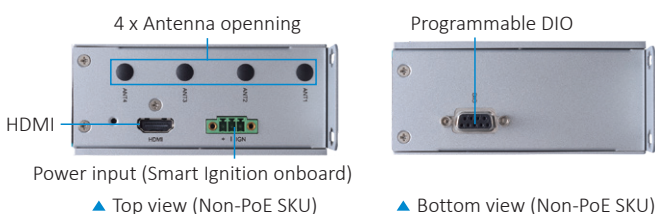
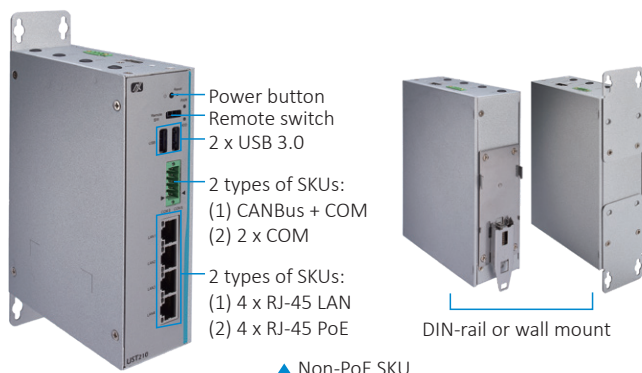


# UST210-83K-FL

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



## Features

- CE, FCC and E-Mark certified
- Intel Atom® x5-E3940 processor
- Extreme cost-effective with fanless and cableless design
- Wide operating temperature range from -40°C to +70°C
- Supports 9 to 36 VDC and 12/24 VDC typical in-vehicle power input
- Smart Ignition for power on/off schedule, vehicle battery protection, and different power modes
- Supports COM, CAN, USB, GbE PoE LAN
- 8-bit programmable DIO for IoT gateway applications
- Supports SocketCAN
- AXView intelligent remote monitoring



## 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-1866 SO-DIMM, up to 8GB	
BIOS	AMI	
TPM	TPM 2.0	
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**, supports SocketCAN*
	Display	1 x HDMI (up to 1920x1080@60Hz)
	Ethernet	4 x RJ-45 isolated 10/100/1000 Mbps Ethernet (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-sized mSATA (occupied 1 x PCI Express Mini Card slot)
Watchdog Timer	255 levels, 1 to 255 sec.	
Power	Power Supply	General Use: 1 x Terminal block, 9 to 36 VDC (typical:12/24V) Vehicle: 1 x Terminal block, 9 to 36 VDC with smart ignition (typical:12/24V)
	Power Consumption	Non-PoE SKU: 9 VDC, 3.878A; 36VDC, 0.85A PoE SKU: 9VDC 6.298A, 36VDC 1.617A



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## Specifications

PoE (PSE, Power Sourcing Equipment)**	Up to 4 x configurable RJ-45 PoE output max. 30W supports PoE & PoE+ <ul style="list-style-type: none"> <li>• PoE (802.3af 15.4W/port)</li> <li>• PoE+ (802.3at 30W/port)</li> </ul>
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***
Humidity	0% to 95%, non-condensing
Dimensions	Non-PoE SKU: 48 mm (1.89") (W) x 110.4 mm (4.33") (D) x 155 mm (6.1") (H) PoE SKU: 67 mm (2.63") (W) x 110.4 mm (4.33") (D) x 155 mm (6.1") (H)
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; E-Mark (E24) certified
EMC	CE/FCC EN 55032 (Class A), EN 55024, 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
Software Support	AXView





\* Please refer the detail in SocketCAN manual.

\*\* See Ordering information.

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

## 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 supported, with 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 supported, with 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 supported, with 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 supported, with Smart Ignition	 PoE SKU

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

### Optional

Communication Modules	8812C300GA0E	3G UC20GKit tBOX/ICO(20) (E)
	8812C300HA0E	3G/GPS UC20GKit tBOX/ICO(20) (E)
	887421011A0E	LE910C4-AP KIT w/GPS for UST210 (E)
	822C1200170E	WiFi WPET-239ACN(BT) FOR ICO120
AC to DC Adapter	509000001500	PWS FSP120-AAAN3(9NA1206647) FSP 120W

\* Specifications and certifications may vary based on different requirements.

## Power Protection

OCP (over current protection)

OVP (over voltage protection)

UVP (under voltage protection)

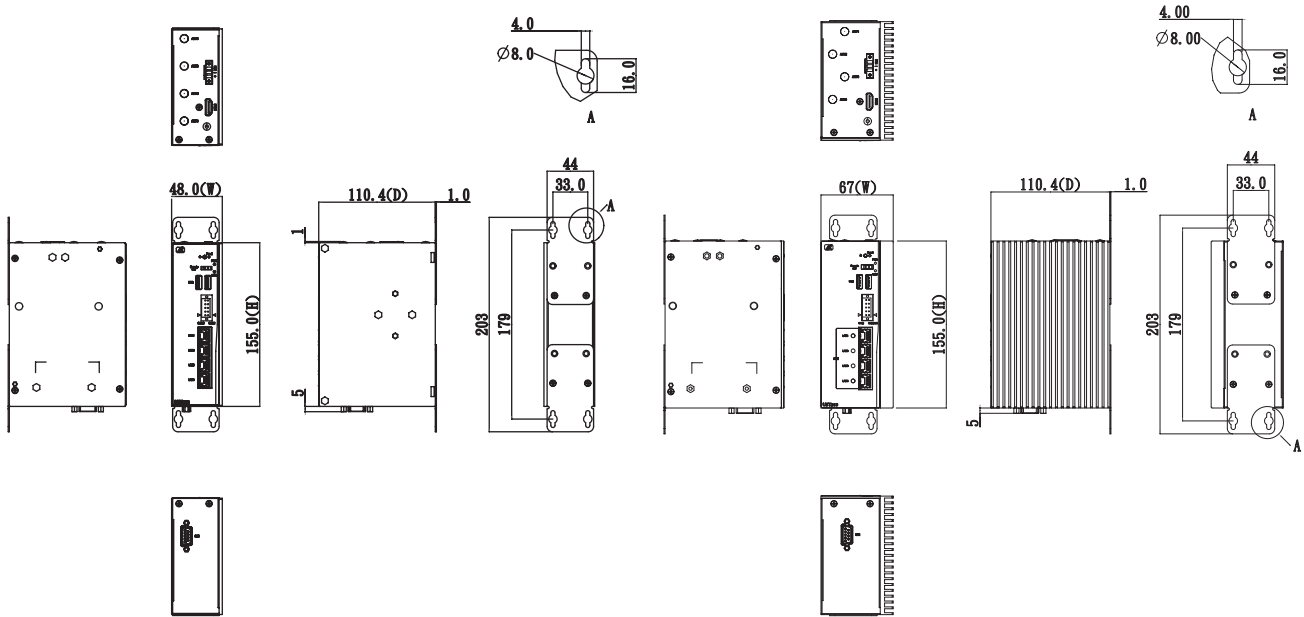
RPP (reverse polarity protection)

ISO 7637-2 pulse 1, 2a, 2b, 3a, 3b, 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 while in-vehicle battery at low voltage, ACC-on delay and shut down delay

## Dimensions



E274210101

E274210102

▲ Non-PoE SKU

▲ PoE SKU