VTC 6210-BK

Intel® Atom™ E3845 Fanless In-Vehicle Computer

Microsoft Azure Certified

Main Features

- Intel® Atom™ processor quad core E3845, 1.91GHz
- 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, based on Intel® Core™ quad core processor E3845 (1.91GHz), is specifically designed for the harsh in-vehicle environment. It allows VTC 6210 to comply with stringent MIL-STD-810G military standard in rugged, fanless and compact mechanism. VTC 6210 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 features rich PAN, WLAN and WWAN wireless connectivity. With dual SIM cards support, VTC 6210 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 also supports two-way voice communication. Equipped with intelligent power management, VTC 6210 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 keeps the flexibility to meet the demand for different telematics applications, such as infotainment, fleet management, dispatching system and video surveillance.

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)
- 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 Dead Reckoning
- Built-in G-sensor

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
- 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

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Dimension Drawing
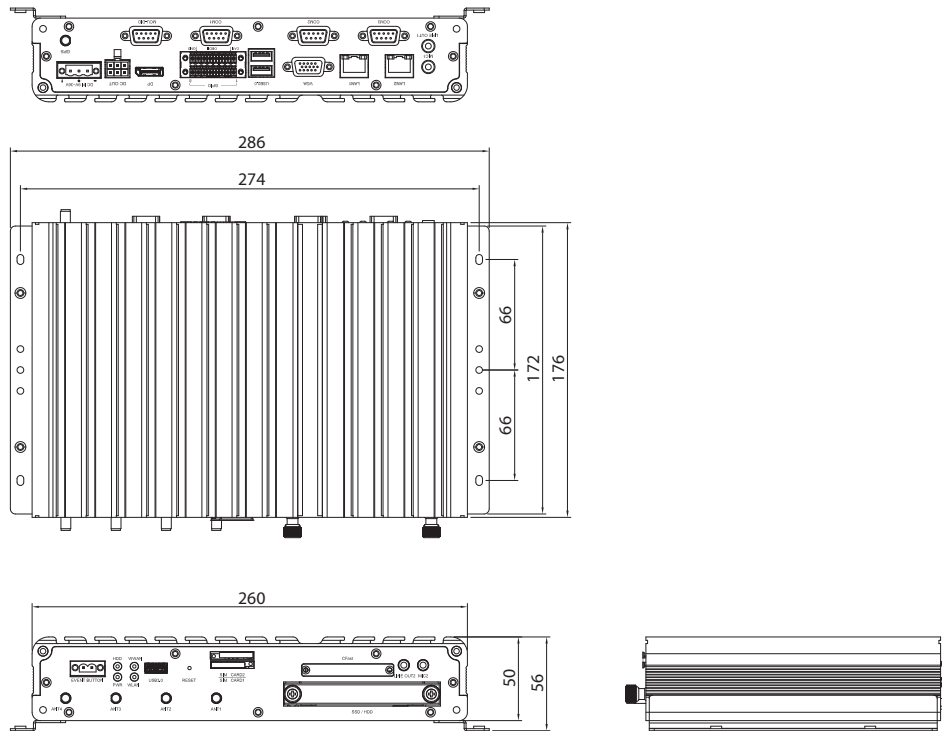
- 1 x Antenna hole for GPS
- 2 x DB-9 RS-232 (RI/12V selectable)
- 1 x DB-9 RS-422/485
- 1 x DB-9 for CAN 2.0B (optional CAN Bus 2.0B mini-PCIe card), 2 x MCU-DI and 2 x MCU-DO
- 1 x 16-pin terminal block
  - 1 x CAN Bus 2.0B (on board)
  - 1 x optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
  - 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 B
- E13 Mark

Ordering Information
- **VTC 6210-BK (P/N: 10V00621000X0)**
  Intel® Atom™ processor E3845 1.91GHz CPU, 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-422/485, 8 x GPIO, 3 x USB, 12VDC output