

VTC 3300

Intel® Pentium® M/Celeron® M Fan-less Transport PC
with GSM/GPRS/GPS and Power Ignition Control



Main Features

- ♦ Fan-less and Rugged Design Platform
- ♦ Wide I/O Connection Option
- ♦ Integrated GSM/GPRS and GPS for Mobile Communication and Navigation
- ♦ Power Ignition Control
- ♦ Dual Display for CRT and LVDS Output
- ♦ PC/104+ Expansion
- ♦ NVRAM Storage Back-up by Battery
- ♦ Wide Range DC input from +6 to +36 VDC
- ♦ ETX Platform for Quick Customization
- ♦ Optional Vibration Bracket, Optional External Active Cooling Kit, and Optional Cover Kit for IP65 Requirement

Product Overview

The VTC 3300 is specifically designed to adapt various power supplying conditions in vehicle environment. The user can control and manage the system's power, such as setting the system to boot after the car engine started, keep the system running after car engine turned off, or even switch to optional power source from back-up battery and more.

The VTC 3300 in-vehicle system provides out of the box solution that suits for immediate implementation. With rugged structure design, the VTC 3300 is designed to withstand dramatic vibration and a wide range of temperature with wide varieties of built-in communication and I/O ports for transportation. The VTC 3300 has a reserved space to integrate the GSM/GPRS and GPS function board. The VTC 3300 also has optional module with SMA and FME connectors for antenna and digital I/O for customized requirements.

Specifications

Main Board

- ♦ ICES 101 ETX Module
- ♦ Supports ETX Module with Intel® Pentium® M/ Celeron® M processor, VGA/ISA/ PCI/IDE/LVDS/Audio/COM/LPT/USB2.0/LAN interface

Main Memory

- ♦ 1 x 200-pin SO-DIMM socket for up to 1GB Non-ECC Non-Registered DDR SDRAM memory

I/O Interface-Front

- ♦ Power / HDD Status LEDs
1 LED, connect to GPIO, programmable for alarm or other application specific purposes
- ♦ 1 x PCMCIA
- ♦ 1 x External access CompactFlash socket (2nd CompactFlash)
- ♦ 1 x USB 2.0
- ♦ 1 x System Reset button
- ♦ 1 x System Power-on Switch
- ♦ Audio output with 1x RJ-11 to headset
- ♦ 1 x GSM SIM-Card socket (COM1)
1 x Reset button for integrated GSM/GPRS and GPS Module (COM2)
- ♦ Antenna Mounting Holes for 2x SMA-type (WLAN and GPS) and 1x FME-type (GSM)

I/O Interface-Rear

- ♦ 4x COM ports:
2 x DB9 for COM3 and COM4 (Support RS-232)
1 x screw terminal for COM5 and COM6 (Support RS-422/485)
- ♦ 1 x RJ45 with LED for 10/100M bps Ethernet
- ♦ 2 x USB 2.0 ports
- ♦ 1 x DB15 VGA
- ♦ 1 x DB26 for LVDS, 1x USB 2.0 and back-light voltage
- ♦ 1 x DB9 Female for digital I/O with 4-input and 4-output
- ♦ Audio interface with Line-in, Line-out, and Mic-in
- ♦ +6 to +36VDC power input with 3-pin power input connector ignition and ground
- ♦ +5 VDC and +12VDC power output to turn on/off fan with thermal control

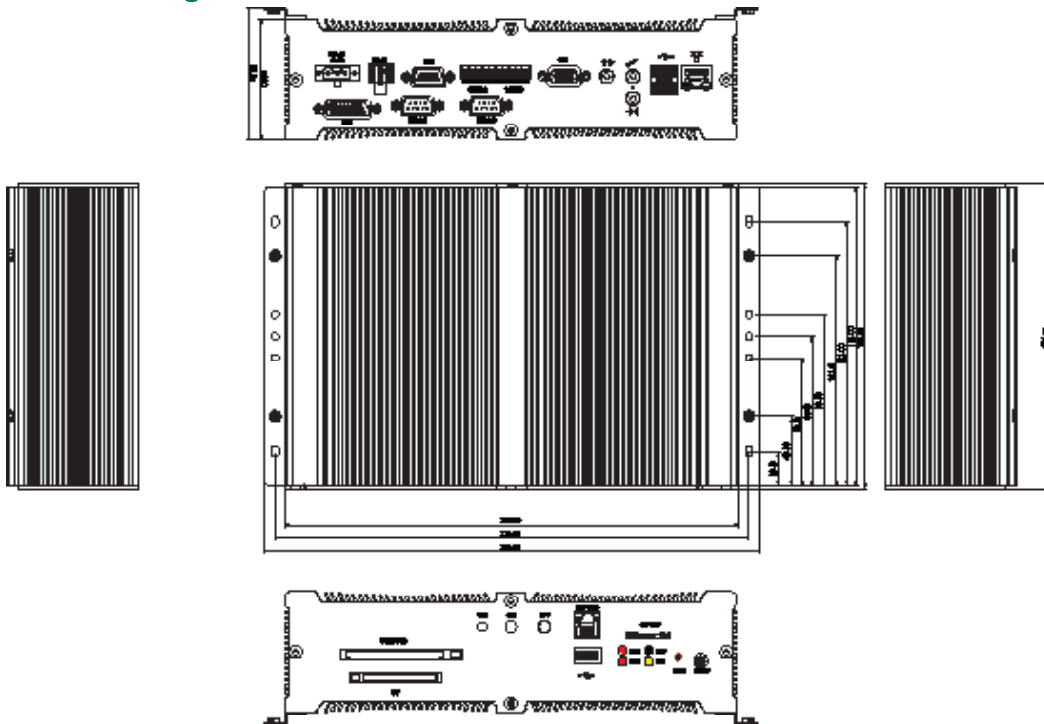
Device

- ♦ 1 x Front Access PCMCIA socket / CompactFlash socket
- ♦ 1 x Internal CompactFlash socket
- ♦ 1 x Internal 1.8"/2.5" HDD drive bay
- ♦ 1 x NVRAM socket

Expansion Slot

- ♦ 1 x Cardbus PCMCIA socket
- ♦ 1 x PC/104+, with PC/104 x1 (ISA) and PCI 104 x1 (PCI)
- ♦ 1 x Mini-PCI socket

Dimension Drawing



Dimensions

- 260 mm (W) x 176 mm (D) x 70 mm (H)

Construction

- Aluminum chassis with fan-less design

Environment

- Operating temperature:
Ambient with air flow : -10°C to 50°C (with CF)
T-case (Surface Temperature of Chassis): -10 °C ~ 55 °C (CF)
- Storage temperature: -20°C to 80°C
- Relative humidity: 10% to 90% (Non-condensing)
- Vibration:
Operating: MIL-STD-810F, Method 514.5, Category 20, Ground Vehicle
–Highway Truck (within Anti-vibration bracket)
Storage: MIL-STD-810F, Method 514.5, Category 24, Integrity Test (within Anti-vibration bracket)
- Shock:
Operating: MIL-STD-810F, Method 516.5, Procedure I, Trucks and semi-trailers=20g (within Anti-vibration bracket)
Crash Hazard: MIL-STD-810F, Method 516.5, Procedure V, Ground equipment = 75g (within Anti-vibration bracket)

Certifications

- CE approval
- FCC
- e Mark

Ordering Information

- **Barebone**
VTC 3300-SKT (P/N: 10V00330000X0) RoHS Compliant
ICES 101 ETX Module
Intel® Pentium® M and Celeron® M processor
1 x SO-DIMM socket for up to 1GB DDR SDRAM memory
2 x RS-232 and 2 x RS-422/485 (Automatic Flow Control and Isolation)
Build-in Power Ignition control

Optional accessory

NAK3300	10Z00330000X0	Siemens MC55 GSM/GPRS tri-band module and U-blox LEA-4S GPS module
Automotive HDD	73H1400G18X00	HDD 2.5" IDE, Drives, 40GB, 5400/8MB/12.5ms, Seagate: ST940814AM, PBFREE
Wireless MiniPCI Card	7510LAN001X00	Wireless MiniPCI card, 802.11 a/b/g AboCom: WCM6002 w/antenna& cable WCM6002
GPS Antenna	60233SAM05X00	GPS antenna/5m/SMA180P, Stars Navigation: STR-3
GSM/GPRS Antenna	60233SAM06X00	GSM/GPRS Antenna/5m/ SMA180P/900/1800, Stars Navigation: TLM-3
Adapter	7400120002X00	VTC3300/3330 POWER ADAPTER FSP:120-AAB(N09001), 120W 19V/6.3A
Adapter w/ US type power cord	7400120003X00	VTC3300/3330 POWER ADAPTER w/ US type power cord FSP:120-AABC(N09002), 120W 19V/6.3A
Adapter w/ Schuko type power cord	7400120004X00	VTC3300/3330 POWER ADAPTER w/ Schukotype power cord FSP:120-AAB(N09003), 120W 19V/6.3A
Adapter w/ UK type power cord	7400120005X00	VTC3300/3330 POWER ADAPTER w/ UK type power cord FSP:120-AAB(N09004), 120W 19V/6.3A

VTC 3300 Fan-less Transport PC

NEXCOM Is Dedicated To Providing Innovative Transport Solutions

NEXCOM is dedicated to providing innovative and rugged Transport PC with the leading technology and years of the know-how in the embedded industry. As the technology in transport market advanced from microcontroller to ARM based CPU platform, it was sufficient to perform the basic tasks like fleet management (vehicle tracking, trip recording), vehicle monitoring (speed, tire pressure), and fee collection. In today's dramatically growing demand for more sophisticated transport applications, such as infotainment, Internet connection and complex data processing, the x86 based PCs is the perfect solution to meet all the new requirements.

Therefore, NEXCOM introduces the x86 based VTC 3300 fan-less transport PC with the rugged structure design, the VTC 3300 fan-less transport PC is capable to withstand dramatic vibration, to operate in a wide range of temperature, and to configure with varieties of built-in I/O ports and internal GPS/GSM/GPRS communication module.

This VTC 3300 transport PC can be widely integrated for buses, utility vehicles, trucks, police cars, taxi cabs, limousines, marine, aviation, trains, and much more.

Applications

1. Vehicle Tracking/Monitoring
2. Real-time Voice & Data Communication
3. Computer-aided Dispatching
4. Public Transportation
5. Infotainment Systems
6. Emergency Medical Services
7. Fleet Management
8. Security

Target Users

1. Bus/Taxi /Train operators
2. Boat/Yacht owners
3. Trucking companies
4. Police officers
5. Service/Delivery companies
6. Advertising agencies



Off-The-Shelf Solutions

Off-the-shelf Platforms

The VTC 3300 fan-less transport PC is a ready to integrate platform for rapid deployment. With a reserved space for wireless Mini-PCI socket and optional GPS/GSM/GPRS module, the VTC 3300 is able to connect to WLAN and to communicate live data via GPRS on the road.

e Mark Certification

The VTC 3300 transport PC has passed e Mark Certification, the requirement for any components or electronic devices used in vehicle in Europe.

e Mark ensures the VTC 3300 transport PC meets the regulation of emission and immunity requirement; hence the VTC 3300 does not interfere with the safety and reliability of today's increasing complex vehicles, trains and marine vessels.

OS/Software Compatibility

The x86 based VTC 3300 transport PC is compatible with Win XP/XPe/2000 as well as Win CE and Linux. In addition, most of the PC compatible hardware and software will also work with the VTC 3300 system.

Intelligent and Reliable Design

Build-in Intelligent Power Ignition Control

The VTC 3300 system has a build-in power ignition control through a hardware setting to adapt various power supplying conditions in vehicle environment. The user can control and manage the system's power with 5 different time delay setting, such as intelligently setting the system to boot after the car engine starts and keeping the system running after car engine turned off.

Fan-less and Rugged Design

With the compact and rugged aluminum chassis, it functions as a heatsink to quickly transfer heat from inside of the system. Moreover, once the thermal sensors on VTC 3300 transport PC detect the unacceptable environment temperature, VTC 3300 can automatically control the optional Fan Kit to lower the temperature.

High Vibration Tolerance Design

With well protected HDD and fixed components, the VTC 3300 transport PC has high vibration and shock tolerance to suit the harsh environment in transport application. An optional vibration protection bracket is available for toughest environment.

NVRAM Data Back-up

For power failure protections, the system automatically back up the last unfinished transaction or transmitting data to NVRAM. When the power is restored, the VTC 3300 transport PC could continue the unfinished transaction or transmitting data that has been saved in NVRAM to avoid the data lost or duplicated transactions.

Powerful Expansion Capabilities

Flexible Scalability

For flexible scalability, NEXCOM offers various Intel® Celeron® M and AMD LX800 CPU selections for different applications and CPU performance requirement.

GPS/GSM/GPRS Function Board (Optional)

The VTC 3300 transport PC has a reserved space to integrate optional GPS/GSM/GPRS function board for GPS navigation and data/voice communications. On this function board, Siemens MC55 module is used for GSM/GPRS application while the Ublox LEA-4S module is utilized for GPS function. Since the GPS/GSM/GPRS function board is from off-the-shelf products, users can implement the navigation and real-time voice & data communication applications in ease without further effort in H/W design.

Dual Independent Display and Integrated LVDS Connector

The VTC 3300 transport PC supports LVDS (Primary) and VGA (Secondary) video outputs with dual independent display function. To enhance the integration with the touch-screen monitor, NEXCOM has a proprietary LVDS connector to integrate the USB signal for touch-screen controller, LVDS signal and 12VDC into one connector.

Abundant I/O Support

In addition to support the standard I/O, such as USB, COM, and LAN, the VTC 3300 also provides PCMCIA, Mini-PCI and PC/104+ sockets to offer diverse expansion capability like CAN bus, WLAN, and mobile 3.0/3.5G applications.