VTC 6210-VR4

Intel® Atom™ E3845 Fanless In-Vehicle Computer
with 4-Channel Video Inputs

Microsoft Azure
Certified

Main Features

- Support 4-channel video inputs
- Three SIM cards + dual WWAN modules support
- Built-in U-blox M8N GPS, optional dead reckoning support
- Built-in CAN Bus 2.0B. Optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- Wake on RTC/SMS via WWAN module
- Compliant with MIL-STD-810G
- 4 x mini-PCIe socket expansion
- Programable 8 x GPIO
- Voice communication via WWAN module

Product Overview

VTC 6210-VR4, based on Intel® Atom™ quad core processor E3845 (1.91GHz), is specifically designed for the harsh in-vehicle environment. It allows VTC 6210-VR4 to comply with stringent MIL-STD-810G military standard in rugged, fanless and compact mechanism. VTC 6210-VR4 provides complete communication capability between automotive and computer with build-in CAN BUS 2.0B interface. Optional OBDII interface (J1939) is also available for vehicle diagnostics. VTC 6210-VR4 features rich PAN, WLAN and WWAN wireless connectivity. With dual SIM cards support, VTC 6210-VR4 allows three SIM cards backup each other for a better connectivity quality by software. In addition, three SIM cards and dual WWAN modules architecture can increase the bandwidth for a faster data transmission speed. Not only data transmission, VTC 6210-VR4 also supports two-way voice communication. Equipped with intelligent power management, VTC 6210-VR4 can be waked on by ignition, RTC timer or SMS message remotely. By integrating the variety of I/O ports and 4 x mini-PCIe sockets expansibility. VTC 6210-VR4 keeps the flexibility to meet the demand for video surveillance bundling with different telematics applications, such as infotainment, fleet management and dispatching system.

Specifications

CPU

- Intel® Atom™ processor quad core E3845, 1.91GHz

Memory

- 1 x 204-pin DDR3L SO-DIMM socket support 1066MHz/1333MHz up to 8GB. Default 2GB

Storage

- 1 x 2.5" SSD/HDD SATA 2.0 (externally accessible, 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)
- 1 x Full size mini-PCIe socket (USB 2.0 + PCIe) + video capture card
- 1 x Half size mini-PCIe socket (USB 2.0 + PCIe)

GNSS Function

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

Video Input Function

- 4-channel analog NTSC/PAL video input
- 4-channel stereo audio input
- Recording video format: MPEG4/H.264 (Software Compression)
- Video resolution:
  Max D1 (NTSC: 720 x 480@30fps; PAL: 720 x 576@25fps)

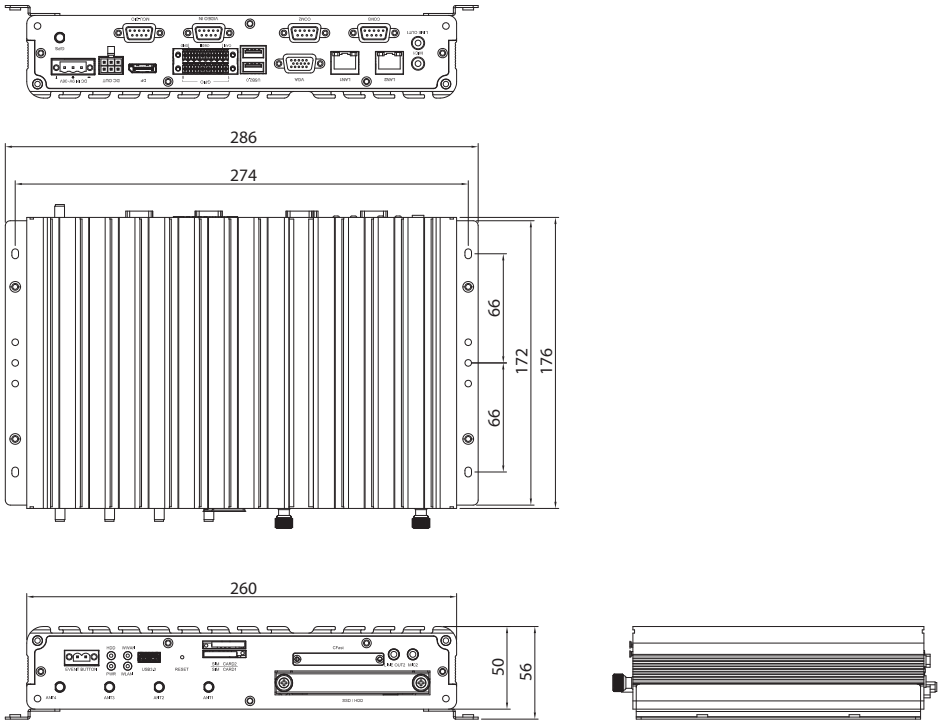
I/O Interface-Front

- 4 x LED for power, storage, WWAN, WLAN
- 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 2.5" SATA 2.0 SSD/HDD tray
- 1 x Externally accessible CFast card socket with cover
- 1 x Event button (trigger type)
- 1 x Reset button
- 1 x Type A USB 3.0 compliant host, supporting system boot up
- 4 x Antenna hole for WWAN/WLAN/BT

I/O Interface-Rear

- 1 x 9 ~ 36VDC input with ignition and 19W typical power consumption

Dimension Drawing



- 2 x Type A USB 2.0 compliant host, supporting system boot up
- 2 x RJ45 10/100/1000 Fast Ethernet with LED
- 1 x Phone jack 3.5mm for 1 x Mic-in
- 1 x Phone jack 3.5mm for 1 x Line-out
- 1 x DB-15 VGA, resolution up to 2560 x 1600 @60Hz
- 1 x DP port, resolution up to 2560 x 1600 @60H
- 1 x Antenna hole for GPS
- 1 x DB-9 RS-232 (RI/12V selectable)
- 1 x DB-9 RS-422/485
- 1 x DB15 connector for 4-channel video inputs
- 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 GPIO (Programmable digital input and digital output)
    Input Voltage (internal type): 5VDC TTL (default)
    Input Voltage (source type): 3 ~ 12VDC
    Digital output (sink type): 5VDC TTL (default), max current: 20mA
    Digital output (source type): 3 ~ 24VDC, max current: 150mA
- 1 x 12VDC output (2A), SM Bus

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

Operating System

- Windows 8, WES8
- Windows 7, WES8
- Fedora

Dimensions

- 260mm (W) x 176mm (D) x 50mm (H) (10.24" x 6.93" x 1.97")
- Weight: 2.1kg

Environment

- Operating temperatures:
  -30°C to 70°C (w/ industrial SSD) with air flow
  -20°C to 50°C (w/ commercial HDD) with air flow
- Storage temperatures: -35°C to 85°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random):
  1g@5 ~ 500 Hz (in operation, HDD), 2g@5 ~ 500 Hz (in operation, SSD)
- Vibration (SSD/HDD):
  Operating: MIL-STD-810G, Method 514.6, Category 4, common carrier US highway truck vibration exposure
  Storage: MIL-STD-810G, Method 514.6, Category 24, minimum integrity test
- 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

Certifications

- CE approval
- FCC Class A
- E13 Mark

Ordering Information

- **VTC 6210-VR4 (P/N: 10V00621001X0)**
  Intel® Atom™ processor E3845 1.91GHz CPU, 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 1 x RS-232, 1 x RS-422/485, 8 x GPIO, 3 x USB, 12VDC output, 4-channel video input