

UST210-83K-FL

Robust and Compact DIN-Rail Fanless Embedded System with Intel Atom® x5-E3940 Processor for In-Vehicle Gateway Applications



Fanless



Low Power



USB 3.0



12 VDC



E-Mark

Features

- CE, FCC and E-Mark certified
- Intel Atom® x5-E3940 processor (Apollo Lake-I)
- Extreme cost-effective with fanless and cableless design
- Wide operating temperature range from -40°C to +70°C
- Supports typical 12 and 24V DC in-vehicle power input
- Smart ignition for power on/off schedule, vehicle battery protection, and different power modes
- Supports COM, CAN, USB, and GbE PoE LAN
- 8-bit programmable DIO for IoT gateway applications

Specifications

Standard Color	Sliver
Construction	Extruded aluminum and heavy-duty steel, IP20
CPU	Intel Atom® x5-E3940 4C @1.6 GHz, TDP: 9.5W
Chipset	SoC integrated
System Memory	1 x DDR3L-1600 SO-DIMM, up to 8GB
BIOS	AMI
TPM	TPM 2.0



Specifications

System I/O Outlet	Serial	Up to 2 x terminal block Serial console or RS-232/422/485*
	CANBus	1 x terminal block CANBus 2.0 A/B*
	Display	1 x HDMI (up to 1920 x 1080 @ 60Hz)
	Ethernet	4 x RJ-45 10/100/1000 Mbps (Intel® I210-AT)
	USB	2 x USB 3.0
	DIO	1 x DB9 8-bit programmable DIO
	Others	4 x antenna opening 1 x power button 1 x reset button 1 x remote switch
Extension Interface	1 x full-size Mini Card slot with SIM Slot (only USB) 1 x half-size Mini Card slot (USB/mSATA)	
Storage	SATA Drive	1 x internal 2.5" SATA drive (9.5 mm height)
	mSATA	1 x half-size mSATA (occupying 1 x PCI Express Mini Card slot)
Watchdog Timer	255 levels, 1 to 255 sec.	
Power	Power Supply	1 x terminal block, 12 and 24V DC with smart ignition***
PoE (PSE, Power Sourcing Equipment)*	Up to 4 x configurable RJ-45 PoE output, each with a maximum of 30W, compatible with PoE and PoE+ <ul style="list-style-type: none"> • PoE (802.3af 15.4W perport) • PoE+ (802.3at 30W perport) 	
System Indicator	1 x LED indicator for SATA drive activity 1 x LED indicator for power	
Operating Temperature	-40°C to +70°C (-40°F to +158°F) with W.T. peripheral**	
Relative Humidity	0% to 95% relative humidity, non-condensing	
Dimensions (W x D x H)	Non-PoE SKU: 48 mm 48 x 110.4 x 155 mm (1.89" x 4.33" x 6.1") PoE SKU: 67 x 110.4 x 155 mm (2.63" x 4.33" x 6.1")	
Mounting	Wall mount, DIN-rail	
Weight (net/gross)	Non-PoE SKU: 0.51 kg (1.12 lb)/0.79 kg (1.74 lb) PoE SKU: 0.84 kg (1.85 lb)/1.12 kg (2.47 lb)	
Certifications	CE (Class A), FCC (Class A) certified; and E-Mark (E24) certified	
EMC	CE/FCC	EN 55032 (Class A), EN 55024, and FCC part 15 B (Class A)
	E-Mark	ECE-R10
Vibration Endurance	3 Gms with mSATA and SSD (5 to 500Hz, X/Y/Z direction; random, operating) MIL-STD-810G, Method 514.6C-VI Category 4 compliant	
EOS Support	Windows® 10 64-bit, Linux	

* Please refer to the ordering information section.





** Wide temperature. All W.T. supported products have to be sorted by Axiomtek.

*** UST210 also supports 9 to 36VDC for general purpose. Please refer to the user manual for configuration settings.



Ordering Information

System

UST210-83K-FL-E3940-CANCOM-TVDC (P/N: E274210100)	Fanless embedded system with Intel Atom® x5-E3940 processor, 1 CAN, 1 COM, 4 LAN, 2 USB, 1 DIO and 1 HDMI, TPM 2.0 support, and smart ignition	 Non-PoE SKU
UST210-83K-FL-E3940-2COM-TVDC (P/N: E274210101)	Fanless embedded system with Intel Atom® x5-E3940 processor, 2 COM, 4 LAN, 2 USB, 1 DIO and 1 HDMI, TPM 2.0 support, and smart ignition	 Non-PoE SKU
UST210-83K-FL-E3940-4POE-CANCOM-TVDC (P/N: E274210102)	Fanless embedded system with Intel Atom® x5-E3940 processor, 1 CAN, 1 COM, 4 PoE LAN, 2 USB, 1 DIO and 1 HDMI, TPM 2.0 support, and smart ignition	 PoE SKU
UST210-83K-FL-E3940-4POE-2COM-TVDC (P/N: E274210103)	Fanless embedded system with Intel Atom® x5-E3940 processor, 2 COM, 4 PoE LAN, 2 USB, 1 DIO and 1 HDMI, TPM 2.0 support, and smart ignition	 PoE SKU

*TDC: terminal block DC-in connector, DC voltage input

Optional

Communication Modules	E29R318105 E29R318108 E29R310101	ACC318-501-20B ACC318-541-30F ACC310-201-20B	LTE NL668-EAU LTE NL668-EAU w/ GPS kit Wi-Fi 5 WPET-239ACN kit
AC to DC Adapter	509000001500	PWS FSP120-AAAN3 (9NA1206647) FSP 120W	
Cable/Power Cord	599000001100 59906000010E 59903000000E 59905000000E 59904010000E	Power cord YP12/YC12_CY-U0032 YUNG_LI 1830 mm Power cord YP-12/YC-12 (Japan) Power cord YP-22/YC-12 (Europe) Power cord YP-35/YC-12 (Australia) Power cord/UK YP-61A/YC-12 L=1830 mm	

* Specifications and certifications may vary based on different requirements.

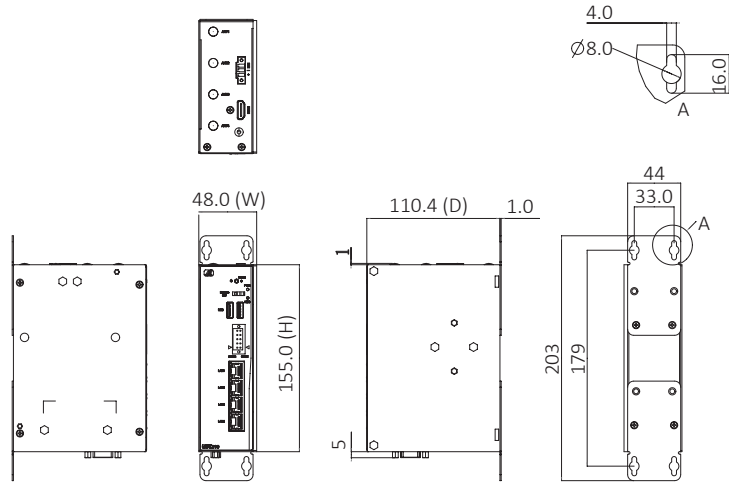
Packing List

- 1 x screw pack
- 1 x wall-mount bracket
- 1 x DIN-rail kit
- 1 x Power terminal block connector
- 1 x CAN or COM terminal block connector
- 1 x thermal pad for memory module
- 1 x HDMI bracket

Power Protection

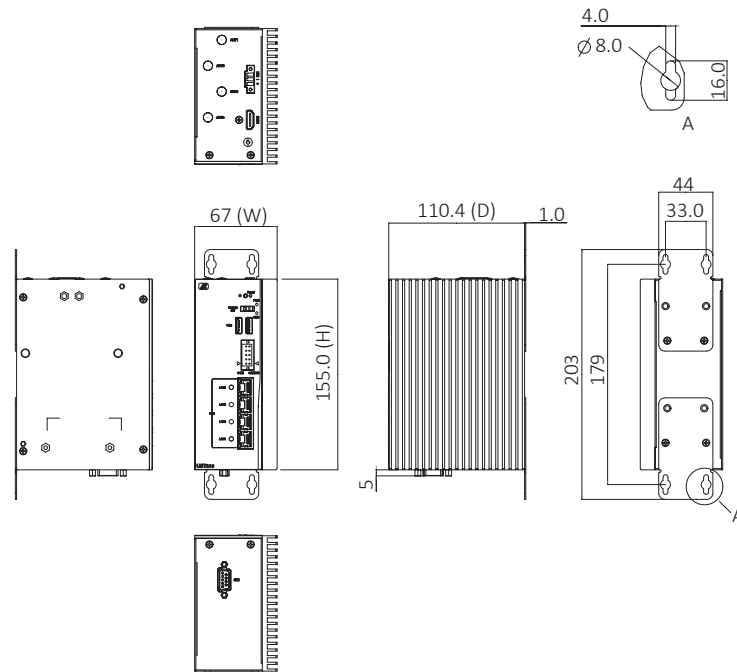
- OCP (over current protection)
 - OVP (over voltage protection)
 - UVP (under voltage protection)
 - RPP (reverse polarity protection)
 - ISO 7637-2 pulse 1, 2a, 2b, 3a, 3b, and 4 (vehicle version)
- Setting for in-vehicle battery protection: system will be automatically turned down at low voltage level.
Setting for ignition control: system will activate a counter at low battery voltage, with IGN ON and IGN OFF delay.

Dimensions



▲ Non-PoE SKU

E274210101



▲ PoE SKU

E274210102