VTC 7220-R

Intel® Core™ i7-4650U Fanless Rolling Stock Computer
with EN50155 Conformity





Main Features

- Intel® Core™ processor dual core i7-4650U
- Three SIM cards + dual WWAN modules support
- Dual accessible & hot swappable SATA 3.0 SSD/HDD (RAID 0/1)
- Built-in u-blox module
- Built-in CAN 2.0B. optional CAN/OBDII module
- Wake on RTC/SMS via WWAN module
- Voice communication via WWAN module
- EN50155 conformity
- 4 x mini-PCIe socket rich expansion capability
- Isolated Power

Product Overview

VTC7220-R features powerful new generation Intel® Core™ processor i7-4650U. Its CPU performance gives users the ability to adapt to what they need in any rolling stock applications. Its Intel® HD graphics 5000 engine allows users to fully take advantage of VTC7220-R to achieve smooth, seamless and stunning graphic performance on 3 different video outputs (VGA, DP, LVDS). VTC7220-R is equipped with 2 externally accessible SSD/HDD trays; users can easily download or upload the data on other devices by just removing the storage devices from VTC7220-R. By integrating the variety of I/O ports and 4 x mini-PCIe sockets expansibility, VTC7220-R is not only suitable for video surveillance application, but also can meet the demand for other applications, such as infotainment and dispatching system. With dual SIM cards support, VTC7220-R allows three SIM cards backup each other for a better connectivity quality by software. In addition, three SIM cards + dual WWAN modules architecture can increase the bandwidth for a faster data transfer speed. Not only data transmission, VTC7220-R also supports two-way voice communication. Equipped with intelligent power management, VTC7220-R can be waked on by ignition, RTC timer or SMS/Ring remotely.

Specifications

CPU

- Intel® Core™ processor dual core i7-4650U, 1.7GHz

Memory

- 2 channel 204-pin DDR3L SO-DMIM socket support 1333/1600MHz up to 16GB, default Industrial grade 2GB

Storage

- 2 x 2.5" SATA 3.0 SSD/HDD (removable & hot swappable), RAID 0,1 supported (optional lockable storage available)
- 1 x CFast (externally accessible)

Expansion

- 1 x Full size mini-PCIe socket (USB 2.0)
- 1 x Full size mini-PCIe socket (USB 2.0 + PCIe)
- 1 x Full size mini-PCIe socket (USB 2.0 + PCIe)
- 1 x Half size mini-PCIe socket (USB 2.0 + PCIe)

Function

- 1 x u-blox NEO-M8N module (support GPS/Gloness/QZSS/Galileo/ Beidou) or optional module with Reckoning
- Built-in G-sensor

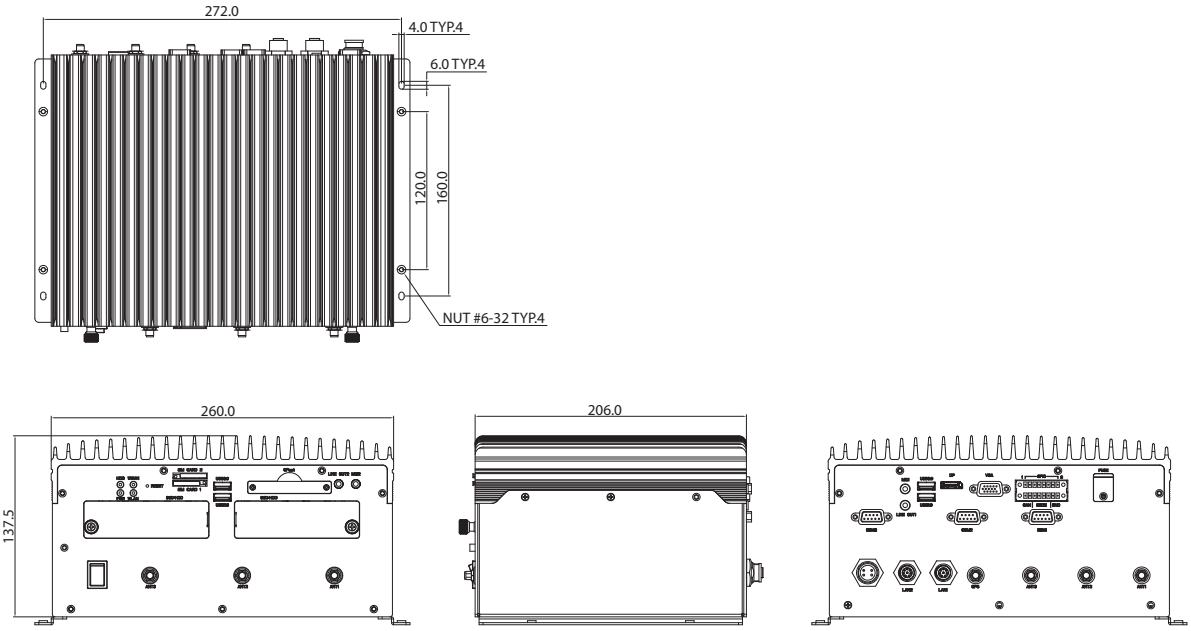
I/O Interface-Front

- 4 x LED for power, storage, WWAN, WLAN
- 1 x Power Switch
- 2 x 2.5" SATA 3.0 SSD/HDD (removable & hot swappable), RAID 0,1 supported (optional lockable storage available)
- 1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 2 x Externally accessible SIM card socket (selectable)
- 1 x Phone jack 3.5mm for 1 x Mic-in
- 1 x Phone jack 3.5mm for 1 x Line-out
- 1 x Externally accessible CFast card socket with cover
- 1 x Reset button
- 3 x antenna hole for WWAN/WLAN/BT

I/O Interface-Rear

- 1 x Circle Type DC Input with ignition
  VTC 7220-RA: 24VDC (16.8V ~ 31.2V) Input with 4KVDC isolation
  VTC 7220-RB: 36VDC (25.2V ~ 46.8V) Input with 2KVDC isolation
  VTC 7220-RC: 48VDC (33.6V ~ 62.4V) Input with 4KVDC isolation
  VTC 7220-RF: 110VDC (77V ~ 143V) Input with 4KVDC isolation
  1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 2 x M12 10/100/1000 Ethernet
- 1 x Phone jack 3.5mm for 1 x Mic-in
- 1 x Phone jack 3.5mm for 1 x Line-out with 1.5W output each
- 1 x DB-15 VGA. Resolution up to 2560 x 1600 @60Hz
- 1 x DP port. Resolution up to 2560 x 1600 @60Hz
- 2 x DB-9 RS-232

Dimension Drawing



- 1 x DB-9 RS-232/422/485 (RI/12V selectable)
- 1 x 16-pin terminal block
  - 1 x CAN Bus 2.0B (on board)
  - 1 x optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
  - 8 x Programmable GPIO
    (Digital Input)
    Input voltage (internal type): 5VDC TTL (default)
    Input voltage (source type): 3 ~ 12VDC
    (Digital Output)
    Digital output (sink type): 5VDC TTL (default), max current: 20mA
    Digital output (source type): 3 ~ 18VDC, max current: 150mA
  - 4 x Antenna hole for WWAN/WLAN/BT/GPS
  - 1 x Fuse (15A)

Power Management

- Ignition On/Off control
- Programmable On/Off delay timer
- System wake up event
  Ignition switch
  RTC timer ALARM interrupt
  Cellular MODEM wakeup signal
- System wake up condition
  Wake up event is triggered, and DC input voltage is greater than UVP threshold
  Timer delay is only applicable for Ignition on
- System power down condition
  Soft off, or Ignition off, or DC input voltage is lower than UVP threshold
  Timer delay is only applicable for Ignition off

Operating System

- Windows 8, WES8
- Window 7, WES7
- Linux kernel 3.X

Dimensions

- 260mm (W) x 206mm (D) x 137.5mm (H) (10.24" x 8.11" x 5.39")
- Weight: 2.5kg

Environment

- Operating temperatures:
  -40°C to 70°C (w/ industrial SSD) with air flow
  -20°C to 45°C (w/ commercial HDD) with air flow
- Storage temperatures: -40°C to 85°C
- Relative humidity: 10% to 90% (non-condensing)

Standards/Certifications

- CE approval
- FCC Class A
- EN50155 conformity
  - Ambient Temperature EN 50155 TX (-40 ~ 70° C)
  - Shock and Vibration IEC 61373 class B
  - Interruptions of Voltage Supply Class S1,S2
  - Supply Change Over Class C1,C2
  - EMC EN 50121-3-2

Ordering Information

- **VTC 7220-RA (P/N: 10V00722001X0)**
  Intel® Core™ processor i7-4650U, 1.7GHz, dual core CPU, 24VDC Input, Industrial Grade 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS- 232, 1 x RS-232/422/485, 4 x GPIO, 3 x USB
- **VTC 7220-RB (P/N: 10V00722002X0)**
  Intel® Core™ processor i7-4650U, 1.7GHz, dual core CPU, 36VDC Input, Industrial Grade 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-232/422/485, 4 x GPIO, 3 x USB
- **VTC 7220-RC (P/N: TBD)**
  Intel® Core™ processor i7-4650U, 1.7GHz, dual core CPU, 48VDC Input, Industrial Grade 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-232/422/485, 4 x GPIO, 3 x USB
- **VTC 7220-RF (P/N: 10V00722003X0)**
  Intel® Core™ processor i7-4650U, 1.7GHz, dual core CPU, 110VDC Input, Industrial Grade 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-232/422/485, 4 x GPIO, 3 x USB

We reserve the right to change specifications and product descriptions at any time without prior notice.