UNO-127

Compact, Fanless Edge Controller with Intel® Atom® Processor, 64GB eMMC, 2 x LAN, 2 x USB, and 1 x HDMI



Features

- Intel® Atom® quad-core x6413E processor
- 4 GB/8 GB DDR4 onboard memory
- Compact, robust, fanless, cable-free design with high stability
- Optimized I/O with 2 x GbE, 2 x USB, 1 x HDMI
- Full-size mPCIe port onboard for flexible expansion
- Built-in TPM2.0 for hardware-based security
- Isolated grounding system
- IEC 61010 certified for industrial applications

Introduction

Advantech's UNO-100 series of integrated DIN-rail controllers feature a modular design for flexible configuration according to specific usage requirements.

The UNO-127 model is equipped with an Intel® Atom® x6413E processor, 4 GB or 8 GB DDR4 RAM, 64 GB eMMC storage, 2 x LAN, 2 x USB, and 1 x HDMI, as well as 1 x full-size mini PCIe for expansion. IEC 61010-1 certified for industrial use, UNO-127 can also be equipped with an optional second-stack extension kit that supports additional 4 x COM ports and 1 x M.2 B key for extending the system I/O and wireless connectivity capabilities.

Specifications

General

- **Certification** CE, FCC, UL, CCC, BSMI
- **Dimensions (W x D x H)** 33.5 x 70 x 100 mm/1.3 x 2.8 x 3.9 in
- **Form Factor** Pocket sized
- **Enclosure** Aluminum
- **Mount Options** DIN-rail
- **Net Weight** 0.5 kg/1.1 lb
- **Power Requirement** 10 ~ 30V_{DC}
- **Power Consumption** 15.8W (typical), 35W (max.)
- **Operating System** Windows 10 LTSC, Windows 11, Ubuntu 20.04, Ubuntu Core 20
- **Software Compatibility** Canonical Ubuntu Core 20 certification
WISE-DeviceOn
WISE IoT Edge

System Hardware

- **BIOS** AMI EFI X64
- **Watchdog Timer** Programmable timer with 255 intervals (1 ~ 255 sec)
- **Processor** Intel® Atom® x6413E quad-core, 1.5 GHz
- **Memory** 4 GB/8 GB DDR4 2666 MHz onboard
- **Graphics Engine** Intel® UHD Graphics
- **Ethernet** 2 x Intel i210IT
- **LED Indicators** Power, Run (programmable), LAN (Active, Status)
- **Storage** 64 GB eMMC onboard (up to 256 GB upon request); optional mSATA shared with mPCIe slot
- **Expansion** 1 x Full-size mPCIe slot (SATA/PCIe/USB2.0 signal)
- **Hardware Security** TPM2.0 (Library Reversion 1.38)

I/O Interfaces

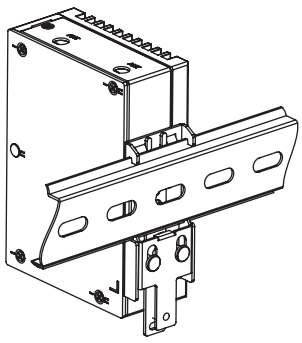
- **LAN** 2 x RJ45, 10/100/1000 Mbps IEEE 802.3u 1000BASE-T Fast Ethernet
- **USB** 2 x USB 3.2 (Gen 1)
- **Display Output** 1 x HDMI (1920 x 1080 @60Hz)
- **Power Connector** 1 x 2-pin terminal block

Environment

- **Operating Temperature** -20 ~ 60 °C/-4 ~ 140 °F @ 5 ~ 85% RH with 0.7 m/s
- **Storage Temperature** -40 ~ 85 °C/-40 ~ 185 °F
- **Relative Humidity** 10 ~ 95% RH @ 40 °C/104 °F, non-condensing
- **Shock Protection** Operating, IEC 60068-2-27, 50G, half sine, 11 ms
- **Vibration Resistance** Operating, IEC 60068-2-64, 2 Grms, random, 5 ~ 500 Hz, 1hr/axis (mSATA)
- **IP Rating** IP30

Installation Scenario

DIN-rail Mount

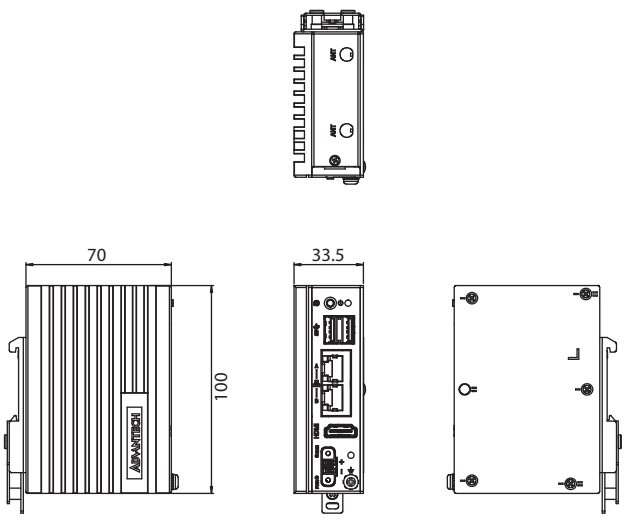


All product specifications are subject to change without notice.

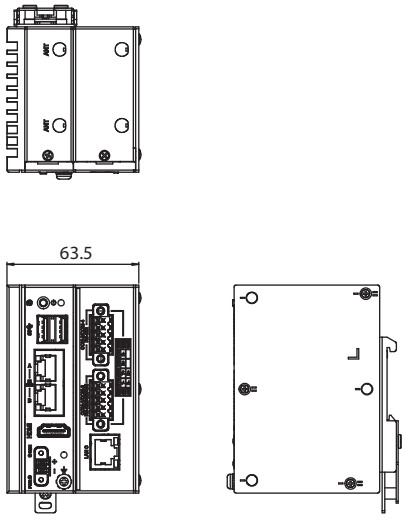
Dimensions

Unit: mm

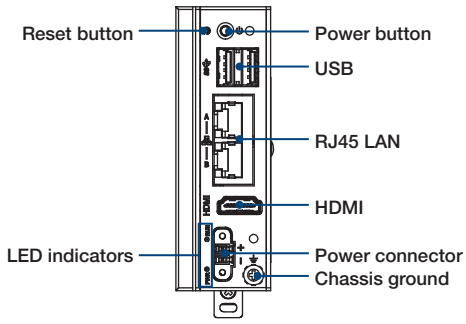
base unit



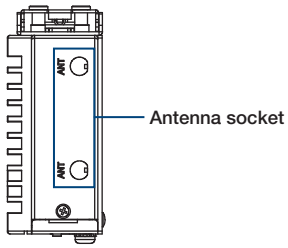
with extension kit



Front I/O



Top I/O



Ordering Information

UNO-127-E22BA (EOL in Aug. 2026)	Intel® Atom® x6413E quad-core CPU, 4 GB RAM, 2 x GbE, 2 x USB, 1 x mPCIe, 1 x HDMI, 64 GB eMMC
UNO-127-E23BA (EOL in Aug. 2026)	Intel® Atom® x6413E quad-core CPU, 8 GB RAM, 2 x GbE, 2 x USB, 1 x mPCIe, 1 x HDMI, 64 GB eMMC
UNO-127-E22BU (EOL in Aug. 2026)	ATOM X6413E, 4G DDR4, 2LAN, 2USB, 1HDMI, MIT
UNO-127-E22CA	Intel® Atom® x6413E quad-core CPU, 4 GB RAM, 2 x GbE, 2 x USB, 1 x mPCIe, 1 x HDMI, 64 GB eMMC
UNO-127-E23CA	Intel® Atom® x6413E quad-core CPU, 8 GB RAM, 2 x GbE, 2 x USB, 1 x mPCIe, 1 x HDMI, 64 GB eMMC
UNO-127-E22CU	ATOM X6413E, 4G DDR4, 2LAN, 2USB, 1HDMI, MIT

Embedded O/S

20704WX9ES0000	WIN10 IoT Enterprise 2019 x64 LTSC v6.07 B005
20704WX1ES0001	WIN10 IoT Enterprise 2021 x64 LTSC v6.08 B009
20701U22DS0001	Image AdvLinuxTu-IOTG_x64 V4.0.4 for UNO series

Optional Accessories

DIN-Rail Power Supply

UNO-IPS2460-AE	A/D 100-240V 60W 24V DIN-rail power supply
96PSD-A60W24-MM	A/D 100-240V 60W 24V MDR DIN-rail power supply

Adapters & Power cords

PWR-247-DE	60W AC to DC UNO series power adapter
1702002600	Power Cable US Plug 1.8 M
1702002605	Power Cable EU Plug 1.8 M
1702031801	Power Cable UK Plug 1.8 M
1700000596-11	Power Cable China/Australia Plug 1.8 M

Wi-Fi Module (mPCIe) and Antenna

EWM-W193H01E	Wifi 802.11ac/a/b/g/n, Bluetooth 5.0
9656EWMG00E	Half-to-full-size mPCIe bracket
1750008800-01	Coaxial cable for antenna L100mm
1750008717-01	Antenna L=10.9 cm 50 Ohm

LTE Module (mPCIe) and Antenna

968AD00589	Quectel EG25G LTE Module Cat. 4, mPCIe with sim holder
1750007990-01	Antenna 4G/LTE full band L=11 cm 50 Ohm
1750006264	SMA(F)/MHF cable, 15cm

Extension Kit



Advantech offers an optional second-stack extension kit for expanding the system functionalities

UNO-127-EKCE

Second stack extension kit for iDoor



Specifications

General	
Ports	1 x iDoor Slot (chassis only)
Dimensions (W x D x H)	35 x 140 x 200 mm/1.4 x 5.5 x 7.8 in
Weight	0.1 kg (0.22 lb)

Ordering Information

Part Number	Description
UNO-127-EKCE	Second stack extension kit for iDoor

Supported iDoor Modules

iDoor Industrial Fieldbus Communication	
PCM-26D2CA-AE	2-port isolated CANBus mPCIe,CANopen, DB9
PCM-26D1DB-MAE/SAE	1-port Hilscher netX100 FieldBus mPCIe,PROFIBUS, DB9, Master/Slave
PCM-26R2PN-MAE/SAE	2-Port Hilscher netX100 FieldBus mPCIe, PROFINET,RJ45, Master/Slave
PCM-26R2EC-MAE/SAE	2-port Hilscher netX100 FieldBus mPCIe, EtherCAT, RJ45,Master/ Slave
PCM-26R2EI-MAE/SAE	2-port Hilscher netX100 FieldBus mPCIe, EtherNet/IP, RJ45,Master/Slave
Industrial I/O & Peripheral	
PCM-24D2R4-BE	2-port isolated RS-422/485, mPCIe, DB9
PCM-24D2R2-BE	2-port isolated RS-232, mPCIe, DB9
PCM-24D4R4-BE	4-port non-isolated RS-422/485 mPCIe, DB37 cable
PCM-24D4R2-BE	4-port non-isolated RS-232 mPCIe, DB37 cable
PCM-24R1TP-BE	1-port Gigabit Ethernet, Intel® i225, mPCIe, RJ45
PCM-24R2PE-AE	2-port Gigabit Ethernet, IEEE 802.3af (PoE)- compliant,mPCIe, RJ45
PCM-24R2GL-AE	2-port Gigabit Ethernet, Intel® i350, mPCIe, RJ45
PCM-27D24DI-AE	24-channel isolated digital I/O with counter mPCIe, DB37
PCM-2300MR-AE	MR4A16B, MRAM, 2 MB, mPCIe
PCM-2300MR-BE	MR4A16B, MRAM, 4 MB, mPCIe
PCM-23U1DG-CE	USB slot w/ lock for USB dongle, half-size mPCIe
PCM-24U2U3-BE	2-port USB 3.0, mPCIe, USB-A type
iDoor Wired/Wireless Communication	
PCM-24S2WF-CE	Wi-Fi 802.11 a/b/g/n 2T2R w/Bluetooth 5.0, M.2/mPCIe, antennas
PCM-24S34G-CE	LTE/HSPA+/GPRS and GPS, full-size mPCIe, 4G/GPS antennas

Extension Kit

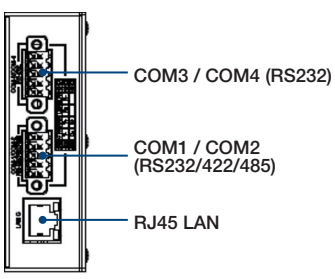


UNO-127-RS1EA

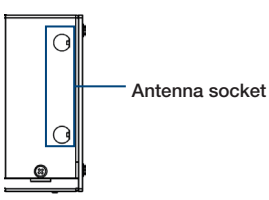
Second stack module with 4 x COM, 1 x LAN, 1 x M.2 B key



Front I/O



Top I/O



Specifications

General	
I/O	2 x isolated RS-232/422/485, terminal block 2 x isolated RS-232, terminal block 1 x RJ45, 10/100/1000 Mbps IEEE 802.3u
Expansion	1 x M.2 B Key (SATA/ USB 3.0 signal)
SIM Slot	1 x nano SIM Slot
Dimensions (W x D x H)	30 x 70 x 100 mm
Weight	145g
Environment	
Operating Temperature	-20~ 60 °C

Ordering Information

Part Number	Description
UNO-127-RS1EA	UNO-127 2nd stack with 4 x COM, 1 x LAN, 1 x M.2 B key

Optional Accessories

LTE Wireless module (M.2 B key) & antenna

Part Number	Description
968AD00590	Quectel EM06-E LTE Cat-6 M.2 module (EMEA/Brazil/APAC)
1750008879-01	RF SMA cable for LTE(150mm)
1750008303-01	Antenna

5G NR Sub6 Wireless module(M.2 B Key) & antenna

Part Number	Description
AIW-355-DQ-E01	5G(Sub-6G)/LTE/WCDMA module, with GNSS, for EU
AIW-355-DQ-N01	5G(Sub-6G)/LTE/WCDMA module, with GNSS, for US
AIW-355-DQ-C01	5G(Sub-6G)/LTE/WCDMA module, with GNSS, for China
1750008569-01	Coaxial Cable, 300 mm/11.8 in, SMA (F) to MFH4
1750009372-01	5G(Sub-6G)/LTE/WCDMA full band dipole antenna
UNO-M2-3052HS	M.2 3052 B key heat sink kit for 5G module

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