

AIMB-287

Intel® Core™ i9/i7/i5/i3 LGA 1200
Mini-ITX with HDMI/eDP, 4 COM,
Dual LAN, M.2, DDR4, DC Input

NEW



WISE-DeviceOn CE FC RoHS

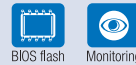
Features

- Supports Intel® 10th Gen Core™ i processor (LGA1200) with Intel H420E chipset
- Two 260-pin SO-DIMM up to 64GB DDR4 2933 MHz SDRAM
- Supports dual display of HDMI 1.4/ HDMI 2.0/eDP
- Supports 1 M.2 M key & 1 M.2 E key, 6 USB 3.0 & 2 USB 2.0 and 2 SATA III
- Supports 12V~24V
- Supports TPM 2.0
- Supports WISE-PaaS/DeviceOn and Embedded Software APIs

Software APIs:



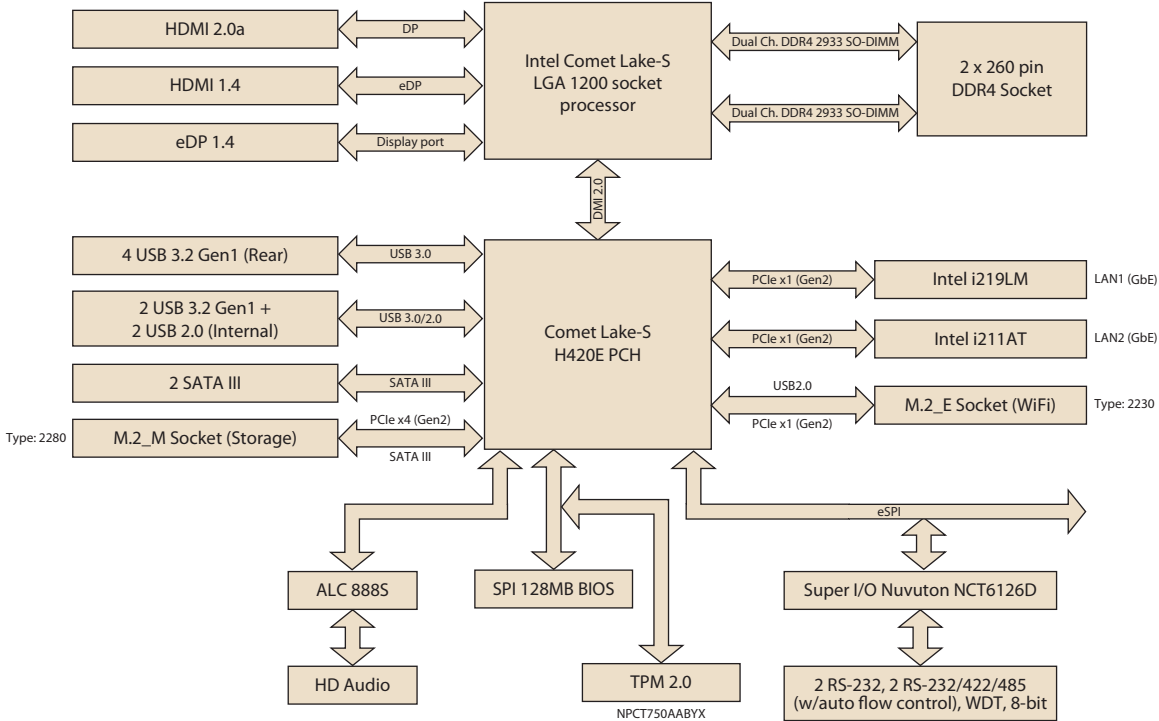
Utilities:



Specifications

| | CPU | i9-10900E/i9-10900TE | i7-10700E/i7-10700TE | i5-10500E/i5-10500TE | i3-10100E/i3-10100TE | G6400E/G6400TE | G5900E/G5900TE | |
|--------------------------|------------------------|---------------------------------------------------------------------------------------------------|----------------------|----------------------|----------------------|----------------------------|----------------|--|
| Processor System | Core Number | 10/10 | 8/8 | 6/6 | 4/4 | 2/2 | 2/2 | |
| | Max Speed | 2.8GHz/ 1.8GHz | 2.9GHz/ 2.0GHz | 3.1GHz/ 2.3GHz | 3.2GHz/ 2.3GHz | 3.8GHz/ 3.2GHz | 3.2GHz/ 3.0GHz | |
| | SmartCache | 20MB/20MB | 16MB/16MB | 12MB/12MB | 6MB/6MB | 2MB/2MB | 2MB/2MB | |
| | TDP | 65W/35W | 65W/35W | 65W/35W | 65W/35W | 58W/35W | 58W/35W | |
| | Chipset | H420E | | | | | | |
| | BIOS | AMI EFI 256 Mbit SPI | | | | | | |
| Expansion Slot | M.2 | 1 x M key for SSD and 3G/4G (Type: 2280; NVMe supported) 1 x E key for wireless (Type: 2230mm) | | | | | | |
| Memory | Technology | Dual Channel DDR4 2933 MHz SDRAM | | | | | | |
| | Max. Capacity | 64GB (up to 32GB per SO-DIMM) | | | | | | |
| | Socket | 2 x 260 PIN DDR4 SO-DIMM (Non-ECC) | | | | | | |
| Graphics | Controller | Intel HD Graphics | | | | | | |
| | HDMI 1.4 | Yes, supports max. resolution 4096 x 2160 @ 24 Hz | | | | | | |
| | eDP | Yes, with internal pin header, supports max. resolution 4096 x 2304 @ 60 Hz | | | | | | |
| | HDMI 2.0 | Yes, supports max. resolution 4096 x 2160 @ 60 Hz | | | | | | |
| Ethernet | Dual Display | Dual HDMI, HDMI 1.4 + eDP, HDMI 2.0 + eDP | | | | | | |
| | Interface | 10/100/1000 Mbps | | | | | | |
| | Controller | GbE LAN1: Intel i219LM GbE LAN2: Intel i211AT | | | | | | |
| SATA | Connector | RJ-45 x 2 | | | | | | |
| | Max Data Transfer Rate | 600 MB/s (SATA 3.0) | | | | | | |
| Rear I/O | Channel | 2 (SATA III) | | | | | | |
| | HDMI 1.4 | 1 | | | | | | |
| | HDMI 2.0 | 1 | | | | | | |
| | Ethernet | 2 | | | | | | |
| | USB | 4 USB 3.2 (Gen1) | | | | | | |
| | Audio | 1 (Line in/Line out/Mic in program able) | | | | | | |
| | DC Jack | 1 | | | | | | |
| Internal Connector | USB | 2 USB3.2 Gen1 / 2 USB2.0 | | | | | | |
| | eDP/inverter | 1 | | | | | | |
| | Serial | 4 (2 BOM option RS232/422/485, 2 RS 232) | | | | | | |
| | SATA | 2 (SATA 3.0) | | | | | | |
| | M.2 | 1 x M key for SSD, Type: 2280mm; 1 x E key for wireless, Type: 2230mm | | | | | | |
| | IrDA | - | | | | | | |
| | GPIO | 8-bit | | | | | | |
| Watchdog Timer | Output | System reset | | | | | | |
| | Interval | Programmable 1 ~ 255 sec/min | | | | | | |
| Power Requirements | Input power | 12~24V DC Input | | | | | | |
| 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 | 170 mm x 170 mm (6.69" x 6.69") | | | | | | |

Block Diagram



Ordering Information

| P/N | Chipset | HDMI 2.0 | eDP | HDMI 1.4 | GbE LAN | COM | SATAIII | USB3.0/2.0 | M.2 M key | M.2 E key | TPM2.0 | AMP | ESD level 4 IO BKT | Rugged CPU Plate |
|------------------|---------|----------|-----|----------|---------|-----|---------|------------|-----------|-----------|--------|-----|--------------------|------------------|
| AIMB-287G2-00A1E | H420E | 1 | 1 | 1 | 2 | 4 | 2 | 6/2 | 1 | 1 | (1) | (1) | N | N |
| AIMB-287FL-00A1E | H420E | 1 | 1 | 1 | 2 | 4 | 2 | 6/2 | 1 | 1 | 1 | 1 | Y | Y |

*) BOM options available on MP version.

Packing List

| Part Number | Description | Quantity |
|----------------|----------------------------------|----------|
| 1700003194 | SATA HDD cable | 1 |
| 1700018785 | SATA power cable (1 port, 25cm) | 1 |
| 1700031130-02 | 1-to-2 serial port cable, 22cm | 1 |
| 1960100521T001 | I/O port bracket | 1 |
| 2046028700 | Startup manual | 1 |
| 1700023082-11 | ATX 2*10P to 1*3P-2.0 25cm cable | 1 |

Optional Accessories

| Part Number | Description |
|-------------------|-----------------------------------------------------------------------|
| 1700031300-01 | M cable USB-A 4P(F)*2/2*5P-2.0 30cm (B2000) |
| 1700029719-01 | M cable USB-A 9P(F)*2/2*10P-2.0 30CM (B2000) |
| 1700031130-02 | 1-to-2 serial port cable, 22cm (B2000) |
| 1960100521T011 | IO BRACKET FOR AIMB-287 w/gasket (level 4 IO bracket for B2000) |
| 1960053207N001 | LGA1150 CPU cooler for CPU TDP ≤ 65W, 92.9 (W) x 92.9 (L) x 46 (H) mm |
| 1960060732N001 | LGA1150 CPU cooler for CPU TDP ≤ 45W, 80 (W) x 80 (L) x 32.2 (H) mm |
| 1960047669N001 | C.L R3 I-LGA1156 S-95W 12V0.4A 95.0 x 95.0 x 69.37mm |
| 96PSA-A150W12W7-3 | ADP A/D 100-240V 150W 12V LOCKABLE DC JACK 62368 |

Optional Chassis

| Part Number | Description |
|-----------------|--------------------------------------------------------------|
| AIMB-B2000-00YE | Mini-ITX chassis (Optional external AC-DC upto 150W Adaptor) |

I/O View



Embedded OS/API

| OS/API | Part No. | 968 P/N | Description |
|------------|----------------|------------|------------------------------------|
| Windows 10 | 20706WX9ES0132 | 968QW19ELE | img W10 19EL AIMB-287 64b 1809 ENU |
| Windows 10 | 20706WX9HS0118 | 968QW19HLE | mg W10 19HL AIMB-287 64b 1809 ENU |
| Windows 10 | 20706WX9VS0122 | 968QW19VLE | img W10 19VL AIMB-287 64b 1809 ENU |

WISE-DeviceOn

Massive IoT Device Management Utility

IoT deployment and management typically involves numerous disparate devices installed on multiple sites. These devices require effective monitoring, managing, and tracking. Advantech's easy-to-use WISE-DeviceOn interface enables users to remotely monitor device health, troubleshoot problems, and send software/firmware updates over-the-air (OTA). In sum, DeviceOn empowers quick real-time responsiveness to emerging problems.



Features

| Comprehensive Management | Remote Access | Efficient Operations |
|------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">• Devices status• Peripherals/firmware• Open for extension | <ul style="list-style-type: none">• Real-time monitoring• Remote controls• Troubleshooting | <ul style="list-style-type: none">• Zero-touch on-boarding• OTA updates• Batch control |

Product Highlights

| | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
|  SOM-6883 High-performance 11 th Gen Intel [®] COMe Type 6 Module |  MIO-5375 Compact 11 th Gen Intel [®] Outdoor Focused 3.5" SBC |  EPC-B5587 10 th Gen Intel [®] Xeon [®] based Edge server |  EPC-R3220 Arm based IoT Edge Gateway |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|

Edge AI Suite

AI development for diverse application at the Edge

Increasing demand for AI inference/analytic capabilities at the Edge make AI training models, software development environments, and hardware configuration key factors in successful solution deployment. Advantech's Edge AI Suite helps users build AI demo devices quickly and choose optimal hardware solutions easily.



| 5x Performance Boost | All-in-one Installation | One Click AI Experience | Plug-and-play Environment | Discover Cost-effective Hardware |
|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">Integrated Intel® OpenVINO™ technologyBoost AI using Advantech hardware | <ul style="list-style-type: none">Build AI environment in under 5 minutesReady-to-use configuration | <ul style="list-style-type: none">User friendly configuration guidanceOne-click Benchmark acquisition | <ul style="list-style-type: none">Easy access to 100+ AI inference extensionsSoftware development package available | <ul style="list-style-type: none">Diverse CPU/RAM optionsFind hardware solutions for AI development |

Embedded Linux Support and Design-in Services

Hardware Certified Ubuntu and Yocto with Eco Partner Services

Linux is the most popular embedded OS for transportation, outdoor services, factory automation, and mission critical applications. Its open source and kernel reliability features ease security updates, and make it particularly adaptable to new AI and Edge computing technology. Advantech has cooperated with Canonical and other software partners to provide hardware certified Ubuntu image and Yocto BSP as Linux offerings. The Advantech, Embedded Linux, and Android Alliance (ELAA) delivers local software services and consultation.



Features

| Certified OS and BSP | Licensed Services | Numerous AI and Edge Resources | Local Partner Alliance |
|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> Platform compatibility tests Preloaded functional driver and software stacks | <ul style="list-style-type: none"> License authorized Canonical delivers 10-years of bug fixes and security updates In-house bundled service | <ul style="list-style-type: none"> Containerized technology for service provision and deployment AI resources from Caffe, TensorFlow, and mxnet | <ul style="list-style-type: none"> Embedded Linux and Android Alliance (ELAA) |

Tento produkt můžete zakoupit u společnosti AutoCont IPC a.s.



AutoCont IPC a.s.

Váš dodavatel průmyslových počítačů, komponent a speciálních průmyslových IT systémů.

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ODMĚNA ZA VĚRNOST

Pravidelní zákazníci u nás nakupují za nižší ceny. Výše slevy se odvíjí od realizovaného obrátu.



SERVIS ON-SITE A IN-TIME

K projektovým dodávkám nabízíme rozšířenou podporu a servis s garancí výměny zařízení do 48 hodin.