

VTC 1000

Intel® Atom™ E640 Fanless In-Vehicle Computer



Main Features

- Compact and fanless design
- Built-in GPS receiver with optional dead reckoning function
- Variety Wireless communication options
- Wake on RTC/ SMS via WWAN Module (Option)
- Wide range DC input from 6~ 36V
- Smart power management with Ignition on/off delay via software Control and low voltage protection
- Certified by CE/ FCC/ e13 Mark

Product Overview

VTC 1000, a compact rugged computer box, is designed for the transportation segment, especial for the vehicle with limited space to house the computer system. Same as all VTC series, the fanless and wide temperature support are reserved in VTC 1000 design. VTC 1000 adopts Intel® Atom™ E640 processor. VTC 1000 does not compromise with its space to scarify its functional features. An advanced GPS receiver with dead reckoning is available as an option as well as the wireless communication. VTC 1000 is the best choice with the cost effective solution for your vehicle application.

Specifications

CPU

- Intel® Atom™ E640 1.0GHz

Main Chipset

- EG20T

Memory

- On-board DDR2 up to 2GB

Expansion

- 1 x Mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x Mini-PCIe socket (USB) x 1 for WWAN option
- 1 x Bluetooth module for option
- 1 x Bundle GPS module or optional GPS with dead reckoning

I/O Interface-Front

- 1 x Power button
- 2 x LED indicators for power and storage
- 1 x System reset button
- 2 x USB 2.0 host type A connector
- 1 x RJ45 with LEDs for 10/ 100/ 1000Mbps Ethernet
- 1 x DB9 RS-232
- 1 x SIM card socket
- 1 x Line-out, 1 x Mic-in
- 3 x Antenna hole reserved for SMA-type antenna connector (WWAN/ WLAN/ BT)

I/O Interface-Rear

- 1 x 6~36VDC input with Ignition and 15W typical power consumption
- 1 x 5V/1A and 12V/1A DC output, SMBus
- 1 x DB9 female connector for 4GPI and 4GPO
- 1 x DB9 dual RS-485 (optional 2 x RS-422, or 1 x RS-422 and 1 x RS-485)
- 1 x DB15 VGA (optional DB26 LVDS interface with 12V and USB2.0)
- 1 x SMA-type GPS antenna connector

Expandable Storage

- 1 x 2.5" SATA II SSD Bay

Operating System

- Windows XP/ WES2009
- WinXP Pro for Embedded
- Win7 Pro for Embedded

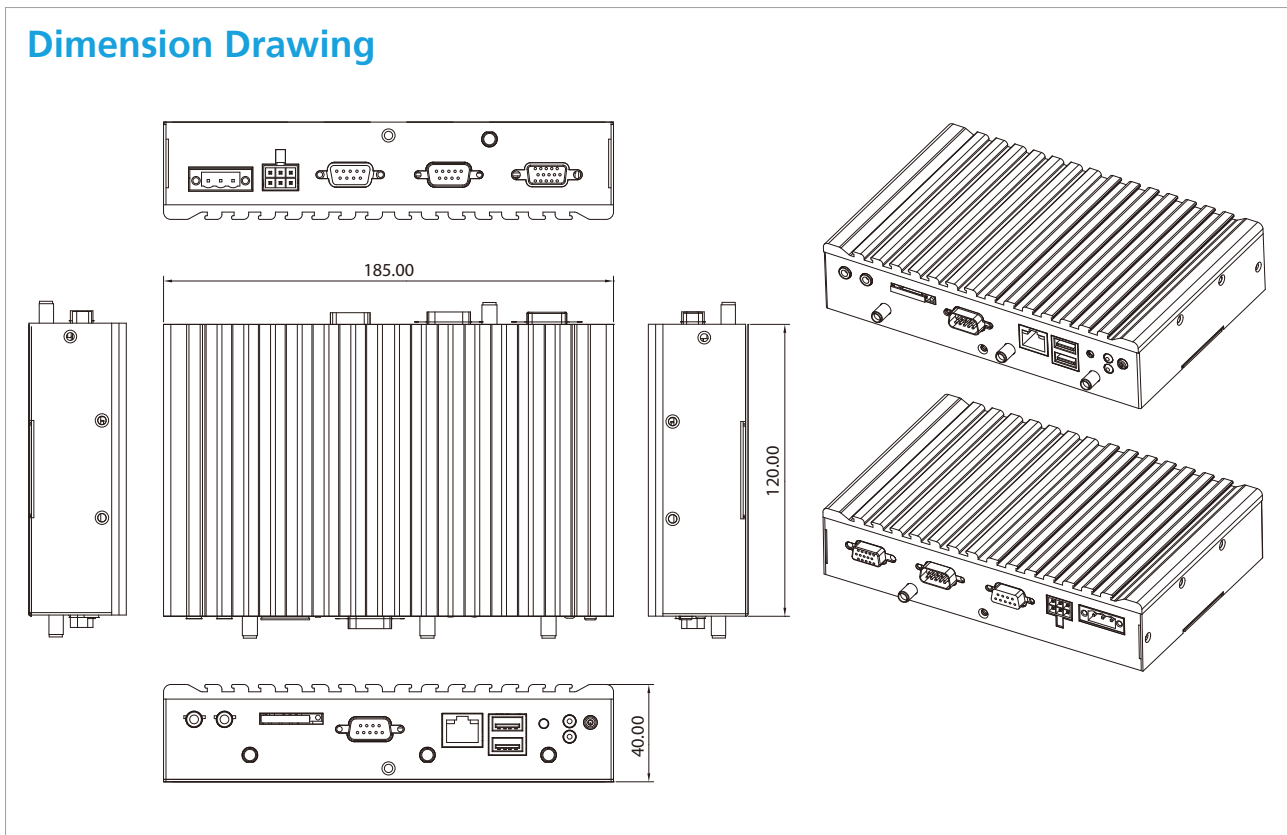
Power Management

- Selectable boot-up & shut-down voltage for low power protection
- HW design ready for 8-level delay time on/off at user's self configuration
- Power on/off ignition, software detectable
- Support S4 suspend mode; wake on RTC/ SMS

Dimensions

- 185 mm (W) x 120 mm (D) x 40 mm (H) (7.3" x 4.7" x 1.6")
- 1 Kg (2.20 Lb)

Dimension Drawing



Construction

- Aluminum top case with sheet metal

Environment

- Operating temperatures:
 - Ambient with air: -20°C to 60°C
- Storage temperatures: -40°C to 80°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 2g @5~500 Hz
- Vibration:
 - Operating: MIL-STD-810F, Method 514.5, Category 20, Ground Vehicle – Highway Truck
 - Storage: MIL-STD-810F, Method 514.5, Category 24, Integrity Test

Shock

- Operating: MIL-STD-810F, Method 516.5, Procedure I, Trucks and semi-trailers= 20g
- Crash hazard: MIL-STD-810F, Method 516.5, Procedure V, Ground equipment= 75g

Standards/ Certifications

- CE approval
- FCC Class B
- e13 Mark

Ordering Information

- VTC 1000 (P/N: 10V00100001X0)**
Intel® Atom™ E640 1.0GHz processor with 1GB DDR2, GPS module and GPS antenna, and VGA output
- VTC 1000-2G (P/N: 10V00100002X0)**
Intel® Atom™ E640 1.0GHz processor with 2GB DDR2, GPS module and GPS antenna, and VGA output
- VTC 1000-LV (P/N: 10V00100003X0)**
Intel® Atom™ E640 1.0GHz processor with 1GB DDR2, GPS module and GPS antenna, and LVDS output
- VTC 1000-DK (P/N: 10V00100004X0)**
Intel® Atom™ E640 1.0GHz processor with 1GB DDR2, GPS module in support of dead-reckoning and GPS antenna, and VGA output
- VTC 1000-D1 (P/N: 10V00100007X0)**
Intel® Atom™ E640 1.0GHz processor with 1GB DDR2, GPS module and GPS antenna, and VGA and LVDS output
- Optional Accessories**

Part No.	Description
10VD0100000X0	VMD 1000-B 7" monitor w/ touch screen
10VD0100101X0	VMD 1001-B 7" Monitor w/ touch screen, VGA interface
10VD0200000X0	VMD 2000-B 8" Monitor w/ touch screen
10VD0200200X0	VMD 2002-B 8" Monitor w/ touch screen, cable integration
10VK0061B00X0	VTK 61B, back-up battery kit for 4 hours in system full loading
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM: Q802XKN5F, w/ antenna & cable (without assembly in NEXCOM)
10VK00WWAN01X0	Cinterion PHS8-P kit, Five bands, UMTS/HSPA (850/800, 900, 1900 and 2100 MHz), Quad-Band GSM w/ internal cable, antenna & packing (without assembly in NEXCOM)
10VK00GPS00X0	SKYTRAQ GPS + GLONASS, w/ antenna & cable
10VK0006007X0	Bluetooth kit, QCOM: QBTM400-01(v7), w/ antenna & cable (without assembly in NEXCOM)
7400120002X00	Power adapter FSP: 120-AAB (N09001), 120W 19V/ 6.3A
60233SAM03X00	Internal cable for GSM/ WLAN/ GPS antenna connection MOQ: 20 pcs
60233SAM05X00	GPS antenna/ 5m/ SMA180P
60233SAM07X00	GSM/ GPRS antenna, SMA, support 850, 900, 1800, 1900
60233SMA30X00	GPS+GSM combo antenna 5M/ SMA180P
60233SAM17X00	GPRS/ UMTS/ HSDPA antenna, SMA, support 850, 900, 1800, 1900 and 2100 MHz