



## Main Features

- Compact and fanless design
- Built-in GPS receiver with optional dead reckoning function
- Variety wireless communication options
- Built-in CAN Bus 2.0B (from EG20T)
- 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 u-blox NEO-M8N module (support GPS/Gloness/QZSS/Galileo/Beidou) or optional connector 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 (for WWAN CM8000 voice communication)  
<VTC 1000-R2 series>
- 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 COM port selected by SW5 & BIOS
  - 1 x RS232 Full (Default)
  - 1 x RS232 (Tx,Rx) + 1x RS422/485
- 1 x DB9 COM port selected by BIOS
  - 4 x GPI
  - 4 x GPO
  - 2 x GPO + CAN Bus 2.0B (Default)
- 1 x DB15 VGA (optional DB26 LVDS interface with 12V and USB 2.0)
- 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

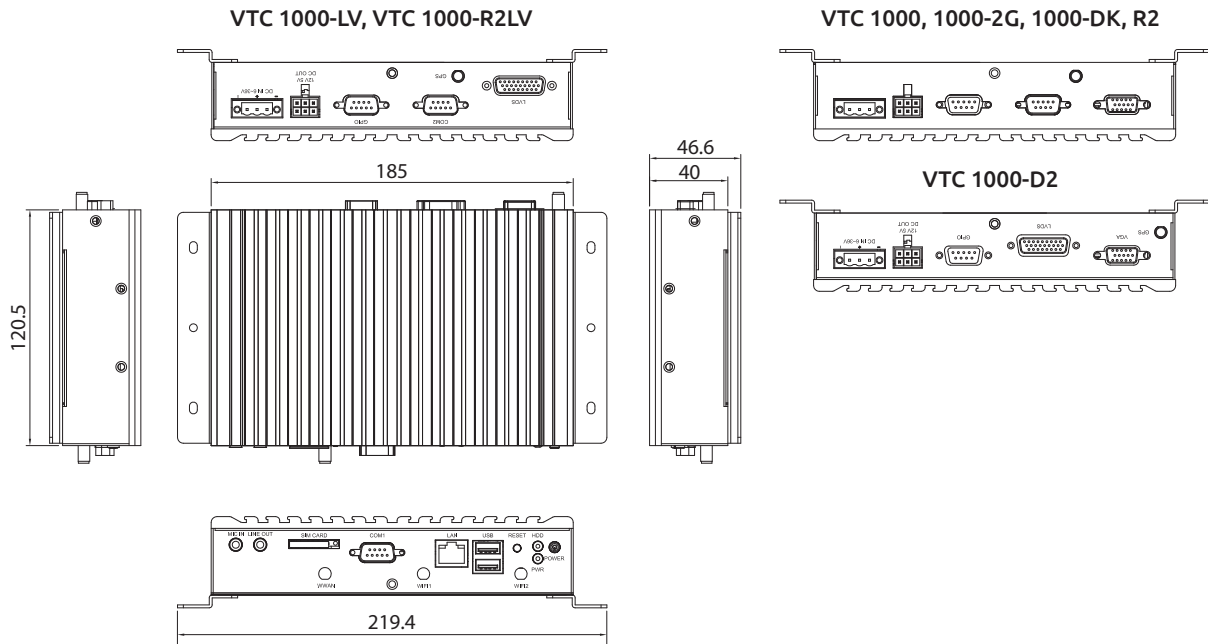
### Power Management

- 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

### Dimensions

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

## Dimension Drawing



### Construction

- Aluminum top case with sheet metal

### Environment

- 30°C to 70°C (w/ industrial SSD) with air flow
- 20°C to 60°C (w/ commercial HDD) with air flow
- 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
- VTC 1000-R2 (P/N: 10V00100011X0)**  
Intel® Atom™ E640 1.0GHz processor with 2GB DDR2, voice support, 2 x RS-232, GPS module + GPS antenna and VGA output
- VTC 1000-D2 (P/N: 10V00100005X2)**  
Intel® Atom™ E640 1.0GHz processor with 2GB DDR2, GPS module + GPS antenna and VGA + LVDS output
- VTC 1000-R2LV (P/N: 10V00100012X0)**  
Intel® Atom™ E640 1.0GHz processor with 2GB DDR2, voice support, 2 x RS-232, GPS module + GPS antenna 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)
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