



## Main Features

- Intel Atom® processor quad core E3950, up to 2.0GHz
- Six SIM cards + three WWAN modules support
- Built-in u-blox-M8 GPS
- Built-in CAN Bus 2.0B
- 1 x External storage (compatible with 9mm disk)
- E mark conformity
- 3 x mini-PCIe + 2 x M.2 socket expansion
- Wide voltage input 9~48 VDC
- Three video outputs, two VGA and one HDMI
- 1 x Mic-in, 2 x Line-out

## Product Overview

VTC 6221, based on Intel Atom® quad core processor E3950 (up to 2.0GHz), is specifically comply with stringent E mark standard in rugged, fanless and compact mechanism. VTC 6221 provides complete communication capability between vehicle and computer with build-in CAN Bus 2.0B interface. VTC 6221 features rich WLAN and WWAN wireless connectivity. With dual SIM cards per modem support, VTC 6221 allows six SIM cards backup each other for a better connectivity quality by software. In addition, six SIM cards and three WWAN modules architecture can increase the bandwidth for a faster data transmission speed. Equipped with intelligent power management, VTC 6221 can be waked on by ignition, RTC timer or SMS message remotely. By integrating the variety of I/O ports and 3 x mini-PCIe, 2 x M.2 sockets expansibility, up to three screens via VGA and HDMI connections, VTC 6221 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 3 can solve the potential request from the market when needed.

## Specifications

### CPU

- Intel Atom® processor E3950, up to 2.0GHz, 12W, 4 core

### Memory

- 1 x 204-pin DDR3L SO-DIMM socket support 1866MHz up to 8GB. default 4GB

### Video Output

- Chipset Intel® HD graphics 505
- 1 x HDMI 1.4b up to 4096 x 2160 @30Hz
- 2 x VGA up to 1920 x 1200 @60Hz

### Storage

- 1 x 2.5" SATA 3.0 external SSD (compatible with 9mm drive)
- 1 x CFast (externally accessible), optional mSATA

### Expansion

- 1 x Full size mini-PCIe socket (USB 2.0) for LTE module with 2 x external SIM
- 1 x Full size mini-PCIe socket (USB 2.0, PCIe 2.0), BOM optional full size mini-PCIe socket (USB 2.0) for LTE module with 2 x external SIM
- 1 x Full size mini-PCIe socket (USB 2.0, PCIe 2.0)
- 1 x M.2 3042 Key B socket (USB 2.0, USB 3.0) for LTE/5G NR module with 2 x external SIM
- 1 x M.2 3042/3050/3052 Key B (USB 2.0, USB 3.0, PCIe 2.0 (BOM optional)) for LTE/5G NR module with 2 x external SIM

### GNSS and On Board Sensor

- 1 x Default u-blox NEO-M8N GNSS module for GPS/Glonass/QZSS/Galileo/Beidou
- Optional M8U modules with dead reckoning available
- G Sensor (3-axis, 10-bit resolution)

### LAN

- 2-Port LAN, 10/100/1000 Mbps I210-IT GbE, BOM optional 3-port LAN

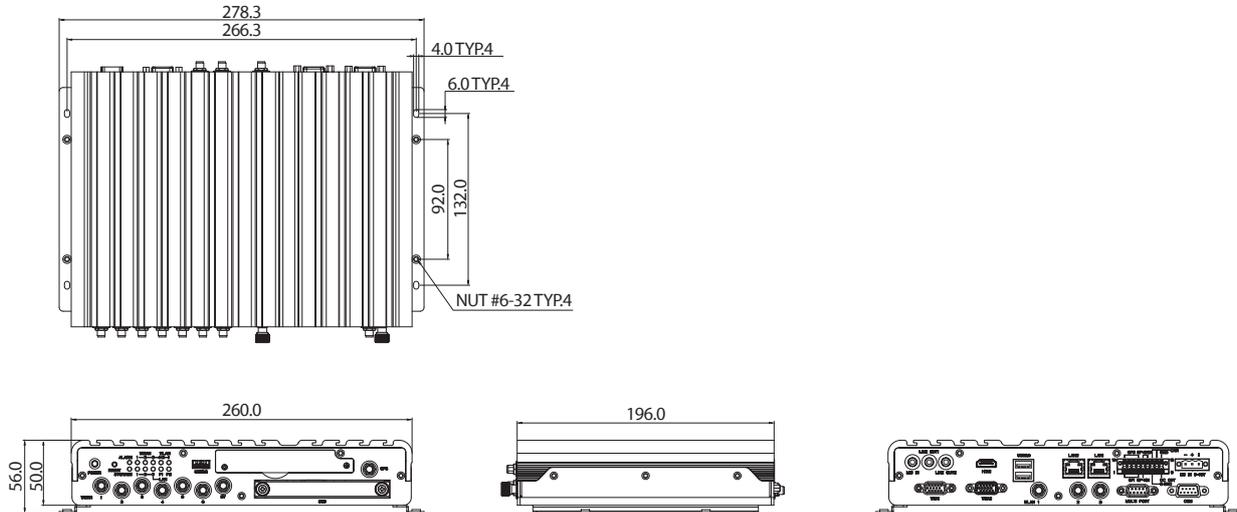
### Security

- TPM 2.0: Infineon SLB9665TT2.0FW5.62 (BOM optional)

### I/O Interface-Front

- 12 x LED indicators (including 2 x programmable LED)
- 6 x Externally accessible SIM card sockets with cover
- 1 x 2.5" removable SSD tray
- 1 x Externally accessible CFast card socket with cover
- 1 x Reset button
- 1 x Power button
- 1 x USB 3.0 type A (5V/0.9A)
- 8 x SMA antenna

## Dimension Drawing



### I/O Interface-Rear

- ♦ 1 x 3-pin terminal block for 9V~48 VDC
- ♦ 2 x USB 2.0 type A (5V/0.5A)
- ♦ 2 x RJ45 LAN port, 10/100/1000 Mbps
- ♦ 1 x Mic-in, 2 x Line-out
- ♦ 2 x VGA
- ♦ 1 x HDMI 1.4b
- ♦ 1 x DB9 (COM) full RS232
- ♦ 3 x SMA antenna
- ♦ 1 x DB9 (MULTI PORT) for RS232 TX/RX, RS485, USB 2.0
- ♦ 1 x 18-pin terminal block
  - 1 x CAN Bus 2.0B (onboard)
  - 4 x DI
  - 4 x DO
  - Vin, GND for GPIO

### Power Management & Software Support

- ♦ Power input 9~48 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/Linux

### 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 80°C
- ♦ Relative humidity: 10% to 90% (non-condensing)
- ♦ Vibration (random)
  - 2g@5~500 Hz (in operation, SSD)
- ♦ Shock (SSD/HDD):
  - Operating: MIL-STD-810G, Method 516.6, Procedure I, functional shock=20g
  - Non-operating: MIL-STD-810G, Method 516.6, Procedure V, crash hazard shock test=75g

### Standards/Certifications

- ♦ CE
- ♦ FCC Class A
- ♦ E13 mark

## Ordering Information

### ♦ VTC 6221 (P/N: 10V00622100X0)

Intel Atom® processor E3950 CPU, 4GB DDR3L SO-DIMM, DC input 9~48 VDC, 2 x VGA, 1 x HDMI, 2 x LAN, 2 x RS232, 1 x RS485, 4 x GPIO, 4 x USB