RP-SMA antennae (male)

Other Features

- **Management** Telnet, FTP, SNMP, Web UI
- **Security** Open System , Shared Key, Lagacy 8021X, WPA, WPA2, WPA-PSK (TKIP), WPA2-PSK(AES)
- **Wireless** Radio on/off, WMM/Regatta Mode, Output Power Control, Fragmentation Length, Beacon Interval, RTS/CTS threshold, DTIM Interval

Modulation Techniques

- **IEEE 802.11n** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
- **IEEE 802.11a** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)

Channel Support

- **FCC** 5.15 GHz ~ 5.25 GHz ; 5.725 GHz ~ 5.85 GHz
- **CE** 5.15 GHz ~ 5.35 GHz; 5.47 GHz ~ 5.725 GHz

Wireless Transmission Rates

- **IEEE 802.11a** 6-24 Mbps: 23 dBm
  54 Mbps: 20 dBm
- **IEEE 802.11n** HT20 - MCS0: 23 dBm
  MCS15: 19 dBm
  HT40 - MCS0: 21 dBm
  MCS15: 19 dBm
- Note: The listed value is the target power calibrated in the card. The actual power will vary depending on each country's regulation.

Receiver Sensitivity

- **IEEE 802.11a** 6Mbps: -89 dBm
  54Mbps: -70 dBm
- **IEEE 802.11n** HT20 - MCS15: -65 dBm
  HT40 - MCS15: -62 dBm

Ordering Information

- **EKI-6331AN** IEEE 802.11 a/n Wireless AP/Client
- **EKI-6331AN-EU** IEEE 802.11 a/n Wireless AP/Client (EU)

EKI-6332GN

IEEE 802.11 b/g/n Wi-Fi AP/Client



Features

- Compliant with IEEE 802.11 b/g/n
- IP55 waterproof certification
- External RP-SMA connectors for 2T2R antennae
- High output power
- MIMO 2 x 2 11n
- Passive 24 V PoE
- WPA/WPA2-Enterprise encryption for a highly secure wireless network
- WEP/WPA/WPA2/ IEEE 802.1 x authentication support
- Spanning Tree and IGMP snooping protocol support

Introduction

The EKI-6332GN is a feature rich wireless AP/Client which provides a reliable wireless connectivity for industrial environments. The PoE injector enhances flexibility in deployment of this AP/Client even where the DC power supply is hard to fulfill. As an 802.11n compliant device, EKI-6332GN provides 6 times higher data rates than legacy 802.11g devices. With the support of STP, WMM and IGMP snooping protocols, EKI-6332GN effectively improves the reliability of wireless connectivity, especially in applications that need high reliability and high throughput data transmission. To secure wireless connections, EKI-6332GN implements the latest encryption technologies including WPA2/WPA/802.1x for powerful security authentication.

Specifications

Standard Support

- **Wireless** IEEE 802.11b/g/n
- **Ethernet** IEEE 802.3u MDI / MDIX 10/100 Fast Ethernet
- **LAN** IEEE 802.11b/g wireless LAN interface
  IEEE 802.11n wireless LAN standard
  Passive 24 V PoE, max. distance: 50 meters
- **Certification** FCC 15B/C
  EN300328 V181
  EN301489 -1/-17
  Telec
  EN55022/24
  EN60950
- **Data Rates** 11b: 11M, 5.5M, 2M, 1Mbps
  11g: 54M, 48M, 36M, 24M, 18M, 12M, 9M, 6Mbps
  11n: HT20 MCS0 ~ 15 / HT40 MCS0 ~ 15

Physical Specifications

- **Power** DC 24 V / 1A; AC Adapter 100 V ~ 240 V
- **Dimensions (W x H x D)** 111 x 256 x 48 mm (4.37" x 10.08" x 1.89")
- **Mounting** Wall, Pole
- **Weight** 0.5 Kg

Environment

- **Operating Temperature** Non Heater : -20 ~ 70 °C (-4 ~ 158 °F)
- **Storage Temperature** -40 ~ 70 °C (-40 ~ 158 °F)
- **Humidity** 10% ~ 95% non-condensing

Interface Operation Modes

- Access Point (AP) / Client

Antenna

- Default external 5 dBi Omni antenna
- 2 x RP-SMA connectors (female) for RP-SMA antennae (male)

Other Features

- **Management** Telnet, FTP, SNMP, Web UI
- **Wireless** Radio on/off, WMM/Regatta Mode, Output Power Control, Fragmentation Length, Beacon Interval, RTS/CTS threshold, DTIM Interval,
- **Security** Open System , Shared Key, Lagacy 8021X, WPA, WPA2, WPA-PSK (TKIP), WPA2-PSK(AES)

Modulation Techniques

- **IEEE 802.11n** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
- **IEEE 802.11b** DSSS (DBPSK, DQPSK, CCK)
- **IEEE 802.11g** OFDM (BPSK, QPSK, 16-QAM, 64-QAM)

Channel Support

- **IEEE 802.11b/g/gn** HT20
  FCC: CH1 ~ CH11; ETSI: CH1 ~ CH13
- **IEEE 802.11gn** HT40
  FCC: CH3 ~ CH9; ETSI: CH3 ~ CH11

Wireless Transmission Rates

- **Transmitted Power*** 802.11b: 27 dBm
  802.11g: 25 dBm @ 6 Mbps, 23 dBm @ 54 Mbps
  802.11gn HT20: 27 dBm @ MCS0/8, 23 dBm@ MCS7/15 802.11gn HT40: 26 dBm @ MCS0/8, 22 dBm@ MCS7/15

*Note: The listed value is the target power calibrated in the card. The actual power will vary depending on each country's regulation

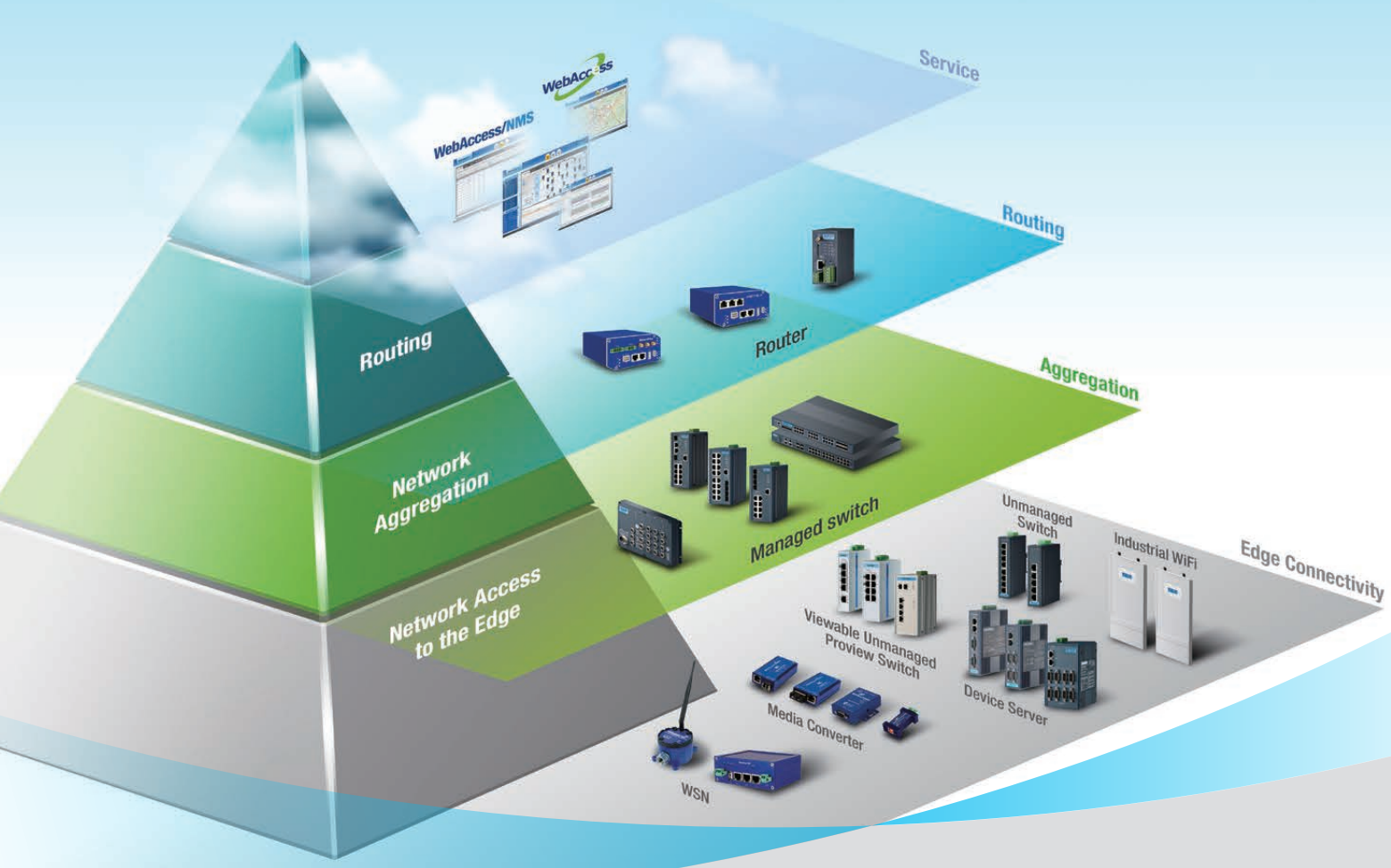
Receiver Sensitivity

- **802.11b Sensitivity** -91 dBm @ 1 Mbps; -85 dBm @ 11 Mbps
- **802.11g Sensitivity** -89 dBm @ 6 Mbps; -70 dBm @ 54 Mbps
- **802.11n HT20** -83 dBm @ MCS0/8; -65 dBm @ MCS7/15
- **802.11n HT40** -80 dBm @ MCS0/8; -62 dBm @ MCS7/15

Ordering Information

- **EKI-6332GN** 802.11 b/g/n Wireless AP/Client (US)
- **EKI-6332GN-EU** 802.11 b/g/n Wireless AP/Client (EU)

Advantech Industrial Communication



ADVANTECH

Enabling an Intelligent Planet

Providing Interconnected Solutions for Advantech's Mission of Enabling an Intelligent Planet

Advantech's iConnectivity group offers a full range of Industrial Communication products including wired and wireless communication solutions for mission critical applications. These products include: Industrial Ethernet Switches, Industrial Wireless AP/CPE, Media Converters, Serial Device Servers, Modbus Gateways, and Cellular IP Gateways/ Routers. They are also capable of securely transmitting, remotely monitoring and controlling networked devices and high communication capabilities for industrial applications. These reliable and robust industrial grade communication products from Advantech's iConnectivity group fit different applications including process manufacturing, discrete manufacturing, security, and intelligent transportation system and the mission is to simplify the way you connect.



EKI-9512/P/9516/P
EN50155 M12 Managed Ethernet Switch



EKI-7700 Series
EKI-7428G Series
Industrial Managed Switch
Industrial Rackmount Managed Switch



EKI-152x Series
EKI-122x Series
1/2/4-port RS-232/422/485 Serial Device Server
1/2/4-port Modbus Gateway



Wzzard-LRPv Sensor Node
Industrial LoRa Private Node

www.advantech.com

Product Index

A

Accessories 14-8
ACP-1010 1U Rackmount Chassis for Full-size SHB/SBC or ATX/MicroATX Motherboard 8-30
ACP-2000/IPC-602 2U 6-Slot Rackmount Chassis with Front USB and PS/2 Interfaces 8-34
ACP-2010/2320 2U Rackmount Chassis for ATX/ MicroATX Motherboard with Low-Profile Rear Bracket Option 8-36
ACP-2020 2U Rackmount Short Depth Chassis for ATX and mATX Motherboard 8-38
ACP-4000 Quiet 4U Rackmount Chassis with Visual & Audible Alarm Notification 8-52
ACP-4010 Quiet 4U Rackmount Chassis for ATX/CEB/EEB Motherboard or Full-size SHB/SBC with Dual System Support 8-54
ACP-4020 348mm Depth 4U Rackmount Chassis for Half-size SBC or ATX Motherboard 8-48
ACP-4320 Quiet 4U Rackmount Chassis with Dual Hot-Swap SAS/SATA HDD Trays 8-56
ACP-4340 4U Rackmount Chassis for Full-size SHB/SBC or ATX/MicroATX Motherboard with 4 Hot Swap Drive Trays 8-58
ACP-4D00 Dual-Node 350mm Depth 4U Chassis for Half-size Slot SBC 8-50
ADAM-3000 Series Isolated Signal Conditioning Modules 1-32
ADAM-3011 Isolated Thermocouple Input Module 1-33
ADAM-3013 Isolated RTD Input Module 1-33
ADAM-3014 Isolated DC Input/Output Module 1-33
ADAM-3016 Isolated Strain Gauge Input Module 1-34
ADAM-3017 External Powered IEPE Signal Conditioner 1-34
ADAM-3112 Isolated AC Voltage Input Module 1-35
ADAM-3114 Isolated AC Current Input Module 1-35
AGS-913 1U Rackmount Intel® Xeon® E5-2600 v3/v4 GPU server, Supporting 3 x PCIe x16 double-depth card and 1 x PCIe x8 single-depth FH/HL card 12-4
AGS-923 2U Rackmount Intel® Xeon® E5-2600 v4/v3 GPU server, Supporting 4 x PCIe x16 double-depth card and 1 x PCIe x8 single-depth FH/HL card 12-6
AIIS-1200P (GigE PoE) Palm Size Vision System, Supports Intel® Braswell SoC, 2-CH Camera Interface for GigE PoE or USB 3.0 4-4
AIIS-1200U (USB 3.0) Palm Size Vision System, Supports Intel® Braswell SoC, 2-CH Camera Interface for GigE PoE or USB 3.0 4-4
AIIS-3400P (PoE) Compact Vision System, Intel® 6th/7th Gen Core i CPU, 4-CH Camera Interface for GigE PoE or USB 3.0 4-6
AIIS-3400U (USB 3.0) Compact Vision System, Intel® 6th/7th Gen Core i CPU, 4-CH Camera Interface for GigE PoE or USB 3.0 4-6
AIIS-3410P (PoE) Compact Vision System, Intel® 6th/7th Gen Core i CPU, 4-CH Camera Interface for GigE PoE or USB 3.0, PCIe expansion slot 4-8
AIIS-3410U (USB 3.0) Compact Vision System, Intel® 6th/7th Gen Core i CPU, 4-CH Camera Interface for GigE PoE or USB 3.0, PCIe expansion slot 4-8
AIIS-5410P Fanless Vision System with Intel® Core™ i Processor, 4-Channel GigE PoE Camera Interface, and PCIe expansion slot 4-10
AIMB-705 LGA1151 6th/7th Generation Intel® Core™ i7/i5/i3/Pentium/Celeron ATX with DVI/VGA, DDR4, SATA III, USB 3.0 & 6 COMs 7-6
AIMB-784 LGA1150 4th Generation Intel® Core™ i7/i5/i3/Pentium ATX with DVI/VGA, DDR3, SATA III 7-4
AIMB-785 LGA1151 6th/7th Generation Intel® Core™ i7/i5/i3/Pentium/Celeron ATX with Triple Display, DDR4, SATA III 7-8
AiMC-3202 Micro Computer, Intel® Core™ i7/i5/i3 CPU, H110, 2 Expansions, 250W 80Plus PSU 5-4
AiMC-3422 Micro Computer, Intel® Core™ i7/i5/i3 CPU, H110, 4 Expansions, 300W 80Plus PSU 5-6
ARK-5261 Intel® Celeron® Processor J1900 Fanless Embedded BOX PC with PCI/PCIe Expansion and Dual Mobile HDDs/SSDs 5-19
ARK-6610/6620 Compact Chassis for Mini-ITX Motherboard 8-6
ASMB Riser Card 9-33
ASMB-260 Intel® Atom™ C3000 Mini-ITX Server Board with 4 DDR4 DIMM, one PCIe x4 Slot (Gen 3.0), 8 SATA III, IPMI 9-6
ASMB-584 LGA 1150 Intel® Xeon® E3 v3/ 4th Generation Core™ Micro ATX Server Board with 2 PCIe x16 slots (x8 link), 1 PCIe x4, 1 PCI, USB 3.0, Dual LANs 9-8
ASMB-585 LGA 1151 Intel® Xeon® E3 v5/v6 & 6th/7th Generation Core™ series Micro ATX Server Board with 4 DDR4, 1 PCIe x16, 3 PCIe x4, Quad LANs, USB 3.0 9-10
ASMB-784 LGA 1150 Intel® Xeon® E3 v3/ 4th Generation Core™ ATX Server Board with 2 PCIe x16 slots (x8 link), 3 PCI, USB 3.0, Quad/Dual LANs 9-12
ASMB-785 LGA 1151 Intel® Xeon® E3 v5/v6 & 6th/7th Generation Core™ ATX Server Board with 4 DDR4, 4 PCIe, 3 PCI, 6 USB 3.0, 6 COM, 6 SATA3, Quad/Dual LANs 9-14
ASMB-813 LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 ATX Server Board with 8 DDR4 DIMM, 5 PCIe x16 Slot, 6 USB 3.0, IPMI 9-16
ASMB-815 LGA 3647-P0 Intel® Xeon® Scalable ATX Server Board with 6 DDR4, 5 PCIe x8 or 2 PCIe x16 and 1 PCIe x8, 8 SATA3, 6 USB3.0, Dual 10GbE, IPMI 9-18
ASMB-823 Dual LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 ATX Server Board with 6 DDR4, 4 PCIe x16, 6 USB 3.0, SATA3, Dual LAN, IPMI 9-20

Product Index

ASMB-825	Dual LGA 3647-P0 Intel® Xeon® Scalable ATX Server Board with 6 DDR4, 4 PCIe x16 + 2 PCIe x8, 8 SATA3, 6 USB3.0, Dual 10GbE, IPMI	9-22
ASMB-913	Dual LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 EATX Server Board with 16 DDR4 DIMM, 3 PCIe x16, 6 USB 3.0, PME support, IPMI	9-24
ASMB-923	Dual LGA 2011-R3 Intel® Xeon® E5-2600 v3/v4 EATX Server Board with 8 DDR4, 4 PCIe x16+ 2 PCIe x8, 4 USB 3.0, IPMI	9-26
ASMB-925	Dual LGA 3647-P0 Intel® Xeon® Scalable EATX Server Board with 12 DDR4, 5 PCIe x16 + 1 PCIe x8 + 1 PCI, 8 SATA3, 6 USB3.0, Dual 10GbE, IPMI	9-28
ASMB-975	Dual LGA 3647-P0 Intel® Xeon® Scalable Proprietary Server Board with 12 DDR4, 4 PCIe x16 + 1 PCIe x8+4 PCIe x4, 14 SATA3, 8 USB3.0, Dual 10GbE, IPMI	9-30
ASR-1000K	Flexible Expansion Module Fulfilling Various JBOD Demands	10-36
ASR-3100	1U Rackmount Dual Intel® Xeon® E5-2600 v3/v4 Storage Server, with up to 16x 2.5" NVMe SSDs and 2x PCIe Gen III x8 Slots	11-4
ASR-5300I	3U 16-bay IP-SAN Storage with Reinforced Reliability for Surveillance	11-8

B

BB-WSL1/2C2112T	Industrial LoRa Private Node	15-31
BB-WSL1/2C31000	Industrial LoRa Private Node	15-31
BB-WSL1/2M31000	Industrial LoRa Private Node	15-31

C

CPU Coolers		14-5

D

DVP-5311D	Vide (DVI-DVI), Control and Data Transmission Extender	2-18
DVP-7011HE	1-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK	2-4
DVP-7011MHE	1-ch Full HD H.264 M.2 Video Capture Card with SDK	2-15
DVP-7011UHE	1-ch H.264 4K HDMI 2.0 PCIe Video Capture Card with SDK	2-17
DVP-7012MHE	1-ch Full HD H.264 M.2 Video Capture Card with SDK	2-16
DVP-7013HE	1-ch H.264/MPEG4 Low-Power PCIe Video Capture Card with SDK	2-5
DVP-7016HE	1-ch Full HD H.264 MiniPCIe Video Capture Card with SDK	2-6
DVP-7017HE	1-ch Full HD H.264 Mini PCIe Video Capture Card with SDK	2-7
DVP-7019HE	1-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK	2-8
DVP-7021HE	2-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK	2-9
DVP-7031HE	4-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK	2-10
DVP-7033HE	4-ch Full HD H.264/MPEG4 PCIe Video Capture Card with SDK	2-11
DVP-7035HE	4-ch Full HD H.264/MPEG4 AHD/CVI/TVI/CVBS PCIe Video Capture Card with SDK	2-12
DVP-7634HE	4ch Full HD H.264 PCIe Video Capture Card with SDK	2-13
DVP-7635HE	4-ch Full HD H.264/MPEG4 AHD/CVI/TVI PCIe Video Capture Card with SDK	2-14

E

EKI-1221/CI/I	1-port Modbus Gateway	15-21
EKI-1222/CI/I	2-port Modbus Gateway	15-21
EKI-1222ECMS	Modbus RTU/TCP to EtherCAT Protocol Gateway	15-25
EKI-1222EIMS	Modbus RTU/TCP to EtherNet/IP Protocol Gateway	15-23
EKI-1222PNMS	Modbus RTU/TCP to PROFINET Protocol Gateway	15-24
EKI-1224/CI/I	4-port Modbus Gateway	15-21
EKI-1331	1-port RS-232/485 to HSPA+ IP Gateway	15-26
EKI-1361	1-port RS-232/422/485 to 802.11a/b/g/n WLAN Serial Device Server	15-22
EKI-1361-MB	1-port RS-232/422/485 to 802.11a/b/g/n WLAN Modbus Gateway	15-22
EKI-1362	2-port RS-232/422/485 to 802.11a/b/g/n WLAN Serial Device Server	15-22
EKI-1362-MB	2-port RS-232/422/485 to 802.11a/b/g/n WLAN Modbus Gateway	15-22
EKI-1521/CI/I	1-port RS-232/422/485 Serial Device Server	15-19
EKI-1522/CI/I	2-port RS-232/422/485 Serial Device Server	15-19
EKI-1524/CI/I	4-port RS-232/422/485 Serial Device Server	15-19

EKI-1526/I/TI 16-port RS-232/422/485 Serial Device Server 15-20
EKI-1528/I/TI 8-port RS-232/422/485 Serial Device Server 15-20
EKI-2525/I 5-port Unmanaged Industrial Ethernet Switch 15-17
EKI-2528/I 8-port Unmanaged Industrial Ethernet Switch 15-17
EKI-2701HPI IEEE 802.3af/at Gigabit PoE+ Injector with Wide Temperature 15-9
EKI-2706E-1GFP/I 4FE+1GE+1G SFP Unmanaged Industrial PoE Switch 15-8
EKI-2706G-1GFP/I 5GE+1G SFP Unmanaged Industrial PoE Switch 15-8
EKI-2728MI 6G+2G Multi-Mode Unmanaged Ethernet Switch with Wide Temperature 15-18
EKI-5526/I-EI 16 port Entry-Level Managed Switch Supporting EtherNet/IP 15-11
EKI-5528/I-EI 8 port Entry-Level Managed Switch Supporting EtherNet/IP 15-11
EKI-5528-PNMA 8 Port Entry-Level Managed Switch Supporting PROFINET MRP Master 15-10
EKI-5626C/CI-MB 16 + 2G Combo ports Entry-Level Managed Switch Supporting Modbus/TCP 15-12
EKI-5629C/CI-MB 8 + 2G Combo ports Entry-Level Managed Switch Supporting Modbus/TCP 15-12
EKI-6331AN IEEE 802.11 a/n Wi-Fi AP/Client 15-36
EKI-6332GN IEEE 802.11 b/g/n Wi-Fi AP/Client 15-37
EKI-6528TI EN50155 8-port M12 Unmanaged Switch with Wide Temperature 15-3
EKI-6528TPI EN50155 8-port M12 Unmanaged PoE Switch with Wide Temperature 15-3
EKI-6558TI EN50155 IP67 8-port M12 Managed Ethernet Switch with Wide Temperature 15-2
EKI-6559TMI EN50155 IP67 8-port M12 + 2-port Fiber Optic Managed Ethernet Switch with Wide Temperature 15-2
EKI-7629C/CI 8+2G Combo Port Gigabit Unmanaged Industrial Ethernet Switch 15-16
EKI-7710E-2C 8FE+2G Port Gigabit Managed 15-13
EKI-7710E-2CI Redundant Industrial Switch 15-13
EKI-7710E-2CP 8FE+2G Port Gigabit Managed 15-6
EKI-7710E-2CPI Redundant Industrial PoE Switch 15-6
EKI-7712E-4F 8FE+4SFP Port Gigabit Managed 15-14
EKI-7712E-4FI Redundant Industrial Switch 15-14
EKI-7712E-4FP 8FE+4SFP Port Gigabit Managed Redundant Industrial PoE Switch 15-7
EKI-7712E-4FPI 8FE+4SFP Port Gigabit Managed Redundant Industrial PoE Switch 15-7
EKI-7720E-4F 16FE+4SFP Port Gigabit Managed 15-15
EKI-7720E-4FI Redundant Industrial Switch 15-15
EKI-9516P EN 50155 16-port Full Gigabit Managed Ethernet Switch with PoE/PoE+ 15-5
EKI-9516-WV EN 50155 16-port Full Gigabit Managed Ethernet Switch 15-4

H

Half-Size SBC Backplanes 6-53
HPC-2040 Mini 4 Bay Server Tower 10-4
HPC-5000 Small Tower Chassis for microATX / Mini-ITX Motherboard 10-6
HPC-7000 Server Tower Chassis for EATX/ATX/ MicroATX Motherboard 10-8
HPC-7120 1U Server Chassis for MicroATX/ATX/EATX Server board 10-12
HPC-7120S 1U Short-Depth Server Chassis for Micro ATX/ATX Motherboards 10-10
HPC-7140 1U Rackmount Server Chassis for MicroATX/ATX Server board with 4 x 3.5" Hot-swap Drive Bays 10-14
HPC-7242 2U Rackmount Chassis for ATX Motherboard with 4 Hot-Swap SAS/SATA HDD Trays and RPS 10-16
HPC-7282 2U Rackmount Chassis for Micro/ATX Server Board with 8 Hot-swap Drive Bays, 7 Low Profile Expansion Slots 10-18
HPC-7320 3U Short-depth Rackmount/ Tower Chassis for EATX/ATX/MicroATX Motherboard 10-20
HPC-7400 4U Compact Rackmount / Tower Chassis for EATX/ATX/MicroATX Motherboard 10-22
HPC-7400-S813 4U GPU Server System With Intel® Xeon® E5-2600 v3/v4 CPU, Supporting up to 2* GPU cards and 1400W RPS 12-8
HPC-7400-S923 4U GPU Server System With Dual Intel® Xeon® E5-2600 v3/v4 CPU, Supporting up to 3* GPU cards and 1400W RPS 12-10
HPC-7442 4U Rackmount Chassis for EATX/ATX/ MicroATX Motherboard with 4 Hot Swap Drive Trays 10-24
HPC-7483 4U Rackmount / Tower Chassis for EATX/ATX/MicroATX Motherboard 10-26
HPC-7483-S923 4U GPU Server System With Dual Intel® Xeon® E5-2600 v4 CPU, Supporting up to 4* GPU cards and 1800W RPS 12-12
HPC-8212 2U Storage Chassis for ATX/EATX Serverboard with 12 Hot-swap Drive Bays 10-28
HPC-8224 2U Storage Chassis for ATX/EATX Serverboard with 24 Hot-swap Drive Bays 10-30
HPC-8316 3U Storage Chassis for ATX/EATX Serverboard with 16 Hot-swap Drive Bays 10-32

Product Index

HPC-8424 4U Storage Chassis for ATX/EATX Serverboard with 24 Hot-swap Drive Bays....10-34

I

i-Modules for MIC-7 Series 5-16
IPC-3012 Compact Chassis for PICMG 1.3 Half Size SHB....8-8
IPC-3026 Quiet Compact Chassis for Half Size SHB/SBC....8-10
IPC-510 Economical 4U Rackmount Chassis with Front-Accessible USB and PS/2 Interfaces....8-40
IPC-5120/7120 Desktop/Wallmount Chassis with front I/O Interfaces for ATX/mATX Motherboard....8-22
IPC-5122 Desktop/Wallmount Chassis for MicroATX Motherboard 8-26
IPC-6025 5-Slot Desktop/Wallmount Chassis with Scalability as 5U Quad-System Solution 8-24
IPC-603 2U 3-Slot Rackmount Chassis for ATX/MicroATX Motherboard with Front I/O....8-32
IPC-610-H 4U Rackmount Chassis with Visual Alarm Notification....8-44
IPC-610-L/IPC-611 4U 15-Slot Rackmount Chassis with Front-Accessible Fan....8-42
IPC-622 6U 20-Slot Rack-mount Short Depth Chassis with Redundant Power Supply 8-62
IPC-623 4U 20-Slot Rackmount Chassis with Multi-System and Front-Accessible Redundant Power Supply 8-60
IPC-631 4U Front I/O Short Depth Rackmount Chassis for ATX/MicroATX Motherboard 8-46
IPC-6606/6608 6/8-Slot Desktop/Wallmount Chassis....8-16
IPC-6806 6-Slot Desktop/Wallmount Compact Chassis for Full-/Half-size Slot SBC....8-12
IPC-6806S-D 6-Slot Desktop/Wallmount Compact Chassis for Half-size Slot SBC 8-14
IPC-7130/7130L Desktop/Wallmount Chassis for ATX/MicroATX Motherboard with Dual Hot-Swap 3.5" Drive Bays....8-28
IPC-7132 Cost-effective Wallmount Chassis for ATX/mATX Motherboard....8-18
IPC-7220 Desktop/wallmount Chassis for ATX/mATX Motherboard....8-20
ITA-1501 Freescale® i.MX6 Quad Fanless Compact System with Multiple COM Ports and Dual Displays 3-4
ITA-1611 Intel® Celeron™J1900 Fanless Compact System with Dual Gigabit Ethernet LAN and Dual Displays 3-6
ITA-1711 Intel® Celeron™J1900 Fanless Compact System with Multiple COM Ports and Dual Displays....3-8
ITA-2111 Intel® Atom™ E3845 1U Fanless System; EN 50121-4 Compliant for Railway Applications....3-10
ITA-2211 Intel® Atom™ E3845 2U Fanless System; EN 50121-4 Compliant for Railway Applications....3-12
ITA-2231 Intel® 6th Generation Core™ i Processor 2U Fanless System; EN 50121-4 Compliant for Railway Applications....3-14
ITA-5231 Intel® 6th Generation Core™ i Processor 2U Fanless System; EN 50155 Compliant for Railway Applications....3-20
ITA-5612 Intel® Atom™ E3950 Fanless Compact System; EN 50155 Compliant for Railway Applications....3-16
ITA-5831 Intel® 6th Generation Core™ i Processor Fanless System; EN 50155 Compliant for Railway Applications....3-18

K

Keyboards 14-7

M

MIC-1810 12-bit, 500 KS/s, 12-ch DAQ platform with Core™ i3/ Celeron® processer 1-49
MIC-1816 16-bit, 1MS/s, 16-ch DAQ platform with Core™ i3/ Celeron® processer 1-50
MIC-3022 4U CompactPCI® Enclosure for 3U Cards....13-9
MIC-3023 3U CompactPCI® Enclosure for 3U Cards....13-11
MIC-3106 4U CompactPCI® with 2 Peripheral Slots....13-5
MIC-3111 4U CompactPCI® with 7 Peripheral Slots....13-5
MIC-3121 4U CompactPCI® with 7 Peripheral Slots....13-7
MIC-3328 3rd Generation Intel® Core™ Processor 3U CompactPCI® PlusIO Card....13-12
MIC-3329 Quad-Core Intel® Atom™ SoC Processor 3U CompactPCI® Card....13-14
MIC-3612 4-port RS-232/422/485 3/6U CompactPCI® Card....13-18
MIC-3620 8-port RS-232 3U CompactPCI® Card 13-18
MIC-3680 2-Port CAN-bus 3U CompactPCI® Card....13-18
MIC-3714 30 MS/s, 12-bit, Simultaneous 4-ch Analog Input 3U CompactPCI® Card 13-19
MIC-3716 250 kS/s, 16-bit, 16-ch Multifunction 3U CompactPCI® Card 13-19
MIC-3720 12-bit, 4-ch Isolated Analog Output Universal CompactPCI® Card 13-20
MIC-3723 16-bit, 8-ch Analog Output 3U CompactPCI® Card....13-20

MIC-3753 72-CH Digital I/O 3U CompactPCI® Card 13-21
MIC-3756 64-ch Isolated Digital I/O CPCI Card 13-21
MIC-3758 128-CH Isolated Digital I/O 3U CompactPCI® Card 13-21
MIC-3761 8-CH Relay & 8-CH Isolated Digital Input 3U CompactPCI® Card 13-22
MIC-3780 8-CH, 16-bit Counter/Timer 3U CompactPCI® Card 13-22
MIC-3953 Single PMC Slot Carrier 3U CompactPCI® Card 13-23
MIC-3954 PCIe® Mini or Storage Carrier 3U CompactPCI® Serial Card 13-24
MIC-3957 GPS Communication 3U CompactPCI® Card 13-25
MIC-3958 4 RJ45 Port Gigabit Ethernet 3U CompactPCI® Card 13-26
MIC-7300 Intel® Celeron N3350/ Atom x7 E3950 Processor 5-8
MIC-7420 Intel 6th Generation Core i Processor Compact Fanless System 5-17
MIC-7500 Intel® 6th Generation Core™ i Compact Fanless System 5-10
MIC-7700 Intel® 6th/7th Generation Core i Socket Compact Fanless System 5-12
MIC-7900 Intel Xeon Processor Broadwell-DE SoC Compact Fanless System 5-14

P

PCA-6011 LGA775 Intel® Core™2 Quad SBC with VGA/DVI/Dual GbE LAN 6-24
PCA-6028 LGA1150 Intel® Core™ i7/i5/i3/Pentium SBC with VGA/DVI/Dual GbE LAN 6-26
PCA-6742 Advantech EVA-X4300 ISA Half-size SBC with VGA/LCD/LAN/CFC/USB and PC/104 6-38
PCA-6743 DM&P Vortex86DX ISA Half-size SBC with VGA/TTL or LVDS/LAN/USB/PC/104/ CFC/COM 6-40
PCA-6763 AMD T40E/T16R ISA Half-size SBC with Dual Independent Display/Dual GbE/SATA/USB/m-SATA/COM/LPT 6-42
PCE-3028 LGA 1150 4th Generation Intel® Core™ i7/i5/i3 Half-size SHB with PCIe/VGA/DVI/Dual GbE LAN 6-28
PCE-3029 LGA 1151 6th and 7th Gen Intel® Core™ i7/i5/i3 Half-size SHB with PCIe 3.0/Dual Independent Display/Dual GbE LAN/ SATA III/m-SATA/ USB 3.0 6-30
PCE-4128 LGA 1150 4th Gen Intel® Xeon® and Core™ i7/i5/i3 Half-size SHB with PCIe 3.0/Triple independent display/Dual GbE LAN/ SATA 3.0/m-SATA/ USB 3.0 6-32
PCE-4129 LGA 1151 6th and 7th Gen Intel® Xeon® and Core™ i7/i5/i3 Half-size SHB with PCIe 3.0/Triple Independent Display/ Dual GbE LAN/SATA III/m-SATA/ USB 3.0 6-34
PCE-5029 LGA1151 6th and 7th Generation Intel® Core™ i7/i5/i3/Pentium/Celeron System Host Board with DDR4, SATA 3.0, USB 3.0, Dual GbE, and Dual Displays 6-14
PCE-5128 LGA1150 Intel® Core™i7/i5/i3/Pentium® SHB DDR3/SATA 3.0/USB3.0/Dual GbE/3 Displays 6-12
PCE-5129 LGA1151 6th and 7th Generation Intel® Core™ i7/i5/i3/Pentium/Celeron System Host Board with DDR4, SATA 3.0, USB 3.0, M.2, Dual GbE, and Triple Displays 6-16
PCE-7128 LGA1150 Intel® Xeon®/Core™i3/Pentium® SHB DDR3/SATA 3.0/USB3.0/Dual GbE /3 Displays 6-18
PCE-7129 6th Generation Intel® Xeon®/Core™ i7/i5/i3/Pentium® LGA1151 System Host Board with DDR4, SATA 3.0, USB 3.0, M.2, Dual GbE, and Triple Displays 6-20
PCE-9228 Dual LGA 2011-R3 Intel Xeon® E5-2600v3 SHB Server Board with C612, DDR4/SATA3.0/USB3.0/Dual Gb 6-22
PCE-GIGE2 (2 ports) PCI Express x4, 2/4-Port GbE Expansion Card 4-12
PCE-GIGE4 (4 ports) PCI Express x4, 2/4-Port GbE Expansion Card 4-12
PCE-USB4 (4 ports) PCI Express x4, 4/8-Port USB 3.0 Expansion Card 4-11
PCE-USB8 (8 ports) PCI Express x4, 4/8-Port USB 3.0 Expansion Card 4-11
PCI-1602UP 2-port RS-232/422/485 Low-Profile Universal PCI Communication Card with Isolation Protection 1-48
PCI-1604L 2-port RS-232 PCI Communication Card 1-48
PCI-1680 2-port CAN-bus Universal PCI Card with Isolation Protection 1-47
PCI-7032 Intel® Celeron J1900/N2930 PCI Half-size SBC with DDR3L 1333/Dual GbE/m-SATA/4 RS-232/422/485 6-36
PCIE-1602 2-port RS-232/422/485 PCI Express Communication Card 1-45
PCIE-1604 2-port RS-232 PCI Express Communication Card 1-45
PCIE-1610 4-port RS-232 PCI Express Communication Card 1-45
PCIE-1612 4-port RS-232/422/485 PCI Express Communication Card 1-45
PCIE-1620 8-port RS-232 PCI Express Communication Card 1-46
PCIE-1622 8-port RS-232/422/485 PCI Express Communication Card 1-46
PCIE-1680 2-Port CAN-Bus PCIE card with Isolation Protection 1-47
PCIE-1730 32-ch TTL and 32-ch Isolated Digital I/O PCIe Card 1-18
PCIE-1730H 32-ch TTL and 32-ch Isolated Digital I/O PCIe card with digital filter and interrupt function 1-18

Product Index

PCIE-1751 48-ch Digital I/O and 3-ch Counter PCI Express Card 1-19
PCIE-1752 64-ch Isolated Digital Output PCI Express Card 1-20
PCIE-1753 96-ch Digital I/O PCI Express Card 1-19
PCIE-1754 64-ch Isolated Digital Input PCI Express Card 1-20
PCIE-1756 64-ch Isolated Digital I/O PCIe Card 1-21
PCIE-1756H 64-ch Isolated Digital I/O PCIe card with digital filter and interrupt function 1-21
PCIE-1760 8-ch Relay and 8-ch Isolated Digital Input PCI Express Card 1-22
PCIE-1802 8-ch, 24-bit, 216 kS/s Dynamic Signal Acquisition PCI Express Card 1-25
PCIE-1802L 4-ch, 24-Bit, 216 kS/s Dynamic Signal Acquisition PCI Express Card 1-25
PCIE-1810 500 kS/s, 12-bit, 16-ch PCI Express Multifunction DAQ Car 1-23
PCIE-1812 250 kS/s, 16-bit, 8-ch, Simultaneous Sampling Multi-function PCI Express DAQ Card 1-26
PCIE-1813 38.4 kS/s, 26-bit, 4-ch, Simultaneous Sampling, Universal Bridge Input, Multi-function PCI Express Card 1-27
PCIE-1816 500 kS/s, 16-bit, 16-ch PCI Express Multifunction DAQ Card 1-24
PCIE-1816H 1 MS/s, 16-bit, 16-ch PCI Express Multifunction DAQ Card 1-24
PCIE-1840 4-ch 16Bit 125 MS/s Digitizer 1-28
PCIE-1840L 4-ch 16Bit 80 MS/s Digitizer 1-28
PICMG1.0 Full-Size SBC Backplanes 6-49
PICMG1.3 Full-Size SHB Backplanes 6-44
PME Expansion Cards Various Selections Supporting PCI, PCI-X, PCIe x1/x4/x8/x16 9-32
Power Supplies 14-2

R

Riser Cards 7-10

S

SKY-4120B 2U 24-bay JBOD Enclosure for High Availability Applications 11-10
SKY-4311 1U Rackmount Dual Intel® Xeon® E5-2600 v3/v4 Storage Server, with up to 8x 2.5" NVMe SSDs and 2x PCIe Gen III x8 Slots 11-6
SmartFlex Flexible, Modular LTE Router 15-28
SmartMotion™ Twin Module Cellular Router for Redundant Reliability 15-29
SmartStart Intelligent 4G LTE Router & Gateway 15-27
SmartSwarm 243 LoRa Gateway 15-30
SmartSwarm 341 Asset Integration Gateway 15-32
SmartSwarm 351 Modbus Eavesdrop to MQTT IIoT Gateway 15-33

U

USB-4620 5-port Full-speed Isolated USB 2.0 Hub 1-36
USB-4622 5-port High-speed USB 2.0 Hub 1-36
USB-4630 4-Port Isolated USB 3.0 SuperSpeed Hub 1-36
USB-4702 10 kS/s, 12-bit, 8-ch Multifunction DAQ USB Module 1-37
USB-4704 48 kS/s, 14-bit, 8-ch Multifunction DAQ USB Module 1-37
USB-4711A 150 kS/s, 12-bit, 16-ch Multifunction DAQ USB Module 1-38
USB-4716 200 kS/s, 16-bit, 16-ch Multifunction DAQ USB Module 1-39
USB-4718 8-ch Thermocouple Input USB Module with 8-ch Isolated Digital Input 1-40
USB-4750 32-ch Isolated Digital I/O USB Module 1-41
USB-4751 48-ch Digital I/O USB Module 1-42
USB-4751L 24-ch Digital I/O USB Module 1-42
USB-4761 8-ch Relay and 8-ch Isolated Digital Input USB Module 1-41

W

WzzardC™ Intelligent Edge Node With SmartMesh IP and Bluetooth LE 15-34
Wzzard™ Intelligent Edge Node With SmartMesh IP and Bluetooth LE 15-35

Advantech Headquarters

No. 1, Alley 20, Lane 26, Rueiguang Road, Neihu District, Taipei, Taiwan 11491
Tel: 886-2-2792-7818 Fax: 886-2-2794-7301
www.advantech.com

Greater China

Regional Service Center, China
Kunshan Manufacturing Center
No. 600, Han-Pu Road, Yu-Shan
Kunshan, Jiangsu, China
Tel: 86-512-5777-5666
Fax: 86-512-5778-5388

Regional Service Center, Taiwan
Taipei Manufacturing Center
7F, No.1, Lane 169, Kang-Ning Street,
Shejr City, Taipei, Taiwan
Tel: 886-2-2692-6076
Fax: 886-2-2692-2762

Advantech China
800-810-0345/800-810-8389
Beijing Office
6th Street No. 7, Shang Di Zone,
Hai-Dian Dist., Beijing, China
Tel: 86-10-6298-4346
Fax: 86-10-6298-4342
Email: sales@advantech.com.cn
www.advantech.com.cn

Shanghai Office
136# Jiangchang Three Road Zhabei
Dist., Shanghai,China
Tel: 86-21-3632-1616
Fax: 86-21-36321616-3394

Advantech Plus Technology Campus
No. 887, Han-pu Road, Yu-Shan, Kunshan,
Jiangsu, China
Tel: 86-512-5777-5666
Fax: 86-512-5778-5388

Shenzhen Office
4F, NO.28, Keji South Road 12th, NanShan Dist.,
Shenzhen, China
Tel: 800-810-0345
Fax: 86-755-2586-7910

Chengdu Office
Room 1401,Building NO.2 HangXing
International Square, High-tech zone No.800
TianFu Avenue, Chengdu, China
Tel: 800-810-0345
Fax: 028-8543-5101

Hong Kong Office
Room 1601, 16/F., Westin Centre, 26 Hung To
Road, Kwun Tong, Kowloon, Hong Kong
Tel: 852-2720-5118
Fax: 852-2720-8013
Email: Infohk@advantech.com

Advantech Taiwan
0800-777-111
Taipei Neihu Office
No. 1, Alley 20, Lane 26, Rueiguang Road,
Neihu Dist., Taipei, 11491, Taiwan
Tel: 886-2-2792-7818
Fax: 886-2-2794-7302
Toll Free: 0800-777-111
Email: sales@advantech.com.tw

Taipei Xindian Office
4F No. 108-3, Minquan Road,
Xindian Dist., New Taipei City, 23141, Taiwan
Tel: 886-2-2218-4567
Fax: 886-2-2218-3650
Toll Free: 0800-777-111
Email: emarketing.aatw@advantech.com.tw

Linkou Office
No. 27, Wende Road, Guishan Dist.,
Taoyuan City, 33371,Taiwan
Tel: 886-2-2792-7818
Toll Free: 0800-777-111
Fax: 886-2-2794-7301

Taichung Office
6F:-5, No.633, Sec. 2, Taiwan Blvd., Xitun Dist.,
Taichung City, 40759, Taiwan
Tel: 886-4-2329-0371
Fax: 886-4-2329-0373

Kaohsiung Office
11F.-7, No.56, Minsheng 1st Rd., Xinxing Dist.,
Kaohsiung City, 80045, Taiwan
Tel: 886-7-229-3600
Fax: 886-7-227-0217

Asia

Advantech Japan
0800-500-1055
Tokyo Office
6-16-3, Asakusa Taito-Ku,
Tokyo 111-0032, Japan
Tel: 81-3-6802-1021
Fax: 81-3-6802-1022
Email: ajp_sales@advantech.com
www.advantech.co.jp

Osaka Office
Minami-Senba M21 Bldg 6F
1-10-20 Minami Senba,
Chuo-Ku, Osaka, 542-0081 Japan
Tel: 81-6-6267-1887
Fax: 81-6-6267-1886

Nagoya Office
Hirokoji Garden Avenue 4F
4-24-16 Meieki Nakamura-ku,
Nagoya City, Aichi 450-00022, Japan
Tel : 81-52-856-9657
Fax : 81-6-6-6267-1886

Advantech Korea
080-363-9494
#1202 AceTechno Tower, 468 Gangseo-ro,
Gangseo-gu, Seoul 157-721, Korea
Tel: 82-2-3663-9494
Fax: 82-2-3663-4955
Email: pros@advantech.co.kr
www.advantech.co.kr

Advantech Singapore
6 Serangoon North Ave 5, #03-08 East
Lobby, Singapore 554910
Tel: 65-6442-1000
Fax: 65-6442-1001
Email: sg@advantech.com
www.advantechsg.com.sg

Advantech Malaysia
Kuala Lumpur Office
L3-03 / 03A, Wisma BU8, No 11,
Lebuh Bandar Utama,
Bandar Utama, 47800 Petaling Jaya,
Selangor Darul Ehsan, Malaysia
Tel: 60-3-7725-4188
Fax: 60-3-7728-1571
Email: sales@advantech.com.my
www.advantech.com.my

Penang Office
No.117 & 119 Ground Floor,
Jalan Perniagaan Gemilang 1,
Pusat Perniagaan Gemilang,
14000 Bukit Mertajam, Penang
Tel: 60-4-537-9188
Fax: 60-4-538-1571

Advantech Thailand
24F, Chamnan Phenjati Business Center
65/205 Rama IX Road, Huay-Kwang,
Bangkok 10320, Thailand
Tel: 66-2-248-3140
Fax: 66-2-248-2424
Email: sales-th@advantech.com
www.advantech.co.th

Advantech Indonesia
Plaza Aminta 6th Floor Suite 601
Jl. TB Simatupang Kav 10
Jakarta Selatan 12310, Indonesia
Tel : 62-21-751-1930/39
Fax : 62-21-751-1933
Email : aid.ccs@advantech.com
www.advantech.co.id

Advantech India
Bangalore Office
No. 3M-409, Kasturi Plaza, 2nd Floor, 3rd Main
Road, East of NGEF Layout, Kasturinagar,
Bangalore – 560043, India
Tel: 91-80-2545-0206
Fax: 91-80-2545-0317
Toll Free: 1800-425-5071
Email: info.in@advantech.com

Pune Office
809, 810, 8th Floor, South Block, Sacred World,
Wanwadi, Pune – 4110040, India
Tel: 91-20-3948-2075
Toll Free: 1800-425-5070
Email: sales.in@advantech.com

Asia

Advantech Australia
1300-308-531
Melbourne Office
Unit 1, 3 Southpark Close,
Keysborough VIC 3173, Australia
Tel: 61-3-9797-0100
Fax: 61-3-9797-0199
Email: info@advantech.net.au
www.advantech.net.au

Middle East and Africa

Advantech Israel
Hamatechet 8, Industrial Zone
Kadima-Zoran, Israel
Tel: 072-2410527
Email: info@advantech.il

Europe

Advantech Europe B.V.
00800-2426-8080/81
Email: customercare@advantech.eu
www.advantech.eu

Advantech Europe Service Center
Ekkersrijt 5708 Science Park Eindhoven
5692 ER Son, The Netherlands
Tel: 31-40-267-7000
Fax: 31-40-267-7001
Email: customercare@advantech.eu

Europe Technical Service/R&D Center
Fuggerstr. 9, 92224 Amberg, Germany
Tel: 49-9621-9732-100
Fax: 49-9621-9732-199
Email: customerservice.aeu@advantech.com

Europe Repair Service Center
ul. Działkowa 121B, 02-234 Warsaw, Poland
Tel: 48-22-31-51-100
Fax: 48-22-31-51-101
Email: rma@advantech.pl

Advantech Benelux & Nordics
Bijster 20A, 4817 HX Breda, The Netherlands
Tel: 31-76-523-3100
Fax: 31-76-523-119
www.advantech.nl

Advantech France
1 Bld Charles de Gaulle Noblet hall C (entrée
rue du débarcadère) 92700 Colombes, France
Tel: 33-1-4119-4666
Fax: 33-1-4119-7929
www.advantech.fr

Advantech Germany
Munich Office
Indusriestr. 15, 82110 Germering, Germany
Tel: 49-89-12599-0
Fax: 49-89-12599-1221
www.advantech.de

Düsseldorf Office
Hochdahler Str. 14, 40724 Hilden, Germany
Tel.: 49-2103-97-885-0
Fax: 49-2103-97-885-19

Advantech Italy
Via Roma, 74,
20060 Cassina de' Pecchi, Milano, Italy
Tel: 39-02-9544-961
Fax: 39-02-9544-9650
www.advantech.it

Advantech UK
London Office
Unit 3 Gunnery Terrace,
Duke of Wellington Avenue,
Royal Arsenal, Woolwich, London,
SE18 6SW, United Kingdom
Tel: 44-0-870-493-1433
Fax: 44-0-208-181-6751
www.advantech.eu

Newcastle Office
Innocore House, Kingfisher Way,
Silverlink Business Park, North Shields,
NE28 9NX, United Kingdom
Tel: 44-0-191-262-4844
Fax: 44-0-191-263-9287
www.advantech-innocore.com

Europe

Advantech Poland
ul. Działkowa 121B, 02-234 Warsaw, Poland
Tel: 48-22-31-51-100
Fax: 48-22-31-51-101

Advantech Russia
Moscow Office
115184 Москва, Большой Ордынский
переулок, д.4, стр.2, офис 102
Tel: 7-495-644-0364
Toll Free: 8-800-555-01-50
Email: info@advantech.ru
www.advantech.ru

St. Petersburg Office
БЦ "Jensen House", 2 этаж, 3-я линия,
62литА, Санкт-Петербург, Россия, 199178
Tel: 7-812-332-5727
Toll Free:8-800-555-81-20
Email: ARU.embedded@advantech.com

Advantech B+B SmartWorx Czech
Sokolská 71, 562 04 Ústí nad Orlicí, Czech
Republic
Tel: 420-465-521-020
eMail: sales@conel.cz

Advantech B+B SmartWorx Ireland
Westlink Commercial Park, Oranmore, Co.
Galway, Ireland
Tel: 353-91-792444
Fax: 353-91-792445
eMail: info@bb-smartworx.com

Americas

Regional Service Center, N. America
380 Fairview Way
Milpitas, CA 95035, USA
Tel: 1-408-519-3800
Fax: 1-408-519-3801

Advantech North America
1-888-576-9668
Ohio (Cincinnati) Office
11380 Reed Hartman Highway
Cincinnati, OH 45241, USA
Tel: 1-513-742-8895
Fax: 1-513-742-8892
Toll Free: 1-800-800-6889
RMA/Tech Support: 1-877-451-6868
Email: info@advantech.com
www.advantech.com/ea

Northern California (Milpitas) Office
380 Fairview Way,
Milpitas, CA 95035, USA
Tel: 1-408-519-3898
Fax: 1-408-519-3888
Toll free: 1-888-576-9668
Email: buy@advantech.com

Southern California (Irvine) Office
13 Whatney, Irvine, CA 92618, USA
Tel: 949-420-2500
Fax: 949-420-2501
Toll Free: 1-800-866-6008
Toll Free: 1-800-557-6813
Email: ECGinfo@advantech.com
Email: CTinfo@advantech.com

Advantech B+B SmartWorx
PO Box 1040, 707 Dayton Road,
Ottawa IL 61350
Tel: 815-434-8731
Fax: 815-433-5109
Toll Free: 800-346-3119
EMail: info@bb-smartworx.com

Advantech South America
Mexico Office
Ave. Baja California #245 Int. 704Col.
Hipódromo CondesaDelegación
Cuauhtémoc 06100, México DF. México
Tel: 52-55-6275-2727
Toll Free: 1-800-467-2415

Brazil Office
Avenida Fagundes Filho, 134 – 12° andar
CEP: 04304-010 - São Paulo
Tel: 55-11-5592-5355
Toll Free: 0800-770-5355
Email: vendas@advantech.com.br

Mission

Enabling an Intelligent Planet

Growth Model

Segmented Business Units
Powered by Global Trusted Brand

Focus & Goal

The Global Leader of
Embedded & Automation Solutions
for iWorld System Integrators

www.advantech.com

Regional Service & Customization Centers

China	Kunshan 86-512-5777-5666	**Taiwan**	Taipei 886-2-2792-7818	**Netherlands**	Eindhoven 31-40-267-7000	**Poland**	Warsaw 00800-2426-8080	**USA**	Milpitas, CA 1-408-519-3898

Worldwide Offices

Greater China

China

Toll Free	800-810-0345
Beijing	86-10-6298-4346
Shanghai	86-21-3632-1616
Shenzhen	86-755-8212-4222
Chengdu	86-28-8545-0198
Hong Kong	852-2720-5118

Taiwan

Toll Free	0800-777-111
Neihu	886-2-2792-7818
Xindian	886-2-2218-4567
Taichung	886-4-2329-0371
Kaohsiung	886-7-229-3600

Middle East and Africa

Israel	072-2410527

Asia

Japan

Toll Free	0800-500-1055
Tokyo	81-3-6802-1021
Osaka	81-6-6267-1887
Nagoya	81-0800-500-1055

Korea

Toll Free	080-363-9494
Seoul	82-2-3663-9494

Singapore

Singapore	65-6442-1000

Malaysia

Kuala Lumpur	60-3-7725-4188
Penang	60-4-537-9188

Thailand

Bangkok	66-2-248-3140

India

Bangalore	91-80-2545-0206
Pune	91-20-3948-2075

Indonesia

Jakarta	62-21-751-1939

Australia

Toll Free	1300-308-531
Melbourne	61-3-9797-0100

Europe

Germany

Toll Free	00800-2426-8080/81
Munich	49-89-12599-0
Düsseldorf	49-2103-97-855-0

France

Paris	33-1-4119-4666

Italy

Milano	39-02-9544-961

Benelux & Nordics

Breda	31-76-523-3100

UK

Newcastle	44-0-191-262-4844
London	44-0-870-493-1433

Poland

Warsaw	48-22-31-51-100

Russia

Moscow	8-800-555-01-50
St. Petersburg	8-800-555-81-20

Czech Republic

Ústí nad Orlicí	420-465-521-020

Ireland

Oranmore	353-91-792444

Americas

North America

Toll Free	1-888-576-9668
Cincinnati	1-513-742-8895
Milpitas	1-408-519-3898
Irvine	1-949-420-2500
Ottawa	1-815-434-8731

Brazil

Toll Free	0800-770-5355
São Paulo	55-11-5592-5355

Mexico

Toll Free	1-800-467-2415
Mexico City	52-55-6275-2727

More Information

8600000370

ADVANTECH

Please verify specifications before quoting. This guide is intended for reference purposes only.
All product specifications are subject to change without notice.
No part of this publication may be reproduced in any form or by any means, electronic, photocopying, recording or otherwise, without prior written permission of the publisher.
All brand names and product names are trademarks or registered trademarks of their respective companies.
© Advantech Co., Ltd. 2017