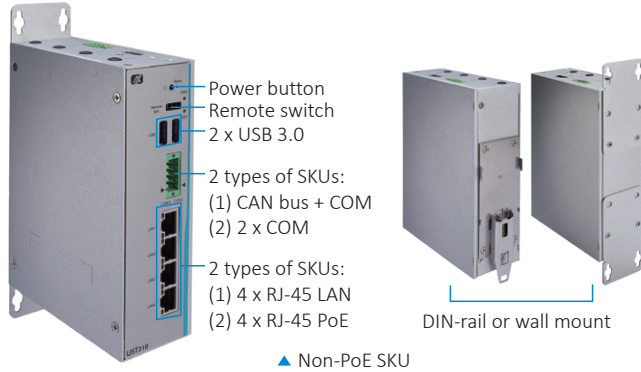


# UST210-83K-FL

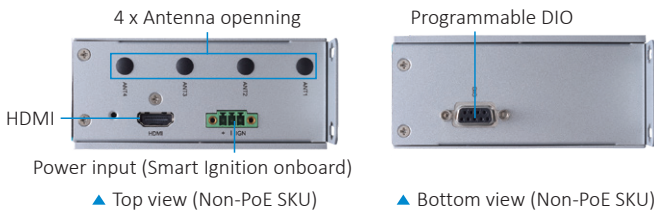
Robust and Compact DIN-rail Fanless Embedded System with Intel Atom® x5-E3940 Processor for In-Vehicle Gateway Applications



▲ Non-PoE SKU

## 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 typical 12V 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



▲ Top view (Non-PoE SKU)

▲ Bottom view (Non-PoE SKU)



## 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*
	Display	1 x HDMI (up to 1920 x 1080@60Hz)
	Ethernet	4 x RJ-45 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 (occupying 1 x PCI Express Mini Card slot)
Watchdog Timer	255 levels, 1 to 255 sec.	
Power	Power Supply	Vehicle: 1 x Terminal block, 12/24 VDC 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"> <li>• PoE (802.3af 15.4W perport)</li> <li>• PoE+ (802.3at 30W perport)</li> </ul>	
System Indicator	1 x LED indicator for SATA drive activity 1 x LED indicator for power	

## Specifications

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	





\* 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 supported, and 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, and 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, and 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, and with Smart Ignition	 PoE SKU

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

### Optional

Communication Modules	TBD	LTE LE910C4-AP KIT(16) for UST/ICO SFP (E)
	TBD	Wi-Fi WPET-239ACN (BT) FOR ICO120 (E)
AC to DC Adapter	509000001500	PWS FSP120-AAAN3(9NA1206647) FSP 120W
Cable/Power Cord	599000001100	Power cord YP12/YC12_CY-U0032 YUNG_LI 1830mm
	59906000010E	Power cord YP-12/YC-12 (Japan)
	59903000000E	Power cord YP-22/YC-12 (Europe)
	59905000000E	Power cord YP-35/YC-12 (Australia)
	59904010000E	Power cord/UK YP-61A/YC-12 L=1830mm

\* 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)

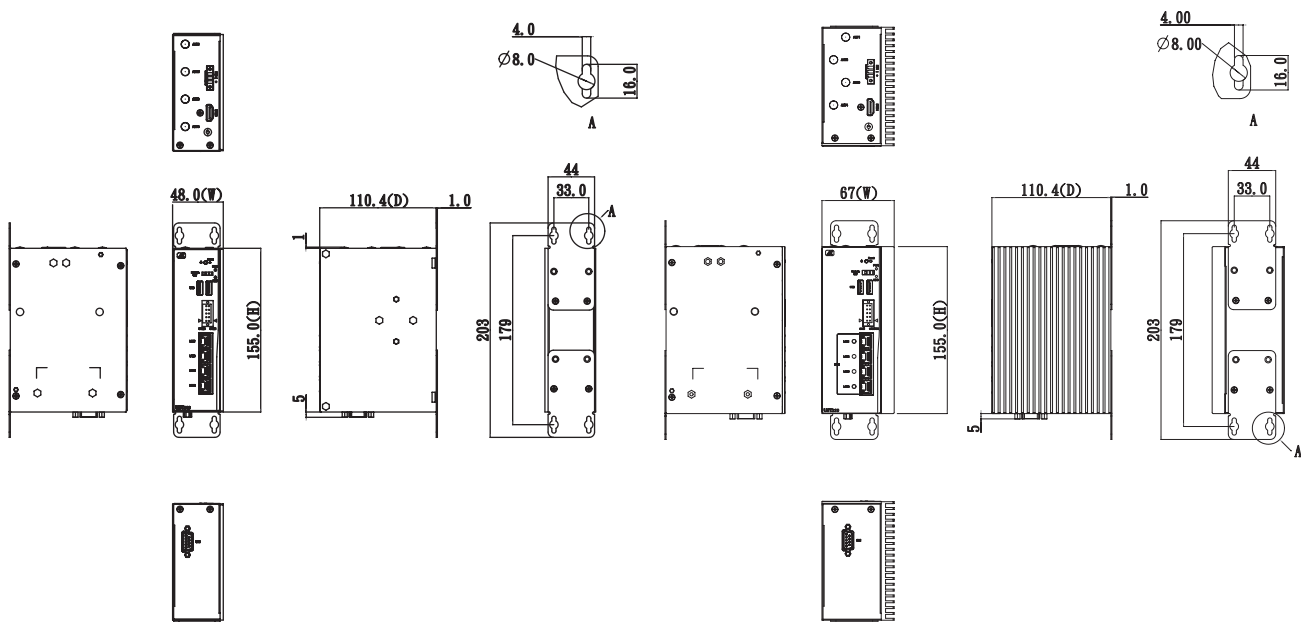
RPP (reverse polarity protection)

ISO 7637-2 pulse 1, 2a, 2b, 3a, 3b, 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, IGN on delay and IGN off delay

## Dimensions



E274210101

▲ Non-PoE SKU

E274210102

▲ PoE SKU