



## Main Features

- Intel Atom® processor quad core x7433RE, 1.5GHz
- 4 x PoE (802.3 bt/af/at, max. total 90W)
- Built-in u-blox-M9N GPS
- Built-in CAN FD
- E Mark conformity
- 3 x expansion slot
- Dual external storage (compatible with 15mm disk)
- 1 x eMMC to run OS
- Two video outputs, one VGA, and one HDMI®

## Product Overview

VTC 6232, based on the Intel Atom® quad-core processor x7433RE (up to 1.5GHz), specifically complies with stringent E-mark standards in a rugged, fanless, and compact mechanism. VTC 6232 provides complete communication capability between the vehicle and the computer with a built-in CAN FD interface. Equipped with intelligent power management, VTC 6232 can be woken up by ignition, RTC timer, or remotely through SMS message. VTC 6232 supports four 802.3bt/af/at PoE ports (maximum total 90W) to connect with IP cameras. The design with a 2.5" removable SSD and eMMC facilitates easy storage access. VTC 6232 maintains the flexibility to meet the demands of video surveillance in vehicle applications.

## Specifications

### CPU

- Intel Atom® processor x7433RE 4 cores/1.5GHz (embedded)

### Memory

- 1 x DDR5 4800 SO-DIMM, default 8GB

### Video Output

- 1 x HDMI® 2.0 up to 4096 x 2160 @60Hz
- 1 x VGA, up to 1920 x 1200@60Hz

### Storage

- 2 x 2.5" SATA 3.0 HDD/SSD tray, removable, 15mm
- 1 x 64GB eMMC default for OS

### Expansion

- 1 x Mini PCIe slot (PCIe 3.0, USB 2.0), BOM optional M.2 3052 Key B (USB 3.2, USB 2.0)
  - Support LTE/5G NR module with 2 x external SIM
- 1 x M.2 3042/3052 Key B (USB 3.2, USB 2.0)
  - Support LTE/5G module
- 1 x M.2 2230 Key E (PCIe 3.0, USB 2.0), BOM optional mPCIe (PCIe 3.0, USB 2.0)
  - Support Hailo module

### GNSS and Onboard Sensor

- 1 x U-blox NEO-M9N GNSS for GPS/Glonass/QZSS/Galileo/Beidou
- 3D accelerometer and 3D gyroscope

### LAN and Power over Ethernet

- 4 x 2.5GbE RJ45 PoE port, Intel® I226-IT (2 x 802.3 bt + 2 x 802.3 af/at), total up to 90W (PoE++1, PoE++2, PoE+3, PoE+4)
- 1 x 2.5GbE RJ45 port, I226-IT

### Security

- TPM 2.0, Infineon SLB9672VU2.0

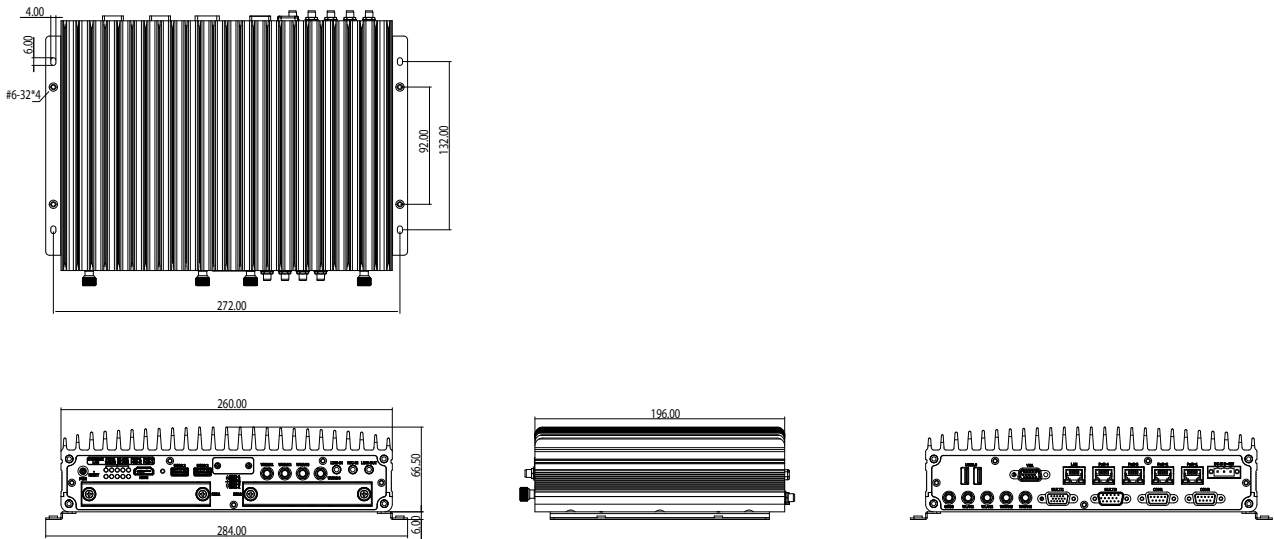
### I/O Interface-Front

- 10 x LED indicator (including 1 x programmable LED)
- 4 x Externally accessible nano-SIM card socket with cover
- 2 x 2.5" removable SSD tray, removable, 15mm
- 1 x Reset button
- 1 x Power button
- 2 x USB 3.2 Gen 2, Type-A
- 1 x HDMI® 2.0
- 1 x Mic in, 1 x Line out, 1 x Line in
- 5 x SMA antenna

### I/O Interface-Rear

- 1 x 3-pin terminal block for 9V~48V DC
- 4 x 2.5GbE RJ45 PoE port, Intel® I226-IT (2 x 802.3 bt + 2 x 802.3 af/at), total up to 90W (PoE++1, PoE++2, PoE+3, PoE+4)
- 1 x 2.5GbE RJ45 port, I226-IT
- 1 x VGA, up to 1920 x 1200@60Hz
- 2 x COM port (DB9), supports RS-232/422/485

## Dimension Drawing



- 4 x SMA antenna
- 2 x USB 2.0 Type-A
- 1 x DB15 (Multi1 Port)
  - 4 x DI with isolation
  - 4 x DO with isolation
  - 1 x GNSS Speed/Direction
  - Vin, GND for GPIO
- 1 x DB15 (Multi2 Port)
  - 1 x RS-422/485
  - 1 x RS-232 (TX/RX)
  - 1 x CAN FD
  - 1 x 12V DC, 2A output (Vout, GND)

### Power Management & Software Support

- Power input 9~48 V DC
- 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 64bit, 11
- Linux 4.x

### Dimensions

- 260mm (W) x 196mm (D) x 66.5mm (H)

### Weight

- 3.2kg

### 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 (random)
  - 2g@5~500Hz (in operation, SSD)
- Vibration (SSD)
  - Operating: MIL-STD-810H, Method 514.8C Procedure 1, Category 4, common carrier US highway truck vibration exposure
  - Storage: MIL-STD-810H, Method 514.8E Procedure 1, Category 24, minimum integrity test
- Shock (SSD)
  - 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 6232-C45 (P/N: 10V00623201X0)**  
Intel Atom® processor x7433RE 1.5GHz CPU, 8GB DDR5 SO-DIMM, DC input 9~48 V DC, 1 x VGA, 1 x HDMI®, 1 x LAN, 4 x PoE, 2 x full RS-232/422/485, 1 x RS-422/485, 8 x GPIO, 2 x USB 3.2, 2 x USB 2.0