VTC 6231

Main Features

- Intel Atom® processor quad core x7433RE, 1.5GHz
- Eight SIM cards + four WWAN modules support
- Built-in u-blox-M9N GPS
- Built-in CAN FD
- 1 x External storage (compatible with 9mm disk)

- E mark conformity
- 3 x M.2 + 2 x mPCIe socket expansion
- Wide voltage input 9~36 VDC
- Three video outputs, one VGA, one HDMI, and one DP
- 1 x Mic-in, 1 x Line-out, 1 x Line-In

Product Overview

VTC 6231, based on Intel Atom® quad core processor x7433RE, is specifically comply with stringent E mark standard in rugged, fanless, and compact mechanism. VTC 6231 provides complete communication capability between vehicle and computer with build-in CAN FD interface. VTC 6231 features rich WLAN and WWAN wireless connectivity. With dual SIM cards per modem support, VTC 6231 allows eight SIM cards backup each other for a better connectivity quality by software. In addition, eight SIM cards and four WWAN modules architecture can increase the bandwidth for a faster data transmission speed. Equipped with intelligent power management, VTC 6231 can be waked on by ignition, RTC timer or SMS message remotely. By integrating the variety of I/O ports and 2 x mini-PCIe, 3 x M.2 sockets expansibility, up to three screens via VGA, HDMI, and DP connections, VTC 6231 keeps the flexibility to meet the demand for different vehicle applications, such as infotainment, dispatching system, cellular/wireless network connectivity, and video surveillance. The design of mini-PCIe slots x 2 can solve the potential request from the market when needed.

Specifications

CPU
- Intel Atom® processor x7433RE, 1.5GHz, 9W, 4-core

Memory
- 1 x 262-pin DDR5 SO-DIMM socket, supports 4800MHz up to 16GB, default 8GB

Video Output
- 1 x VGA up to 1920 x 1200 @60Hz
- 1 x HDMI 2.0 up to 4096 x 2160 @60Hz
- 1 x DP up to 4096 x 2160 @60Hz

Storage
- 1 x 2.5" SATA 3.0 external SSD (compatible with 9mm drive)
- 1 x mSATA (occupies one mPCIe slot)

Expansion
- 2 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 Full size mini-PCIe socket (USB 2.0, SATA, PCIe 3.0) for mSATA (default), BIOS select (USB 2.0) for LTE with 2 x external Nano-SIM, BOM option (USB 2.0, PCIe 3.0) for WLAN
- 1 x M.2 2230 Key E (PCIe 3.0 x 1, USB 2.0), BOM optional mPCIe (PCIe 3.0 x 1, USB2.0) for Hailo module

- 1 x Full size mini-PCIe socket (USB 2.0, PCIe 3.0) for WiFi, BOM option 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

GNSS and Onboard Sensor
- 1 x Default u-blox NEO-M9N GNSS module for GPS/Glonass/QZSS/Galileo/Beidou
- Optional M9V modules with dead reckoning available
- G Sensor (3-axis, 10-bit resolution)

LAN and Power over Ethernet
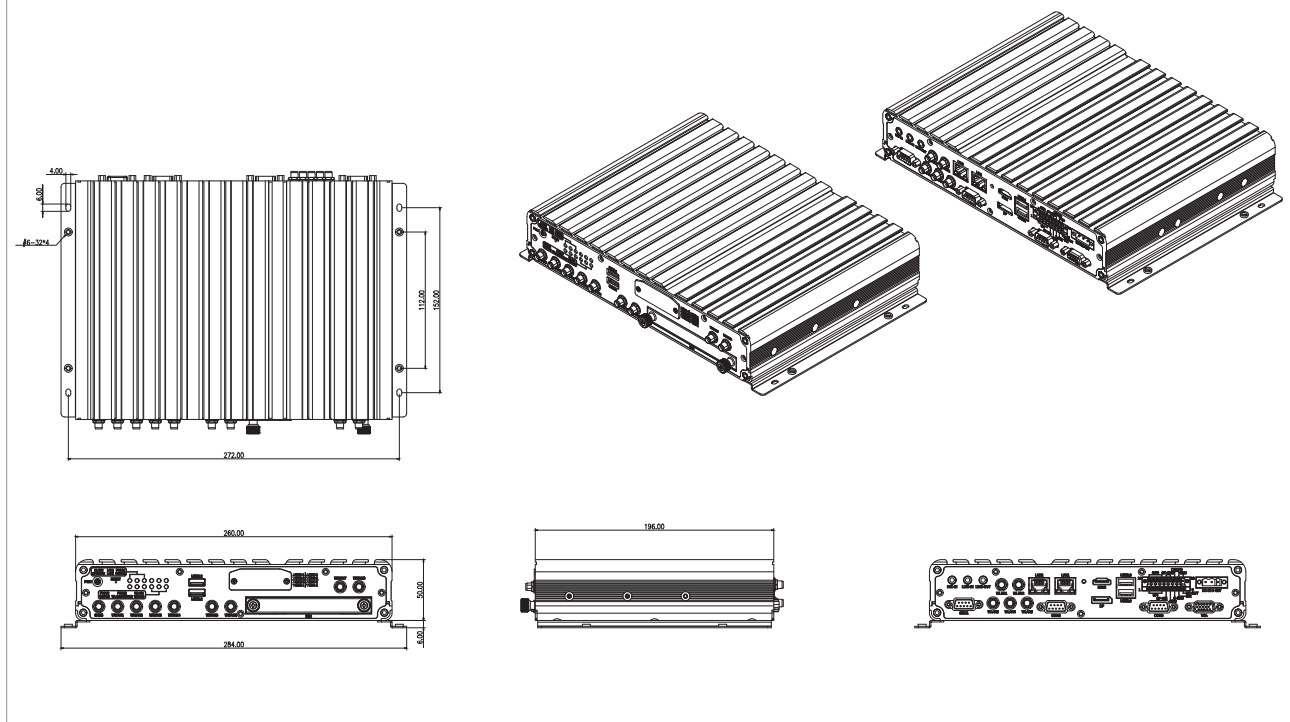- 2-Port LAN, 10/100/1000/2500 Mbps I226-IT Ethernet Controller

Security
- TPM 2.0: Infineon SLB9670VQ2.0

I/O Interface-Front
- 12 x LED indicators (including 3 x programmable LED)
- 8 x Externally accessible Nano-SIM card sockets with cover
- 1 x 2.5" SATA 3.0 SSD tray (removable, 9mm)
- 1 x Reset button
- 1 x Power button
- 2 x USB 3.2 (Gen 2) type A
- 9 x SMA antenna

NEXCOM

Dimension Drawing

I/O Interface-Rear
- 1 x 3-pin terminal block for 9V~36 VDC
- 2 x USB 2.0 type A
- 2 x RJ45 LAN port, 10/100/1000/2500 Mbps
- 1 x Mic-in, 1 x Line-out, 1 x Line-In
- 1 x VGA, 1 x HDMI 2.0, 1 x DP
- 2 x DB9 (COM1, COM2) for selectable RS232/422/485 Full
- 5 x SMA antenna
- 1 x DB9 for RS232 Full
- 1 x 18-pin terminal block
  - 1 x CAN FD (isolated)
  - 4 x DI
  - 4 x DO
  - 1 x GNSS Speed/Direction
  - 12V/2A DC output
  - GND

Power Management & Software Support
- Power input 9~36 VDC
- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level power on/off delay time by software
- Support S3/S4 suspend mode
- 10~255 seconds WDT support, setup by software
- SDK (Windows/Linux) including utility and sample code

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

Dimensions
- 260mm (W) x 196mm (D) x 50mm (H) (10.24" x 7.71" x 1.97")

Weight
- 2.5kg

Environment
- Operating temperatures:
  - -40°C to 70°C (w/ industrial SSD) with air flow
- Storage temperatures: -40°C to 85°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration
  - IEC 60068-2-64, 2G for SSD
  - Operating: MIL-STD-810H, 514.8C Procedure 1, Category 4
  - Storage: MIL-STD-810H, 514.8E Procedure 1, Category 24
- Shock
  - Operating: MIL-STD-810H, Method 516.8, Procedure I, functional shock=40g
  - Non-operating: MIL-STD-810H, Method 516.8, Procedure V, crash hazard shock test=75g

Standards/Certifications
- CE
- FCC Class A
- E13 mark

Ordering Information

- **VTC 6231 (P/N: 10V00623100X0)**
  Intel Atom® processor x7433RE CPU,8GB DDR5 SO-DIMM, DC input 9~36 VDC, 1 x VGA, 1 x HDMI, 1 x DP, 2 x LAN, 2 x selectable RS232/422/485 Full, 1 x RS232 Full, 8 x GPIO, 2 x USB 3.2, 2 x USB 2.0