

VTC 1021-BK/C2K

Intel Atom® x5- E3940 Fanless In-Vehicle Computer



VTC 1021-BK



VTC 1021-C2K



Main Features

- Intel Atom® x5-E3940 processor quad core 1.8GHz
- Built-in U-blox M8N GPS, optional dead reckoning support
- Built-in CAN 2.0B, optional OBD2 SAE J1708/ SAE J1939
- 2 x POE support, total 60W (VTC1021-C2K only)
- 2 x RJ45 10/100/1000 Fast Ethernet with LED
- 3 x DI and 3 x DO support
- Smart power management with Ignition on/off delay via software control and low voltage protection
- Variety of wireless communication options
- Certified by CE/ FCC/ E13 mark

Product Overview

VTC 1021 features next generation Intel Atom® x5-E3940 processor quad core 1.8GHz, with powerful graphic and multimedia enhancement. VTC 1021 is packed rugged, fanless, and 1 DIN compact enclosure for the vehicles with limited space to locate the computer system. On board CAN 2.0B and optional OBD interface (SAE J1939) for vehicle diagnostics and driver behavior management. An advanced GPS receiver supports GPS/Glonass/QZSS/Galileo/Beidou and optional dead reckoning is also available. VTC 1021 features WLAN and WWAN wireless data and voice connectivity. With dual SIM external access design, it allows user to access SIM card conveniently.

Dual PoE functions (VTC1021-C2K only) are suited for most PoE devices, including wireless access points, as well as IP cameras. Additional 12VDC output can be provided for external display with easy power wire arrangement. VTC 1021 keeps the flexibility to meet different demands for telematics applications, such as infotainment, fleet management, dispatching system and mobile video surveillance.

Specifications

CPU

- Intel Atom® processor Apollo Lake E3940, 1.80GHz

Memory

- 1 x 204-pin DDR3L SO-DIMM socket support 1066MHz/ 1333MHz up to 8GB. Default 4GB

Storage

- 1 x 2.5" SATA 2.0
- 1 x mSATA for full-size mini-PCIe socket

Expansion

- 1 x Full size mini-PCIe socket (USB 2.0 + PCIe + mSATA)
- 1 x Full size mini-PCIe socket (USB 2.0 + PCIe)
- 1 x Full size mini-PCIe socket (USB 2.0, optional USB 3.0)

Function

- 1 x u-blox NEO-M8N on board (support GPS/Glonass/QZSS/Galileo/Beidou)
- Built-in G-sensor
- TPM 2.0

I/O Interface-Front

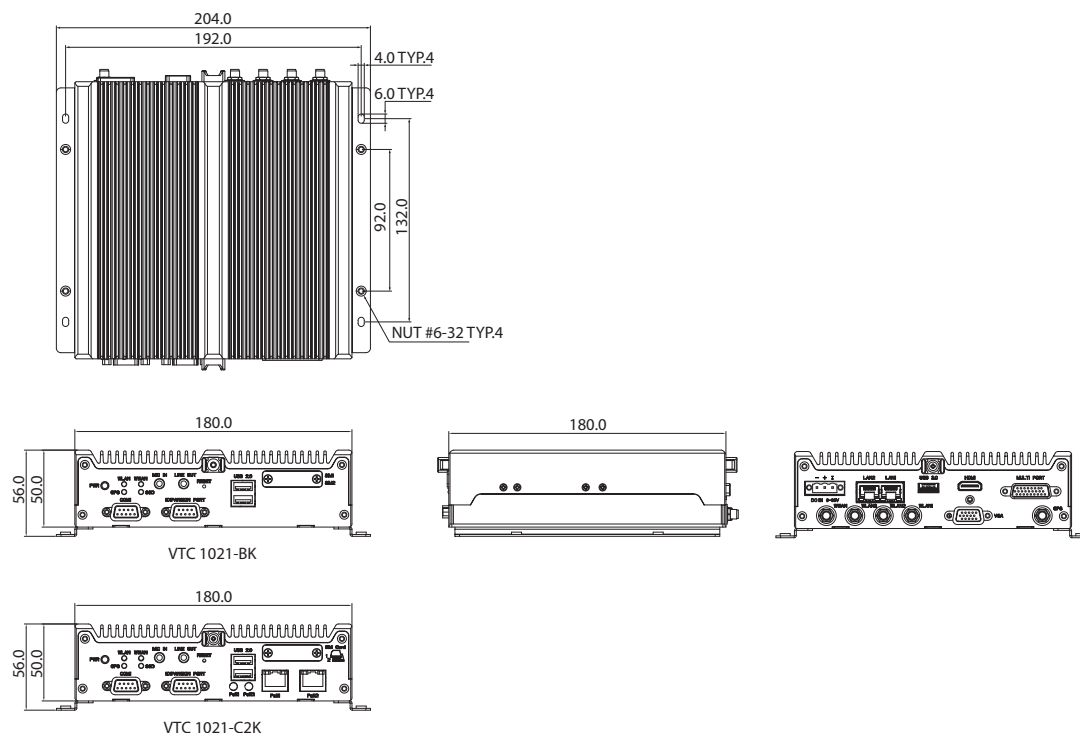
- 1 x Power button with LED
- 4 x LED for WWAN, WLAN, SSD, GPS
- 1 x Line-out/MIC-in

- 1 x Reset button
- 1 x DB9 for fully RS232
- 2 x Type A USB 2.0 compliant host, supporting system boot up
- 2 x External accessible SIM card socket (selectable) with cover
- 1 x DB9 for Expansion Port (Option)
- 2 x RJ45 PoE (including 2 x PoE LED light, VTC1021-C2K only)

I/O Interface-Rear

- 1 x Phoenix connector for Power/ GND/ Ignition input
- 1 x Type A USB 3.0 compliant host, supporting system boot up
- 2 x RJ45 10/ 100/ 1000 Fast Ethernet with LED
- 1 x DB15 VGA, resolution up to 1920 x 1080 @60Hz
- 1 x HDMI port, resolution up to 3840x2160 @30Hz
- 1 x DB26 port
 - 1 x CANBus 2.0B
 - 1 x RS232 Tx/ Rx
 - 1 x GPS DR (Option)
 - 3 x DI and 3 x DO
 - 1 x RS422/ RS485
 - 12V/ 2A DC output
 - GND
- 5 x Antenna holes for GPS/WWAN/WLAN

Dimension Drawing



Power Management

- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level power on/off delay time by software
- Status of ignition and low voltage can be detected by software
- Support S3/S4 suspend mode

Operating System

- Windows 10
- Yocto

Dimensions

- 180 mm (W) x 180 mm (D) x 50 mm (H) (7.09" x 7.09" x 1.97")
- Weight: 1.7 kg

Environment

- Temperature:
 - Operating temperatures: -40°C to 70°C (w/ industrial SSD) with air flow
 - Storage temperatures: -40°C to 85°C with air flow
 - Damp Heat Test per EN60068-2-30
- Humidity: IEC60068-2-3, Damp Heat Steady State Test, 40C, 95%, 48Hrs
- Vibration: IEC 60068-2-64, 2G for SSD or 0.5G for HDD
 - Operating: MIL-STD-810G, 514.6C Procedure 1, Category 4
 - Storage: MIL-STD-810G, 514.6E Procedure 1, Category 24

Shock:

- MIL-STD-810G, 516.6 Procedure I, trucks and semi-trailers=40g
- Crash hazard: Procedure V, ground equipment=75g

Certifications

- CE approval
- FCC Class A
- E13 Mark

Ordering Information

♦ VTC 1021-BK (P/N: 10V00102101X0)

Intel Atom® processor Apollo Lake E3940, 1.80GHz with 4GB DDR3L SO-DIMM, U-blox M8N GPS on board, VGA/HDMI output, 2 x LAN, 2 x RS-232 (1 x full, 1x Tx/Rx) & 1 x RS-422/485, 1 x CAN 2.0B, 3 x DI & 3 x DO, 2 x USB 2.0 & 1 x USB 3.0, 1 x Line-out/Mic-in

♦ VTC 1021-C2K (P/N: 10V00102102X0)

Intel Atom® processor Apollo Lake E3940, 1.80GHz with 4GB DDR3L SO-DIMM, U-blox M8N GPS on board, VGA/HDMI Output, 2 x LAN & 2 x PoE, 2 x RS-232 (1 x full, 1x Tx/Rx) & 1 x RS-422/485, 1 x CAN 2.0B, 3 x DI & 3 x DO, 2 x USB 2.0 & 1 x USB 3.0, 1 x Line-out/Mic-in