VTC 1920

Intel Atom® x7211RE Telematics IoT Gateway

Slim and Ruggedized Design

Main Features

- Super slim and ruggedized design
- Intel Atom® processor x7211RE (1.0GHz)
- Built-in 1 x CAN FD, 1 x CAN 2.0B
- Smart power management with Ignition on/off delay via software control and low voltage protection
- Built-in U-blox M9N GNSS
- Dual SIM cards for WWAN modules
- Wide range DC input from 9 ~ 36V
- Wide operating temperature -40°C ~ 70°C
- Certified by CE/ FCC/ E13 mark

Product Overview

VTC 1920, a super slim, rugged, and entry-level vehicle computer with Intel Atom® processor x7211RE (1.0GHz), is designed for the harsh in-vehicle environment. It allows to comply with stringent MIL-STD-810H military standard in rugged, fanless, and compact mechanism. Because of the super slim design, it is especially for the vehicles with limited space to locate the computer system, but without compromising with its space to scarify its features.

VTC 1920 has onboard CAN FB and CAN 2.0B for vehicle diagnostics and driver behavior management. An advanced GNSS receiver supports GPS/Glonass/QZSS/Galileo/Beidou. VTC 1920 features WLAN and WWAN wireless connection capability. With external 2 x SIM socket which can support a better connectivity quality by software. VTC 1920 keeps the flexibility to meet different demands for telematics applications, such as IoT Gateway infotainment, fleet management and dispatching system.

Specifications

CPU

- Intel Atom® processor dual core x7211RE, 1.0GHz

Memory

- 1 x 260-pin DDR4 SO-DIMM socket support 3200MHz up to 16GB. Default 4GB

Storage

- 1 x M.2 Key M 2242 for SATA 3.0
- 1 x M.2 Key M 2280 for SATA 3.0 (optional on daughter board)

Expansion

- 1 x M.2 3042/3050/3052 Key B socket (USB 2.0, USB 3.2 Gen 2) for LTE/ 5G NR module with 2 x external Nano-SIM
- 1 x M.2 2230 Key E socket (USB 2.0, PCIe 3.0), (optional on daughter board)
- 1 x Full size mini-PCIe socket (USB 2.0), BOM optional M.2 3052 Key B (USB 2.0) for LTE module (optional on daughter board)

Function

- 1 x u-blox NEO-M9N onboard (support GPS/Glonass/QZSS/Galileo/BeiDou)
- Built-in G-sensor
- TPM2.0

I/O Interface-Front

- 1 x Power button with LED
- 3 x LED for WWAN, WLAN, Storage, 1 x Reset button
- 2 x SIM socket (Nano type) with cover
- 1 x DB15 connector for 1 x CAN FD, 1 x CAN 2.0B, 1 x DR, 1 x analog input (detect 9~36VDC)
- 1 x Line-out/MIC-In
- 2 x Type A USB 3.2
- 3 x antenna hole for GNSS/WLAN

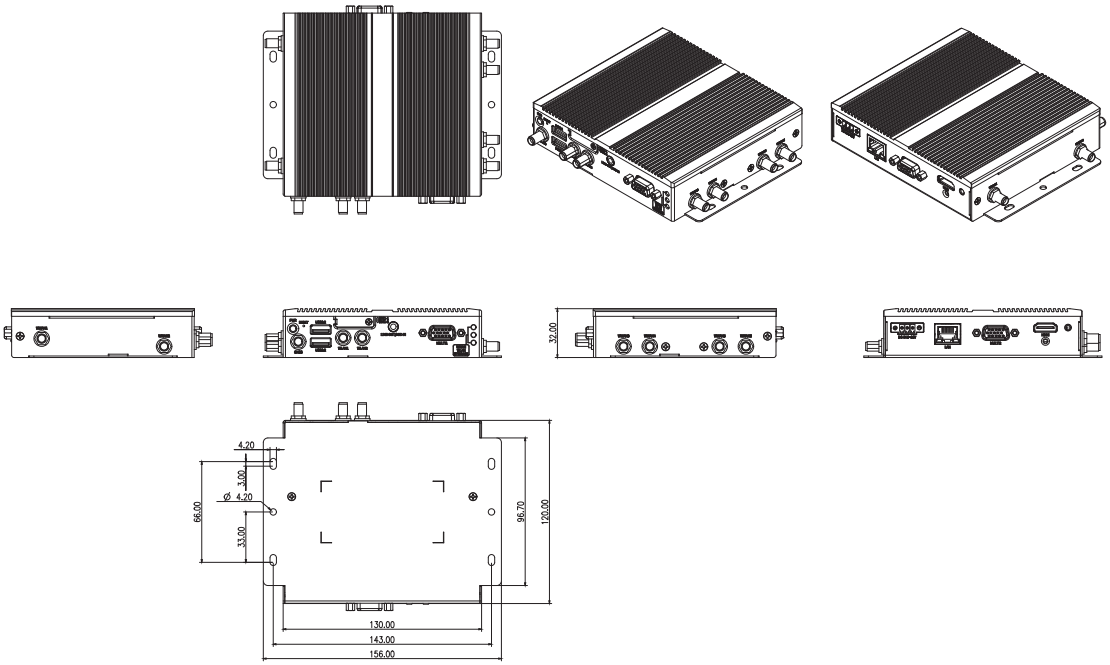
I/O Interface-Rear

- 1 x Phoenix connector for Power/GND/Ignition input
- 1 x RJ45 10/100/1000/2500 Mbps Ethernet with LED
- 1 x HDMI, resolution up to 3840 x 2160 @30Hz
- 1 x DB15 for 2 x RS232 (TX/RX), 1 x RS485 (TX/RX), 3 x DI, 3 x DO

Operating System

- Windows 10, 11 (64-bit)
- Linux 4.x

Dimension Drawing



Environment

- Temperature
  - Operating temperatures: -40°C~70°C
  - Storage temperatures: -45°C~85°C
  - Damp heat test per EN60068-2-30
- Humidity
  - IEC60068-2-78, Damp heat steady state test, 40C, 95%, 48Hrs
- Vibration
  - IEC 60068-2-64, 2G
  - Operating: MIL-STD-810H, 514.8C Procedure 1, Category 4
  - Storage: MIL-STD-810H, 514.8E Procedure 1, Category 24
- Shock
  - MIL-STD-810H, 516.8 Procedure I, trucks and semi-trailers=40g
  - Non-operating: MIL-STD-810H, Method 516.8, Procedure V, crash hazard shock test=75g

Dimensions

- 130mm (W) x 120mm (D) x 32mm (H) (5.12" x 4.72" x 1.26")
- Weight: 0.6 kg (1.3 lbs)

Certifications

- CE approval
- FCC Class A
- E13 mark

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

Ordering Information

- **VTC 1920 (P/N: 10V00192000X0)**
  Intel Atom® processor x7211RE, 1.0GHz with 4GB DDR4 SO- DIMM, U-blox M9N GNSS onboard, HDMI output, 1 x LAN, 2 x RS-232 (Tx/Rx), 1 x RS-485 (Tx/Rx), 1 x CAN FD, 1 x CAN 2.0B, 3 x DI, 3 x DO, 2 x USB 3.2, 1 x Line-out/Mic-in