Empowering the
Mobile Workforce

2015
Mobile Computing Solutions

- IoT Pumps Business Intelligence into Transportation

- Redefine Driving Experience with Connected Car

- Strengthen Security with Mobile Surveillance for A Safe Ride

- Fleet Management Boosts Operational Transparency to Raise Fleet Productivity

- Increase Yield and On-site Safety for Field Operation

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MCS

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About NEXCOM

Reliable Partner for the Intelligent Systems

Founded in 1992 and headquartered in Taipei, Taiwan, NEXCOM is committed to being your trustworthy partner in building the intelligent systems. To surpass customers' expectations, NEXCOM makes the difference by utilizing its decades of industrial computing experience, a highly talented R&D team, and by providing exceptional levels of customer service. With these core strengths, NEXCOM has enabled its customers to win key projects in a diverse range of industries.

With its focus on delivering these core values to better serve customers, NEXCOM integrates its capabilities and operates six global businesses, which are Multi-Media Solutions (MMS), Mobile Computing Solutions (MCS), IoT Automation Solutions (IAS), Network and Communication Solutions (NCS), Intelligent Digital Security (IDS), and Medical and Healthcare Informatics

(MHI). This strategic deployment enables NEXCOM to offer time-to-market, time-to-solution products and service without compromising cost.

In addition, the service-to-market business model gives NEXCOM core competence to build a strong world-class service network by providing customized service, global logistics, local access, and real-time support. Operating six subsidiaries, from China, Italy, Japan, Taiwan, the United States, to the United Kingdom, NEXCOM is able to better facilitate customers' requirements as well as closely work with global partners in different regions.

Partners should also be assured that NEXCOM's Taiwan based Headquarters and subsidiary offices in China, UK and USA have obtained ISO 9001:2008 Certification.

IAS	iAutomation: factory automation (FA), PPC & HMI, machine automation (MA), machine vision IoT: IoT gateway, industrial wireless solutions Intelligent System Services: embedded computer, single board computer, computer-on-module, POS, kiosk PPC, ODM/OEM services
IDS	Intelligent Digital Security: IP Cam, NVR, mobile server platform
MCS	Mobile Computing Solutions: rugged computer devices, rugged mobile computer Vehicle Telematics Computer: Car PC, train PC
MMS	Multimedia Solutions: digital signage
MHI	Medical and Healthcare Informatics: total solutions with a variety of medical IT systems
NCS	Network and Communication Solutions : network security, VoIP, HPC, telecommunication, storage, switch, industrial firewall

Corporate Vision

To become the industrial leader in providing intelligent systems, NEXCOM utilizes its industry leading technology, localized customer support and worldwide logistics services. This will be achieved by:

- Great team work
- Cooperation with trusted partners
- Growth through innovation

Corporate Mission

- An innovative supplier in vertical application markets
- A quality partner in engineering, manufacturing and services

Business Strategy

Aim to better support the activities of all its partners, NEXCOM divides its sales force into six dedicated business units to target rapidly expanding vertical markets. This enhances each business unit concentrating on strategic channel accounts and on repeat order business. Moreover, NEXCOM's business units have been set up to serve the requirements of key project accounts, where product ODM and project support are frequently required.

NEXCOM is working with embedded computing solution providers to envision new opportunities for growth. We'll help you deliver reliable vertical solutions, optimized for the next wave of IoT and Industrial 4.0 applications.

Research and Development

Innovation, Quality, Speed and One-stop Service

Over a decade ago, NEXCOM successfully launched the PEAK series of Single Board Computers onto the IPC market, and in doing so, gained a solid reputation for product quality and innovation. In subsequent years, NEXCOM has enhanced its reputation for R&D excellence with a multitude of high-end technology products, which has cemented NEXCOM as one of the industry leaders for R&D and innovation.

The mission of NEXCOM R&D team is to design exceptional products that meet the stringent requirements of today's global markets. In order to achieve this goal, we have recruited hundreds of talented engineers who have the knowledge and expertise to make NEXCOM's products stand out in this highly competitive market.

In 2015, NEXCOM will expand our offerings with solutions for IoT gateway, robot controller, connected cars, Industry 4.0, and industrial security applications. The team is encouraged to "Think with New Ideas" and "Know how to make it and do it right first time". In addition, the size of NEXCOM's R&D team has been expanded to over 166 members and remains as one of core competences of the company.

Versatile Design Capabilities

- Fanless technology for industrial computer
- High availability network security platform, blade, and cPCI
- Rugged tablet computer and car PC
- Ultra small footprint computer-on-module
- High speed networking
- Isolated and non-isolated power system
- Isolated and non-isolated industrial I/O
- Wide range of operating temperature

24/7 Production Line

Optimal Manufacturing Efficiency

The manufacturing of delicate products requires a high-level technology, craftsmanship, standards and time-to-market efficiency. Over years continual investment in advanced manufacturing equipment and systemic training programs has enabled NEXCOM to obtain optimal manufacturing efficiency.

To fulfill the increasing market demand for NEXCOM's products, the company has opened a 24/7 production line. This investment not only furthers the quality of products, but also reduces production lead-time for all global customers.

Quality Assurance

Under a strict Quality Assurance System, product design and reliability are controlled to support all critical solutions, and ensure Total Quality Assurance (TQA) implementation for all NEXCOM products and service. Furthermore, NEXCOM technical support team aims to provide feedback within 24 hours to ensure technical issues are resolved in the shortest possible time.

IPQC Auditing (105E)

SMT Process → AOI Checking → DIP Process → Touch Up & Power-On Test

IPQC Auditing

20% Dynamic Burn-In

100% Function Test

FQC Test & Inspection

OQC Inspection

Inventory/ Shipping ← Test & Inspect 105E II AQL 0.65% ← Packing/ Assembly
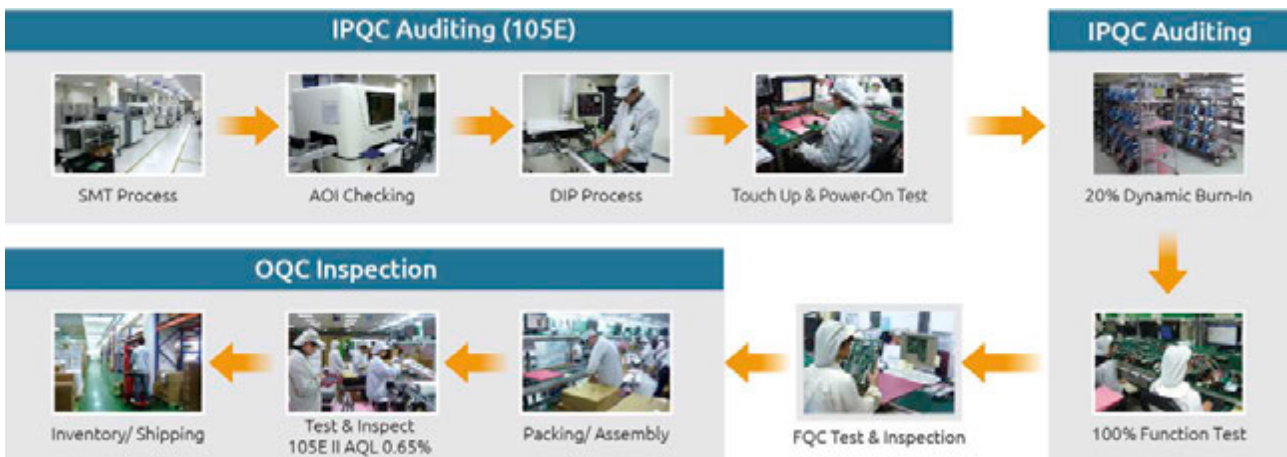
Closed-Loop Quality Assurance System

Green Policy

As a global citizen, NEXCOM is committed to providing green products and services, which are compliant with WEEE and RoHS legislation. NEXCOM continues to proactively work with industry peers and suppliers, to clarify standards, and identify compatible technologies and practices that help reduce hazardous substances from our products and manufacturing processes.

Global Fulfillment Service

Product delivery and customer support are always more effective when delivered locally. NEXCOM localizes support and provides a global customer service network to handle all aspects of global business, from presales, order taking, and system assembly to logistics. For expeditious product delivery, NEXCOM has established four regional service centers: Taiwan (for Asia), USA (for North America and South America), the United Kingdom (for Europe) and China. Therefore, NEXCOM customers benefit from quality assured product assembly and four service centers.

NEXCOM has invested heavily to establish operational infrastructures, including advanced equipment and facilities, not only at its global headquarters but also at subsidiary offices. Today, each of our service centers, with ISO 9001:2008 certification, has a purpose built assembly line, RMA/ DOA center and warehouse storage capability.

NEXCOM Global Service Network

Assembly Line Operation

NEXCOM offers custom-built products based on customers' specific requirements through the build-to-order services. A dedicated 24/7 assembly line and Quality Assurance System are installed in the services center to ensure exceptional production efficiency and superb product performance and reliability.

Service Pledge and Connection

As a reliable intelligent systems provider for vertical markets, NEXCOM provides the very best products and the most expeditious service to help customers build the digital infrastructure. Comprehensive types of service are provided to promptly satisfy varying requirements. In addition to the headquarters in Taiwan, seven subsidiaries and distributors in strategic worldwide locations are at your service.

Service Types

| Quotation | Project Consultant | Technical Support | Solution Alliance | RMA/DOA | Assembly/ Test | Global Logistics | Customization | ODM Original Design Manufacturing |

Your Truly Global Information Resource

www.nexcom.com

www.nexcom.com is your one-stop platform for the latest information on all NEXCOM products and services. The rejuvenated website not only contains product relevant information and data, solutions/ products demo, up-to-date news, but incorporates online downloads, publications, and technical service supports, such as RMA/ DOA centre. Furthermore to localize service and support, seven NEXCOM sister websites remain to serve visitors in diverse geographical regions.

Get the Latest Updates Anytime, Anywhere

m.nexcom.com

At the end of the year 2011, NEXCOM launches its mobile site, m.nexcom.com. The site aims to cross time and space boundaries by allowing users to access the latest innovation and information of NEXCOM via smartphones. On this website, users will easily find our latest products, news, application stories, white papers, and videos. The mobile site now supports iOS and Android system. Please visit us at m.nexcom.com.

Design and Manufacturing Services (DMS)

Customized Service for Tailor-Made Solutions

NEXCOM provides cost-effective and time-to-market Design and Manufacturing Services (DMS). The DMS offers product customization from core modular designs to finished products based on customers' specifications in all kinds of industrial field. The levels of the service include manufacturing new CPU boards and system based products to fulfill customers' unique applications.

Unique DMS Features

With vast experience, the know-how, leading technology and innovative design capabilities, NEXCOM DMS incorporates the following features:

Prompt Time-to-Market

NEXCOM possesses a dedicated project management team to monitor and ensure each DMS project is delivered on schedule. Thus, a quick time-to-market solution can be offered with time-scales varying from one-three months for the design phase, with an average six month period from design to market.

Flexible Design and Manufacturing

NEXCOM possesses a complete R&D team to design and engineer the latest industrial grade products. As R&D engineers grouped into small cross-functional teams, they can develop more reliable products with flexible designs and quicker response to customers' requirements. In addition to our R&D capabilities, the state of art manufacturing facility and production lines enables NEXCOM to offer a flexible manufacturing with highly skilled factory staff.

Rigid Quality Control

NEXCOM is pledged to deliver high quality products, from design to manufacture, and safeguard against defective products by implementing a rigid Quality Assurance System. In this system, at the end of each process, NEXCOM performs various tests to ensure that the product passes the industrial standard before it enters into next stage. Finally, additional tests are performed to ensure all board and system level products function correctly. Tests include "Failure Mode and Effects Analysis", "Vibration Test", "Burn-in Chambers", "Drop Test", and "AC Power Source Test".

Extensive DMS Experience

We set higher standards! NEXCOM surpasses your tailor-made product requirements with extensive DMS experiences. We are specialized in X86 architecture and have accumulated invaluable experience and know-how in real working environments. Moreover, with a superb reputation, NEXCOM has under its belt many ODM projects in diverse fields, such as gaming, medical, POS, network security, transportation, marine, blade servers, and Linux BIOS etc.

Scope of DMS Work

■ Original Design Manufacturing Service (ODMS)

NEXCOM offers a complete ODM Service starting from the brand new product design right through to the finished product. We can design products based on the customer's unique specifications and application requirements.

■ Customization to Order Service (CTOS)

NEXCOM also provides CTOS, which is a quick-to-market solution by modifying the existing products to fit your business requirements, such as BIOS setting, component change by using current PCM layout, chassis color change, and packing accessories etc.
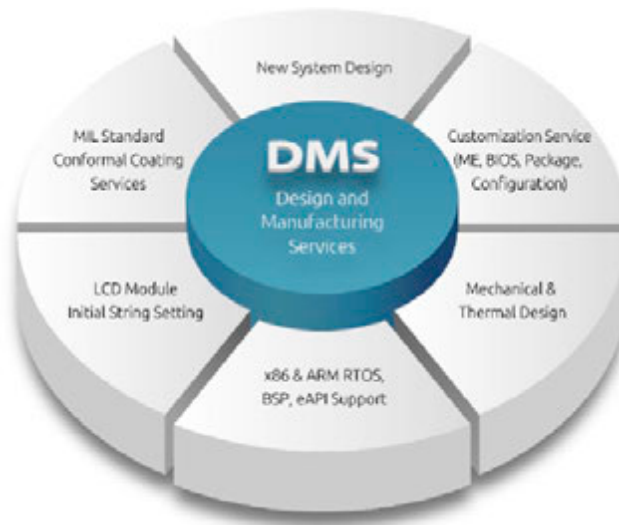
Service of DMS

With decades of industrial computing experience, NEXCOM has the capability to provide different levels of customized service to manufacture innovative products with exceptional high quality. We can assist you to differentiate from competitors, and save significant time and efforts.

Level 1	Logo Re-brand	We provide the service to change the membrane to re-brand the company logo on the front panel. Customers need to provide Membrane drawing with all color pantone number. There is a service charge involved.
Level 2	Customerized Build	Customers can change the membrane and chassis color to re-brand the packing. NEXCOM can offer dedicated part numbers and BOM. MOQ and service charge are required.
Level 3	Manufacturing Service	Contract manufacturing. The service scope includes system assembly & burn-in, software loading & testing. MOQ and manufacturing service charge are required.
Level 4	New Project	The design of new board & system is available. NRE and quantity commitment are required.

Professional Conformal Coating Solution

Get Ruggedized with NEXCOM Cost-Effective Conformal Coating Service for Hash Environment Protection

Prompt Time-to-Market

NEXCOM recognizes the harsh reality that many embedded systems find themselves operating in unusual hostile environments. When conformal coating is required to protect your application against substantial humidity, dust, chemicals or temperature extremes, we can help!

Cost Effective Service to Apply Coating Solution in Vertical Market Segments

In addition to the usual military and harsh industrial environments that demand conformal coating, NEXCOM expand our conformal coating to Vehicle Telematics Computing, outdoor traffic control/surveillance, and off-shore Marine applications. These applications demand embedded computing performance with increased reliability through conformal coating process.

To support a wide range of applications in vertical markets, NEXCOM has engineered a diverse range of platforms, which incorporate the latest.

"State of the Art" Conformal Coating Line

NEXCOM uses automated Conformal Coater equipment for applications that require a high level of accuracy and repeatability in moderate to high volume manufacturing environments. "State of the Art" coating line is a closed-loop robotic platform featuring optical encoder feedback on all axes.
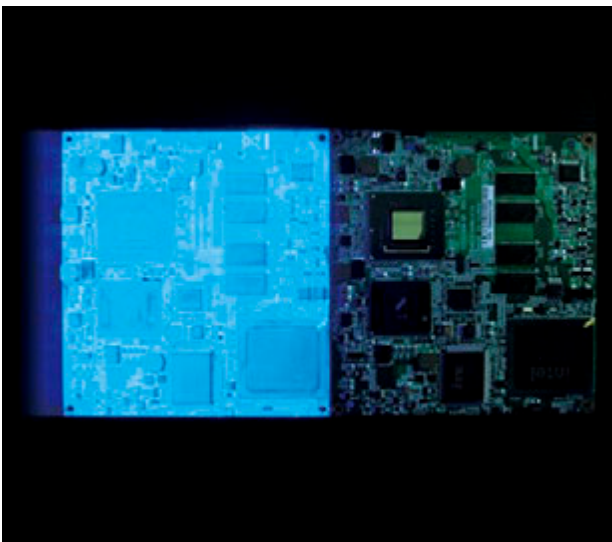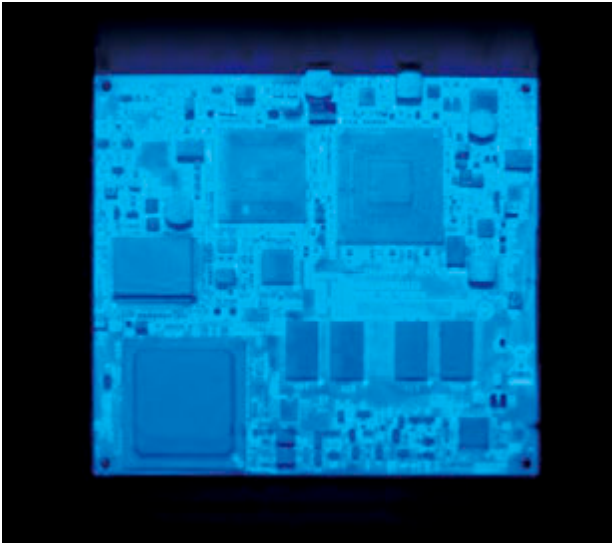
Smart Masking Technology

Our smart masking technology can pin point specific area on the PCBA for coating. The green, programmable conformal coater equipment allow user to only coat the area selected, which save labor/ material costs.

De-Flux Cleaning

To prepare a PCB for conformal coating, the circuits need to be cleaned. NEXCOM uses automatic defluxing and cleanliness testing systems. The deflux system is equipped with an automatic chemical management system that automatically doses and mixes defluxing chemicals at the turn of a keyed switch.

De-Coating RMA Service

NEXCOM offer De-Coating RMA service upon request. This new service allows you to further cost down and generate higher ROI.

Quality Assurance Policy and Consistency Guarantee

Conformal coating inspection is a critical factor in determining successful coating application and long term reliability of PCBs. Using the IPC standards allows the coating operator to monitor the coating application performance. NEXCOM offers 100% manual screening by examining the PCB under white and UVA light and Thickness Gauge.

Real Time Cleanliness Testing

NEXCOM's deflux cleaning system is also equipped with an onboard cleanliness testing system which allows a user to program a desired cleanliness level. This assures that cleanliness levels will be consistent batch after batch.

NEXCOM follows IPC-A 610, IPC-CC-830, IPC J-STD-001E regulations to generate consistent, adjustable coating thickness and cleanliness.

IoT Pumps Business Intelligence into Transportation

Focusing on the transportation sector, NEXCOM Mobile Computing Solutions (MCS) Business Unit delivers underpinning technologies for the Internet of Things (IoT), looking to a future where transport is made more intelligent and sustainable. By providing data acquisition and data communication technologies for data-driven decision making (DDDM), NEXCOM MCS can turn smart mobility into reality with connected cars, advance passenger experience for passenger transport services, and increase efficiency and productivity for commercial fleets and field operations, covering multiple segments of intelligent transportation systems (ITS).

Field Operations

Volatile outdoor conditions challenge fieldworkers in many ways. To create and maintain a safe, productive workplace takes sophisticated planning and careful execution throughout field operations. Making use of sensor-generated data and open communication can increase operational transparency, allowing fieldworkers and site managers to share the same understanding in agriculture and forestry, mining, construction, and port and harbor industries.

Automobile

In the IoT architecture, connected cars serve as information hubs performing various functions. For instance, connected cars can monitor neighboring vehicles to reduce road accidents, communicate with transportation infrastructure to optimize routes, amass sensor-generated data to acquire vehicle status, and provide in-vehicle infotainment for drivers and passengers, making driving and riding safe, smooth and enjoyable.

Fleet Vehicle

Today's dynamic transport industry requires dynamic fleet management. That is how the IoT comes into play. By acquiring high volume, high variety, and high velocity of data, commercial carriers can obtain profound operational insight and build a responsive fleet to strengthen supply chain management, adapt to fluctuating market needs, ensure regulatory compliance, and fight cargo theft all together.

Public Transportation

Passenger transport services—including taxi, bus, mass rapid transit, and railway services—can combine mobile surveillance and electronic data logs to create a sense of security, monitor driver behavior, and devise operational improvement strategies. At the same time, passenger experience can be enhanced by offering real-time location-based information and internet services with passenger information systems.

Redefine Driving Experience with Connected Car

Overview & How It Works

Vehicles are becoming an expansion of our connected digital lives with drivers and passenger expecting a safer, more efficient and enjoyable driving and riding experience. In passenger vehicles, head units are capable of supporting connection to intelligent transportation systems (ITS), keeping drivers and passengers updated with real-time travel information, making people know what to expect on the road, and allowing them to change travel plans if necessary. Head units opens up opportunities for advanced driver assistance systems (ADAS), remote diagnostics, and preventive maintenance, giving drivers more control over their vehicles. Head units also serve an entertainment purpose, offering location-based information, internet services, and on-demand multimedia services. Head units evolve continuously to provide new features. Similar need for infotainment can also be found in public transportation systems and met with passenger infotainment systems.

Successful Factors

ITS places a premium on connectivity to internet, transportation infrastructure, vehicles, and passengers. Head units rely on advanced sensing which involves signals, images, and videos processing to construct situational awareness and to provide driver assistance. The multimedia capability and internet connectivity are directly linked to entertainment-related features and quality of streaming services.

NEXCOM's Strengths

For passenger vehicles, NEXCOM in-vehicle terminals provide powerful computing and communication backbones for data processing and data exchange while enabling information visualization with a touchscreen. NEXCOM in-vehicle terminals boast a powerful graphics engine to bring immersive multimedia to vehicles while offering ample system headroom for future feature expansion. With access to automobile electronic systems, NEXCOM in-vehicle terminals can harvest a wide variety of data and ultimate realize big data analytics. For public transportation systems, NEXCOM satisfies the need for infotainment with passenger information systems.

Model	IVT 1100
LCD Size	6.95" TFT LCD
Resolution	800 x 480
Brightness	450cd/m²
Contrast Ratio	500 : 1
View Angle	V: 60/70 H: 75/75
Brightness Adjustment	Auto via light sensor
CPU	Intel® Atom™ E3825
Chipset	N/A
Memory	DDR3L 1600MHz SO-DIMM slot (up to 4GB)
Storage	mSATA
Second Storage	1 x Micro SDHC
Dimension (mm)	178 x 100 x 187.15
Power Input	DC 9V to 36V
Ignition Control	Yes, w/ 8 level delay time setting
Power Management	Low voltage protection
GPS	uBlox NEO-M8N on board
Optional Communication	Wi-Fi/Bluetooth/ WWAN, FM radio, GPS tracker
Voice Communication	Yes
SMS/Ring Wake up	Yes
SIM Socket	1
USB 2.0	2 x USB 3.0 Type A
COM	N/A
OBDII Module	1 x CAN bus 2.0B
Video out	VGA
Video in	4 x CVBS
PoE (802.3af, total 60W)	N/A
Audio	4 x 20W Audio ouput, Mic in x 1, Line in x 1
Mini-PCIe Socket	(PCIe+ USB) x 1, (USB+ UART) x 1
SMBus	N/A
DC Output	N/A
GPIO	1 x eCall event button
Certification	CE, FCC Class B, SAE J1113, SAE J1455, ISO7637-2, EN 60950-1 LVD
Operation Temperature	-20℃ to 50℃
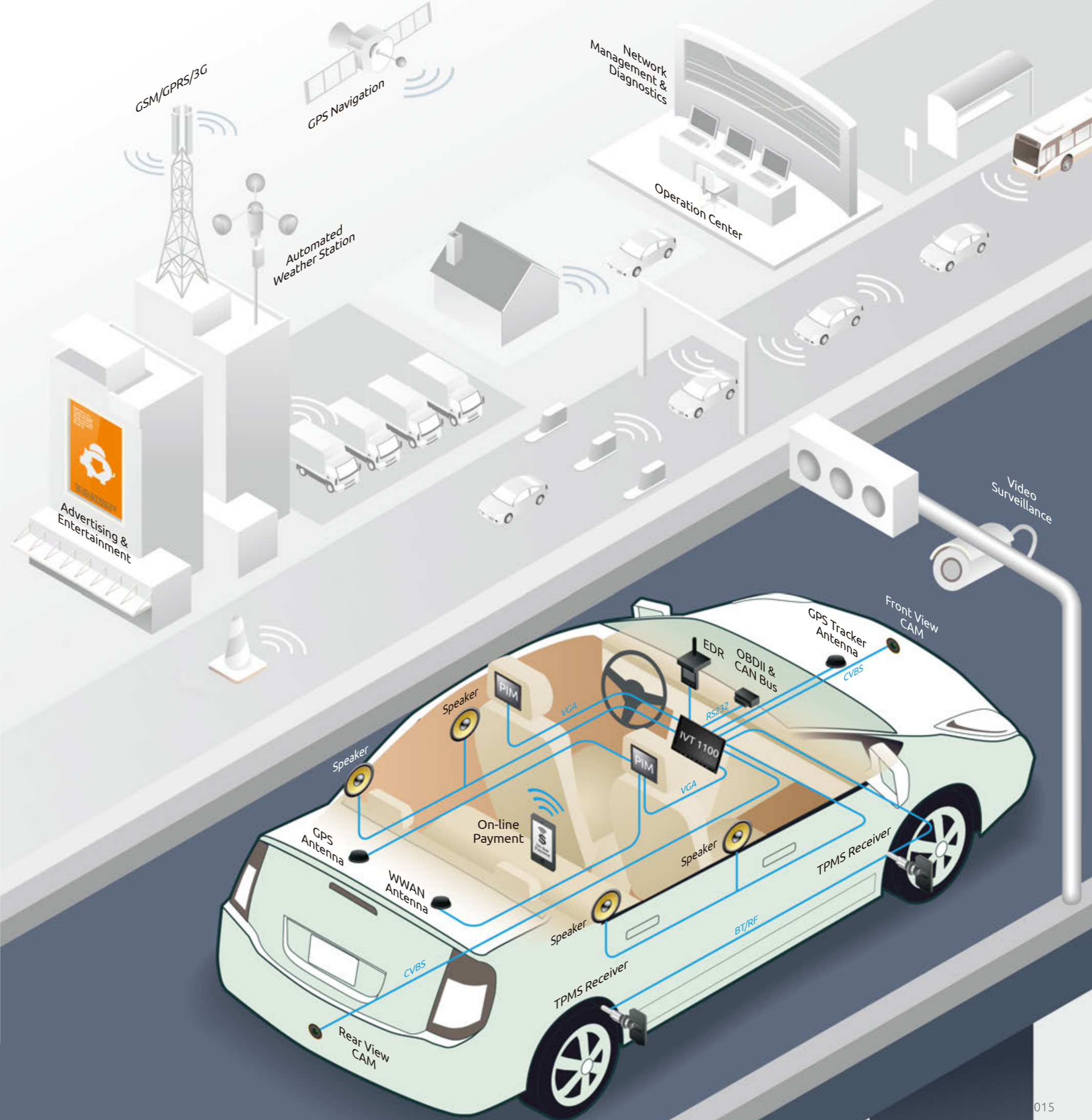
Strengthen Security with Mobile Surveillance for A Safe Ride

Overview & How It Works

More and more surveillance systems are boarding public transportation systems in view of crime prevention, fare evasion prevention, and dispute and incident settlement. Mobile surveillance systems document on video of a sequence of events taking place in public transportation systems; tag them with travel information; keep the compiled records locally or send to the cloud; and even run local analysis to enable immediate actions to be taken. Mobile surveillance systems produce evidence and lay the cornerstone of business intelligence in respect of public safety and operational efficiency.

Successful Factors

To this end, mobile surveillance systems must produce quality images which are sharp enough for object detection, facial recognition, and video analysis and coordinate with in-vehicle sensors to gather information such as geo-location and moving speed. High storage capacity is imperative to provide long-time recording in line with long service hours or upload intervals; still wireless internet connection comes in handy for real-time remote monitoring and backup if necessary. Mobile surveillance systems also reply on image and video processing capabilities for local analysis and video playback.

NEXCOM's Strengths

NEXCOM vehicle computers answer these needs with support for multiple high-resolution IP cameras and ability to safely hold multiple terabytes of data at a lower cost. NEXCOM vehicle computers support high bandwidth wireless connection for fast reliable data and audio communication, and connection to automobile electronic systems is provided for vehicle data collection. Moreover, NEXCOM vehicle computers based on Intel® Core™ processors are capable of processing and analyzing the gathered information and responding accordingly.

Mobile Surveillance - Vehicle

Model	VTC 6200-VR4	VTC 6210	VTC 6210-VR4	VTC 7110-BK	VTC 7120-BK	VTC 7100-C8SK
CPU	Intel® Atom™ D510	Intel® Atom™ E3845	Intel® Atom™ E3845	2nd Generation Intel® Core™ i7 2610UE	2nd Generation Intel® Celeron® Processor 847E	Intel® Atom™ D2550
Chipset	Intel® ICH-8M	No	No	Intel® QM67	Intel® QM67	Intel® ICH-10R
Memory	DDR2 667/800 SO-DIMM, 1GB (default) up to 2GB	DDR3L 1066/1333 SO-DIMM, 2GB (default) up to 8GB	DDR3L 1066/1333 SO-DIMM, 2GB (default) up to 8GB	DDR3 1333MHz, SO-DIMM, 2GB (default) up to 8GB	DDR3 1333MHz, SO-DIMM, 2GB (default) up to 8GB	DDR3 1066MHz SO-DIMM, 2GB (default) up to 4GB
Storage	2.5" HDD/SSD (external)	2.5" HDD/SSD (external)	2.5" HDD/SSD (external)	2.5" SSD (external)	2.5" SSD (external)	2.5" SSD x 2 (external)
Second Storage	1 x SATA DOM	1 x CFast slot (external)	1 x CFast slot (external)	1 x CFast (external)	1 x CFast (external)	1 x CFast (external)
Dimension (mm)	260 x 176 x 50	260 x 176 x 50	260 x 176 x 50	260 x 176 x 66.5	260 x 176 x 66.5	260 x 176 x 90.1
Power Input	DC 8V to 60V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V
Ignition Control	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting
Power Management	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection
GPS	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	On board uBlox NEO-6Q	On board uBlox NEO-6Q	On board uBlox NEO-6Q
Optional Communication	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/ Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN
Voice Communication	Yes	Yes	Yes	Yes	Yes	Yes
SMS/Ring Wake Up	No	Yes	Yes	Yes	Yes	Yes
SIM Socket	1	3	3	2	2	2
USB 2.0	4	USB 3.0 x 1 USB 2.0 x 2	USB 3.0 x 1 USB 2.0 x 2	3	3	3
COM	RS-232 x 1 RS-485 x 1	RS-232 x 2 RS-422/485 x 1	RS-232 x 2 RS-422/485 x 1	RS-232 x 1 RS-422/485 x1	RS-232 x 1 RS-422/485 x1	RS-232 x 1 RS-422/485 x1
CAN/OBDII	No	CAN bus 2.0B on board. Optional CAN/ OBDII module	CAN bus 2.0B on board. Optional CAN/ OBDII module	Optional CAN/ OBDII module	Optional CAN/ OBDII module	Optional CAN/ OBDII module
Video Out	LVDS, VGA x 2 (Clone mode)	DP, VGA	DP, VGA	LVDS or DVI-D, VGA	LVDS or DVI-D, VGA	LVDS or DVI-D, VGA
PCI-104	No	No	No	1	1	1
Ethernet	RTL8111C-VC-GR 10/100/1000 x 1	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2	10/100/1000 x 2
PoE (802.3af,total 60W)	No	No	No	No	No	8
Audio	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2
Mini-PCIe Socket	USB x 1	(PCIe+USB) x 3, USB x 1	(PCIe+USB) x 3, USB x 1	(PCIe+USB) x1, USB x 1	(PCIe+USB) x1, USB x 1	(PCIe+USB) x1, USB x 1
SMBus	1	1	1	1	1	1
DC Output	5V (1A), 12V (1A)	12V (2A)	12V (2A)	12V (4A)	12V (4A)	12V (4A)
GPIO	In x 4, Out x 4 (w/ isolation)	Programmable PC GPIO x 8 (option: w/ isolation) MCU: DI x 2, DO x 2	Programmable PC GPIO x 8 (option: w/ isolation) MCU: DI x 2, DO x 2	In x 4, Out x 4	In x 4, Out x 4	In x 4, Out x 4
Certification	CE, FCC Class B, e13	CE, FCC Class B, E13	CE, FCC Class B, E13	CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, e13
Operation Temperature	-30℃ to 60℃	-30℃ to 70℃	-30℃ to 70℃	-30℃ to 50℃	-30℃ to 50℃	-30℃ to 55℃

Model	VTC 7110-C4SK	VTC 7120-C4SK	VTC 7200	VTC 7210	VTC 7220	VTC 7230	VTC 7240
CPU	2nd Generation Intel® Core™ i7-2610UE	2nd Generation Intel® Celeron® 874E	4th Generation Intel® Core™ i3-4010U	4th Generation Intel® Core™ i5-4300U	4th Generation Intel® Core™ i7-4650U	5th Generation Intel® Core™ i3-5010U	5th Generation Intel® Core™ i7-5650U
Chipset	Intel® QM67	Intel® QM67	No	No	No	No	No
Memory	DDR3 1333MHz, SO-DIMM, 2GB (default) up to 8GB	DDR3 1333MHz, SO-DIMM, 2GB (default) up to 8GB	2 channel DDR3L 1333/1600 SO-DIMM, 2GB (default) up to 16GB	2 channel DDR3L 1333/1600 SO-DIMM, 2GB (default) up to 16GB	2 channel DDR3L 1333/1600 SO-DIMM, 2GB (default) up to 16GB	2 channel DDR3L 1333/1600 SO-DIMM, 2GB (default) up to 16GB	2 channel DDR3L 1333/1600 SO-DIMM, 2GB (default) up to 16GB
Storage	2.5" SSD x 2 (external)	2.5" SSD x 2 (external)	2.5" HDD/SSD 2 x SATA 3.0 (external)	2.5" HDD/SSD 2 x SATA 3.0 (external)	2.5" HDD/SSD 2 x SATA 3.0 (external)	2.5" HDD/SSD 2 x SATA 3.0 (external)	2.5" HDD/SSD 2 x SATA 3.0 (external)
Second Storage	1 x CFast (external)	1 x CFast (external)	1 x CFast (external)	1 x CFast (external)	1 x CFast (external)	1 x CFast (external)	1 x CFast (external)
Dimension (mm)	260 x 176 x 90.1	260 x 176 x 90.1	260 x 206 x 79.5	260 x 206 x 79.5	260 x 206 x 79.5	260 x 206 x 79.5	260 x 206 x 79.5
Power Input	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V
Ignition Control	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting
Power Management	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection
GPS	On board uBlox NEO-6Q	On board uBlox NEO-6Q	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)
Optional Communication	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN
Voice Communication	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SMS/Ring Wake Up	Yes	Yes	Yes	Yes	Yes	Yes	Yes
SIM Socket	2	2	3	3	3	3	3
USB 2.0	3	3	USB 3.0 x 2 USB 2.0 x 2	USB 3.0 x 2 USB 2.0 x 2	USB 3.0 x 2 USB 2.0 x 2	USB 3.0 x 2 USB 2.0 x 2	USB 3.0 x 2 USB 2.0 x 2
COM	RS-232 x 1 RS-422/485 x1	RS-232 x 1 RS-422/485 x1	RS-232 x2 RS-232/485/422 x1	RS-232 x2 RS-232/485/422 x1	RS-232 x2 RS-232/485/422 x1	RS-232 x2 RS-232/485/422 x21	RS-232 x2 RS-232/485/422 x1
CAN/OBDII	Optional CAN/ OBDII module	Optional CAN/ OBDII module	CAN bus 2.0B on board. Optional CAN/ OBDII module	CAN bus 2.0B on board. Optional CAN/ OBDII module	CAN bus 2.0B on board. Optional CAN/ OBDII module	CAN bus 2.0B on board. Optional CAN/ OBDII module	CAN bus 2.0B on board. Optional CAN/ OBDII module
Video Out	LVDS or DVI-D, VGA	LVDS or DVI-D, VGA	DP, VGA. LVDS (internal)	DP, VGA. LVDS (internal)	DP, VGA. LVDS (internal)	DP, VGA. LVDS (internal)	DP, VGA. LVDS (internal)
PCI-104	1	1	No	No	No	No	No
Ethernet	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2
PoE (802.3af,total 60W)	4	4	No	No	No	No	No
Audio	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2
Mini-PCIe Socket	(PCIe+USB) x1, USB x 1	(PCIe+USB) x1, USB x 1	(PCIe+USB) x 3, USB x 1	(PCIe+USB) x 3, USB x 1	(PCIe+USB) x 3, USB x 1	(PCIe+USB) x 3, USB x 1	(PCIe+USB) x 3, USB x 1
SMBus	1	1	1	1	1	1	1
DC Output	12V (4A)	12V (4A)	12V (2A)	12V (2A)	12V (2A)	12V (2A)	12V (2A)
GPIO	In x 4, Out x 4	In x 4, Out x 4	MCU: DI x 2, DO x 2 In x 4, Out x 4	MCU: DI x 2, DO x 2 In x 4, Out x 4	MCU: DI x 2, DO x 2 In x 4, Out x 4	MCU: DI x 2, DO x 2 In x 4, Out x 4	MCU: DI x 2, DO x 2 In x 4, Out x 4
Certification	CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, E13	CE, FCC Class B, E13	CE, FCC Class B, E13	CE, FCC Class B, E13	CE, FCC Class B, E13
Operation Temperature	-30℃ to 50℃	-30℃ to 50℃	-30℃ to 55℃	-30℃ to 50℃	-30℃ to 55℃	-30℃ to 55℃	-30℃ to 50℃

Mobile Surveillance - Vehicle

Model	Coming Soon	Coming Soon
	MVS 5200	**MVS 5210**
CPU	5th Generation Intel® Core™ i3-5010U	5th Generation Intel® Core™ i7-5650U
Chipset	No	No
Memory	2 channel DDR3L 1600 SO-DIMM, 2GB (default) up to 16GB	2 channel DDR3L 1600 SO-DIMM, 2GB (default) up to 16GB
Storage	2.5" SSD SATA 3.0 x 2 mSATA x 1	2.5" SSD SATA 3.0 x 2 mSATA x 1
Second Storage	1 x CFast slot (accessible)	1 x CFast slot (accessible)
Dimension (mm)	260 x 206 x 130	260 x 206 x130
Power Input	DC 9V to 36V (w/opitonal internal back up battery)	DC 9V to 36V (w/opitonal internal back up battery)
Ignition Control	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting
Power Management	Low voltage protection	Low voltage protection
GPS	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)
Optional Communication	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN
Voice Communication	Yes	Yes
SMS/Ring Wake Up	Yes	Yes
SIM Socket	3	3
USB 2.0	USB 3.0 x 3 USB 2.0 x 3	USB 3.0 x 3 USB 2.0 x 3
COM	RS-232/422/485 x 2	RS-232/422/485 x 2
CAN/OBDII	CAN bus 2.0B on board. Optional CAN/OBDII module	CAN bus 2.0B on board. Optional CAN/OBDII module
Video Out	VGA x 2, LVDS	VGA x 2, LVDS
PCI-104	No	No
Ethernet	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2
PoE (802.3af,total 60W)	8	8
Audio	Mic-in x 1, Line-out x 2	Mic-in x 1, Line-out x 2
Mini-PCIe Socket	(PCIe+USB) x 1 USB x 1, mSATA x1	(PCIe+USB) x 1 USB x 1, mSATA x1
SMBus	1	1
DC Output	12V (2A)	12V (2A)
GPIO	PC: DI x 4, DO x 4 MCU: DI x 2, DO x 2 Analog-In x 1, Speed Frequency x 1	PC: DI x 4, DO x 4 MCU: DI x 2, DO x 2 Analog-In x 1, Speed Frequency x 1
Certification	CE, FCC Class B, E13	CE, FCC Class B, E13
Operation Temperature	-30℃ to 50℃ (w/o internal back up battery)	-30℃ to 50℃ (w/o internal back up battery)

Model		
	VES30-4S	**VES30-8S**
Architecture	Unmanaged Gigabit switch	Unmanaged Gigabit switch
PoE Port	4-port, 10/100/1000 base-T	8-port, 10/100/1000 base-T
LAN Port	1-port, 10/100/1000 base-T	1-port, 10/100/1000 base-T
Standard Compliance	IEEE 802.3af PSE, total 60W	IEEE 802.3af PSE, total 120W
LED	4 x PoE indicator 1 x low voltage protection indicator	8 x PoE indicator 1 x low voltage protection indicator
Dimensions (mm)	167 x 58.8 x 139.6	167 x 58.8 x 139.6
Ignition Control	Yes	Yes
Low Voltage Protection	Yes	Yes
Power On/Off Delay Time	Yes	Yes
Power Input	9~36VDC	9~36VDC
Certification	CE, FCC Class B,	CE, FCC Class B,
Operation Temperature	-30℃ to 70℃	-30℃ to 70℃

Mobile Surveillance - Railway

Model			Coming Soon	Coming Soon
	nROK 5300	**nROK 5500**	**VTC 6210-R**	**VTC 7220-R**
CPU	3rd Generation Intel® Core™ i5 3610ME	3rd Generation Intel® Core™ i7-3517UE	Intel® Atom™ E3845	4th Generation Intel® Core™ i74650U
Chipset	Intel® QM77	Intel® QM77	No	No
Memory	DDR3 1333 SO-DIMM 2GB (up to 16G)	DDR3 1333 SO-DIMM 2GB (up to 16G)	DDR3L 1066/1333 SO-DIMM, 2GB (default) up to 8GB	2 channel DDR3L 1333/1600 SO-DIMM, 2GB (default) up to 16GB
Storage	4 x 2.5" SATA SSD removable Tray (3 x removable + 1 x fixed HDD Tray for optional)	4 x 2.5" SATA SSD removable Tray (3 x removable + 1 x fixed HDD Tray for optional)	2.5" SSD (external)	2.5" SSD SATA 3.0 x 2 (external)
Second Storage	1 x mini-PCIe SSD	1 x mini-PCIe SSD	1 x CFast slot (accessible)	1 x CFast slot (accessible)
Dimension (mm)	482 x 400 x 88	482 x 400 x 88	260 x 176 x 50 (24/36 VDC) 260 x 176 x TBD (110 VDC)	260 x 206 x 117
Power Input	24/36/72/110 VDC (w/ isolation protection)	24/36/72/110 VDC (w/ isolation protection)	24/36/110 VDC (w/ isolation protection)	24/36/72/110 VDC (w/ isolation protection)
Ignition Control	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting
Power Management	Low voltage protection & configuration via software	Low voltage protection & configuration via software	Low voltage protection	Low voltage protection
GPS	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)
Optional Communication	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN
Voice Communication	No	No	Yes	Yes
SMS/Ring Wake Up	No	No	Yes	Yes
SIM Socket	2	2	3	3
USB 2.0	1 x M12 with 2 x USB2.0 signal 2 x USB 3.0	1 x M12 with 2 x USB2.0 signal 2 x USB 3.0	1 x USB 3.0 Type A 1 x M12 with two USB2.0	2 x USB3.0 Type A 2 x USB2.0 Type A
COM	2 x RS232 (isolation) 1 x RS422/485 (isolation)	2 x RS232 (isolation) 1 x RS422/485 (isolation)	2 x RS232 (isolation) 1 x RS422/485 (isolation)	2 x RS232 (isolation) 1 x RS422/485 (isolation)
CAN/OBDII	No	No	CAN bus 2.0B on board	CAN bus 2.0B on board. Optional CAN/OBDII module
Video Out	VGA, HDMI	VGA, HDMI	DP, VGA	DP, VGA. LVDS (internal)
PCI-104	1	1	No	No
Ethernet	2 x 10/100/1000 (M12)	2 x 10/100/1000 (M12)	2 x 10/100/1000 (M12)	2 x 10/100/1000 (M12)
PoE (802.3af,total 60W)	8	8	N/A	N/A
Audio	Mic-in x 1, Line-out x 1 Line In x 1	Mic-in x 1, Line-out x 1 Line in x 1	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2
Mini-PCIe Socket	2 x (PCIe+USB), 1 x USB	2 x (PCIe+USB), 1 x USB	(PCIe+USB) x 3	(PCIe+USB) x 3, USB x 1
SMBus	N/A	N/A	N/A	1
DC Output	N/A	N/A	N/A	N/A
GPIO	PC: DI x 4, DO x 4 w/ isolation	PC: DI x 4, DO x 4 w/ isolation	PC: DI x 4, DO x 4 w/ isolation	PC: DI x 4, DO x 4
Certification	CE, FCC Class A, EN50155, EN45455-2	CE, FCC Class A, EN50155, EN45455-2	CE, FCC Class B, EN50155	CE, FCC Class B, EN50155
Operation Temperature	-40℃ to 70℃ (TX)	-40℃ to 70℃ (TX)	-40℃ to 70℃ (TX)	-40℃ to 70℃ (TX)

Fleet Management Boosts Operational Transparency to Raise Fleet Productivity
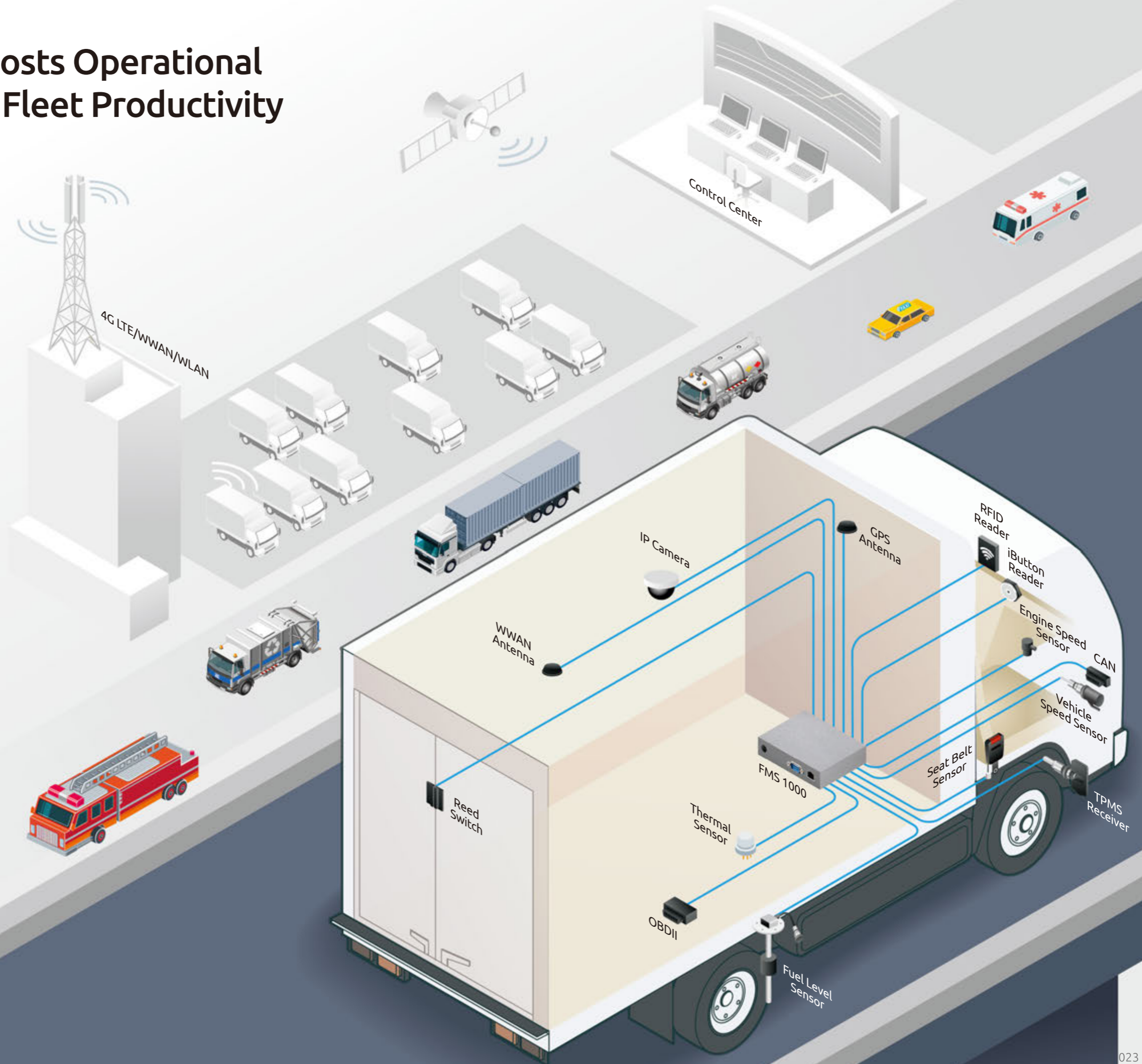
Overview & How It Works

In quest to drive revenue, curb costs, and ensure regulatory and company compliance, commercial fleets are installing fleet management systems on fleet vehicles. Fleet management systems are used as an information hub offering various information ranging from work orders and routing and navigation suggestions to real-time traffic and weather information. Fleet management systems also help log vehicle data and maintain electronic records for tax reporting and other legal obligations. Fleet dispatchers also depend on fleet management systems to track fleet vehicles, keep contact with fleet drivers, arrange maintenance schedules, and draw up driving guidelines

Successful Factors

Dynamic tracking and positioning of fleet vehicles and goods in transit is one major function of fleet management systems. Ability to integrate a wide variety of real time or non-real time data also plays an important role in fleet management and is the foundation for filing and analysis of such as driver behavior, insurance policy, and fuel consumption. Moreover, fleet management systems need to establish audio and data communication between drivers and dispatchers.

NEXCOM's Strengths

Aimed at fleet vehicles running around the globe, NEXCOM fleet management systems support worldwide satellite navigation systems to increase location's accuracy. NEXCOM fleet management systems can access vehicle data to detect abnormal events even in power-off state and enable preventive maintenance to be taken by keeping a close watch on vehicle health status. NEXCOM systems support CAN 2.0 and OBDII for use on different brand vehicles. NEXCOM fleet management systems provide multiple connectivities for both data and voice communication; more importantly NEXCOM systems allow carrier switch to avoid costly data roaming charges and for quality internet connection.

Control Center

4G LTE/WWAN/WLAN

RFID Reader

iButton Reader

GPS Antenna

IP Camera

Engine Speed Sensor

CAN

WWAN Antenna

Vehicle Speed Sensor

FMS 1000

Seat Belt Sensor

TPMS Receiver

Reed Switch

Thermal Sensor

OBDII

Fuel Level Sensor

Fleet Management

Model	VTC 100	VTC 1000	VTC 1010	VTC 6210	VTC 7100-BK	VTC 7100-D1K
CPU	ARM® Cortex™-A8, 720MHz	Intel® Atom™ E640	Intel® Atom™ E3827	Intel® Atom™ E3845	Intel® Atom™ D2550	Intel®Atom™ D2550
Chipset	No	Intel® EG20T	No	No	Intel® ICH-10R	Intel® ICH-10R
Memory	On board DDR2 256MB	1GB DDR2 memory on board Optional: 2GB	DDR3L 1066/1333 SO-DIMM, 2GB (default) up to 8GB	DDR3L 1066/1333 SO-DIMM, 2GB (default) up to 8GB	DDR3 1066MHz SO-DIMM, 2GB (default) up to 4GB	DDR3 1066MHz SO-DIMM, 2GB (default) up to 4GB
Storage	Micro SDHC socket, 4GB (default)	2.5" SATA SSD	2.5" SSD	2.5" HDD/SSD (external)	2.5" SSD (external)	2.5" SSD (external)
Second Storage	No	No	1 x SD (external)	1 x CFast (external)	1 x CFast (external)	1 x CFast (external)
Dimension (mm)	180 x 110 x 45	185 x 120 x 40	180 x 180 x 50	260 x 176 x 50	260 x 176 x 50	260 x 176 x 73.6
Power Input	DC 9V to 36V	DC 6V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V
Ignition Control	Yes w/ 8 level delay time setting	Yes w/ 8 level delay time setting	Yes, w/ 8 level time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting
Power Management	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection
GPS	On board uBlox NEO-6Q	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	On board uBlox NEO-6Q	On board uBlox NEO-6Q
Optional Communication	Wi-Fi/WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN
Voice Communication	No	No	Yes	Yes	Yes	Yes
SMS/Ring Wake up	Yes	Yes	Yes	Yes	Yes	Yes
SIM Socket	1	1	2	3	2	2
USB 2.0	2	2	USB 3.0 x 1 USB 2.0 x 2	USB 3.0 x 1 USB 2.0 x 2	3	3
COM	RS-232 x 1, RS-485 x1	RS-232 x 1, RS-232 x1 or RS-422/485	RS-232 x 2 RS-422/485 x 1	RS-232 x 2 RS-422/485 x 1	RS-232 x 1 RS-422/485 x1	RS-232 x 1, RS-232 x 3 (w/isolation) RS-422/485 x 1, RS-422/485 x 2 (w/isolation)
CAN/OBDII	CAN bus 2.0B x1 (from Cortex™-A8)	CAN bus 2.0B x1 (from EG20T)	CAN bus 2.0B on board. Optional CAN/OBDII module	CAN bus 2.0B on board. Optional CAN/OBDII module	Optional CAN/OBDII module	OBDII (SAE J1939 or J1708)
Video out	VGA	VGA or LVDS or VGA + LVDS	DP, VGA	DP, VGA	LVDS, VGA	LVDS or DVI-D, VGA
PCI-104	No	No	No	No	1	1
Ethernet	AR8033-AL1A 10/100/1000 x 1	RTL8211CL-GR 10/100/1000 x 1	Intel® 10/100/1000 x 1	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2
PoE (802.3af,total 60W)	No	No	No	No	No	No
Audio	Mic-in x 1, Line-out x 1	Mic-in x 1, Line-out x 1	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2
Mini-PCIe Socket	USB x 1	(PCIe+USB) x1, USB x 1	(PCIe+USB) x 3, (PCIe or mSATA) x 1, USB x 1	(PCIe+USB) x 3, USB x 1. 3.3V/3.6V selectable	(PCIe+USB) x1, USB x 1	(PCIe+USB) x1, USB x 1
SMBus	No	No	1	1	1	1
DC Output	No	5V (1A), 12V (1A)	12V (1A)	12V (2A)	12V (4A)	12V (4A)
GPIO	In x 3, Out x 3	In x 4, Out x 4	Programmable GPIO x 6	Programmable PC GPIO x 8 (option: w/ isolation) MCU-DI x 2, MCU-DO x 2	In x 4, Out x 4	In x 4, Out x 4
Certification	CE, FCC Class B	CE, FCC Class B, e13	CE, FCC Class B, E13	CE, FCC Class B, E13	CE, FCC Class B, e13	CE, FCC Class B, e13
Operation Temperature	-20℃ to 70℃	-20℃ to 70℃	-30℃ to 70℃	-30℃ to 70℃	-30℃ to 55℃	-30℃ to 55℃

Model	VTC 7110-D1K	VTC 7120-D1K	FMS 1000
			Coming Soon
CPU	2nd Generation Intel® Core™ i7 2610UE	2nd Generation Intel® Celeron™ 847E	ARM 32-bit Cortex™-M4 CPU
Chipset	Intel® QM67	Intel® QM67	No
Memory	DDR3 1333MHz SO-DIMM, 2GB (default) up to 4GB	DDR3 1333MHz SO-DIMM, 2GB (default) up to 4GB	PSRAM 1MB
Storage	2.5" SSD (external)	2.5" SSD (external)	N/A
Second Storage	1 x CFast (external)	1 x CFast (external)	No
Dimension (mm)	260 x 176 x 73.6	260 x 176 x 73.6	146 x 153 x 56
Power Input	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V (w/ internal back up battery)
Ignition Control	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes w/ 8 level delay time setting
Power Management	Low voltage protection	Low voltage protection	Low voltage protection
GPS	On board uBlox NEO-6Q	On board uBlox NEO-6Q	uBlox NEO-M8N on board
Optional Communication	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/WWAN
Voice Communication	Yes	Yes	Yes
SMS/Ring Wake up	Yes	Yes	Yes
SIM Socket	2	2	1
USB 2.0	3	3	No
COM	RS-232 x 1, RS-232 x 3 (w/isolation) RS-422/485 x 1, RS-422/485 x 2 (w/isolation)	RS-232 x 1, RS-232 x 3 (w/isolation) RS-422/485 x 1, RS-422/485 x 2 (w/isolation)	RS-232 x 1
CAN/OBDII	OBDII (SAE J1939 or J1708)	OBDII (SAE J1939 or J1708)	OBDII on board (SAE J1939)
Video out	LVDS or DVI-D, VGA	LVDS or DVI-D, VGA	No
PCI-104	1	1	No
Ethernet	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2	10/100 x 1
PoE (802.3af,total 60W)	No	No	No
Audio	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 1, Line-out x 1
Mini-PCIe Socket	(PCIe+USB) x1, USB x 1	(PCIe+USB) x1, USB x 1	SPI x 1
SMBus	1	1	No
DC Output	12V (4A)	12V (4A)	12V (1A)
GPIO	In x 4, Out x 4	In x 4, Out x 4	DI x 3, DO x 3 Analog-In x 3 Speed frequency x 1
Certification	CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, e13
Operation Temperature	-30℃ to 55℃	-30℃ to 55℃	-40℃ to 70℃ (w/o battery) -20℃ to 60℃ (w/ battery)

Model	VMC 100	VMC 1000	VMC 1100
LCD Size	7" TFT LCD	7" TFT LCD	7" TFT LCD
Resolution	800 x 480	800 x 480	800 x 480
Brightness	400cd/m²	500cd/m²	400cd/m²
Contrast Ratio	600 : 1	600 : 1	600 : 1
View Angle	V: 50/70 H: 70/70	V: 60/60 H: 70/70	V: 50/70 H: 70/70
Brightness Adjustment	Auto via light sensor	Auto via light sensor	Auto via light sensor
Audio	Built-in Speaker x 2	Built-in Speaker x 2	Built-in Speaker x 2
Touch Screen	4-wire antiglare	4-wire antiglare	4-wire antiglare
Camera	N/A	1 (option)	N/A
Control Button	F1~ F5 functions key Power button x 1 Brightness/volume control x 2 System reset button x 2	Power button x 1 Brightness control x 2 Volume control x 2	F1~ F5 functions key Power button x 1 Brightness/volume control x 2 System reset button x 2
Mounting	VESA 75	VESA 75	VESA 75
Ingress Protection	Front Panel IP54	IP54	Front Panel IP54
Dimension (mm)	213 x 145 x 49.3	182 x 138 x 50	213 x 145 x 50
CPU	ARM® Cortex™-A8	Intel® Atom™ E640	Intel® Atom™ E3825
Chipset	N/A	EG20T	N/A
Memory	512MB DDR3 on board	1GB DDR2 on board	DDR3L 1600MHz SO-DIMM, 2GB (default), up to 4GB
Storage Interface	4GB Micro SDHC up to 16GB	mSATA	SATA DOM
Power Input	DC 9V to 36V	DC 6V to 36V	DC 9V to 36V
Ignition Control	Yes w/ 8 level delay time setting	Yes w/ 8 level delay time setting	Yes w/ 8 level delay time setting
Power Management	Low voltage protection	low voltage protection	Low voltage protection
GPS	uBlox NEO-M8N on board	uBlox6 on board	uBlox NEO-M8N on board
Optional Communication	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/WWAN	Wi-Fi/Bluetooth/ WWAN
USB	USB2.0 x 1	USB2.0 x 3	USB3.0 x 1
COM	RS232 x 1 RS485 x 1	RS232 x 2 RS422/485 x 1	RS232 x 1 RS485 x 1
OBDII Module	CAN bus 2.0B x 1 Optional OBDII	N/A	CAN bus 2.0B x 2 Optional OBDII
Ethernet	10/100/1000 x 1	10/100/1000 x 1	10/100/1000 x 1
Audio	Mic-in x 1 Line-out x 1	Mic-in x 1 Line-out x 1	Mic-in x 1 Line-out x 1
Mini-Card	(USB+ UART) x1	(PCIe+ USB+ SATA) x1	(PCIe+ USB) x 1 (USB+ UART) x1
GPIO	In x 3, Out x 3	In x 3, Out x 3	2 x PWM, 2 x analog input, 3 x GPO, 3 x GPI
Certification	CE, FCC Class B SAE J1113, SAE J1455, ISO7637-2 EN 60950-1 LVD	CE, FCC Class B, e13	CE, FCC Class B SAE J1113, SAE J1455, ISO7637-2 EN 60950-1 LVD
Operation Temperature	-20℃ to 70℃	-20℃ to 50℃	-20℃ to 60℃

Increase Yield and On-site Safety for Field Operation

Overview & How It Works

Mobile data terminals are used to help raise yield, to reduce waste of time, money, and labor force as well as to protect environments in agriculture and forestry, mining, construction, and port and harbor industries. Mobile data terminals provide precise positioning, geo-information, and visual aids in field operations to help manage the volatility of onsite traffic and increase situational awareness. On field sites, mobile data terminals harvest field and machine data to give fieldworkers more control over heavy machines and site mangers operation status. Asset management can also make use of mobile data terminals to prevent equipment loss and to reduce unexpected downtime.

Successful Factors

Ability to handle graphics-intensive processing is a must for mobile data terminals and the level of position accuracy determines the effectiveness of location-based functions such as geo-fencing, self-navigation, and asset tracking. Advanced sensing is key to both creating situational awareness and collecting field and machine data. Ease of use is also worthy of consideration to avoid distracted driving. The outdoor harsh operating conditions require mobile data terminals to be robust for long-lasting use.

NEXCOM's Strengths

NEXCOM vehicle mount computers are packed with powerful computing and graphics capabilities and support different levels of position accuracy required of different mobile data terminals. NEXCOM vehicle mount computers make use of Control Area Network and wireless internet networks, enabling assorted data to seamlessly flow from heavy machines to site offices and even the cloud. NEXCOM vehicle mount computers features single-step access to user-defined functions, providing the benefit of convenience and enabling quick response. To withstand the rigorous of field operating environments, NEXCOM mobile data terminals have passed vibration testing, and provide high resistance to electromagnetic interference (EMI), cold and heat stress, and dust and water ingress.

Field Operation

Model	VMC 100	VMC 1100	VMC 3000/3500	VMC 3001/3501	VMC 3011/3511	VMC 4011
LCD Size	7" TFT LCD	7" TFT LCD	10.4" TFT LCD	10.4" TFT LCD	10.4" TFT LCD	12.1" TFT LCD
Resolution	800 x 480	800 x 480	1024 x 768	1024 x 768	1024 x 768	1024 x 768
Brightness	400cd/m²	400cd/m²	400cd/m²	400cd/m²	1000cd/m²	1000cd/m²
Contrast Ratio	600 : 1	600 : 1	600 : 1	600 : 1	600 : 1	600 : 1
View Angle	V: 50/70 H: 70/70	V: 50/70 H: 70/70	V: 60/60 H: 70/70	V: 60/60 H: 70/70	V: 60/60 H: 70/70	V: 60/60 H: 70/70
Brightness Adjustment	Auto via light sensor	Auto via light sensor	Auto via light sensor	Auto via light sensor	Auto via light sensor	Auto via light sensor
Audio	Built-in Speaker x 2	Built-in Speaker x 2	Built-in speaker x 2	Built-in speaker x 2	Built-in speaker x 2	Built-in speaker x 2
Touch Screen	4-wire antiglare	4-wire antiglare	5-wire antiglare	5-wire antiglare	5-wire antiglare	5-wire antiglare
Camera	N/A	N/A	N/A	N/A	N/A	N/A
Control Button	F1~ F5 functions key Power button x 1 Brightness/ volume control x 2 System reset button x 2	F1~ F5 functions key Power button x 1 Brightness/ volume control x 2 System reset button x 2	Power button x 1 Brightness control x 2 Volume control x 2 Function key x 5 Shift key x 1	Power button x 1 Brightness control x 2 Volume control x 2 Function key x 5 Shift key x 1	Power button x 1 Brightness control x 2 Volume control x 2 Function key x 5 Shift key x 1	Power button x 1 Brightness control x 2 Volume control x 2 Function key x 5 Shift key x 1
Mounting	VESA 75	VESA 75	VESA 75/100	VESA 75/100	VESA 75/100	VESA 75/100
Ingress Protection	Front Panel IP54	Front Panel IP54	IP65	IP65	IP65	IP65
Dimension (mm)	213 x 145 x 49.3	213 x 145 x 50	290 x 230 x 68	290 x 230 x 68	290 x 230 x 68	340 x 262 x 75.1
CPU	ARM® Cortex™-A8	Intel® Atom™ E3825	Intel® Atom™ D2550/ Intel® Core™ i7 2610UE	Intel® Atom™ D2550/ Intel® Core™ i7 2610UE	Intel® Atom™ D2550/ Intel® Core™ i7 2610UE	Intel® Atom™ D2550
Chipset	N/A	N/A	Intel® ICH10R/ Intel® QM67	Intel® ICH10R/ Intel® QM67	Intel® ICH10R/ Intel® QM67	Intel® ICH10R
Memory	512MB DDR3 on board	DDR3L 1600MHz SO-DIMM, 2GB (default), up to 4GB	DDR3 1333MHz SO-DIMM, 2GB (default), up to 4GB	DDR3 1333MHz SO-DIMM, 2GB (default), up to 4GB	DDR3 1333MHz SO-DIMM, 2GB (default), up to 4GB	DDR3 1333MHz SO-DIMM slot, 2GB (default), up to 4GB
Storage Interface	4GB Micro SDHC up to 16GB	SATA DOM	1 x CFast 1 x 2.5" SSD bay	1 x CFast 1 x 2.5" SSD bay	1 x CFast 1 x 2.5" SSD bay	1 x CFast 1 x 2.5" SSD bay
Power Input	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V
Ignition Control	Yes w/ 8 level delay time setting	Yes w/ 8 level delay time setting	Yes w/ 8 level delay time setting	Yes w/ 8 level delay time setting	Yes w/ 8 level delay time setting	Yes w/ 8 level delay time setting
Power Management	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection
GPS	uBlox NEO-M8N on board	uBlox NEO-M8N on board	uBlox6 on board	uBlox6 on board	uBlox6 on board	uBlox6 on board
Optional Communication	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN
USB	USB2.0 x 1	USB3.0 x 1	USB2.0 x 2	USB2.0 x 1	USB2.0 x 1	USB2.0 x 2
COM	RS232 x 1 RS485 x 1	RS232 x 1 RS485 x 1	RS232 x 2	RS232 x 1	RS232 x 1	RS232/422/485 x 1 RS232 x 2
OBDII Module	CAN bus 2.0B x 1 Optional OBDII	CAN bus 2.0B x 2 Optional OBDII	Optional OBDII	Optional OBDII	Optional OBDII	Optional OBDII
Ethernet	10/100/1000 x 1	10/100/1000 x 1	10/100/1000 x 1	10/100/1000 x 1	10/100/1000 x 1	10/100/1000 x 2
Audio	Mic-in x 1 Line-out x 1	Mic-in x 1 Line-out x 1	Mic-in x 1 Line-out x 1	Mic-in x 1 Line-out x 1	Mic-in x 1 Line-out x 1	Mic-in x 1 Line-out x 1
Mini-Card	(USB+ UART) x1	(PCIe+ USB) x1 (USB+ UART) x1	(PCIe+ USB+ SATA) x1 USB x 1	(PCIe+ USB+ SATA) x1 USB x 1	(PCIe+ USB+ SATA) x1 USB x 1	(PCIe+ USB+ SATA) x1 USB x 1
GPIO	In x 3, Out x 3	2 x PWM, 2 x analog input, 3 x GPO, 3 x GPI	In x 3, Out x 3	In x 3, Out x 3	In x 3, Out x 3	In x 2, Out x 2
Certification	CE, FCC Class B SAE J1113, SAE J1455, ISO7637-2 EN 60950-1 LVD	CE, FCC Class B SAE J1113, SAE J1455, ISO7637-2 EN 60950-1 LVD	CE, FCC Class B	CE, FCC Class B	CE, FCC Class B	CE, FCC Class B
Operation Temperature	-20℃ to 70℃	-20℃ to 60℃	-30℃ to 60℃	-30℃ to 60℃	-30℃ to 60℃	-30℃ to 60℃

2015 New Products

VTC 7230

Intel® Core™ i3-5010U Fanless In-Vehicle Computer

- Three SIM cards + dual WWAN modules support
- Dual externally accessible SATA 3.0 SSD/HDD
- Built-in u-blox NEO-M8N module, optional Dead Reckoning support
- Built-in CAN 2.0B. Optional CAN/OBDII module
- WWAN support Wake on RTC/SMS, Voice Communication
- Compliant with MIL-STD-810G
- 4 x mini-PCIe socket rich expansion capability

VTC 7240

Intel® Core™ i7-5650U Fanless In-Vehicle Computer

- Three SIM cards + dual WWAN modules support
- Dual externally accessible SATA 3.0 SSD/HDD
- Built-in u-blox NEO-M8N module, optional Dead Reckoning support
- Built-in CAN 2.0B. Optional CAN/OBDII module
- WWAN support Wake on RTC/SMS, Voice Communication
- Compliant with MIL-STD-810G
- 4 x mini-PCIe socket rich expansion capability

Coming Soon

FMS 1000

Vehicle Gateway Device

- 1 x 10/100 Mbps Ethernet
- 3G WWAN and WLAN support
- Voice & SMS communication
- 1 x CAN Bus 2.0B and OBDII (SAE J1939)
- Driver identification (iButton and RFID)
- Support optional precision GPS module
- Rugged IP67 protection

MVS 5200

8-CH PoE Premium Mobile Network Video Recorder

- 8 x Video channel 720P real time live view while 1080P recording
- 8 x 10/100/1000 Mbps 802.3af PoE port
- Multitasking PC highly performs even while recording video
- Intel® Broadwell™ processor dual core i3-5010U, 2.1GHz
- Dual removable SATA 3.0 SSD/HDD
- 7/24 GPS tracker function support even PC is off
- Built-in CAN 2.0B; optional OBDII function (SAE J1939)

Coming Soon

MVS 5210

8-CH PoE Premium Mobile Network Video Recorder

- 8 x Video channel 720P real time live view while 1080P recording
- 8 x 10/100/1000 Mbps 802.3af PoE port
- Multitasking. PC highly performs even while recording video
- Intel® Broadwell™ processor dual core i7-5650U, 2.2GHz
- Dual removable SATA 3.0 SSD/HDD
- 7/24 GPS tracker function support even PC is off
- Built-in CAN 2.0B; optional OBDII function (SAE J1939)

Coming Soon

VMC 1100

**7" All-In-One Vehicle Computer
with Touch Screen and Multifunctional Tracker**

- 7" WVGA TFT LCD Monitor with resistor touch screen
- Built-in Intel® Atom™ Dual Core E3825 1.33GHz
- Compact and fanless design
- Wide Range DC input from 9 ~ 36V
- Support GPS/GPRS/GSM communication and tracker
- Dual CAN bus support and support option OBDII (SAE J1939)
- SAE J1113, ISO7637-2 and SAE J1455 compliance for power design

VES30-4S

4 + 1 Gigabit Ethernet Switch with 4-Port PoE

- 4 x 10/100/1000 Mbps PoE port (802.3af compliance)
- 15.4W at 48VDC for each PoE port
- Low battery voltage protection
- CE/FCC, E13 mark certification
- Wide power input range 9 ~ 36VDC
- -30 ~ 70°C operating temperature
- Ignition power on/off support

VMC 4011

**12.1" Rugged Vehicle Mount Computer
with Intel® Atom™, Touch Screen and IP65**

- 12.1" XGA TFT LCD monitor with high brightness display
- Robust with Die-cast aluminum and fanless, IP65 design
- Built-in Intel® Atom™ D2550 processor
- Automatic/manual brightness control
- Wake on RTC/SMS/LAN
- Variety wireless communication options
- Wide range DC input from 9 ~ 36V

VES30-8S

8 + 1 Gigabit Ethernet Switch with 8-Port PoE

- 8 x 10/100/1000 Mbps PoE port (802.3af compliance)
- 15.4W at 48VDC for each PoE port
- Low battery voltage protection
- CE/FCC, E13 mark certification
- Wide power input range 9 ~ 36VDC
- -30 ~ 70°C operating temperature
- Ignition power on/off support

VTC 6210-R

Intel® Atom™ E3845 Fanless Rolling Stock Computer

- Intel® Atom™ E3845 quad core processor
- Compliant with EN50155
- Support Rolling Stock Power Input rating with 24/36/110 VDC
- Three SIM cards + dual WWAN modules support
- Externally accessible SATA 3.0 SSD/HDD
- Built-in u-blox NEO-M8 module, optional Dead Reckoning support
- 3 x mini-PCIe socket rich expansion capability

Coming Soon

VMC 100

**7" All-In-One Vehicle Computer
with ARM® Cortex®-A8 and OBD Multiprotocol**

- 7" WVGA TFT LCD Monitor with resistor touch screen
- ARM® Cortex®-A8 Processor with 800MHz frequency
- Dual CAN bus support and support option OBDII
- Variety wireless communication options (Support LTE)
- Wide Range DC input from 9 ~ 36V
- Support Linux, Android and Windows embedded compact
- SAE J1113, ISO7637-2 and SAE J1455 compliance for power design

VTC 7220-R

Intel® Core™ i7-4650U Fanless Rolling Stock Computer

- Intel® Core™ processor dual core i7-4650U
- Compliant with EN50155
- Support Rolling Stock Power Input rating with 24/36/48/110 VDC
- Three SIM cards + dual WWAN modules support
- Dual externally accessible SATA 3.0 SSD/HDD
- Built-in u-blox NEO-M8 module, optional Dead Reckoning support
- 4 x mini-PCIe socket rich expansion capability

Coming Soon

IVT 1100

Main Features

- 6.95" WVGA TFT LCD Monitor with resistor touch screen
- Built-in Intel® Atom™ Dual Core E3825 1.33GHz
- Double DIN and fanless design
- Front button for easy operating
- Support GPS/GPRS/GSM tracker function

- Built-in GPS (Option: Dead Reckoning Support)
- Variety wireless communication options (Support LTE)
- Dual CAN bus support and support option OBDII (SAE J1939)
- Wide Range DC input from 9 ~ 36V
- SAE J1113, ISO7637-2 and SAE J1455 compliance for power design

Product Overview

IVT 1100, a new generation 6.95-inch in-vehicle mount computer with latest technology in the in-vehicle infotainment segment.

The feature-rich IVT 1100 supports the Tizen In-Vehicle Infotainment (Tizen IVI) software platform, allowing automakers to immediately turn a vehicle into an information desk, a media service center, a Wi-Fi hotspot and even a mobile diagnostic center.

IVT 1100 is equipped with two mini-PCIe expansions to support 3G/4G networks, Wi-Fi tethering, and Bluetooth pairing with mobile devices. In addition, the IVT 1100 is built with Intel® Atom™ processor E3825 with integrated Intel® HD Graphics, built-in GPS and 3-axis sensors, and supports for CAN bus protocols to provide ideal balance of performance and power consumption.

IVT 1100 is designed to ensure reliable operation even when exposed to a temperature range of -20°C to 50°C and can resist vibration and shock based on military standard 810G. With its rich feature set and built-in robust nature the IVT 1100 is a complete solution for developing from concepts of the connected vehicle all the way through to reality.

Specifications

General

- Cooling System: Fanless
- Enclosure: Metal with aluminum die casting heatsink
- Mounting: Double DIN
- Three fakra type antenna connectors of WWAN/Radio/GPS
- Two SMA female type antenna connector of Wi-Fi
- 3-axis accelerometer G-sensor
- Power Input: 9 ~ 36VDC input with Ignition
- Power Consumption: TBD
- Dimension: 178mm (W) x 100mm (H) x 187.15mm (D)(7" x 3.9" x 6.4")
- Weight: TBD

LCD Panel

- 6.95-inch TFT LCD Panel with LED Backlight
- 800 x 480 pixels (WVGA)
- Brightness: 450 cd/m² (typical)
- Contrast ratio: 500:1 (typical)

Touch Screen Sensor

- 4-wire resistant touch
- Anti-glare coating surface
- Transmission rate: 78 ± 3%

CPU & Chipset

- Intel® Atom™ Dual Core E3825 1.33GHz

Memory

- One 204-pin DDR3L 1600MHz SO-DIMM slot (up to 4GB)
  - Default 2GB

Expandable Storage

- 1 x SATAIII mSATA Slot (available option 16G and 32G)
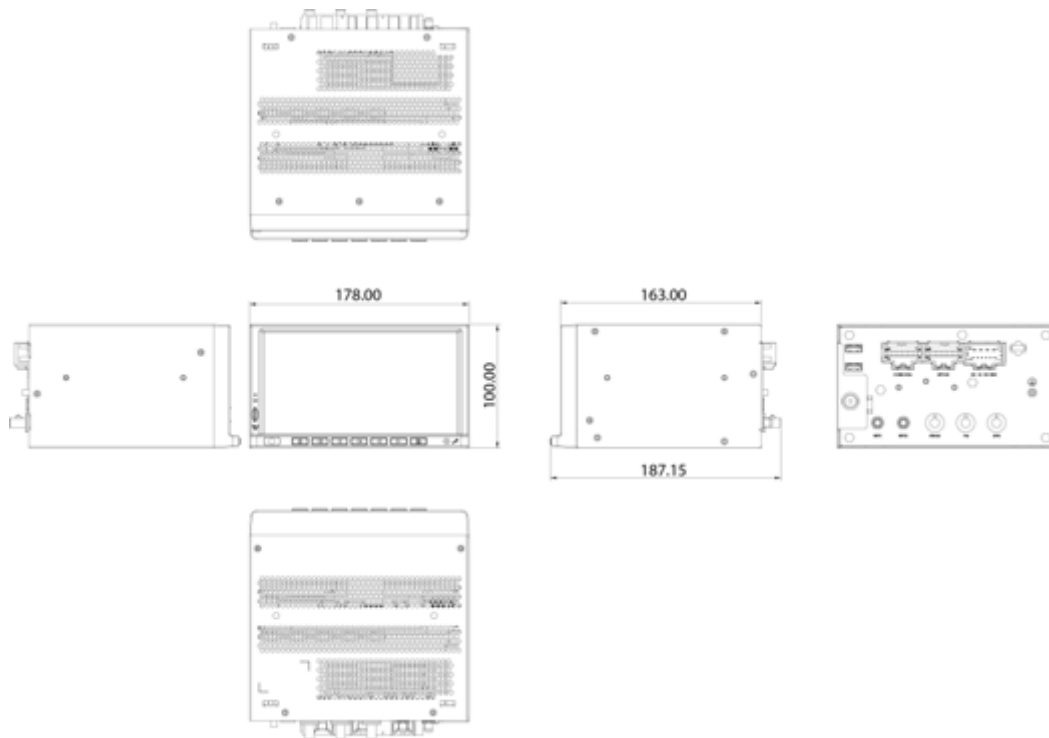
Expansion

- 1 x Half mini-PCIe socket (PCIe + USB) for WLAN and BT option
- 1 x mini-PCIe socket ((USB + UART) for WWAN option)

I/O Interface-Front

- 1 x power button (with LED)
- 2 x volume button (with LED)
- 1 x mute, 2 x auto scan for FM (with LED, forward, back)
- 1 x Quick Manu button (with LED)
- Light Sensor
- Internal Mic-in
- 1 x Micro SD socket
- 1 x Reset button

NEXCOM

Dimension Drawing

I/O Interface-Rear

- 3 connectors with lock for
  - 1 x power/ignition input
  - 1 x eCall event button (only for uBlox 3G module)
  - 1 x CAN Bus 2.0B
  - 4 x CVBS Video-In (for rear/side camera, AV input)
  - 4 x 20W audio ouput. Front right, front left, rear right and rear left
  - 1 x Line-in
  - 1 x VGA
- 1 x Fuse 15A
- 2 x USB 3.0

Communication Module

- 1 x On board GPS module
- 1 x WLAN or Bluetooth module for optional
- 1 x WWAN module for optional

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 S3 and S4 suspend mode; wake on RTC and SMS

Operating System

- Windows 8 Professional, WES8
- Windows 7, WES7
- Linux Tizen (kernel V3.2.0)

Environment

- Operating temperatures: Ambient with air -20°C to 50°C
- Storage temperatures: -30°C to 80°C
- Relative humidity: 10% to 95% (non-condensing)
- Vibration (random): 2g @5 ~ 500Hz
- Vibration
  Operating: MIL-STD-810G, 514.6 Procedure 1, Category 4
  Storage: MIL-STD-810G, 514.6 Procedure 1, Category 24
- Shock
  Operating: MIL-STD-810G, Method 516.6, Procedure I, trucks and semi-trailers=20g

Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, ground equipment=75g

Power Design & Protection

- Load dump and inductive load protection
- Cold cranking protection
- Transient voltage protection
- Electrostatic discharge protection

Standards/Certifications

- EMC
  - CE, FCC class B
- Power
  - SAE J1113
  - SAE J1455
  - ISO 7637-2
- Safety
  - EN 60950-1 LVD

Ordering Information

- **IVT 1100 (P/N: TBD)**
  6.95" In-vehicle Infotainment Computer with Touch Screen and Multifunctional Tracker and Intel® Atom™ Dual Core E3825 1.33GHz processor with 2GB DDR3L, GPS module and GPS antenna

- **Bundle Accessories**
  GPS/ GLONASS 5M Antenna
  Driver CD

VTC 100

Main Features

- Compact and fanless design
- ARM® Cortex®-A8 Processor with 720MHz frequency
- Variety Wireless communication options
- Built-in CAN Bus V2.0B; Optional support for OBDII module SAE J1939/J1708
- Wide range DC input from 9 ~ 36V
- Smart power management with Ignition on/off delay via software
- Control and low voltage protection
- Operating System Support WEC 7 and Linux 3.2 driver

Product Overview

VTC 100, 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 100 design. VTC 100 adopts the Cortex®-A8 Processor with 720MHz frequency. VTC 100 does not compromise with its space to scarify its functional features. An advanced GPS receiver and optional wireless communication are available. VTC 100 is the best choice with the cost effective solution for your vehicle application.

Specifications

MPU
- ARM® Cortex®-A8 Processor with 720MHz frequency

Memory
- On-board DDR2 256MB

Expansion
- 1 x CAN Bus 2.0B function, optional OBDII module (SAE J1939/J1708)
- 1 x mini-PCIe socket (USB) x 1 for WWAN option
- 1 x on-board uBlox NEO-6Q GPS module

I/O Interface-Front
- 2 x USB 2.0 host type A connector
- 1 x Line-out, 1 x Mic-in
- 1 x System reset button
- 2 x LED's for power, storage
- 1 x Power button
- 1 x SIM card socket
- 4 x Antenna hole reserved for SMA-type antenna connector (WWAN/WLAN)

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with Ignition and 6W typical power consumption
- 1 x DB9 RS-232 (COM1)
- 1 x DB9 RS-485 (COM2)
- 1 x DB9 female connector for 3GPI and 3GPO
- 1 x DB15 VGA
- 1 x RJ45 with LEDs for 10/100/1000Mbps Ethernet
- 1 x SMA-type GPS antenna connector

- 1 x Antenna hole reserved for SMA-type antenna connector (WWAN/WLAN)

Expandable Storage
- Micro SDHC Slot (Bundle with 4GB)

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

Operation System
- Windows Embedded Compact 7
- Linux 3.2

Dimensions
- 180mm (W) x 110mm (D) x 45mm (H)
- 0.5 Kg (1.10 Lb)

Construction
- Aluminum top case with metal sheet

Environment
- Operating temperatures: Ambient with air -20℃ to 70℃
- Storage temperatures: -40℃ to 80℃
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 2g @5 ~ 500 Hz
- Vibration:
  Operating: MIL-STD-810G, Method 514.6, Category 20, Ground Vehicle – Highway Truck

Dimension Drawing

VTC 100-A5E & VTC 100-A5U
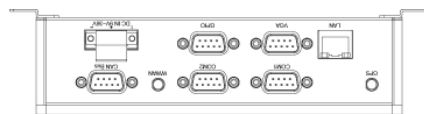
VTC 100-A1E & VTC 100-A1U & VTC 100-A2E
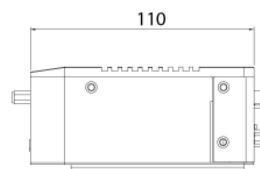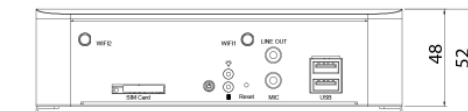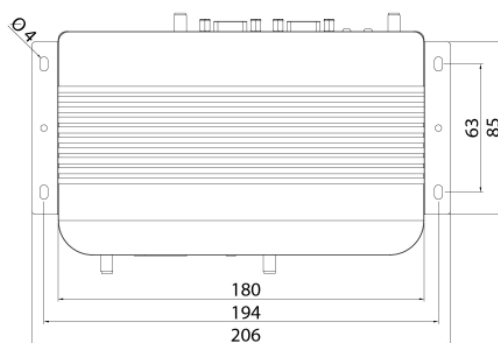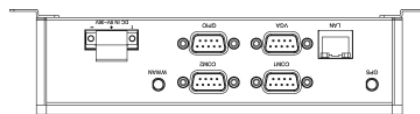
Storage: MIL-STD-810G, Method 514.6, Category 24, Integrity Test
- Shock:
Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=20g
Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, Ground equipment=75g

Standards/Certifications
- CE approval
- FCC Class B

Ordering Information

- **VTC 100-A1E (P/N: 10V00010000X0)**
  ARM® Cortex®-A8 720MHz Processor with 256MB DDR2, GPS and WEC7 system

- **VTC 100-A5E (P/N: 10V00010001X0)**
  ARM® Cortex®-A8 720MHz Processor with 256MB DDR2, GPS, OBD II module SAE J1939/J1708 and WEC7 system

- **VTC 100-A1U (P/N: 10V00010001X0)**
  ARM® Cortex®-A8 720MHz Processor with 256MB DDR2, GPS, 1 x CAN Bus 2.0B, Linux Ubuntu OS

- **VTC 100-A5U (P/N: 10V00010004X0)**
  ARM® Cortex®-A8 720MHz Processor with 256MB DDR2, GPS, 1 x CAN Bus 2.0B, OBDII module SAE J1939/J1708 and Linux Ubuntu OS

- **VTC 100-A2E (P/N: 10V00010002X0)**
  ARM® Cortex®-A8 720MHz Processor with 256MB DDR2, GPS, VIOB-WIFI-B01 and WEC7 system

VTC 1000

Main Features

- Compact and fanless design
- Built-in GPS receiver with pptional 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 module 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, (1 x RS-232<Default>) or (1 x RS-232 + 1 x RS-422) or (1 x RS-232 + 1 x RS-485) selected by SW5 DIP Switch and BIOS setting <VTC 1000-R2 series>
- 1 x DB9 port, 4 x GPI and (2 x GPO + CAN Bus 2.0B<Default>) or (4 x GPO) selected by BIOS
- 1 x DB9 dual RS-485 (optional 2 x RS-422, or 1 x RS-422 and 1 x RS-485) <non VTC 1000-R2 series>
- 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)

Construction
- Aluminum top case with sheet metal

Dimension Drawing

VTC 1000-LV, VTC 1000-R2LV

VTC 1000, 1000-2G, 1000-DK, R2

VTC 1000-D2

185

120.5

46.6

40

219.4

Environment
- -30°C to 70°C (w/ industrial SSD) with air flow
  -20°C to 60°C (w/ commercial HDD) with air flow
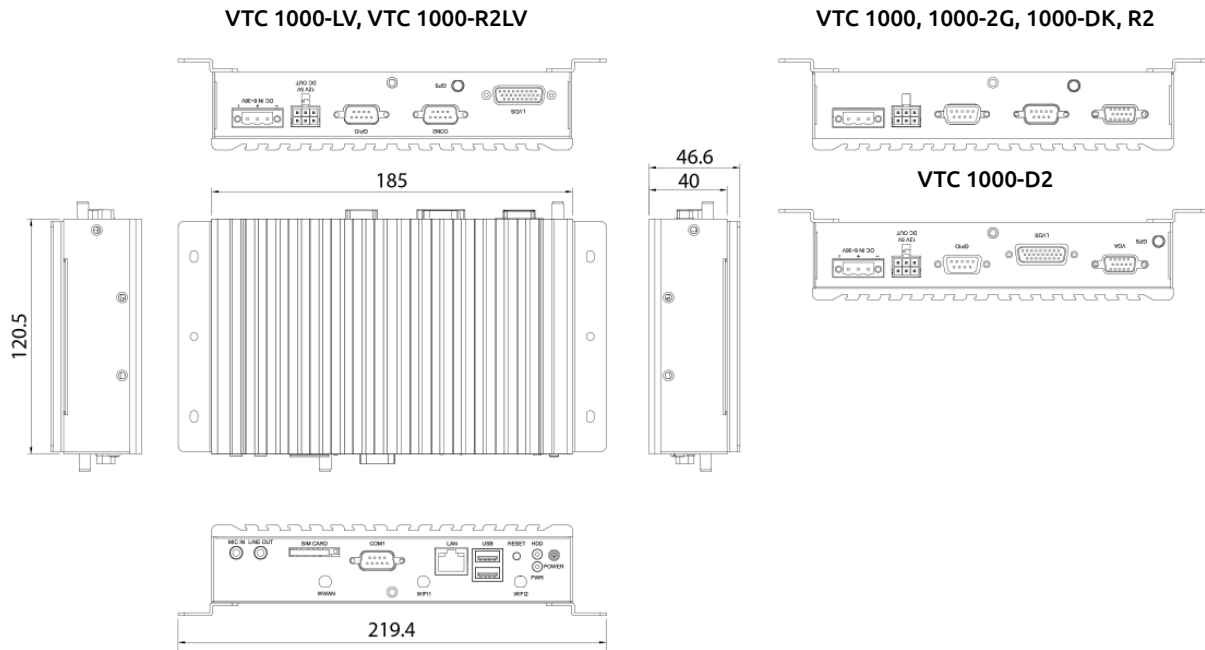- Storage temperatures: -40°C to 80°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 2g @5 ~ 500 Hz
- Vibration:
  Operating: MIL-STD-810F, Method 514.5, Category 20, Ground Vehicle – Highway Truck
  Storage: MIL-STD-810F, Method 514.5, Category 24, Integrity Test
- Shock:
  Operating: 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)
10VK0WWAN01X0	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

VTC 1010

Main Features

- Intel® Atom™ processor E3827, 1.75GHz
- Dual SIM cards + dual WWAN modules support
- Wide operating temperature -30°C ~ 70°C
- Built-in CAN 2.0B. Optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- 4 x mini-PCIe socket rich expansion capability
- Wake on RTC/SMS via WWAN module
- Voice communication via WWAN module
- Compliant with MIL-STD-810G
- Built-in U-blox UBX-G6010 GPS, optional Dead Reckoning support

Product Overview

VTC 1010 features next generation Intel® Atom™ processor E3827, 1.75GHz, with powerful graphic and multimedia enhancement. VTC 1010 is packed rugged, fanless, and 1 DIN compact enclosure. It is specifically designed to comply with stringent MIL-STD-810G military standard. VTC 1010 comes with build-in CAN BUS 2.0B interface and optional OBDII (SAE J1939) port to monitor the vehicle operating status real-time and troubleshoot a non-working vehicle. With dual SIM cards design, it allows the choice of the best service carrier network and minimizes roaming cost. VTC 1010 can be configured to work with two independent WWAN connections and can effectively increase the bandwidth for faster massive data transfer over the air. VTC 1010 also supports two-way voice communication. Equipped with intelligent vehicle power management, VTC 1010 can be waked up by ignition, RTC timer, or remote dial-up for flexible operation or maintenance. VTC 1010 can satisfy different demands for versatile telematics applications, such as infotainment, fleet management, dispatching system and mobile video surveillance.

Specifications

CPU
- Intel® Atom™ processor E3827, Dual Core 1.75GHz

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

Storage
- 1 x 2.5" SATA 2.0
- 1 x External accessible SD card socket

Expansion
- 1 x Full size mini-PCIe socket (USB 2.0)
- 1 x Full size mini-PCIe socket (USB 2.0+ PCIe)
- 1 x Full size mini-PCIe socket (mSATA or 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, Gyroscope, and e-Compass sensors

I/O Interface-Front
- 8 x LED for power, system status, storage, WWAN, WLAN, GPS, LAN, GPIO
- 2 x External accessible SIM card socket (selectable) with cover
- 1 x Audio jack 3.5mm for WWAN voice communication, including 1 x Mic-in and 1 x Line-out
- 1 x External accessible SD 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

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with ignition and 11W typical power consumption
- 1 x Type A USB 2.0 compliant host, supporting system boot up
- 1 x RJ45 10/100/1000 Fast Ethernet with LED
- 1 x Phone jack 3.5mm for 1 x Mic-in (for WWAN voice communication)
- 1 x Phone jack 3.5mm for 1 x Line-out (for PC audio)
- 1 x DB-15 VGA. Resolution up to 2560 x 1600 @60Hz
- 1 x DP port. Resolution up to 2560 x 1600 @60Hz
- 1 x DB-9 for RS-232
- 4 x Antenna hole for GPS/WWAN/WLAN/BT
- 1 x LHF 60-pin connector
  1 x 6-pin power connector, 12VDC output (max: 1A)
  1 x Type A female USB 2.0 compliant host, supporting system boot up
  1 x DB-9 RS-232
  1 x DB-9 RS-422/485
  1 x DB-9 female 3 x DI and 3 x DO. On board CAN 2.0B signals
  (Programmable Digital Input)
    Input voltage (Internal Type): 5VDC TTL (default)
    Input voltage (Source Type): 3 ~ 12VDC

Dimension Drawing
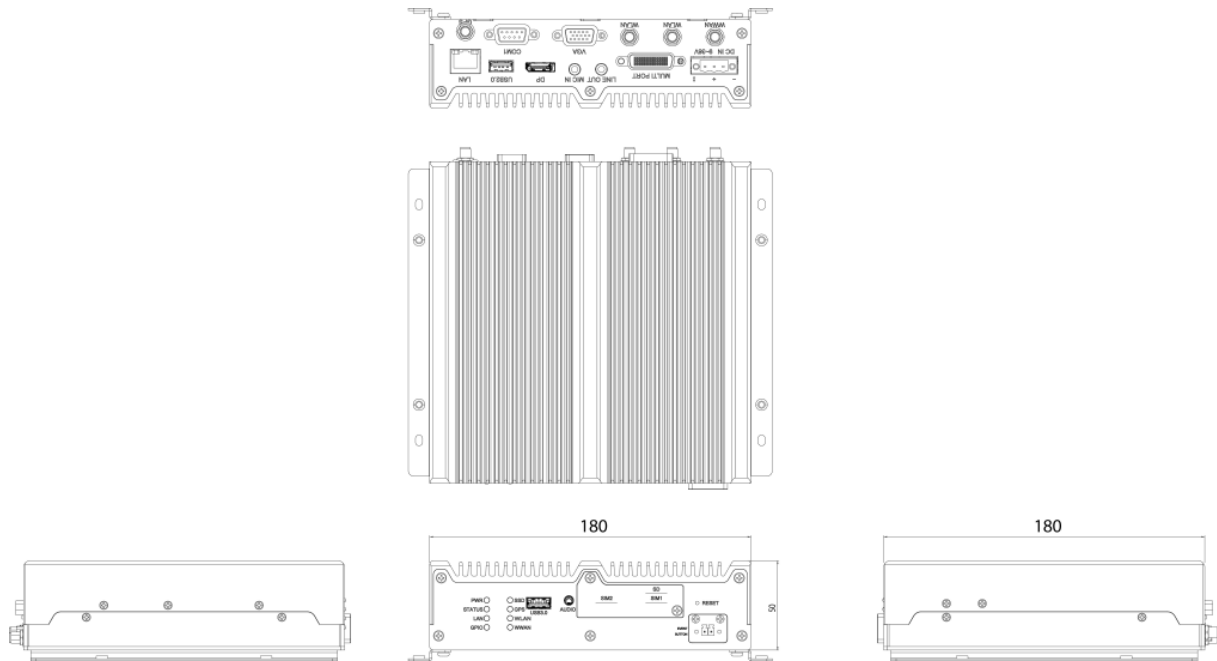
(Programmable Digital Output)
Digital output (Sink Type): 5VDC TTL (default), max current: 20mA
Digital output (Source Type): 3 ~ 24VDC, max current: 250mA
1 x optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
1 x DB-9 for optional GPS Dead Reckening module
4 x BNC connector Video-In for optional 4-channel video capture card
4 x Audio connector for 7.1 channel audio output (front, center/woofer, rear surround, side surround)

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 Professional, WES8
* Windows 7, WES7
* Tizen IVI
* Fedora

Dimensions
* 180mm (W) x 180mm (D) x 50mm (H) (7.09" x 7.09" x 1.97")
* 1.7kg

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, SSD)
* Vibration (SSD):
  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):

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 1010-BK (P/N: 10V00101000X0))**
  Intel® Atom™ dual core processor E3827 1.75GHz CPU, 2GB DDR3L SO-DIMM, VGA/DP Output, 1 LAN, 2 x RS-232, 1 x RS-422/485, 3 x DI, 3 x DO, 3 x USB, 12VDC output

VTC 2100

Main Features

- Build-in Intel® Atom™ D410 1.6GHz processor
- Internal wireless communication (3.5G, GSM/GPRS, WLAN, BT)
- Smarter ignition power on/off, delay-time and low voltage protection
- PCI-104 and mini card for expansion

- 8 ~ 60V wide range DC power input
- Dual VGA output (Clone mode)
- Fanless design
- Support 2 x RS-232/1 x RS-485

Product Overview

The VTC 2100 is an economic version of car pc with high performace for use in transportation application. The VTC 2100 system is designed in a very compact form factor, yet maintaining the industrial requirements for high availability, wide operation temperature range, and better vibration protection. The design also follows the in-vehicle industrial standard, like eMark. More features required for in-vehicle operations, such as power ignition delay control, low-power protection, SMBus connection and capture module, etc., are continued from others of NEXCOM's in-vehicle computer products. The GPS is an integrated function of VTC 2100. With expansion capability, the 3.5G, Bluetooth, etc., can be added to cover varieties of application requirements. Dual VGA display connections make the VTC 2100 an ideal choice for in-vehicle signage platforms as well.

Specifications

CPU
- Intel® Atom™ D410 Single Core 1.6GHz

Main Chipset
- ICH8M

Memory
- One 200-pin DDR2 667/800MHz SO-DIMM slot (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 module with Dead Reckoning
- 1 x PCI-104 x 1

I/O Interface-Front
- 1 x Line-out, 1 x Mic-in
- 1 x SIM card socket
- 1 x System reset button
- 2 x USB 2.0 host type A connector
- 4 x LED's for power, storage, WLAN/HSDPA and GPIO
- 1 x Power button
- 4 x Antenna hole reserved for SMA-type antenna connector (WWAN/WLAN/BT)

I/O Interface-Rear
- 1 x 8 ~ 60VDC input with Ignition and 23W typical power consumption
- 1 x 5V/1A and 12V/1A DC output, SMBus
- 1 x DB26 LVDS interface with 12V and USB 2.0
- 1 x DB9 female connector for 4GPI and 4GPO
- 2 x DB9 RS-232 (COM1, COM2)
- 1 x DB9 RS-485 w/auto flow control (COM3, optional RS-232)
- 2 x DB15 VGA (clone mode)
- 1 x Line-out, 1 x Mic-in
- 2 x USB 2.0 host type A connector
- 1 x RJ45 with LEDs for 10/100/1000Mbps Ethernet
- 1 x SMA-type GPS antenna connector

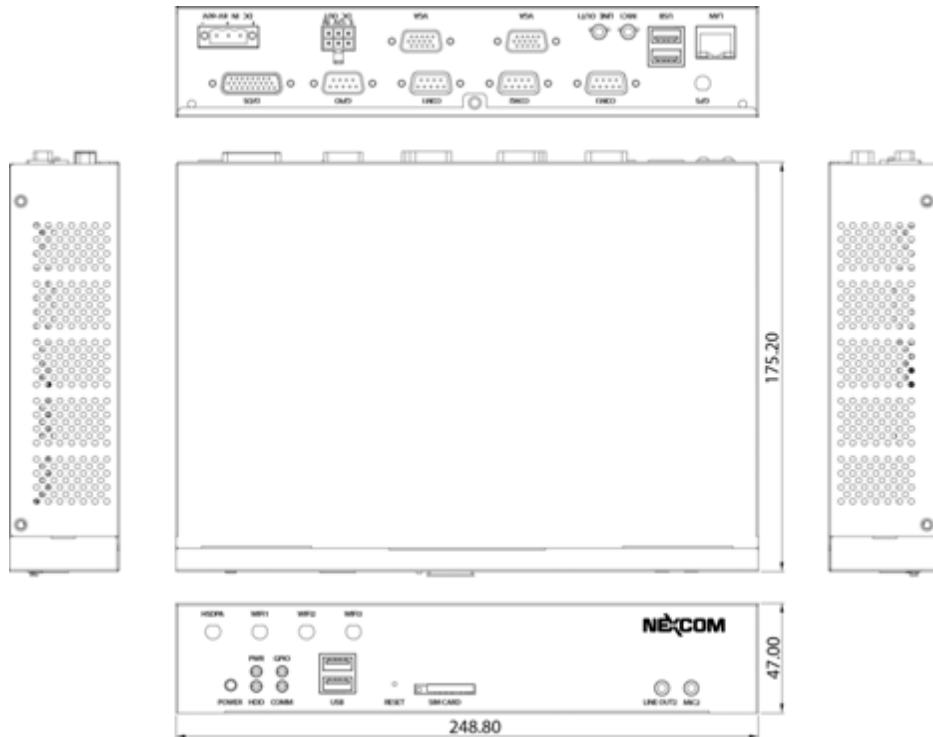### Expandable Storage
- 1 x 2.5" SATA II HDD Bay

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 S3/S4 suspend mode

Operating System
- Windows XP/WES2009
- WES 7E

NEXCOM

Dimension Drawing

Dimensions
- 248.8mm (W) x 175.2mm (D) x 47mm (H) (9.8" x 6.9" x 1.85")
- 1.49 Kg (3.28 Lb)

Construction
- Metal sheet

Environment
- Operating temperatures:
  Ambient with air -10℃ to 50℃ (SSD)/-10℃ to 50℃ (HDD)
- Storage temperatures: -40℃ to 80℃
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random):
  2g@5 ~ 500 Hz with SSD; 1g@5 ~ 500 Hz with HDD (In operation)
- 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
  equipment=75g

Standards/Certifications
- CE approval
- FCC Class B
- e13 Mark

Ordering Information

- **VTC 2100 (P/N: 10V00210000X0)**
  Intel® Atom™ D410 1.6GHz processor w/1GB DDR2, GPS module and GPS antenna

- **Optional Accessorie**

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)
10VK0WWAN01X0	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

VTC 6200

Main Features

- Built-in Intel® Atom™ D510 Dual Core 1.6GHz processor
- Internal wireless communication (3.5G, GSM/GPRS, WLAN, BT)
- Smarter ignition power on/off, delay-time and low voltage protection
- PCI104, mini-PCIe socket, and proprietary PCIe module expansion
- 8~60V wide range DC power input

- Dual VGA output (clone mode)
- Rugged fanless design to meet IP65 and MIL standard
- Flexible chassis design for PCI-104 and HDD can be used at the same time
- Support 2 x isolated RS232 ports (COM1, COM2)
- Isolated GPIO

Product Overview

NEXCOM's popular VTC Series range has been extended with the launch of VTC 6200, a dedicated computing solution for in-vehicle surveillance applications. The VTC 6200 utilizes the powerful video processing capability of the of Intel® Atom™ D510 processer which can support Dual Core technology. With additional Video Capture Module, VTC 6200 is the ideal solution for in-vehicle surveillance applications.

Specifications

CPU
- Intel® Atom™ D510 Dual Core 1.6GH

Main Chipset
- ICH8M

Memory
- One 200-pin DDR2 667/800MHz SO-DIMM slot (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 module with Dead Reckoning
- 1 x PCI-104

I/O Interface-Front
- 1 x Line-out, 1 x Mic-in
- 1 x SIM card socket
- 1 x System reset button
- 2 x USB 2.0 host type A connector
- 4 x LED's for power, storage, WLAN/HSDPA and GPIO
- 1 x Power button
- 4 x Antenna hole reserved for SMA-type antenna connector (WWAN/WLAN/BT)

I/O Interface-Rear
- 1 x 8~60VDC input with Ignition and 23W typical power consumption
- 1 x 5V/1A and 12V/1A DC output, SMBus

- Fuse
- 1 x DB26 LVDS interface with 12V and USB 2.0
- 1 x DB9 female connector for isolated 4GPI and 4GPO
- 2 x DB9 isolated RS232 port (COM1, COM2)
- 2 x DB9 RS-232 (COM3, COM4)
- 1 x DB9 isolated RS485 (COM5)
- 2 x DB15 VGA (clone mode)
- 1 x Line-out, 1 x Mic-in
- 2 x USB 2.0 host type A connector
- 1 x RJ45 with LEDs for 10/100/1000Mbps Ethernet
- 1 x SMA-type GPS antenna connector
- Mounting hole reserved:
  For RF Coax to SMA Bulkhead x 1 (for GPS) reference, signal connect to function board

Expandable Storage
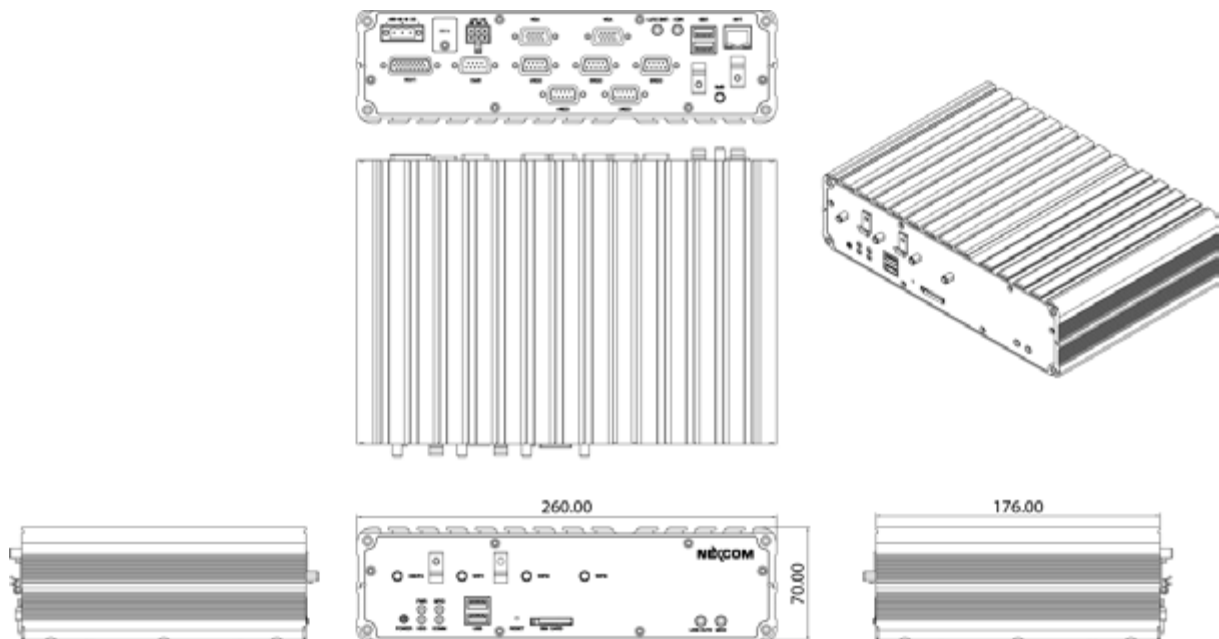- 1 x 2.5" SATA II HDD bay
- 1 x SATA DOM

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 S3/ S4 suspend mode

Operating System
- Windows XP/WES2009
- WES 7E

Dimension Drawing

260.00

176.00

70.00

Dimensions
- 260mm (W) x 176mm (D) x 70mm (H) (10.24" x 6.93" x 2.75")
  (support HDD and PCI-104 at the same time)
- 2.65 Kg (5.84 Lb)

Construction
- Aluminum enclosure with fanless design

Environment
- Operating temperatures:
  Ambient with air -30°C to 60°C (SSD)/-30°C to 50°C (HDD)
- Storage temperatures: -40°C to 80°C
- Relative humidity: 10% to 90% (Non-condensing)
- Vibration (random):
  2g@5~500 Hz with SSD; 1g@5~500 Hz with HDD (in operation)
- 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 6200 (P/N : 10V00620000X0)**
  Intel® Atom™ D510 1.66GHz processor, 1GB DDR2, GPS module and GPS antenna

- **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
10VK0033V00X0	VTK 33V, anti-vibration/fan Kit
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)
10VK0WWAN01X0	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

VTC 6200-NI

Intel® Atom™ D510 Fanless In-Vehicle Computer

Main Features

- Built-in Intel® Atom™ D510 Dual Core 1.66GHz processor
- Internal wireless communication (3.5G, GSM/ GPRS, WLAN, BT)
- Smarter ignition power on/off, delay-time and low voltage protection
- PCI-104 and mini card expansion interface
- 8 ~ 60V wide range DC power input
- Dual VGA output (clone mode)
- Rugged fanless design to meet MIL standard

Product Overview

NEXCOM's popular VTC Series range has been extended with the launch of VTC 6200-NI, a dedicated computing solution for in-vehicle surveillance applications. The VTC 6200-NI utilizes the powerful video processing capability of the of Intel® Atom™ D510 processer which can support Dual Core technology. With additional Video Capture Module, VTC 6200-NI is the ideal solution for in-vehicle surveillance applications.

Specifications

CPU
- Intel® Atom™ D510 Dual Core 1.6GHz

Main Chipset
- ICH8M

Memory
- One 200-pin DDR2 667/800MHz SO-DIMM slot (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 module with Dead Reckoning
- 1 x PCI-104

I/O Interface-Front
- 1 x Line-out, 1 x Mic-in
- 1 x SIM card socket
- 1 x System reset button
- 2 x USB 2.0 host type A connector
- 4 x LED's for power, storage, WLAN/ HSDPA and GPIO
- 1 x Power button
- 4 x Antenna hole reserved for SMA-type antenna connector (WWAN/ WLAN/BT)

I/O Interface-Rear
- 1 x 8 ~ 60VDC input with Ignition and 23W typical power consumption
- 1 x 5V/1A and 12V/1A DC output, SMBus

- Fuse
- 1 x DB9 female connector for isolated 4GPI and 4GPO
- 2 x DB15 VGA (clone mode)
- 1 x DB26 LVDS interface with 12V and USB 2.0
- 2 x DB9 RS-232 (COM1, COM2)
- 1 x DB9 RS-485 (COM3)
- 1 x Line-out, 1 x Mic-in
- 2 x USB 2.0 host type A connector
- 1 x RJ45 with LEDs for 10/100/1000Mbps Ethernet
- 1 x SMA-type GPS antenna connector

Expandable Storage
- 1 x 2.5" SATA II HDD bay
- 1 x SATA DOM

Power Management
- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level on/off delay time by software
- Status of ignition and low voltage status can be detected by software
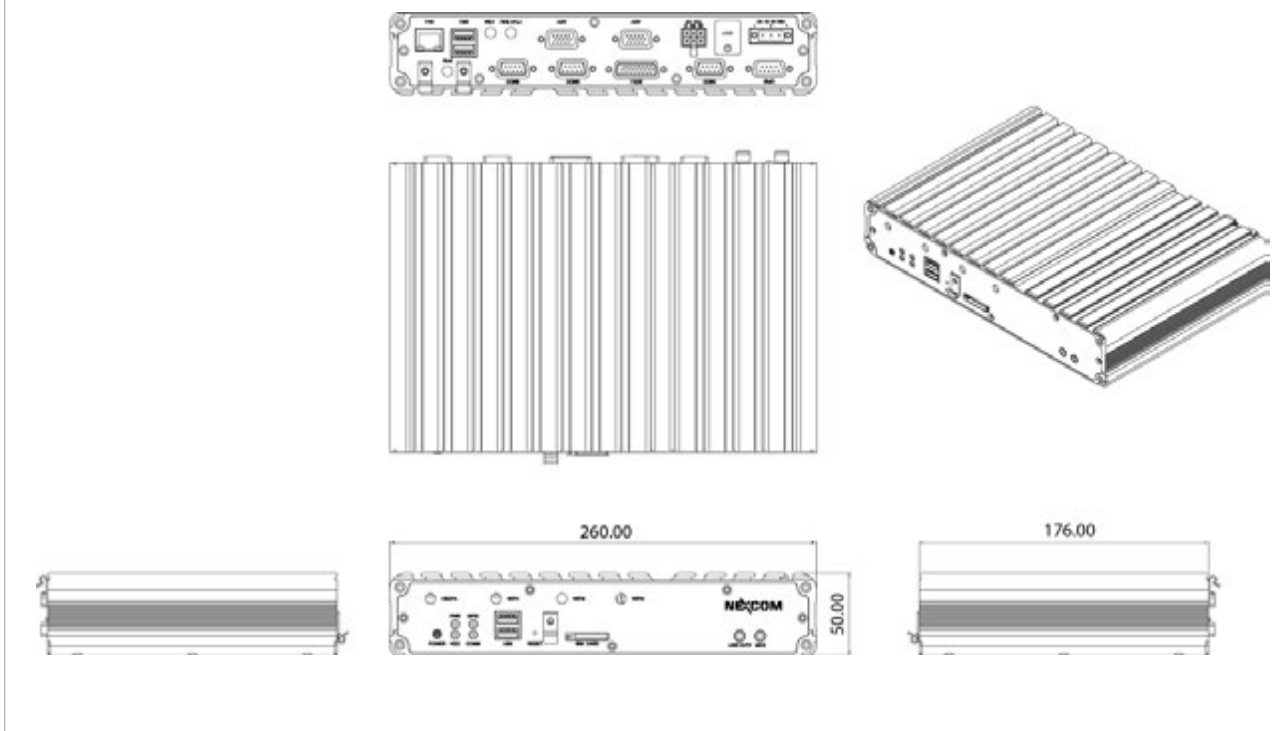- Support S3/S4 suspend mode

Operating System
- Windows XP/ WES2009
- WES 7E

Dimensions
- 260mm (W) x 176mm (D) x 50mm (H) (10.24" x 6.93" x 1.97")
- 2.19 Kg (4.82 Lb)

Dimension Drawing

Construction
* Aluminum enclosure with fanless design

Environment
* Operating temperatures :
  Ambient with air -30℃ to 60℃ (SSD)/-30℃ to 50℃ (HDD)
* Storage temperatures: -40℃ to 80℃
* Relative humidity: 10% to 90% (Non-condensing)
* Vibration (random):
  2g@5~500 Hz with SSD; 1g@5~500 Hz with HDD (in operation)
* Vibration (with SSD):
  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 (with SSD):
  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 6200-NI (P/N : 10V00620002X0)**
  Intel® Atom™ D510 1.66GHz processor, 1GB DDR2, GPS module and GPS antenna

* **VTC 6200-NI-DK (P/N : 10V00620006X0)**
  Intel® Atom™ D510 1.66GHz processor, 1GB DDR2, dead reckoning GPS module and GPS antenna

* **VTC 6200-VR4 (P/N : 10V00620009X0)**
  Intel® Atom™ D510 1.66GHz processor, 1GB DDR2, GPS module, GPS antenna and 4CH Capture card

* **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
10VK0033V00X0	VTK 33V, anti-vibration/fan Kit
10VK0061B00X0	VTK 61B, back-up battery kit for 4 hours in system full loading
10VK0060P00X0	VTK 60P, IP65 protection kit for VTC 6000
10VK0061P00X0	VTK 61P, IP65 protection kit for VTC 61XX series & VTC 6200-NI
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM : Q802XKN5F, w/antenna & cable (without assembly in NEXCOM)
10VK0WWAN01X0	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

VTC 6201

Intel® Atom™ D510 Fanless In-Vehicle Computer

with Three GigaLAN and Two SIM Card Slots Support

Main Features

- Build-in Intel® Atom™ D510 Dual Core 1.66GHz processor
- Support three Ethernet LAN Ports
- Dual SIM card slots available for vary carriers
- Variety Wireless Communication (WLAN/BT/WWAN)
- Dual VGA output (clone mode)
- PCI-104 and mini card expansion interface
- 9 ~ 60V wide range DC power input
- Smarter ignition power on/off, delay-time and low voltage protection
- Rugged fanless design to meet MIL standard

Product Overview

With the launch of VTC 6201, VTC series has extended its market from in-vehicle to rail application. Keeping the same mechanical housing as VTC 6200-NI and utilize Intel® Atom™ D510 processor, VTC 6201 additionally supports multiple Ethernet LAN ports and dual sim card slot. Moreover, it provides the optional M12 connectors to replace RJ45 to enforce its connectivity in the server vibration environment.

Specifications

CPU
- Intel® Atom™ D510 Dual Core 1.66GHz

Main Chipset
- ICH8M

Memory
- One 200-pin DDR2 667/800MHz SO-DIMM slot (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 module with Dead Reckoning
- 1 x PCI-104

I/O Interface-Front
- 1 x Line-out, 1 x Mic-in
- 1 x System reset button
- 2 x SIM card sockets
- 2 x USB 2.0 host type A connector
- 1 x Power button
- 4 x Antenna hole reserved for SMA-type antenna connector (WWAN/WLAN/BT)
- 4 x LED's for power, storage, WLAN/WWAN and GPIO

I/O Interface-Rear
- 1 x 9 ~ 60VDC input with ignition and 23W typical power consumption
- 1 x 5V/1A and 12V/1A DC output, SMBus

- 2 x DB15 VGA (clone mode)
- 2 x USB 2.0 host type A connector
- 1 x Line-out, 1 x Mic-in
- 3 x RJ45 with LED's for 10/100/1000Mbps Ethernet (optional M12 connectors x 2)
- 2 x DB9 RS-232 (COM1, COM2)
- 1 x DB9 RS-485 (COM3)
- 1 x DB26 LVDS interface with 12V and USB 2.0
- 1 x SMA antenna hole for GPS
- 1 x DB9 FEMALE CONNECTOR FOR 4GPI and 4GPO
- 1 x FUSE

Expandable Storage
- 1 x 2.5" SATA II HDD Bay or SATA DOM x 1

Power Management
- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level on/off delay time by software
- Status of ignition and low voltage status can be detected by software
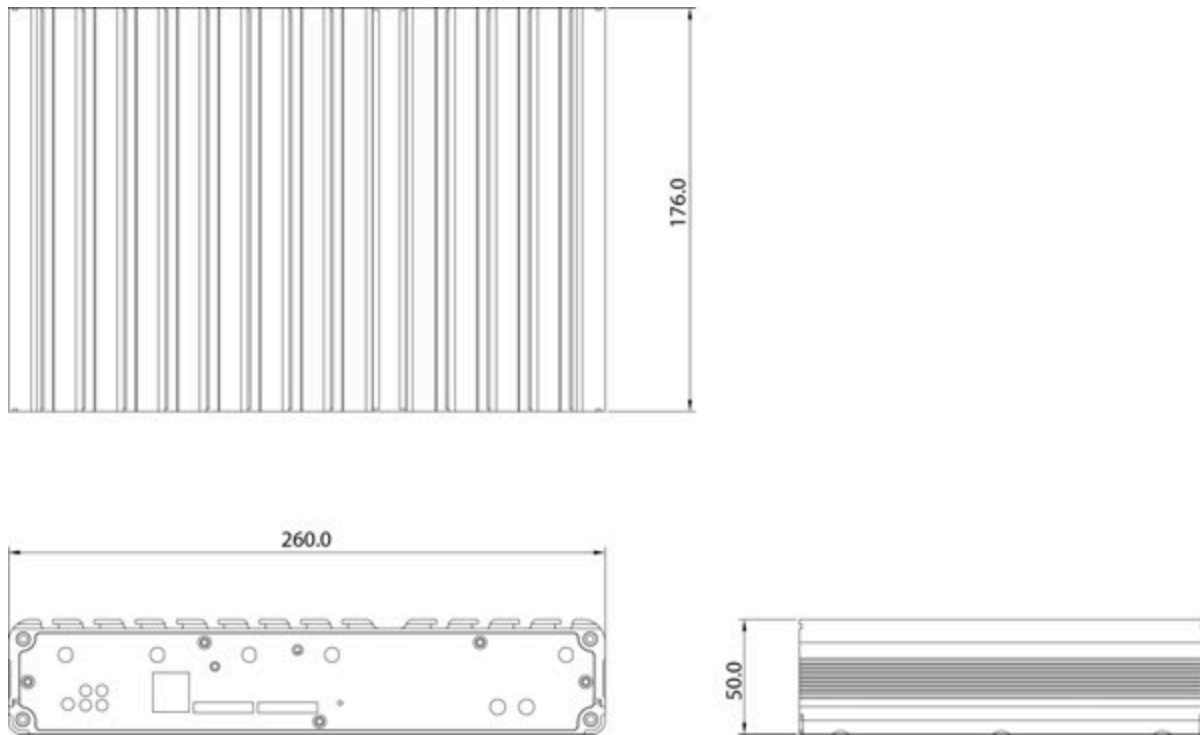- Support S3/S4 suspend mode

Operating System
- Windows XP/WES2009
- WES 7E

Dimensions
- 260mm (W) x 176mm (D) x 50mm (H) (10.24" x 6.93" x 1.97")
- 2.19 Kg (4.82 Lb)

Dimension Drawing

Construction
* Aluminum enclosure with fanless design

Environment
* Operating temperatures:
  Ambient with air -30°C to 60°C (SSD)/-30°C to 50°C (HDD)
* Storage temperatures: -40°C to 80°C
* Relative humidity: 10% to 90% (Non-condensing)
* Vibration (random):
  2g@5 ~ 500 Hz with SSD; 1g@5 ~ 500 Hz with HDD (in operation)
* Vibration (with SSD):
  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 (with SSD):
  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

Protection Grade
* Optional protection kit for IP65 rating

Standards/Certifications
* CE approval
* FCC Class B
* e13 Mark

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
10VK0033V00X0	VTK 33V, anti-vibration/fan Kit
10VK0061B00X0	VTK 61B, back-up battery kit for 4 hours in system full loading
10VK0060P00X0	VTK 60P, IP65 protection kit for VTC 6000
10VK0061P00X0	VTK 61P, IP65 protection kit for VTC 61XX series & VTC 6200-NI
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM: Q802XKN5F, w/antenna & cable (without assembly in NEXCOM)
10VK0WWAN01X0	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

Ordering Information

* **VTC 6201 (P/N: 10V00620100X0)**
  Intel® Atom™ D510 1.66GHz processor, 1GB DDR2, GPS module and GPS antenna and in support of three GigaLAN and two sim card slots

* **VTC 6201-M (P/N: 10V00620101X0)**
  Intel® Atom™ D510 1.66GHz processor, 1GB DDR2, GPS module and GPS antenna and in support of two 10/100Mbps Ethernet LAN port with M12 connectors and two sim card slots

VTC 6210

Main Features

- Intel® Atom™ processor quad core E3845, 1.91GHz
- Three SIM cards + dual WWAN modules support
- Built-in U-blox UBX-G6010 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
- 1 x Antenna hole for GPS
- 2 x DB-9 RS-232 (RI/5V/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

NEXCOM

Dimension Drawing
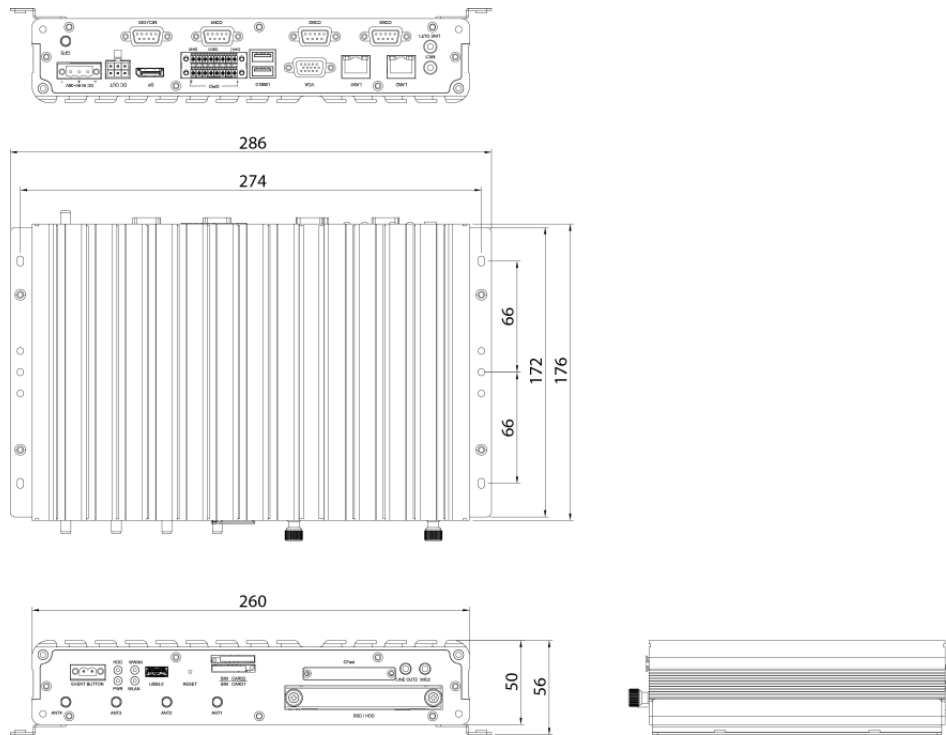
- 1 x 16-pin terminal block
  - 1 x CAN Bus 2.0B (on board)
  - 1 x optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
  - 8 x GPIO (Programmable Digital Input or optional isolation)
    Input Voltage (internal type): 5VDC TTL (default)
    Input Voltage (source type): 3 ~ 12VDC (Programmable Digital output or optional isolation)
    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

VTC 7100-BK

Intel® Atom™ D2550 Fanless In-Vehicle Computer

Main Features

- Build-in Intel® Atom™ D2550 1.86GHz processor
- Support two Ethernet LAN ports
- Removable SSD tray and CFast slot
- Optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- Support two SIM card sockets
- PCI-104 socket

- 9 ~ 36V wide range DC power input
- Smarter power management and low voltage protection
- Support 4 digital input and 4 digital output
- Rugged fanless design to meet MIL standard
- Internal wireless communication (3.5G, GSM/GPRS, WLAN, BT)
- Wake on RTC/SMS via WWAN module

Product Overview

VTC 7100-BK, adopting the high performance processor, Intel® Atom™ D2550, is a new generation of VTC series. In additional to keep the advantage of existing VTC series, it offers dual LAN ports for redundancy, two high speed interface for storage, 2.5" SATA and CFast. The storage is easily accessible from the front side for maintenance concern. Furthermore, it offers the ODBII for heavy duty truck such as SAE J1939. With the rich features, VTC 7100-BK can satisfy your demand in vehicle applications.

Specifications

CPU
- Intel® Atom™ D2550 1.86GHz

Main Chipset
- ICH10R

Memory
- One 204-pin DDR3 1066MHz SO-DIMM slot (up to 4GB)

Expansion
- 1 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) for WWAN option
- 1 x Bluetooth module for option
- 1 x on board uBlox NEO-6Q GPS module or optional GPS with dead

reckoning
- 1 x PCI-104 socket

I/O Interface-Front
- 1 x Line-out, 1 x Mic-in (for WWAN CM8000 voice communication)
- 2 x SIM card socket (selectable)
- 1 x System reset button
- 1 x USB 2.0 host type A connector
- 1 x Power button
- 1 x CFast with protection cover
- 1 x Accessible 2.5" SATA II SSD tray (optional lockable storage available)
- 4 x LED's for power, storage, WLAN/HSDPA and GPIO
- G sensor

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with ignition and 35W typical power consumption
- 1 x 12V/4A DC output, SMBus
- 1 x DB26 LVDS interface with 12V and USB 2.0
- 1 x DB-15 VGA
- 1 x DB9 RS-232 (default) or optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- 1 x DB9 RS-422/485
- 1 x DB9 female connector for 4 x DI and 4 x DO
  (Digital Input)
    Input voltage (Internal Type): 5VDC TTL (default)
    Input voltage (Source Type): 3 ~ 12VDC
  (Digital Output)
    Digital output (Sink Type): 5VDC TTL (default), max current: 20mA
    Digital output (Source Type): 3 ~ 24VDC, max current: 250mA
- 1 x DB15 VGA
- 2 x USB 2.0 host type A connector
- 2 x RJ45 with LEDs for 10/100/1000Mbps Ethernet
- 1 x Line-out, 1 x Mic-in
- 1 x SMA-type GPS antenna connector
- 4 x Antenna hole reserved for SMA-type antenna connector (WWAN/WLAN/BT)

Operating System
- WES 7
- Win7 Pro for Embedded
- Linux 2.6
- WES 2009
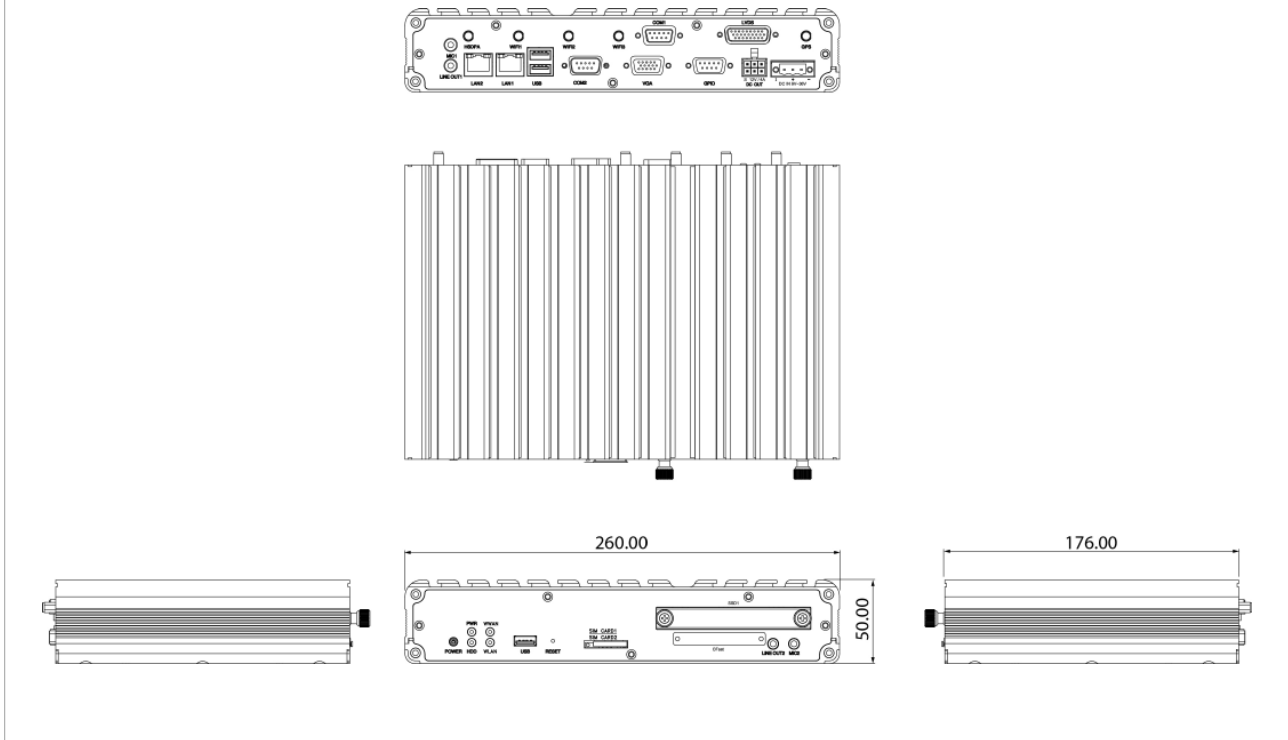
NEXCOM

Dimension Drawing

260.00

50.00

176.00

Power Management
* Selectable boot-up & shut-down voltage for low power protection by

Software
* Setting 8-level on/off delay time by software
* Status of ignition and low voltage status can be detected by software
* Support S3/S4 suspend mode

Dimensions
* 260mm (W) x 176mm (D) x 50mm (H) (10.24" x 6.93" x 1.97")
* 2.3 Kg (5.07 Lb)

Construction
* Aluminum enclosure with fanless design

Environment
* Operating temperatures:
  -30°C to 55°C (w/ industrial SSD) with air flow
  -20°C to 45°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, SSD)
* Vibration (SSD):
  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):
  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

Standards/Certifications
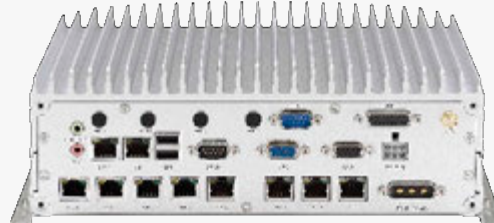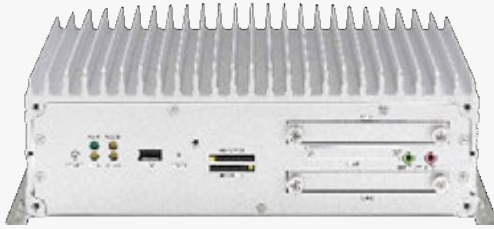* CE approval
* FCC Class A
* e13 Mark

Ordering Information

* **VTC 7100-BK (P/N: 10V00710003X0)**
  Intel® Atom™ D2550 1.86GHz, 2GB DDR3 SODIMM, LVDS/VGA
  Output, 1 x RS-232, 1 x RS-485/422

* **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
10VK0071F00X0	VTK 71F, fan Kit
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM: Q802XKN5F, w/antenna & cable (without assembly in NEXCOM)
10VK0WWAN01X0	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
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

VTC 7100-C8SK

Intel® Atom™ D2550 Fanless In-Vehicle Computer
with 8-channel PoE

Main Features

- Build-in Intel® Atom™ D2550 1.86GHz processor
- Support two Ethernet LAN ports
- Dual removable 2.5" SSD tray and CFast slot
- Optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- Support two SIM card sockets
- PCI-104 socket
- 9 ~ 36V wide range DC power input
- Smarter power management and low voltage protection
- Support 4 digital input and 4 digital ouput
- Rugged fanless design to meet MIL standard
- Support 8 channels PoE with IEEE802.3af
- Wake on RTC/SMS via WWAN module

Product Overview

VTC 7100-C8SK, adopting the high performance processor, Intel® Atom™ D2550, is a new generation of VTC series. In additional to keep the advantage of existing VTC series, it offers dual LAN ports for redundancy, Three high speed interface for storage, 2.5" SATA and CFast. The storage is easily accessible from the front side for maintenance concern. Furthermore, it offers the OBDII for heavy duty truck such as SAE J1939/J1708, and support 8-channel PoE. With the rich features, VTC 7100-C8SK can satisfy your demand in vehicle applications.

Specifications

CPU
- Intel® Atom™ D2550 1.86GHz

Main Chipset
- ICH10R

Memory
- One 204-pin DDR3 1066MHz SO-DIMM slot (up to 4GB)

Expansion
- 1 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) for WWAN option
- 1 x Bluetooth module for option
- 1 x on board uBlox NEO-6Q GPS module or optional GPS with dead reckoning

I/O Interface-Front
- 1 x Line-out, 1 x Mic-in (for WWAN CM8000 voice communication)
- 2 x SIM card socket (selectable)
- 1 x System reset button
- 1 x USB 2.0 host type A connector
- 1 x Power button
- 1 x CFast with protection cover
- 2 x Accessible 2.5" SATA II SSD tray (optional lockable storage available)
- 4 x LED's for power, storage, WLAN/HSDPA and GPIO
- G sensor

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with ignition and 36W typical power consumption
- 1 x 12V/4A DC output, SMBus
- 1 x DB26 LVDS interface with 12V and USB 2.0
- 1 x DB-15 VGA
- 1 x DB9 RS-232 (default) or optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- 1 x DB9 RS-422/485
- 1 x DB9 female connector for 4 x DI and 4 x DO
  (Digital Input)
    Input voltage (Internal Type): 5VDC TTL (default)
    Input voltage (Source Type): 3 ~ 12VDC
  (Digital Output)
    Digital output (Sink Type): 5VDC TTL (default), max current: 20mA
    Digital output (Source Type): 3 ~ 24VDC, max current: 250mA
- 2 x USB 2.0 host type A connector
- 2 x RJ45 with LEDs for 10/100/1000Mbps Ethernet
- 8 x RJ45 with LEDs for 10/100/1000Mbps Ethernet and support IEEE802.3af PoE (Max. 60W)
- 1 x Line-out, 1 x Mic-in
- 1 x SMA-type GPS antenna connector
- 4 x Antenna hole reserved for SMA-type antenna connector (WWAN/WLAN/BT)

Power Management
- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level on/off delay time by software
- Status of ignition and low voltage status can be detected by software
- Support S3/S4 suspend mode

Dimension Drawing

Operating System
- WES 7
- Win7 Pro for Embedded
- Linux 2.6
- WES 2009

Dimensions
- 260mm (W) x 176mm (D) x 90.1mm (H) (10.24" x 6.93" x 3.51")
- 4 Kg (8 Lb)

Construction
- Aluminum enclosure with fanless design

Environment
- Operating temperatures:
  -30°C to 55°C (w/ industrial SSD) with air flow
  -20°C to 40°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, SSD)
- Vibration (SSD):
  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):
  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

Standards/Certifications
- CE approval
- FCC Class A
- e13 Mark

Ordering Information

- **VTC 7100-C8SK (P/N: 10V00710009X0)**
  Intel® Atom™ D2550 1.86GHz, 2GB DDR3 SODIMM, LVDS/VGA Output, 1 x RS-232, 1 x RS-485/422 with 8-channel PoE

- **Optional A ccessories**

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
10VK0071F00X0	VTK 71F, fan Kit
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM: Q802XKN5F, w/antenna & cable (without assembly in NEXCOM)
10VK0WWAN01X0	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
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

VTC 7100-D1K

Main Features

- Build-in Intel® Atom™ D2550 1.86GHz processor
- Support two Ethernet LAN ports
- Removable 2.5" SSD tray and CFast slot
- Optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- Support two SIM card sockets
- PCI-104 socket

- 9 ~ 36V wide range DC power input
- Smarter power management and low voltage protection
- Support isolation digital input/output and analog input
- Rugged fanless design to meet MIL standard
- Support 3 x Isolation RS-232 and 2 x RS-422/485
- Wake on RTC/SMS via WWAN module

Product Overview

VTC 7100-D1K, adopting the high performance processor, Intel® Atom™ D2550, is a new generation of VTC series. In additional to keep the advantage of existing VTC series, it offers dual LAN ports for edundancy, two high speed interface for storage, 2.5" SATA and CFast. The storage is easily accessible from the front side for maintenance concern. Furthermore, it offers the ODBII for heavy duty truck such as SAE J1939/J1708 and isolation digital input, output, RS-232 and RS-422/485. With the rich features, VTC 7100-D1K can satisfy your demand in vehicle applications.

Specifications

CPU
- Intel® Atom™ D2550 1.86GHz

Main Chipset
- ICH10R

Memory
- One 204-pin DDR3 1066MHz SO-DIMM slot (up to 4GB)

Expansion
- 1 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) for WWAN option
- 1 x Bluetooth module for option
- 1 x on board uBlox NEO-6Q GPS module or optional GPS with dead reckoning

I/O Interface-Front
- 1 x Line-out, 1 x Mic-in (for WWAN CM8000 voice communication)
- 2 x SIM card socket (selectable)
- 1 x System reset button
- 1 x USB 2.0 host type A connector
- 1 x Power button
- 1 x CFast with protection cover
- 1 x Accessible 2.5" SATA II SSD tray (optional lockable storage available)
- 2 x DB9 isolation RS-422/485, Isolation: 5K Vrms
- 3 x DB9 isolation RS-232, Isolation: 5K Vrms
- 4 x LED's for power, storage, WLAN/WWAN and GPIO
- G sensor

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with ignition and 29W typical power consumption
- 1 x 12V/4A DC output, SMBus
- 1 x DB26 LVDS interface with 12V and USB 2.0
- 1 x DB-15 VGA
- 1 x DB9 RS-232 (default) or optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- 1 x DB9 RS-422/485
- 1 x DB9 female connector for 4 x DI and 4 x DO
  (Digital Input)
    Input voltage (Internal Type): 5VDC TTL (default)
    Input voltage (Source Type): 3 ~ 12VDC
  (Digital Output)
    Digital output (Sink Type): 5VDC TTL (default), max current: 20mA
    Digital output (Source Type): 3 ~ 24VDC, max current: 250mA
- 10-Pin terminal block for 8 x DI and 8 x DO
  Isolation: 5K Vrms
  (Isolated Digital Input)
    Input voltage (Internal Type): 5VDC TTL (default)
    Input voltage (Source Type): 0 ~ 30VDC
  (Isolated Digital Output)
    Digital output (Sink Type): 5VDC TTL (default), max current: 20mA
    Digital output (Source Type): 0 ~ 30VDC, max current: 250mA
- 5-Pin terminal block for 3 x analog input
  Isolation: 2K Vrms
  2 x isolated analog voltage input 12VDC (Max.)
  1 x isolated analog current input 10A (Max.)
- 2 x USB 2.0 host type A connector
- 2 x RJ45 with LEDs for 10/100/1000Mbps Ethernet

Dimension Drawing

260.00

73.62

176.00
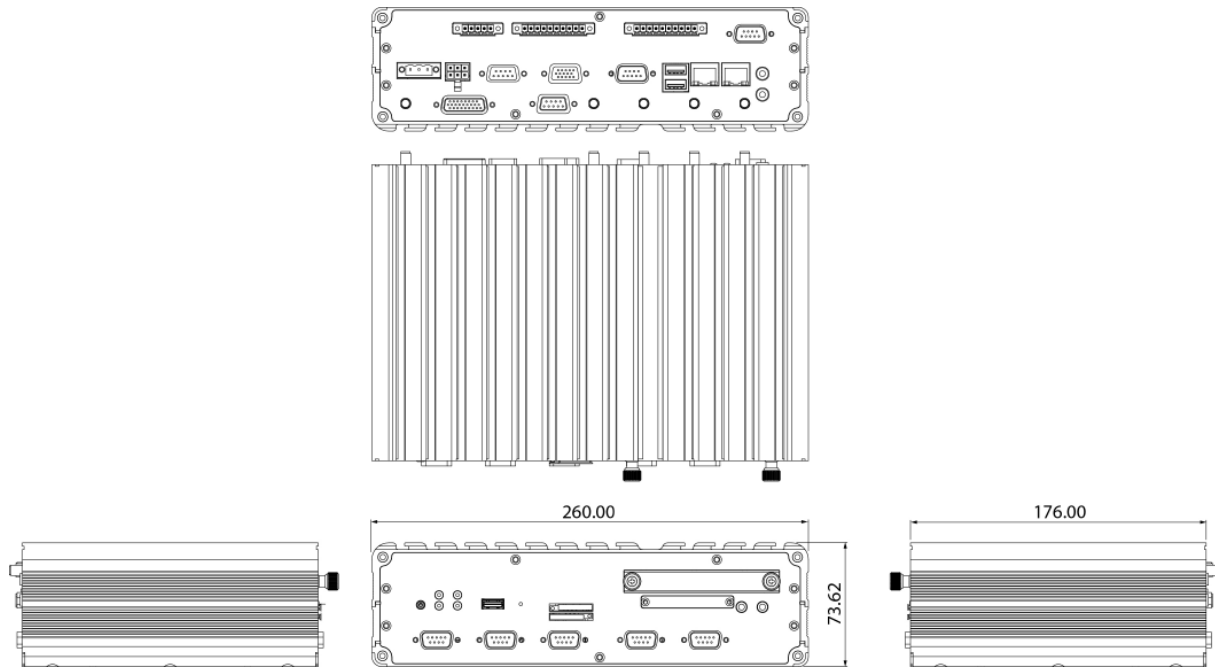
- 1 x Line-out, 1 x Mic-in Operating System
- 1 x DB9 male connector for 1 x OBDII (default) or 2 x OBDII (option)
- 1 x SMA-type GPS antenna connector
- 4 x Antenna hole reserved for SMA-type antenna connector (WWAN/WLAN/BT)

Power Management
- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level on/off delay time by software
- Status of ignition and low voltage status can be detected by software
- Support S3/S4 suspend mode

Operating System
- WES 7
- Win7 Pro for Embedded
- Linux 2.6
- WES 2009

Dimensions
- 260mm (W) x 176mm (D) x 73.6mm (H) (10.24" x 6.93" x 2.9")
- 4 Kg (7.47 Lb)

Construction
- Aluminum enclosure with fanless design

Environment
- Operating temperatures:
  -30°C to 55°C (w/ industrial SSD) with air flow
  -20°C to 45°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, SSD)
- Vibration (SSD):
  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):
  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

Standards/Certifications
- CE approval
- FCC Class A
- e13 Mark

Ordering Information

- **VTC 7100-D1K (P/N: 10V00711001X0)**
  Intel® Atom™ D2550 1.86GHz, 2GB DDR3 SODIMM, LVDS/VGA Output, 1 x RS-232, 1 x RS-485/422 with isolation DI/DO, COM,1 x OBDII (SAEJ1939 or J1708)

- **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
10VK0071F00X0	VTK 71F, fan Kit
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM: Q802XKN5F, w/antenna & cable (without assembly in NEXCOM)
10VK0WWAN01X0	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
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

VTC 7110-BK

Intel® Core™ i7 Fanless In-Vehicle Computer

Main Features

- Build-in Intel® Core™ i7 2610UE 1.5G Hz processor
- Support two Ethernet LAN ports
- Removable 2.5" SSD tray and CFast slot
- Optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- Support two SIM card slots
- PCI-104 socket

- 9 ~ 36V wide range DC power input
- Smarter power management and low voltage protection
- Support 4 digital input and 4 digital output
- Rugged fanless design to meet MIL standard
- Internal wireless communication (3.5G, GSM/GPRS, WLAN, BT)
- Wake on RTC/SMS via WWAN module

Product Overview

VTC 7110-BK, adopting the high performance processor, Intel® Core™ i7, is a new generation of VTC series. In additional to keep the advantage of existing VTC series, it offers dual LAN ports for redundancy, two high speed interface for storage, 2.5" SATA and CFast. The storage is easily accessible from the front side for maintenance concern. Furthermore, it offers the OBDII for heavy duty truck such as SAE J1939 and support 4 digital input and 4 digital output for device connectivity. With the rich features, VTC 7110-BK can satisfy your demand in vehicle applications.

Specifications

CPU
- Intel® Core™ i7 2610UE 1.5GHz

Main Chipset
- QM67

Memory
- One 204-pin DDR3 1333MHz SO-DIMM slot (up to 8GB)

Expansion
- 1 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) for WWAN option
- 1 x Bluetooth module for option
- 1 x Bundle GPS module or optional GPS with dead reckoning
- 1 x on board uBlox NEO-6Q GPS module or optional GPS with dead reckoning

I/O Interface-Front
- 1 x Line-out, 1 x Mic-in (for WWAN CM8000 voice communication)
- 2 x SIM card socket (selectable)
- 1 x System reset button
- 1 x USB 2.0 host type A connector
- 1 x Power button
- 1 x CFast with protection cover
- 1 x Accessible 2.5" SATA II SSD tray
  (optional lockable storage available)
- 4 x LED's for power, storage, WLAN/WWAN and GPIO
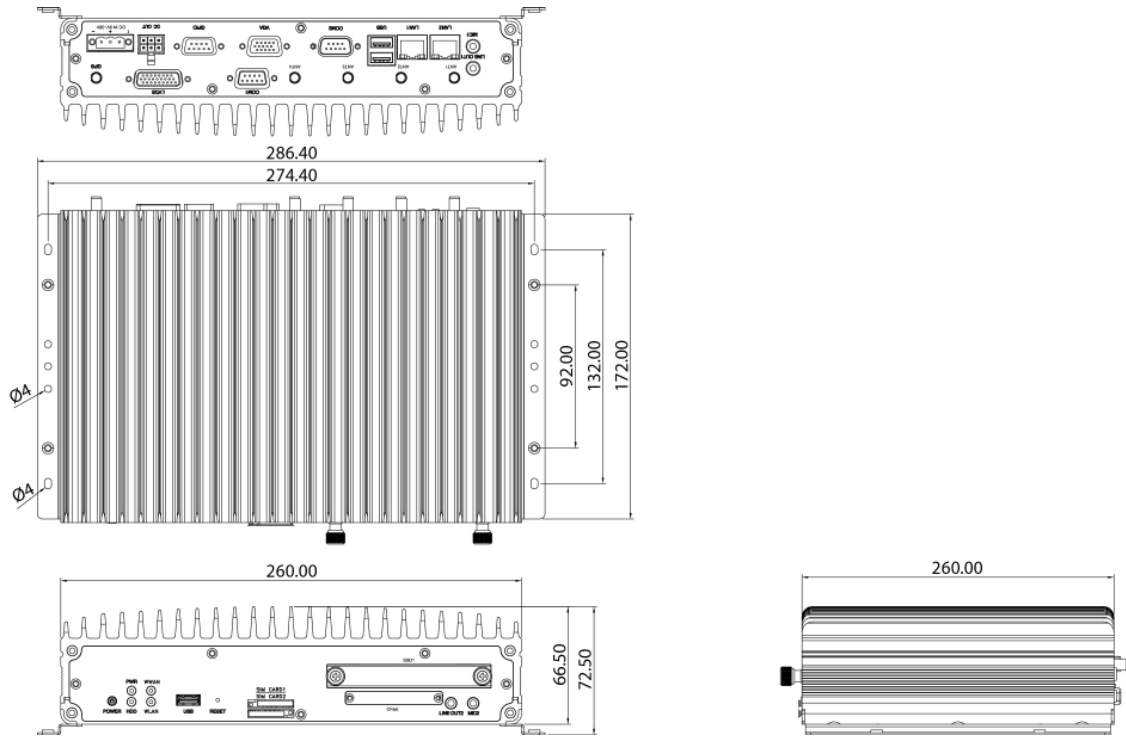- G sensor

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with ignition and 30W typical power consumption
- 1 x 12V/4A DC output, SMBus
- 1 x DB26 LVDS interface with 12V and USB 2.0
- 1 x DB15 VGA
- 1 x DB9 RS-232 (default) or optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- 1 x DB9 RS-422/485
- 1 x DB9 female connector for 4 x DI and 4 x DO
  (Digital Input)
    Input voltage (Internal Type): 5VDC TTL (default)
    Input voltage (Source Type): 3 ~ 12VDC
  (Digital Output)
    Digital output (Sink Type): 5VDC TTL (default), max current: 20mA
    Digital output (Source Type): 3 ~ 24VDC, max current: 250mA
- 2 x USB 2.0 host type A connector
- 2 x RJ45 with LEDs for 10/100/1000Mbps Ethernet
- 1 x Line-out, 1 x Mic-in
- 1 x SMA-type GPS antenna connector
- 4 x Antenna hole reserved for SMA-type antenna connector (WWAN/WLAN/BT)

Power Management
- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level on/off delay time by software
- Status of ignition and low voltage status can be detected by software
- Support S3/S4 suspend modeOperating System

NEXCOM

Dimension Drawing

Operating System
- WES 7
- Win7 Pro for Embedded
- Linux 2.6
- WES 2009

Dimensions
- 260mm (W) x 176mm (D) x 66.5mm (H) (10.24" x 6.93" x 2.59")
- 3.25 Kg (7.16 Lb)

Construction
- Aluminum enclosure with fanless design

Environment
- Operating temperatures:
  -30°C to 50°C (w/ industrial SSD) with air flow
  -20°C to 45°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, SSD)
- Vibration (SSD):
  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):
  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
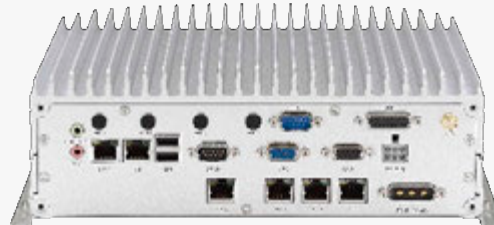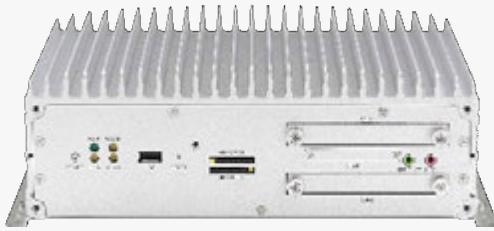
Standards/Certifications
- CE approval
- FCC Class A
- e13 Mark

Ordering Information

- **VTC 7110-BK (P/N: 10V00711006X0)**
  Intel® Core™ i7 1.5GHz, Industrial Grade 2GB DDR3 SODIMM, LVDS/VGA Output, 1 x RS-232, 1 x RS-485/422

- **VTC 7110-B2K (P/N: 10V00711010X0)**
  Intel® Core™ i7 1.5GHz, Industrial Grade 2GB DDR3 SODIMM, DVI-D/VGA Output, 1 x RS-232, 1 x RS-485/422

- **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
10VK0071F00X0	VTK 71F, fan Kit
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM: Q802XKN5F, w/antenna & cable (without assembly in NEXCOM)
10VK0WWAN01X0	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/MA180P
60233SAM17X00	GPRS/UMTS/HSDPA antenna, SMA, support 850, 900, 1800, 1900 and 2100 MHz
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

VTC 7110-C4SK

Main Features

- Build-in Intel® Core™ i7 2610UE 1.5G Hz processor
- Support two Ethernet LAN ports
- Dual removable 2.5" SSD tray and CFast slot
- Optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- Support two SIM card slots
- PCI-104 socket

- 9 ~ 36V wide range DC power input
- Smarter power management and low voltage protection
- Support 4 digital input and 4 digital output
- Rugged fanless design to meet MIL standard
- Support 4 channels PoE with IEEE802.3af
- Wake on RTC/SMS via WWAN module

Product Overview

VTC 7110-C4SK, adopting the high performance processor, Intel® Core™ i7, is a new generation of VTC series. In additional to keep the advantage of existing VTC series, it offers dual LAN ports for redundancy, Three high speed interface for storage, 2.5" SATA and CFast. The storage is easily accessible from the front side for maintenance concern. Furthermore, it offers the OBDII for heavy duty truck such as SAE J1939/J1708, support 4 digital input and 4 digital output and 4-channel PoE. With the rich features, VTC 7110-C4SK can satisfy your demand in vehicle applications.

Specifications

CPU
- Intel® Core™ i7 2610UE 1.5GHz

Main Chipset
- QM67

Memory
- One 204-pin DDR3 1333MHz SO-DIMM slot (up to 8GB)

Expansion
- 1 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) for WWAN option
- 1 x Bluetooth module for option
- 1 x on board uBlox NEO-6Q GPS module or optional GPS with dead reckoning

I/O Interface-Front
- 1 x Line-out, 1 x Mic-in (for WWAN CM8000 voice communication)
- 2 x SIM card socket (selectable)
- 1 x System reset button
- 1 x USB 2.0 host type A connector
- 1 x Power button
- 1 x CFast with protection cover
- 2 x Accessible 2.5" SATA II SSD tray, Optional RAID 0,1 supported (optional lockable storage available)
- 4 x LED's for power, storage, WLAN/WWAN and GPIO
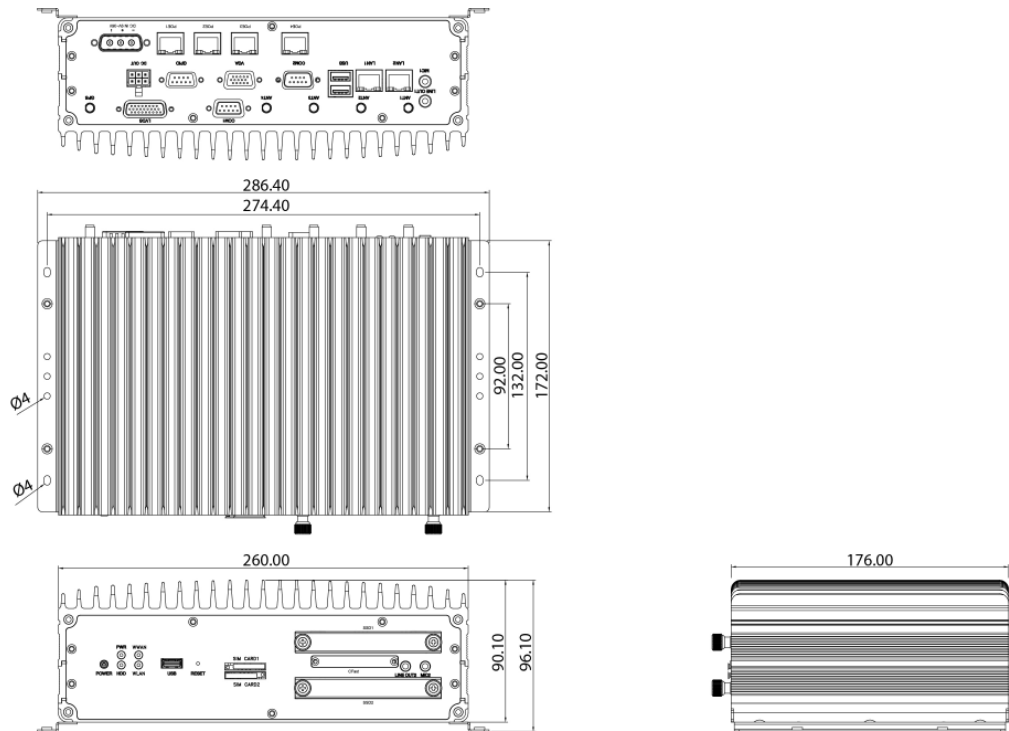- G sensor

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with ignition and 74W typical power consumption

- 1 x 12V/4A DC output, SMBus
- 1 x DB26 LVDS interface with 12V and USB 2.0
- 1 x DB15 VGA
- 1 x DB9 RS-232 (default) or optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- 1 x DB9 RS-422/485
- 1 x DB9 female connector for 4 x DI and 4 x DO
  (Digital Input)
    Input voltage (Internal Type): 5VDC TTL (default)
    Input voltage (Source Type): 3 ~ 12VDC
  (Digital Output)
    Digital output (Sink Type): 5VDC TTL (default), max current: 20mA
    Digital output (Source Type): 3 ~ 24VDC, max current: 250mA
- 2 x USB 2.0 host type A connector
- 2 x RJ45 with LEDs for 10/100/1000Mbps Ethernet
- 4 x RJ45 with LEDs for 10/100/1000Mbps Ethernet and support IEEE802.3af PoE (Max. 60W)
- 1 x Line-out, 1 x Mic-in
- 1 x SMA-type GPS antenna connector
- 4 x Antenna hole reserved for SMA-type antenna connector (WWAN/WLAN/BT)

Power Management
- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level on/off delay time by software
- Status of ignition and low voltage status can be detected by software
- Support S3/S4 suspend mode

Dimension Drawing

Operating System
- Windows XP/WES2009
- WES 7E
- Win7 Pro for Embedded
- Linux 2.6

Dimensions
- 260mm (W) x 176mm (D) x 90.1mm (H) (10.24" x 6.93" x 3.51")
- 4 Kg (8.81 Lb)

Construction
- Aluminum enclosure with fanless design

Environment
- Operating temperatures:
  -30°C to 50°C (w/ industrial SSD) with air flow
  -20°C to 40°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, SSD)
- Vibration (SSD):
  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):
  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

Standards/Certifications
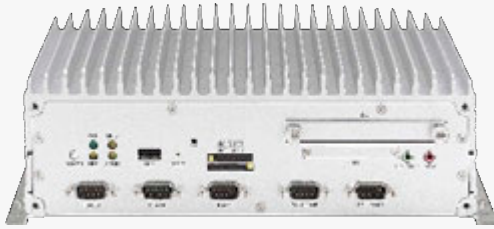- CE approval
- FCC Class A
- e13 Mark

Ordering Information

- **VTC 7110-C4SK (P/N: 10V00710011X0)**
  Intel® Core™ i7 2610UE, Industrial Grade 2GB DDR3 SODIMM, LVDS/VGA Output, 1 x RS-232, 1 x RS-485/422 with 4-channel PoE

- **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
10VK0071F00X0	VTK 71F, fan Kit
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM: Q802XKN5F, w/antenna & cable (without assembly in NEXCOM)
10VK0WWAN01X0	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
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

VTC 7110-D1K

Main Features

- Build-in Intel® Core™ i7 2610UE 1.5G Hz processor
- Support two Ethernet LAN ports
- Removable 2.5" SSD tray and CFast slot
- OBDII support of SAE J1939 or J1708
- Support two SIM card slots
- PCI-104 socket

- 9 ~ 36V wide range DC power input
- Smarter power management and low voltage protection
- Support isolation digital input/output and analog input
- Rugged fanless design to meet MIL standard
- Support Isolation RS-232 and RS-422/485
- Wake on RTC/SMS via WWAN module

Product Overview

VTC 7110-D1K, adopting the high performance processor, Intel® Core™ i7, is a new generation of VTC series. In additional to keep the advantage of existing VTC series, it offers dual LAN ports for redundancy, two high speed interface for storage, 2.5" SATA and CFast. The storage is easily accessible from the front side for maintenance concern. Furthermore, it offers the OBDII for heavy duty truck such as SAE J1939/J1708 and isolation digital input, output, RS-232 and RS-422/485. With the rich features, VTC 7110-D1K can satisfy your demand in vehicle applications.

Specifications

CPU
- Intel® Core™ i7 2610UE 1.5GHz

Main Chipset
- QM67

Memory
- One 204-pin DDR3 1333MHz SO-DIMM slot (up to 8GB)

Expansion
- 1 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) for WWAN option
- 1 x Bluetooth module for option
- 1 x on board uBlox NEO-6Q GPS module or optional GPS with dead reckoning
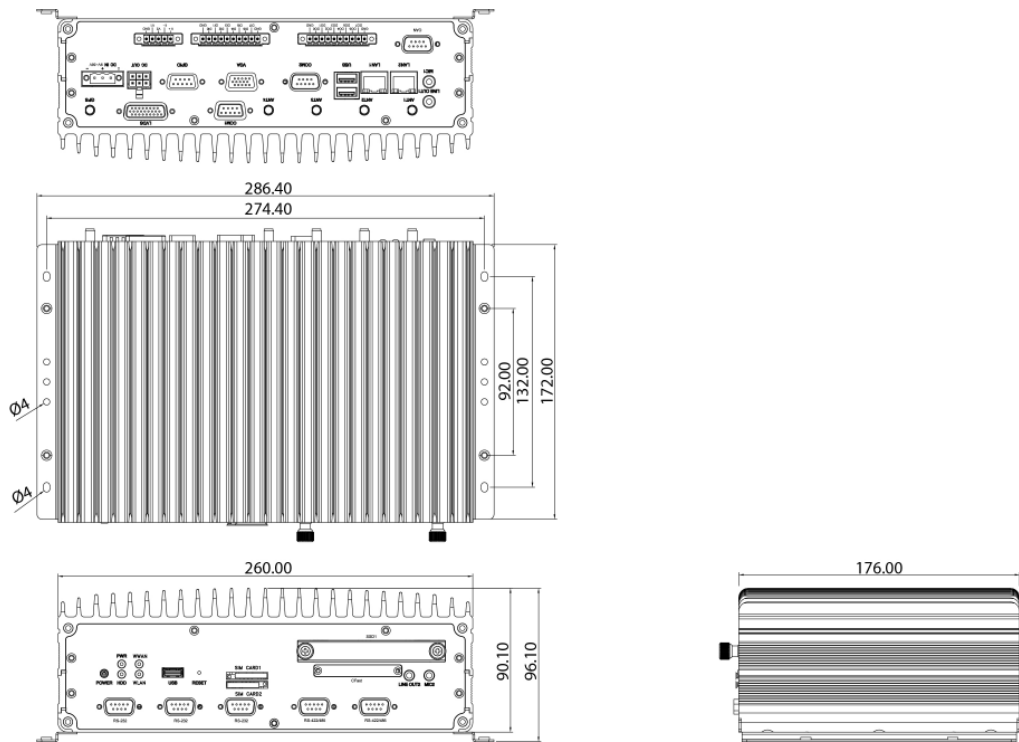
I/O Interface-Front
- 1 x Line-out, 1 x Mic-in (for WWAN CM8000 voice communication)
- 2 x SIM card socket (selectable)
- 1 x System reset button
- 1 x USB 2.0 host type A connector
- 1 x Power button
- 1 x CFast with protection cover
- 1 x Accessible 2.5" SATA II SSD tray
  (optional lockable storage available)
- 2 x DB9 isolation RS-422/485, Isolation: 5K Vrms
- 3 x DB9 isolation RS-232, Isolation: 5K Vrms
- 4 x LED's for power, storage, WLAN/WWAN and GPIO
- G sensor

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with ignition and 38W typical power consumption
- 1 x 12V/4A DC output, SMBus

- 1 x DB26 LVDS interface with 12V and USB 2.0
- 1 x DB-15 VGA
- 1 x DB9 RS-232 (default) or OBDII (option)
- 1 x DB9 RS-422/485
- 1 x DB9 female connector for 4 x DI and 4 x DO
  (Digital Input)
    Input voltage (Internal Type): 5VDC TTL (default)
    Input voltage (Source Type): 3 ~ 12VDC
  (Digital Output)
    Digital output (Sink Type): 5VDC TTL (default), max current: 20mA
    Digital output (Source Type): 3 ~ 24VDC, max current: 250mA
- 10-Pin terminal block for 8 x DI and 8 x DO
  Isolation: 5K Vrms
  (Isoated Digital Input)
    Input voltage (Internal Type): 5VDC TTL (default)
    Input voltage (Source Type): 3 ~ 12VDC
  (Isoated Digital Output)
    Digital output (Sink Type): 5VDCTTL (default), max current: 20mA
    Digital output (Source Type): 3 ~ 24VDC, max current: 250mA
- 5-Pin terminal block for 3 x analog input
  Isolation: 2K Vrms
  2 x isolated analog voltage input 12VDC (Max.)
  1 x isolated analog current input 10A (Max.)
- 2 x USB 2.0 host type A connector
- 2 x RJ45 with LEDs for 10/100/1000Mbps Ethernet
- 1 x Line-out, 1 x Mic-in
- 1 x DB9 male connector for 1 x OBDII (default) or 2 x OBDII (option)
- 1 x SMA-type GPS antenna connector
- 4 x Antenna hole reserved for SMA-type antenna connector
  (WWAN/WLAN/BT)

Dimension Drawing

Power Management
- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level on/off delay time by software
- Status of ignition and low voltage status can be detected by software
- Support S3/S4 suspend mode

Operating System
- Windows XP/WES2009
- WES 7E
- Win7 Pro for Embedded
- Linux 2.6

Dimensions
- 260mm (W) x 176mm (D) x 90.1mm (H) (10.24" x 6.93" x 3.51")
- 3.89 Kg (8.57 Lb)

Construction
- Aluminum enclosure with fanless design

Environment
- Operating temperatures:
  -30°C to 50°C (w/ industrial SSD) with air flow
  -20°C to 45°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, SSD)
- Vibration (SSD):
  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):
  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

Standards/Certifications
- CE approval
- FCC Class A
- e13 Mark

Ordering Information

- **VTC 7110-D1K (P/N: 10V00711007X0)**
  Intel® Core™ i7 1.5GHz, Industrial Grade 2GB DDR3 SODIMM, LVDS/ VGA Output,1 x RS-232, 1 x RS-485/422 with isolation DI/DO, COM and 1 x OBDII (SAEJ1939 or J1708)

- **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
10VK0071F00X0	VTK 71F, fan Kit
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM: Q802XKN5F, w/antenna & cable (without assembly in NEXCOM)
10VK0WWAN01X0	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
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

VTC 7120-BK

Main Features

- Build-in Intel® Celeron® Processor 847E 1.1GHz
- Support two Ethernet LAN ports
- Removable 2.5" SSD tray and CFast slot
- Optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- Support two SIM card slots
- PCI-104 socket

- 9 ~ 36V wide range DC power input
- Smarter power management and low voltage protection
- Support 4 digital input and 4 digital output
- Rugged fanless design to meet MIL standard
- Internal wireless communication (3.5G, GSM/GPRS, WLAN, BT)
- Wake on RTC/SMS via WWAN module

Product Overview

VTC 7120-BK, adopting the high performance processor, Intel® Celeron® is a new generation of VTC series. In additional to keep the advantage of existing VTC series, it offers dual LAN ports for redundancy, two high speed interface for storage, 2.5" SATA and CFast. The storage is easily accessible from the front side for maintenance concern. Furthermore, it offers the OBDII for heavy duty truck such as SAE J1939 and support 4 digital input and 4 digital output for device connectivity. With the rich features, VTC 7120-BK can satisfy your demand in vehicle applications.

Specifications

CPU
- Intel® Celeron® Processor 847E 1.1GHz

Main Chipset
- QM67

Memory
- One 204-pin DDR3 1333MHz SO-DIMM slot (up to 8GB)

Expansion
- 1 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) for WWAN option
- 1 x Bluetooth module for option
- 1 x On board uBlox NEO-6Q GPS module or optional GPS with dead reckoning

I/O Interface-Front
- 1 x Line-out, 1 x Mic-in (for WWAN CM8000 voice communication)
- 2 x SIM card socket (selectable)
- 1 x System reset button
- 1 x USB 2.0 host type A connector
- 1 x Power button
- 1 x CFast with protection cover
- 1 x Accessible 2.5" SATA II SSD tray
  (optional lockable storage available)
- 4 x LED's for power, storage, WLAN/WWAN and GPIO
- G sensor

I/O Interface-Rear
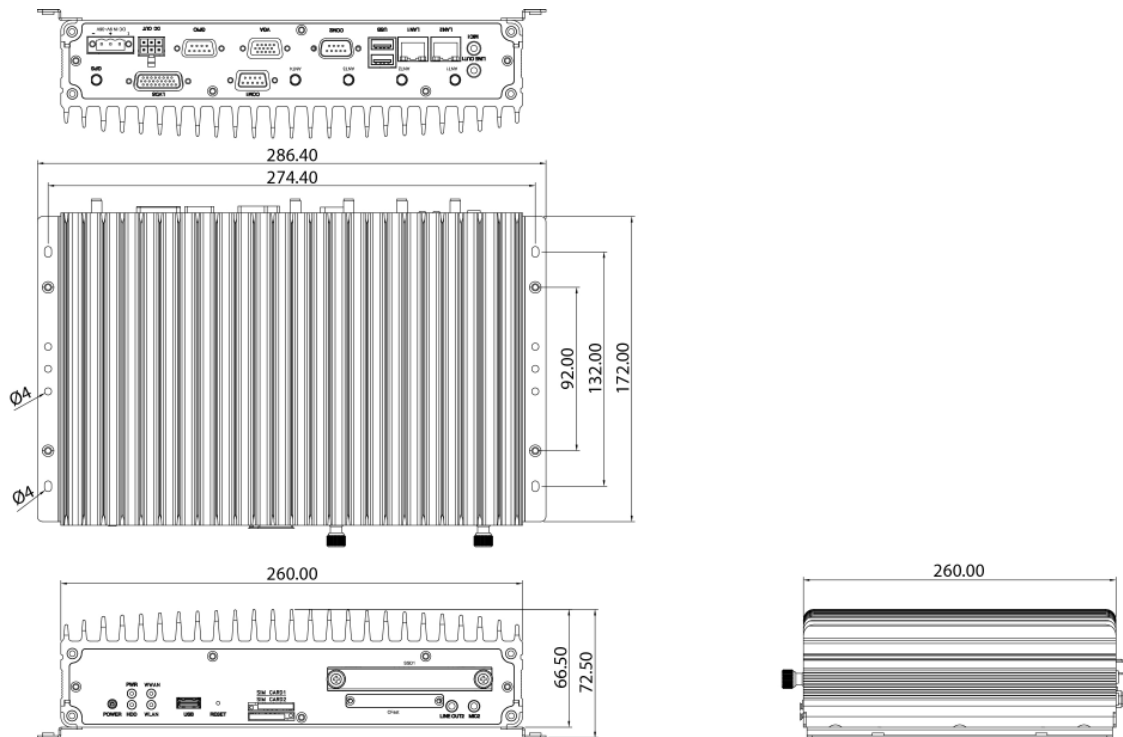- 1 x 9 ~ 36VDC input with ignition and 21W typical power consumption

- 1 x 12V/4A DC output, SMBus
- 1 x DB26 LVDS interface with 12V and USB 2.0
- 1 x DB15 VGA
- 1 x DB9 RS-232 (default) or optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- 1 x DB9 RS-422/485
- 1 x DB9 female connector for 4 x DI and 4 x DO
  (Digital Input)
    Input voltage (Internal Type): 5VDC TTL (default)
    Input voltage (Source Type): 3 ~ 12VDC
  (Digital Output)
    Digital output (Sink Type): 5VDC TTL (default), max current: 20mA
    Digital output (Source Type): 3 ~ 24VDC, max current: 250mA
- 1 x DB15 VGA
- 2 x USB 2.0 host type A connector
- 2 x RJ45 with LEDs for 10/100/1000Mbps Ethernet
- 1 x Line-out, 1 x Mic-in
- 1 x SMA-type GPS antenna connector
- 4 x Antenna hole reserved for SMA-type antenna connector (WWAN/WLAN/BT)

Power Management
- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level on/off delay time by software
- Status of ignition and low voltage status can be detected by software
- Support S3/S4 suspend mode

Operating System

Dimension Drawing

- Windows XP/WES2009
- WES 7E
- Win7 Pro for Embedded
- Linux 2.6

Dimensions
- 260mm (W) x 176mm (D) x 66.5mm (H) (10.24" x 6.93" x 2.59")
- 3.25 Kg (7.16 Lb)

Construction
- Aluminum enclosure with fanless design

Environment
- Operating temperatures:
  -30°C to 50°C (w/ industrial SSD) with air flow
  -20°C to 45°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, SSD)
- Vibration (SSD):
  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):
  Operating: MIL-STD-810G, Method 516.6, Procedure I, functional shock=20g
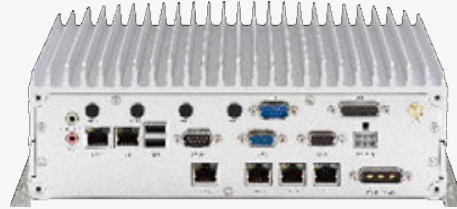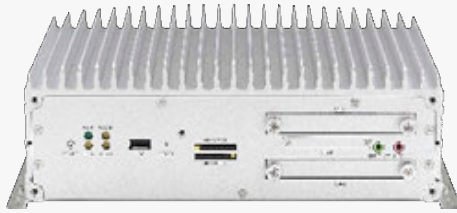 Non-Operating: MIL-STD-810G, Method 516.6, Procedure V, crash hazard shock test=75g

Standards/Certifications
- CE approval
- FCC Class A
- e13 Mark

Ordering Information

- **VTC 7120-BK (P/N: 10V00712000X0)**
  Intel® Celeron® 847E 1.1GHz, 2GB DDR3 SODIMM, LVDS/VGA Output, 1 x RS-232, 1 x RS-422/485

- **VTC 7120-B2K (P/N: 10V00712003X0)**
  Intel® Celeron® 847E 1.1GHz, Industrial Grade 2GB DDR3 SODIMM, DVI-D/VGA Output, 1 x RS-232, 1 x RS-422/485

- **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
10VK0071F00X0	VTK 71F, fan Kit
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM: Q802XKN5F, w/antenna & cable (without assembly in NEXCOM)
10VK0WWAN01X0	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
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

VTC 7120-C4SK

Main Features

- Build-in Intel® Celeron® Processor 847E 1.1GHz
- Support two Ethernet LAN ports
- Dual removable 2.5" SSD tray and CFast slot
- Optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- Support two SIM card slots
- PCI-104 socket

- 9 ~ 36V wide range DC power input
- Smarter power management and low voltage protection
- Support 4 digital input and 4 digital ouput
- Rugged fanless design to meet MIL standard
- Support 4 channels PoE with IEEE802.3af
- Wake on RTC/SMS via WWAN module

Product Overview

VTC 7120-C4SK, adopting the high performance processor, Intel® Celeron® is a new generation of VTC series. In additional to keep the advantage of existing VTC series, it offers dual LAN ports for redundancy, Three high speed interface for storage, 2.5" SATA and CFast. The storage is easily accessible from the front side for maintenance concern. Furthermore, it offers the ODBII for heavy duty truck such as SAE J1939, support 4 digital input and 4 digital output and 4-channel PoE. With the rich features, VTC 7120-C4SK can satisfy your demand in vehicle applications.

Specifications

CPU
- Intel® Celeron® Processor 847E 1.1GHz

Main Chipset
- QM67

Memory
- One 204-pin DDR3 1333MHz SO-DIMM slot (up to 8GB)

Expansion
- 1 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) for WWAN option
- 1 x Bluetooth module for option
- 1 x On board uBlox NEO-6Q GPS module or optional GPS with dead reckoning

I/O Interface-Front
- 1 x Line-out, 1 x Mic-in (for WWAN CM8000 voice communication)
- 2 x SIM card socket (selectable)
- 1 x System reset button
- 1 x USB 2.0 host type A connector
- 1 x Power button
- 1 x CFast with protection cover
- 2 x Accessible 2.5" SATA II SSD tray, Optional RAID 0,1 supported (optional lockable storage available)
- 4 x LED's for power, storage, WLAN/WWAN and GPIO
- G sensor

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with ignition and 27.8W typical power

consumption
- 1 x 12V/4A DC output, SMBus
- 1 x DB26 LVDS interface with 12V and USB 2.0
- 1 x DB15 VGA
- 1 x DB9 RS-232 (default) or optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- 1 x DB9 RS-422/485
- 1 x DB9 female connector for 4 x DI and 4 x DO
  (Digital Input)
    Input voltage (Internal Type): 5VDC TTL (default)
    Input voltage (Source Type): 3 ~ 12VDC
  (Digital Output)
    Digital output (Sink Type): 5VDC TTL (default), max current: 20mA
    Digital output (Source Type): 3 ~ 24VDC, max current: 250mA
- 2 x USB 2.0 host type A connector
- 2 x RJ45 with LEDs for 10/100/1000Mbps Ethernet
- 4 x RJ45 with LEDs for 10/100/1000Mbps Ethernet and support IEEE802.3af PoE (Max. 60W)
- 1 x Line-out, 1 x Mic-in
- 1 x SMA-type GPS antenna connector
- 4 x Antenna hole reserved for SMA-type antenna connector (WWAN/WLAN/BT)

Power Management
- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level on/off delay time by software

Dimension Drawing

- Status of ignition and low voltage status can be detected by software
- Support S3/S4 suspend mode

Operating System
- Windows XP/WES2009
- WES 7E
- Win7 Pro for Embedded
- Linux 2.6

Dimensions
- 260mm (W) x 176mm (D) x 90.1mm (H) (10.24" x 6.93" x 3.51")
- 4 Kg (8.81 Lb)

Construction
- Aluminum enclosure with fanless design

Environment
- Operating temperatures:
  -30°C to 50°C (w/ industrial SSD) with air flow
  -20°C to 40°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, SSD)
- Vibration (SSD):
  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):
  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

Standards/Certifications
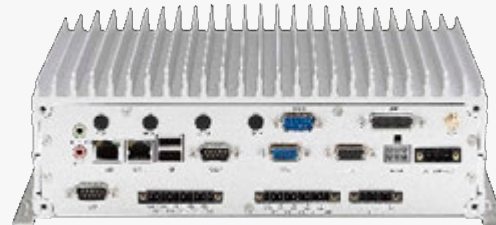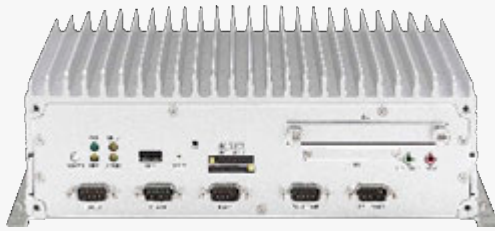- CE approval
- FCC Class A
- e13 Mark

Ordering Information

- **VTC 7120-C4SK (P/N: 10V00712004X0)**
  Intel® Celeron® 847E 1.1GHz, Industrial Grade 2GB DDR3 SODIMM, LVDS/VGA Output, 1 x RS-232, 1 x RS-422/485 with 4-channel PoE

- **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
10VK0071F00X0	VTK 71F, fan Kit
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM: Q802XKN5F, w/antenna & cable (without assembly in NEXCOM)
10VK0WWAN01X0	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
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

VTC 7120-D1K

Main Features

- Build-in Intel® Celeron® Processor 847E 1.1GHz
- Support two Ethernet LAN ports
- Removable 2.5" SSD tray and CFast slot
- CAN bus in support of SAE J1939 or J1708 up to dual
- Support two SIM card slots
- PCI-104 socket

- 9 ~ 36V wide range DC power input
- Smarter power management and low voltage protection
- Support isolation digital input/output and analog input
- Rugged fanless design to meet MIL standard
- Support Isolation RS-232 and RS-422/485
- Wake on RTC/SMS via WWAN module

Product Overview

VTC 7120-D1K, adopting the high performance processor, Intel® Celeron® is a new generation of VTC series. In additional to keep the advantage of existing VTC series, it offers dual LAN ports for redundancy, two high speed interface for storage, 2.5" SATA and CFast. The storage is easily accessible from the front side for maintenance concern. Furthermore, it offers the ODBII for heavy duty truck such as SAE J1939/J1708 and isolation digital input, output, RS-232 and RS-422/485. With the rich features, VTC 7120-D1K can satisfy your demand in vehicle applications.

Specifications

CPU
- Intel® Core™ Celeron® Processor 847E 1.1GHz

Main Chipset
- QM67

Memory
- One 204-pin DDR3 1333MHz SO-DIMM slot (up to 8GB)

Expansion
- 1 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) for WWAN option
- 1 x Bluetooth module for option
- 1 x On board uBlox NEO-6Q GPS module or optional GPS with dead reckoning
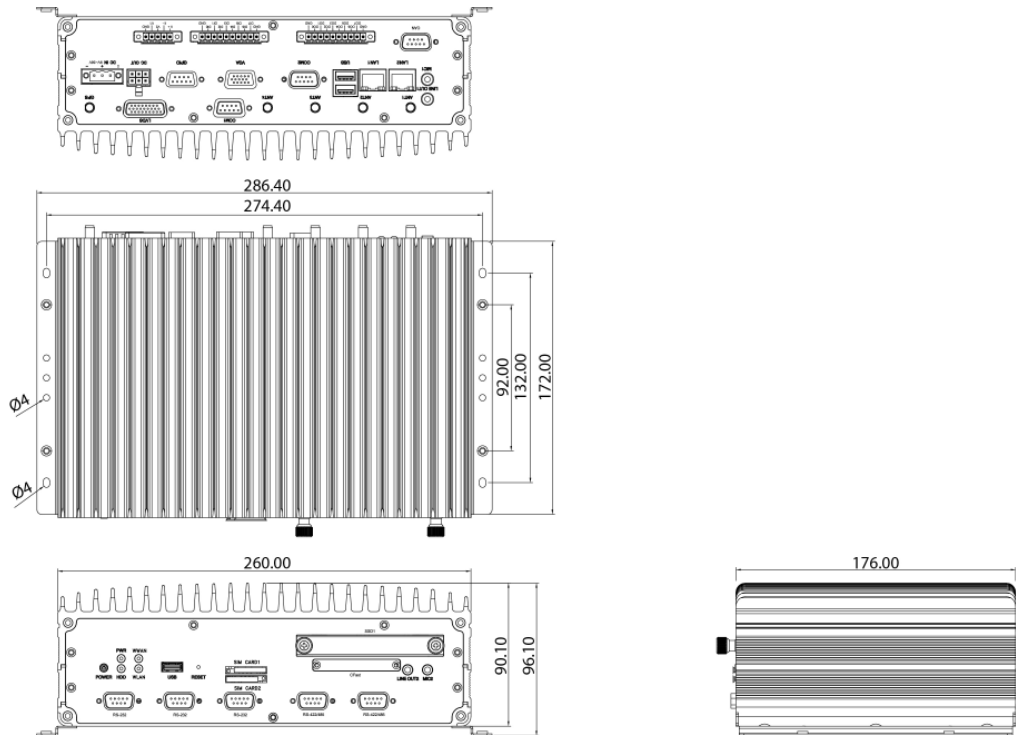
I/O Interface-Front
- 1 x Line-out, 1 x Mic-in (for WWAN CM8000 voice communication)
- 2 x SIM card socket (selectable)
- 1 x System reset button
- 1 x USB 2.0 host type A connector
- 1 x Power button
- 1 x CFast with protection cover
- 1 x Accessible 2.5" SATA II SSD tray
  (optional lockable storage available)
- 2 x DB9 isolation RS-422/485
- 3 x DB9 isolation RS-232
- 4 x LED's for power, storage, WLAN/WWAN and GPIO

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with ignition and 29.5W typical power consumption
- 1 x 12V/4A DC output, SMBus

- 1 x DB26 LVDS interface with 12V and USB 2.0
- 1 x DB-15 VGA
- 1 x DB9 RS-232 (default) or OBDII (option)
- 1 x DB9 RS-422/485
- 1 x DB9 female connector for 4 x DI and 4 x DO
  (Digital Input)
    Input voltage (Internal Type): 5VDC TTL (default)
    Input voltage (Source Type): 3 ~ 12VDC
  (Digital Output)
    Digital output (Sink Type): 5VD CTTL (default), max current: 20mA
    Digital output (Source Type): 3 ~ 24VDC, max current: 250mA
- 10-Pin terminal block for 8 x DI and 8 x DO
  Isolation: 5K Vrms
  (Isolated Digital Input)
    Input voltage (Internal Type): 5VDC TTL (default)
    Input voltage (Source Type): 3 ~ 12VDC
  (Isolated Digital Output)
    Digital output (Sink Type): 5VDCTTL (default), max current: 20mA
    Digital output (Source Type): 3 ~ 24VDC, max current: 250mA
- 5-Pin terminal block for 3 x analog input
  Isolation: 2K Vrms
  2 x isolated analog voltage input 12VDC (Max.)
  1 x isolated analog current input 10A (Max.)
- 2 x USB 2.0 host type A connector
- 2 x RJ45 with LEDs for 10/100/1000Mbps Ethernet
- 1 x Line-out, 1 x Mic-in
- 1 x DB9 male connector for 1 x ODBII (deafult) or 2 x OBDII (option)
- 1 x SMA-type GPS antenna connector
- 4 x Antenna hole reserved for SMA-type antenna connector (WWAN/WLAN/BT)

NEXCOM

Dimension Drawing

Power Management
- Selectable boot-up & shut-down voltage for low power protection by software
- Setting 8-level on/off delay time by software
- Status of ignition and low voltage status can be detected by software
- Support S3/S4 suspend mode

Operating System
- Windows XP/WES2009
- WES 7E
- Win7 Pro for Embedded
- Linux 2.6

Dimensions
- 260mm (W) x 176mm (D) x 90.1mm (H) (10.24" x 6.93" x 3.51")
- 3.89 Kg (8.57 Lb)

Construction
- Aluminum enclosure with fanless design

Environment
- Operating temperatures:
  -30°C to 50°C (w/ industrial SSD) with air flow
  -20°C to 45°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, SSD)
- Vibration (SSD):
  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):
  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

Standards/Certifications
- CE approval
- FCC Class A
- e13 Mark

Ordering Information

- **VTC 7120-D1K (P/N: 10V00712002X0)**
  Intel® Celeron® 847E 1.1GHz, Industrial Grade 2GB DDR3 SODIMM, LVDS/VGA Output, 1 x RS-232, 1 x RS-422/485 with isolation DI/DO, COM and 1 x OBDII (SAEJ 1939 or J1708)

- **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
10VK0071F00X0	VTK 71F, fan Kit
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM: Q802XKN5F, w/antenna & cable (without assembly in NEXCOM)
10VK0WWAN01X0	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
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

VTC 7200-BK

Intel® Core™ i3-4010U Fanless In-Vehicle Computer

Main Features

- Intel® Core™ processor dual core i3-4010U
- Three SIM cards + dual WWAN modules support
- Dual externally accessible SATA 3.0 SSD/HDD
- Built-in u-blox NEO-M8N module, optional Dead Reckoning support
- Built-in CAN 2.0B. Optional CAN/OBDII module

- Wake on RTC/SMS via WWAN module
- Voice communication via WWAN module
- Compliant with MIL-STD-810G
- 4 x mini-PCIe socket rich expansion capability

Product Overview

VTC 7200-BK features powerful new generation Intel® Core™ processor i3-4010U. Its CPU performance gives the users the ability to adapt to what they need in any telematics applications. Its Intel® HD graphics 5000 engine allows users to fully take advantage of VTC 7200-BK to achieve smooth, seamless and stunning graphic performance on 3 different video outputs (VGA, DP, LVDS). VTC 7200 is equipped with 2 externally accessible SSD/HDD trays; users can easily download or upload the data on other devices by just removing the storage devices from VTC 7200-BK. By integrating the variety of I/O ports and 4 x mini-PCIe sockets expansibility, VTC 7200-BK is not only suitable for video surveillance application, but also can meet the demand for other telematics applications, such as infotainment, fleet management and dispatching system. With dual SIM cards support, VTC 7200-BK allows three SIM cards backup each other for a better connectivity quality by software. In addition, three SIM cards + dual WWAN modules architecture can increase the bandwidth for a faster data transfer speed. Not only data transmission, VTC 7200-BK also supports two-way voice communication. Equipped with intelligent power management, VTC 7200-BK can be waked on by ignition, RTC timer or SMS/Ring remotely.

Specifications

CPU
- Intel® Core™ processor dual core i3-4010U, 1.7GHz

Memory
- 2 channel 204-pin DDR3L SO-DMIM socket support 1333/1600MHz up to 16GB, default 2GB

Storage
- 2 x 2.5" SATA 3.0 SSD/HDD (externally accessible), RAID 0,1 supported (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 + PCIe)
- 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 SATA 3.0 SSD/HDD tray, RFID 0, 1 supported (optional lockable storage available)
- 1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 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 CFast card socket with cover
- 1 x Event button (trigger type)
- 1 x Reset button
- 3 x Antenna hole for WWAN/WLAN/BT

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with ignition and 35W typical power consumption
- 1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 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 with 1.5W output each
- 1 x DB-15 VGA. Resolution up to 2560 x 1600 @60Hz
- 1 x DP port. Resolution up to 2560 x 1600 @60Hz
- 2 x DB-9 RS-232
- 1 x DB-9 RS-232/422/485 (RI/5V/12V selectable)
- 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

NEXCOM

Dimension Drawing

- 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 Programmable GPIO
    (Digital Input)
      Input voltage (internal type): 5VDC TTL (default)
      Input voltage (source type): 3 ~ 12VDC
    (Digital Output)
      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
- 4 x antenna hole for WWAN/WLAN/BT/GPS
- 1 x Fuse (15A)

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
- Window 7, WES7
- Linux kernel 3.X

Dimensions
- 260mm (W) x 206mm (D) x 79.5mm (H) (10.24" x 8.11" x 3.13")
- Weight: 2.5kg

Environment
- Operating temperatures:
  -30°C to 55°C (w/ industrial SSD) with air flow
  -20°C to 45°C (w/ commercial HDD) with air flow
- Storage temperatures: -35°C to 85°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 1.5g@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

Standards/Certifications
- CE approval
- FCC Class B
- E13 Mark

Ordering Information

- **VTC 7200-BK (P/N: 10V00720000X0)**
  Intel® Core™ processor i3-4010U, 1.7 GHx dual core CPU, Industrial Grade 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-232/422/485, 8 x GPIO, 3 x USB, 12VDC output

VTC 7210-BK

Main Features

- Intel® Core™ processor dual core i5-4300U
- Three SIM cards + dual WWAN modules support
- Dual externally accessible SATA 3.0 SSD/HDD
- Built-in u-blox NEO-M8N module, optional Dead Reckoning support
- Built-in CAN 2.0B. Optional CAN/OBDII module
- Wake on RTC/SMS via WWAN module
- Voice communication via WWAN module
- Compliant with MIL-STD-810G
- 4 x mini-PCIe socket rich expansion capability

Product Overview

VTC 7210-BK features powerful new generation Intel® Core™ processor i5-4300U. Its CPU performance gives the users the ability to adapt to what they need in any telematics applications. Its Intel® HD graphics 5000 engine allows users to fully take advantage of VTC 7210-BK to achieve smooth, seamless and stunning graphic performance on 3 different video outputs (VGA, DP, LVDS). VTC 7210-BK is equipped with 2 externally accessible SSD/HDD trays; users can easily download or upload the data on other devices by just removing the storage devices from VTC 7210-BK. By integrating the variety of I/O ports and 4 x mini-PCIe sockets expansibility, VTC 7210-BK is not only suitable for video surveillance application, but also can meet the demand for other telematics applications, such as infotainment, fleet management and dispatching system. With dual SIM cards support, VTC 7210-BK allows three SIM cards backup each other for a better connectivity quality by software. In addition, three SIM cards + dual WWAN modules architecture can increase the bandwidth for a faster data transfer speed. Not only data transmission, VTC 7210-BK also supports two-way voice communication. Equipped with intelligent power management, VTC 7210-BK can be waked on by ignition, RTC timer or SMS/Ring remotely.

Specifications

CPU
- Intel® Core™ processor dual core i5-4300U, 1.9GHz

Memory
- 2 channel 204-pin DDR3L SO-DMIM socket support 1333/1600MHz up to 16GB, default 2GB

Storage
- 2 x 2.5" SATA 3.0 SSD/HDD (externally accessible), RAID 0,1 supported (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 + PCIe)
- 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 SATA 3.0 SSD/HDD tray, RFID 0, 1 supported (optional lockable storage available)
- 1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 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 CFast card socket with cover
- 1 x Event button (trigger type)
- 1 x Reset button
- 3 x Antenna hole for WWAN/WLAN/BT

I/O Interface-Rear
- 1 x 9~36VDC input with ignition and 36W typical power consumption
- 1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 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 with 1.5W output each
- 1 x DB-15 VGA. Resolution up to 2560 x 1600 @60Hz
- 1 x DP port. Resolution up to 2560 x 1600 @60Hz
- 2 x DB-9 RS-232
- 1 x DB-9 RS-232/422/485 (RI/5V/12V selectable)
- 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

Dimension Drawing

- 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 Programmable GPIO
    (Digital Input)
      Input voltage (internal type): 5VDC TTL (default)
      Input voltage (source type): 3~12VDC
    (Digital Output)
      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
- 4 x Antenna hole for WWAN/WLAN/BT/GPS
- 1 x Fuse (15A)

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
- Window 7, WES7
- Linux kernel 3.X

Dimensions
- 260mm (W) x 206mm (D) x 79.5mm (H) (10.24" x 8.11" x 3.13")
- Weight: 2.5kg

Environment
- Operating temperatures:
  -30°C to 50°C (w/ industrial SSD) with air flow
  -20°C to 45°C (w/ commercial HDD) with air flow
- Storage temperatures: -35°C to 85°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 1.5g@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

Standards/Certifications
- CE approval
- FCC Class B
- E13 Mark

Ordering Information

- **VTC 7210-BK (P/N: 10V00721000X0)**
  Intel® Core™ processor i5-4300U, 1.9 GHz dual core CPU, Industrial Grade 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-232/422/485, 8 x GPIO, 3 x USB, 12VDC output

VTC 7220-BK

Intel® Core™ i7-4650U Fanless In-Vehicle Computer

Main Features

- Intel® Core™ processor dual core i7-4650U
- Three SIM cards + dual WWAN modules support
- Dual externally accessible SATA 3.0 SSD/HDD
- Built-in u-blox NEO-M8N module, optional Dead Reckoning support
- Built-in CAN 2.0B. Optional CAN/OBDII module

- Wake on RTC/SMS via WWAN module
- Voice communication via WWAN module
- Compliant with MIL-STD-810G
- 4 x mini-PCIe socket rich expansion capability

Product Overview

VTC 7220-BK features powerful new generation Intel® Core™ processor i7-4650U. Its CPU performance gives the users the ability to adapt to what they need in any telematics applications. Its Intel® HD graphics 5000 engine allows users to fully take advantage of VTC 7220-BK to achieve smooth, seamless and stunning graphic performance on 3 different video outputs (VGA, DP, LVDS). VTC 7220-BK is equipped with 2 externally accessible SSD/HDD trays; users can easily download or upload the data on other devices by just removing the storage devices from VTC 7220-BK. By integrating the variety of I/O ports and 4 x mini-PCIe sockets expansibility, VTC 7220-BK is not only suitable for video surveillance application, but also can meet the demand for other telematics applications, such as infotainment, fleet management and dispatching system. With dual SIM cards support, VTC 7220-BK allows three SIM cards backup each other for a better connectivity quality by software. In addition, three SIM cards + dual WWAN modules architecture can increase the bandwidth for a faster data transfer speed. Not only data transmission, VTC 7220-BK also supports two-way voice communication. Equipped with intelligent power management, VTC 7220-BK can be waked on by ignition, RTC timer or SMS/Ring remotely.

Specifications

CPU
- Intel® Core™ processor dual core i7-4650U, 1.7GHz

Memory
- 2 channel 204-pin DDR3L SO-DMIM socket support 1333/1600MHz up to 16GB, default 2GB.

Storage
- 2 x 2.5" SATA 3.0 SSD/HDD (externally accessible), RAID 0,1 supported (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 + PCIe)
- 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
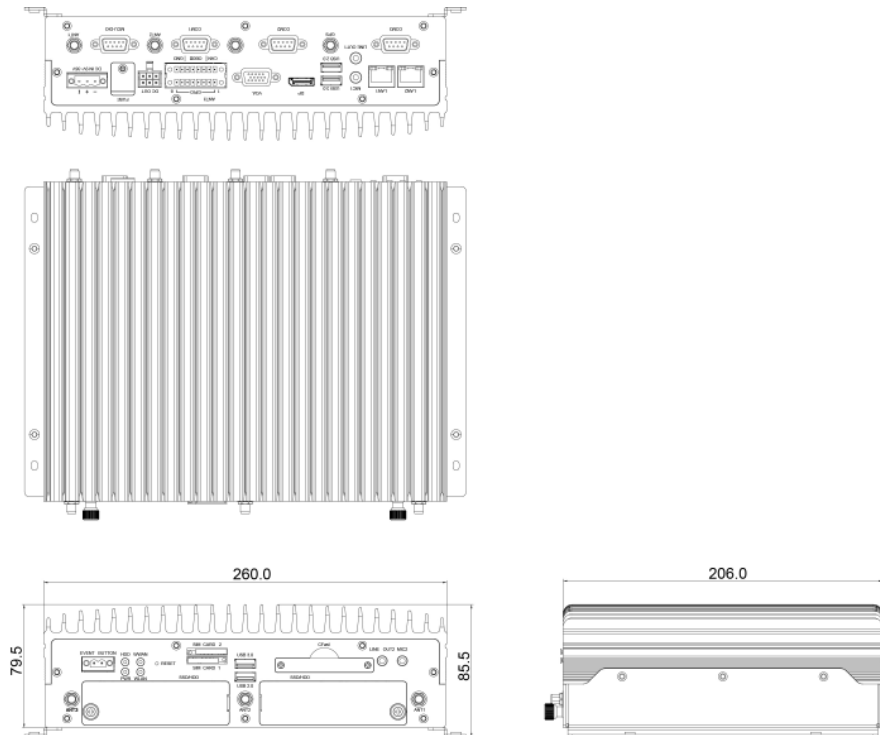
I/O Interface-Front
- 4 x LED for power, storage, WWAN, WLAN

- 2 x Externally accessible SATA 3.0 SSD/HDD tray, RFID 0, 1 supported (optional lockable storage available)
- 1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 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 CFast card socket with cover
- 1 x Event button (trigger type)
- 1 x Reset button
- 3 x antenna hole for WWAN/WLAN/BT

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with ignition and 37W typical power consumption
- 1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 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 with 1.5W output each
- 1 x DB-15 VGA. Resolution up to 2560 x 1600 @60Hz
- 1 x DP port. Resolution up to 2560 x 1600 @60Hz
- 2 x DB-9 RS-232
- 1 x DB-9 RS-232/422/485 (RI/5V/12V selectable)
- 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

NEXCOM

Dimension Drawing

- 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 Programmable GPIO
    (Digital Input)
    Input voltage (internal type): 5VDC TTL (default)
    Input voltage (source type): 3 ~ 12VDC
    (Digital Output)
    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
- 4 x Antenna hole for WWAN/WLAN/BT/GPS
- 1 x Fuse (15A)

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
- Window 7, WES7
- Linux kernel 3.X

Dimensions
- 260mm (W) x 206mm (D) x 79.5mm (H) (10.24" x 8.11" x 3.13")
- Weight: 2.5kg

Environment
- Operating temperatures:
  -30°C to 50°C (w/ industrial SSD) with air flow
  -20°C to 45°C (w/ commercial HDD) with air flow
- Storage temperatures: -35°C to 85°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 1.5g@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

Standards/Certifications
- CE approval
- FCC Class B
- E13 Mark

Ordering Information

- **VTC 7220-BK (P/N: 10V00722000X0)**
  Intel® Core™ processor i7-4650U, 1.7GHz, dual core CPU, Industrial Grade 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-232/422/485, 8 x GPIO, 3 x USB, 12VDC output

VTC 7230

Main Features

- Intel® Core™ processor dual core i3-5010U
- Three SIM cards + dual WWAN modules support
- Dual externally accessible SATA 3.0 SSD/HDD
- Built-in u-blox NEO-M8N module, optional Dead Reckoning support
- Built-in CAN 2.0B. Optional CAN/OBDII module

- Wake on RTC/SMS via WWAN module
- Voice communication via WWAN module
- Compliant with MIL-STD-810G
- 4 x mini-PCIe socket rich expansion capability

Product Overview

VTC 7230 features powerful new generation Intel® Core™ processor i3-5010U. Its CPU performance gives the users the ability to adapt to what they need in any telematics applications. Its powerful graphic engine allows users to fully take advantage of VTC 7230 to achieve smooth, seamless and stunning graphic performance on 3 different video outputs (VGA, DP, LVDS). VTC 7230 is equipped with 2 externally accessible SSD/HDD trays; users can easily download or upload the data on other devices by just removing the storage devices from VTC 7230. By integrating the variety of I/O ports and 4 x mini-PCIe sockets expansibility, VTC 7230 is not only suitable for video surveillance application, but also can meet the demand for other telematics applications, such as infotainment, fleet management and dispatching system. With dual SIM cards support, VTC 7230 allows three SIM cards backup each other for a better connectivity quality by software. In addition, three SIM cards + dual WWAN modules architecture can increase the bandwidth for a faster data transfer speed. Not only data transmission, VTC 7230 also supports two-way voice communication. Equipped with intelligent power management, VTC 7230 can be waked on by ignition, RTC timer or SMS/Ring remotely.

Specifications

CPU
- Intel® Core™ processor dual core i3-5010U, 2.1GHz

Memory
- 2 channel 204-pin DDR3L SO-DMIM socket support 1333/1600MHz up to 16GB, default 2GB

Storage
- 2 x 2.5" SATA 3.0 SSD/HDD (externally accessible), RAID 0,1 supported (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 + PCIe)
- 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
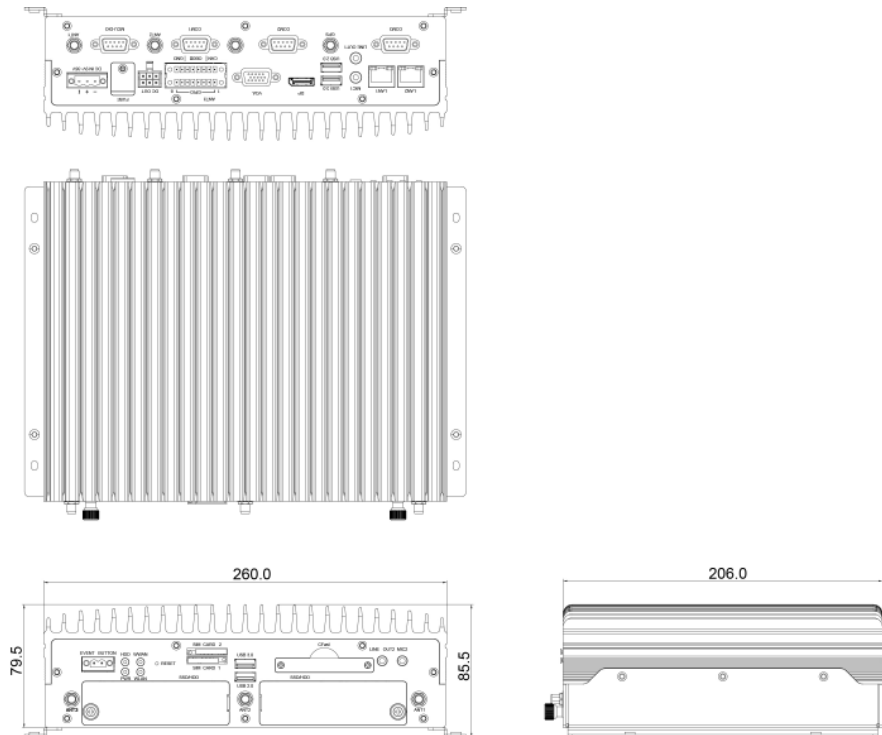- Built-in G-sensor

I/O Interface-Front
- 4 x LED for power, storage, WWAN, WLAN

- 2 x Externally accessible SATA 3.0 SSD/HDD tray, RFID 0, 1 supported (optional lockable storage available)
- 1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 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 CFast card socket with cover
- 1 x Event button (trigger type)
- 1 x Reset button
- 3 x Antenna hole for WWAN/WLAN/BT

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with ignition and 35W typical power consumption
- 1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 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 with 1.5W output each
- 1 x DB-15 VGA. Resolution up to 2560 x 1600 @60Hz
- 1 x DP port. Resolution up to 2560 x 1600 @60Hz
- 2 x DB-9 RS-232
- 1 x DB-9 RS-232/422/485 (RI/5V/12V selectable)
- 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

Dimension Drawing

- 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 Programmable GPIO
    (Digital Input)
      Input voltage (internal type): 5VDC TTL (default)
      Input voltage (source type): 3 ~ 12VDC
    (Digital Output)
      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
- 4 x antenna hole for WWAN/WLAN/BT/GPS
- 1 x Fuse (15A)

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
- Window 7, WES7
- Linux kernel 3.X

Dimensions
- 260mm (W) x 206mm (D) x 79.5mm (H) (10.24" x 8.11" x 3.13")
- Weight: 2.5kg

Environment
- Operating temperatures:
  -30°C to 55°C (w/ industrial SSD) with air flow
  -20°C to 45°C (w/ commercial HDD) with air flow
- Storage temperatures: -35°C to 85°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 1.5g@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
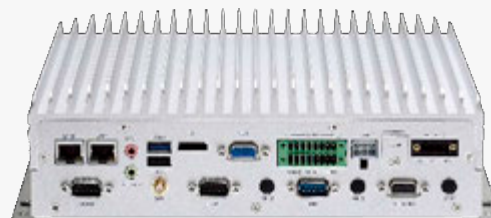
Standards/Certifications
- CE approval
- FCC Class B
- E13 Mark

Ordering Information

- **VTC 7230 (P/N: 10V00723000X0)**
  Intel® Core™ processor i3-5010U, 2.1GHz dual core CPU, Industrial Grade 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-232/422/485, 8 x GPIO, 3 x USB, 12VDC output

VTC 7240

Main Features

- Intel® Core™ processor dual core i7-5650U
- Three SIM cards + dual WWAN modules support
- Dual externally accessible SATA 3.0 SSD/HDD
- Built-in u-blox NEO-M8N module, optional Dead Reckoning support
- Built-in CAN 2.0B. Optional CAN/OBDII module

- Wake on RTC/SMS via WWAN module
- Voice communication via WWAN module
- Compliant with MIL-STD-810G
- 4 x mini-PCIe socket rich expansion capability

Product Overview

VTC 7240 features powerful new generation Intel® Core™ processor i7-5650U. Its CPU performance gives the users the ability to adapt to what they need in any telematics applications. Its powerful graphic engine allows users to fully take advantage of VTC 7240 to achieve smooth, seamless and stunning graphic performance on 3 different video outputs (VGA, DP, LVDS). VTC 7240 is equipped with 2 externally accessible SSD/HDD trays; users can easily download or upload the data on other devices by just removing the storage devices from VTC 7240. By integrating the variety of I/O ports and 4 x mini-PCIe sockets expansibility, VTC 7240 is not only suitable for video surveillance application, but also can meet the demand for other telematics applications, such as infotainment, fleet management and dispatching system. With dual SIM cards support, VTC 7240 allows three SIM cards backup each other for a better connectivity quality by software. In addition, three SIM cards + dual WWAN modules architecture can increase the bandwidth for a faster data transfer speed. Not only data transmission, VTC 7240 also supports two-way voice communication. Equipped with intelligent power management, VTC 7240 can be waked on by ignition, RTC timer or SMS/Ring remotely.

Specifications

CPU
- Intel® Core™ processor dual core i7-5650U, 2.2GHz

Memory
- 2 channel 204-pin DDR3L SO-DMIM socket support 1333/1600MHz up to 16GB, default 2GB

Storage
- 2 x 2.5" SATA 3.0 SSD/HDD (externally accessible), RAID 0,1 supported (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 + PCIe)
- 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 SATA 3.0 SSD/HDD tray, RFID 0, 1 supported (optional lockable storage available)
- 1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 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 CFast card socket with cover
- 1 x Event button (trigger type)
- 1 x Reset button
- 3 x Antenna hole for WWAN/WLAN/BT

I/O Interface-Rear
- 1 x 9 ~ 36VDC input with ignition and 35W typical power consumption
- 1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 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 with 1.5W output each
- 1 x DB-15 VGA. Resolution up to 2560 x 1600 @60Hz
- 1 x DP port. Resolution up to 2560 x 1600 @60Hz
- 2 x DB-9 RS-232
- 1 x DB-9 RS-232/422/485 (RI/5V/12V selectable)
- 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

Dimension Drawing

- 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 Programmable GPIO
    (Digital Input)
    Input voltage (internal type): 5VDC TTL (default)
    Input voltage (source type): 3 ~ 12VDC
    (Digital Output)
    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
- 4 x antenna hole for WWAN/WLAN/BT/GPS
- 1 x Fuse (15A)

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
- Window 7, WES7
- Linux kernel 3.X

Dimensions
- 260mm (W) x 206mm (D) x 79.5mm (H) (10.24" x 8.11" x 3.13")
- Weight: 2.5kg

Environment
- Operating temperatures:
  -30°C to 55°C (w/ industrial SSD) with air flow
  -20°C to 45°C (w/ commercial HDD) with air flow
- Storage temperatures: -35°C to 85°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 1.5g@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

Standards/Certifications
- CE approval
- FCC Class B
- E13 Mark

Ordering Information

- **VTC 7240 (P/N: 10V00724000X0)**
  Intel® Core™ processor i7-5650U, 2.2GHz dual core CPU, Industrial Grade 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-232/422/485, 8 x GPIO, 3 x USB, 12VDC output

VTC Series Accessories

VTK 61B

Main Features
* Back up smart battery + charger
* Thermal control
* SMBus interface
* For VTC 6xxx series

Specifications

Back up smart battery + Charger
* Battery back-up for 4 hours in system full loading (1.4A/12V)
* Battery status is detectable by S/W
* 2 x LED indicators for the battery status
* Input voltage: 6 ~ 36V with ignition control
* Output voltage: 12V with ignition for VTC Series System

Operation Temperature
* 0°C to +55°C

Certification
* CE approval
* FCC

Dimensions
* 238mm (W) x 150mm (L) x 25mm (H)
* 1.75 Kg (3.86 Lb)

Ordering Information

* **VTK 61B (P/N: 10VK0061B00X0)**

* **VTK 61B1 (P/N: 10VK0061B02X0, for VTC 1000 only)**

VTK 61P
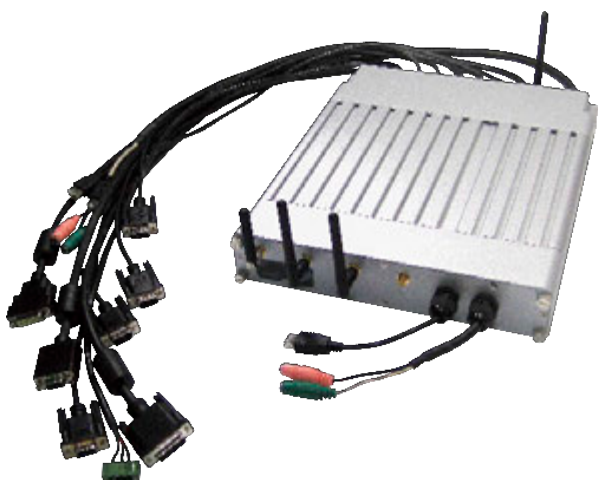
Main Features
* IP65 compliant, anti-dust & anti-water protection kit
* Cables and antennas can be connected on VTC 6000 with external peripheral devices
* LED status is readable through window
* VTK 61P designed for VTC 6100/VTC 6110/VTC 6120/VTC 6200-NI
* Available on customization for VTC 71xx-Bx series

Specifications

Dimensions
* 260mm (L) x 306mm (W) x 50mm (H)
* 2.8 Kg (6.18 Lb)

Ordering Information

* **VTK 61P (P/N: 10VK0061P00X0)**

VTK 33V

Main Features

- Unique 3D X-Y-Z axis anti-vibration design
- Integrated 3600RPM fan x 2
- VTK 33V for VTC 3300E, VTC 6000, VTC 6100, VTC 6110

Specifications

Vibration

- VTC 3300E, VTC 6000, VTC 6100, VTC 6110 (operating)
  2G@10 ~ 500 Hz with automotive HDD
  3G@5 ~ 500 Hz random with CF

Thermal

- 2 x fan (60 x 60mm, 12V) for lowing surface temperature of VTC series

Dimensions

- 320mm (W) x 180mm (L) x 86.5mm (H)
- 1.48 Kg (3.3 Lb)

Ordering Information

- **VTK 33V (P/N: 10VK0033V00X0)**

VTK 71F

Main Features

- Integrated 3600RPM fan x 2

Specifications

Thermal

- 2 x fan (60 x 60mm, 12V) for lowing surface temperature

Dimensions

- 320mm (W) x 180mm (L) x 86.5mm (H)
- 1.48 Kg (3.3 Lb)

Ordering Information

- **VTK 71F (P/N: 10VK0071F00X0)**

FMS 1000

Coming Soon

Main Features

- 1 x 10/100 Mbps Ethernet
- 3G WWAN and WLAN support
- Rugged IP67 protection
- Back up rechargable battery

- Voice & SMS communication
- 1 x CAN Bus 2.0B and optional OBDII (SAE J1939)
- Driver identification (iButton & RFID)
- Support optional precision GPS module

Product Overview

FMS 1000 provides powerful vehicle tracking with GPS and 3G WWAN high speed connectivity. This gateway device is perfectly suitable for monitoring and tracking remote vehicles and collecting valuable data from vehicle via CAN Bus 2.0B or OBDII interface. FMS 1000 helps fleet managers maximize fleet productivity and efficiency.

With Ethernet port, FMS 1000 can transmit Ethernet data efficiently, and have direct phone communication between operating center and driver for any expected events and emergencies.

A rechargeable battery inside and intelligent power management can provide low voltage protection. With variety of interfaces, such as digital-input/output, analog-input and RS-232, FMS 1000 can perform tasks such as monitoring temperature, the level of fuel tank or tire pressure with external sensors.

There are G-sensor and CAN 2.0B and OBDII on FMS 1000 to monitor the behavior of driver and it can improve the safety and vehicle maintenance. For security and driver identification, vibration sensor and I-Button are perfectly to be taken an advantage of.

Specifications

CPU
- ARM 32-bit Cortex™-M4, 168MHz

WWAN Connection
- u-blox LISA-U230
  - UMTS/HSPA: 800, 850, 900, 1700, 1900, 2100MHz
  - GSM/GPRS/EDGE: Quad band 850, 900, 1800, 1900

WLAN Connection
- TI WG1400
  - 802.11 b/g/n, 2.4GHz

Ethernet
- 1 x 10/100 Mbps Ethernet

On Board Sensors
- 1 x G-sensor

Serial Port
- 1 x RS232 for optional RFID reader

Voice & SMS Communication
- 1 x MIC-in

- 1 x Line-out

GPS
- On board u-blox, NEO-M8N GPS module
- Support GPS/ Gloness/ QZSS/ Galileo/ Beidou
- Support optional precision GPS module

Battery
- Li Polymer rechargeable battery, 1200mAh

Digital Input/Output
- 3 x DI
- 3 x DO

Analog Input
- 3 x Analog-In
  - Input: 0~38V
  - Resolution: 12 bit

CAN Bus 2.0B
- 1 x CAN Bus 2.0B

Dimension Drawing

Coming Soon

OBDII
- 1 x OBDII, support SAE J1939

Internal Memory
- 1MB on board memory

Other Interfaces
- iButton (Dallas) for driver identification
- Frequency input for vehicle speed detection
- 1 x direction signal for optional GPS DR module

Firmware Update
- Via Ethernet

I/O Interface- Front
- Power/ ignition/ GND input
- CAN Bus 2.0B
- OBDII
- 3 x DI and 3 x DO
- 3 x Analog-In
- 1 x Speed frequency-Input
- 1 x Direction signal
- 1 x 1-wire
- 1 x Mic-In
- 1 x Line-Out
- 1 x Ethernet
- 1 x 12VDC output
- 1 x RS 232
- 3 x antenna for GPS/ WWAN/ Wi-Fi

LED Indicators- Top Cover
- 1 x Power LED
- 1 x GPS LED
- 1 x Wi-Fi LED
- 1 x WWAN LED

Power Management
- 9 ~ 36VDC input
- 8-level power off delay time
- Low voltage protection

Dimensions
- 153 mm (W) x 146 mm (D) x 56 mm (H) (6" x 5.75" x 2.2")

Environment
- Operating temperatures:
  -20°C ~ 60°C, with internal battery
- Storage temperatures:
  -40°C ~ 80°C
- Relative humidity:
  10% to 90% (non-condensing)
- Vibration:
  2g@5 ~ 500Hz
  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:
  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

- **FMS 1000 (P/N: TBD)**
  10/100 Mbps Ethernet port, CAN Bus 2.0B, OBDII, back-up battery, iButton, on board G-sensor , 1 x RS232

MVS 5200

Coming Soon

Main Features

- 8 x video channel 720P real time live view while 1080P recording
- 8 x 10/100/1000 Mbps 802.3af PoE port
- H.264/MPEG4/MJPEG codec decoding
- Multitasking. PC highly performs even while recording video
- 5th generation Intel® Core™ dual core i3-5010U, 2.1GHz
- Dual removable SATA 3.0 SSD/HDD
- 7/24 GPS tracker function support even PC is off
- Built-in CAN 2.0B. Optional OBDII function (SAE J1939)

Product Overview

MVS 5200 performs 8-CH live view when keeping recording the video simultaneously without lags. It provides multitasking capability such as running video recognition software like ALPR continuously while recording videos.

MVS 5200 mobile network video recorder promotes increased safety and security for public transportation with high video frame rates and 2 removable extensive storage HDD/SSD capacity. It connects up to 8 IP cameras + PoE function providing reliable and high quality video coverage in and around your vehicle.

MVS 5200 leverages wireless networks to simplify fleet management with capabilities such as remote, real-time video monitoring and automated video extraction. Vehicle data integration and diagnostics are also carried out via CAN Bus and OBDII. This remote capability keeps transit fleets in service around the clock. MIL-STD-810G for shock and vibration is designed to operate in harsh environments.

For added physical security, the pre-alarm function on MVS 5200 features two DI and DO interface that can both operate in power-off state, ensuring vehicle location, alarm and emergency notifications are constantly available at times of intrusion or urgent conditions. While the integrated back-up battery guards against power interruptions, and extends video coverage on vehicle shutdown.

Specifications

NVR System

Video Input
- 8-CH

Performance
- 4 x 1080p live view + 1 x 1080P playback
- 8 x 720P live view + 1 x 720P playback

Compression
- H.264, MPEG4, MJPEG

Resolution
- CIF ~ 2M

Storage
- 2 x Removable 2.5" SATA 3.0 with lock

LED Indicator
- Power, storage

Interface
- 1 x phone jack 3.5mm for 1 x Line-Out
- 1 x dual USB type A connector for 1 x USB 3.0 + 1 x USB 2.0 port

PC System

CPU
- 5th generation Intel® Core™ dual core i3-5010U, 2.1GHz

Memory
- 2 channel 204-pin DDR3L SO-DMIM socket support 1600MHz up to 16GB, default 2GB industrial grade memory

Storage
- 1 x CFast (externally accessible)
- 1 x mSATA

Expansion
- 1 x full size Mini-PCIe socket (USB 2.0)
- 1 x full size Mini-PCIe socket (USB 2.0 + PCIe)
- 1 x full size Mini-PCIe socket (mSATA)

GPS and ON Board Sensor
- 1 x default U-blox NEO-M8N GPS module for GPS/Gloness/QZSS/Galileo/Beidou
- Optional modules with Dead Reckoning available
- Built-in G-sensor

Dimension Drawing

Coming Soon

Power over Ethernet
- 8-port RJ45 for 10/100/1000 base-T. PoE IEEE 802.3af compliance, total 60W

I/O Interface-Front
- 2 x removable 2.5" HDD/SSD tray with lock
- 6 x LED indicators for power/storage/WLAN/WWAN
- 2 x Reset button
- 1 x CFast socket with cover
- 2 x dual USB type A connector for 1 x USB 3.0 + 1 x USB 2.0 port
- 2 x externally accessible SIM card socket (selectable)
- 1 x DB-15 VGA output for live view
- 1 x DB-15 VGA input for PC video switch
- 1 x phone jack 3.5mm for 1 x Line-Out
- 4 x antenna hole for WWAN/WLAN/BT/GPS

I/O Interface-Rear
- 8 x RJ45 10/100/1000 Mbps PoE port, 802.3af compliance, total 60W
- 2 x RJ45 10/100/1000 Fast Ethernet with LED
- 1 x 9~36VDC input with ignition and 80W typical power consumption
- 1 x dual USB type A connector for USB 3.0 port + USB 2.0 port
- 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 DB26 LVDS interface with 12V and USB2.0
- 2 x DB-9 RS-232/422/485 (w/ optional 3KV isolation protection)
- 1 x DB15 connector
  - MCU DIO (2x DI, 2 x DO)
  - 1 x analog input
  - 1 x speed frequency input
  - 1 x 1-wire
  - 1 x RS232 (for RFID reader)
  - 12VDC output
  - 1 x direction signal for optional DR GPS
- 1 x 12VDC output (2A) + battery bypass DC output (2A) + SM Bus
- 1 x 16-pin terminal block connector
  - 1 x CAN Bus 2.0B (on board)
  - 1 x OBDII from optional VIOB-OBD-03 module (SAE J1939)
  - 1 x CAN Bus 2.0B from optional VIOB-CAN-03 module
  - 8 x GPIO
    (4 x Digital Input, w/ optional 3KV isolation protection)
    Input Voltage (Internal Type): 5VDC TTL (default)
    Input Voltage (Source Type): 3 ~ 12VDC
    (4 x Digital Output, w/ optional 3KV isolation protection)
    Digital Output (Sink Type): 5VDC TTL (default), max current: 20mA
    Digital Output (Source Type): 3 ~ 24VDC, max current: 150mA

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
- Optional internal 1100mAh, Li-Polymer rechargeable battery

Operating System
- Windows 8, WES8
- Window 7, WES7
- Linux kernel 3.X

Dimensions
- 260mm (W) x 206mm (D) x 130mm (H) (10.24" x 8.11" x 5.12")
- 3.3kg

Environment
- Operating temperatures (without internal battery):
  -30°C ~ 50°C (w/ industrial SSD) with air flow
  -20°C ~ 45°C (w/ commercial HDD) with air flow
- Operating temperatures (with internal battery):
  -20°C ~ 50°C (w/ industrial SSD) with air flow
  -20°C ~ 45°C (w/ commercial HDD) with air flow
- Storage temperatures: -40°C ~ 80°C
  Relative humidity: 10% to 90% (non-condensing)
  Vibration (random): 1.5g@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

Orderin g Information

- **VMS 5200-BK (P/N: TBD)**
  5th generation Intel® Core™ dual core i3-5010U, 2.1GHz, 2GB DDR3L industrial grade SO-DIMM, 8 x RJ45 10/100/1000 PoE port (802.3af), 2 x RJ45 10/100/1000 Ethernet port, VGA/LVDS Output, 2 x RS-232/422/485, 8 x GPIO, 3 x USB, 12VDC output

MVS 5210

Coming Soon

Main Features

- 8 x video channel 720P real time live view while 1080P recording
- 8 x 10/100/1000 Mbps 802.3af PoE port
- H.264/MPEG4/MJPEG codec decoding
- Multitasking. PC highly performs even while recording video
- 5th generation Intel® Core™ dual core i7-5650U, 2.2GHz
- Dual removable SATA 3.0 SSD/HDD
- 7/24 GPS tracker function support even PC is off
- Built-in CAN 2.0B. Optional OBDII function (SAE J1939)

Product Overview

MVS 5210 performs 8-CH live view when keeping recording the video simultaneously without lags. It provides multitasking capability such as running video recognition software like ALPR continuously while recording videos.

MVS 5210 mobile network video recorder promotes increased safety and security for public transportation with high video frame rates and 2 removable extensive storage HDD/SSD capacity. It connects up to 8 IP cameras + PoE function providing reliable and high quality video coverage in and around your vehicle.

MVS 5210 leverages wireless networks to simplify fleet management with capabilities such as remote, real-time video monitoring and automated video extraction. Vehicle data integration and diagnostics are also carried out via CAN Bus and OBDII. This remote capability keeps transit fleets in service around the clock. MIL-STD-810G for shock and vibration is designed to operate in harsh environments.

For added physical security, the pre-alarm function on MVS 5210 features two DI and DO interface that can both operate in power-off state, ensuring vehicle location, alarm and emergency notifications are constantly available at times of intrusion or urgent conditions. While the integrated back-up battery guards against power interruptions, and extends video coverage on vehicle shutdown.

Specifications

NVR System

Video Input
- 8-CH

Performance
- 4 x 1080p live view + 1 x 1080P playback
- 8 x 720P live view + 1 x 720P playback

Compression
- H.264, MPEG4, MJPEG

Resolution
- CIF ~ 2M

Storage
- 2 x Removable 2.5" SATA 3.0 with lock

LED Indicator
- Power, storage

Interface
- 1 x phone jack 3.5mm for 1 x Line-Out
- 1 x dual USB type A connector for 1 x USB 3.0 + 1 x USB 2.0 port

PC System

CPU
- 5th generation Intel® Core™ dual core i7-5650U, 2.2GHz

Memory
- 2 channel 204-pin DDR3L SO-DMIM socket support 1600MHz up to 16GB, default 2GB industrial grade memory

Storage
- 1 x CFast (externally accessible)
- 1 x mSATA

Expansion
- 1 x full size Mini-PCIe socket (USB 2.0)
- 1 x full size Mini-PCIe socket (USB 2.0 + PCIe)
- 1 x full size Mini-PCIe socket (mSATA)

GPS and ON Board Sensor
- 1 x default U-blox NEO-M8N GPS module for GPS/Gloness/QZSS/Galileo/Beidou
- Optional modules with Dead Reckoning available
- Built-in G-sensor

Dimension Drawing

Coming Soon

Power over Ethernet
- 8-port RJ45 for 10/100/1000 base-T. PoE IEEE 802.3af compliance, total 60W

I/O Interface-Front
- 2 x removable 2.5" HDD/SSD tray with lock
- 6 x LED indicators for power/storage/WLAN/WWAN
- 2 x Reset button
- 1 x CFast socket with cover
- 2 x dual USB type A connector for 1 x USB 3.0 + 1 x USB 2.0 port
- 2 x externally accessible SIM card socket (selectable)
- 1 x DB-15 VGA output for live view
- 1 x DB-15 VGA input for PC video switch
- 1 x phone jack 3.5mm for 1 x Line-Out
- 4 x antenna hole for WWAN/WLAN/BT/GPS

I/O Interface-Rear
- 8 x RJ45 10/100/1000 Mbps PoE port, 802.3af compliance, total 60W
- 2 x RJ45 10/100/1000 Fast Ethernet with LED
- 1 x 9~36VDC input with ignition and 80W typical power consumption
- 1 x dual USB type A connector for USB 3.0 port + USB 2.0 port
- 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 DB26 LVDS interface with 12V and USB2.0
- 2 x DB-9 RS-232/422/485 (w/ optional 3KV isolation protection)
- 1 x DB15 connector
  - MCU DIO (2x DI, 2 x DO)
  - 1 x analog input
  - 1 x speed frequency input
  - 1 x 1-wire
  - 1 x RS232 (for RFID reader)
  - 12VDC output
  - 1 x direction signal for optional DR GPS
- 1 x 12VDC output (2A) + battery bypass DC output (2A) + SM Bus
- 1 x 16-pin terminal block connector
  - 1 x CAN Bus 2.0B (on board)
  - 1 x OBDII from optional VIOB-OBD-03 module (SAE J1939)
  - 1 x CAN Bus 2.0B from optional VIOB-CAN-03 module
  - 8 x GPIO
    (4 x Digital Input, w/ optional 3KV isolation protection)
    Input Voltage (Internal Type): 5VDC TTL (default)
    Input Voltage (Source Type): 3 ~ 12VDC
    (4 x Digital Output, w/ optional 3KV isolation protection)
    Digital Output (Sink Type): 5VDC TTL (default), max current: 20mA
    Digital Output (Source Type): 3 ~ 24VDC, max current: 150mA

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
- Optional internal 1100mAh, Li-Polymer rechargeable battery

Operating System
- Windows 8, WES8
- Window 7, WES7
- Linux kernel 3.X

Dimensions
- 260mm (W) x 206mm (D) x 130mm (H) (10.24" x 8.11" x 5.12")
- 3.3kg

Environment
- Operating temperatures (without internal battery):
  -30°C ~ 50°C (w/ industrial SSD) with air flow
  -20°C ~ 45°C (w/ commercial HDD) with air flow
- Operating temperatures (with internal battery):
  -20°C ~ 50°C (w/ industrial SSD) with air flow
  -20°C ~ 45°C (w/ commercial HDD) with air flow
- Storage temperatures: -40°C ~ 80°C
  Relative humidity: 10% to 90% (non-condensing)
  Vibration (random): 1.5g@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

Orderin g Information

- **VMS 5210-BK (P/N: TBD)**
  5th generation Intel® Core™ dual core i7-5650U, 2.2GHz, 2GB DDR3L industrial grade SO-DIMM, 8 x RJ45 10/100/1000 PoE port (802.3af), 2 x RJ45 10/100/1000 Ethernet port, VGA/LVDS Output, 2 x RS-232/422/485, 8 x GPIO, 3 x USB, 12VDC output

VES30-4S

Main Features

- 4 x 10/100/1000 Mbps PoE port (802.3af compliance)
- 15.4W at 48VDC for each PoE port
- Low battery voltage protection
- CE/FCC, E13 mark certification

- Wide power input range 9 ~ 36VDC
- -30 ~ 70°C operating temperature
- Ignition power on/off support
- Power on/off delay time setting

Product Overview

VES30-4S mobile PoE switch is designed for telematics applications in harsh environments with fanless enclosure. It provides 5 Giga bit Fast Ethernet ports including 4 IEEE 802.3af compliance PoE ports to transfer large amounts of video streaming, voice and critical data across Ethernet network smoothly and quickly.

As the power source from a vehicle is unstable by nature, the mobile PoE switches support a wide voltage input range of 9VDC to 36VDC and provide smart power management with low battery voltage protection, power-on and power-off delay timer, and auto ignition power on/off functions. These unique features can secure reliable operation and prevent premature failure of both the PoE switches and vehicle.

VES30-4S is encased in a fanless dustproof enclosure and can operate under shock, vibration, and temperature extremes from -30 to 70°C. The mobile PoE switches are also small in size and support din rail mounting for ease of installation with PD devices such as IP cameras and Wi-Fi access points.

Specifications

Architecture
- Switch architecture. Highly integrated, unmanaged-smart gigabit, store and forward switch
- 4K entry MAC address table with automatic learning and aging

Power over Ethernet
- PoE standard IEEE 802.3af Power over Ethernet/PSE
- PoE power supply type end-span
- PoE power output per port 48V DC, 350mA. max. 15.4 watts

Network Connector
- 4-port RJ45 for 10/100/1000 base-T. PoE IEEE 802.3af compliance, total 60W
- 1-port RJ45 for 10/100/1000 base-T

Standard Compliance
- IEEE 802.3 for 10BaseT Ethernet
- IEEE 802.3u for 100BaseT(X) Fast Ethernet
- IEEE 802.3ab for 1000BaseT(X) Gigabit Ethernet
- IEEE 802.3x for flow control
- IEEE 802.3af Power Over Ethernet

I/O Interface
- Power: 1 x 9~36VDC input with ignition

Ethernet:
- Ethernet:
  4 x RJ45 10/100/1000 Mbps PoE port, 802.3af compliance
  1 x RJ45 10/100/1000 Mbps
- LED:
  1 x power indicator
  8 x PoE indicator
  1 x low voltage protection indicator

Power Management
- Selectable boot-up & shut-down voltage for low power protection by Dip switch
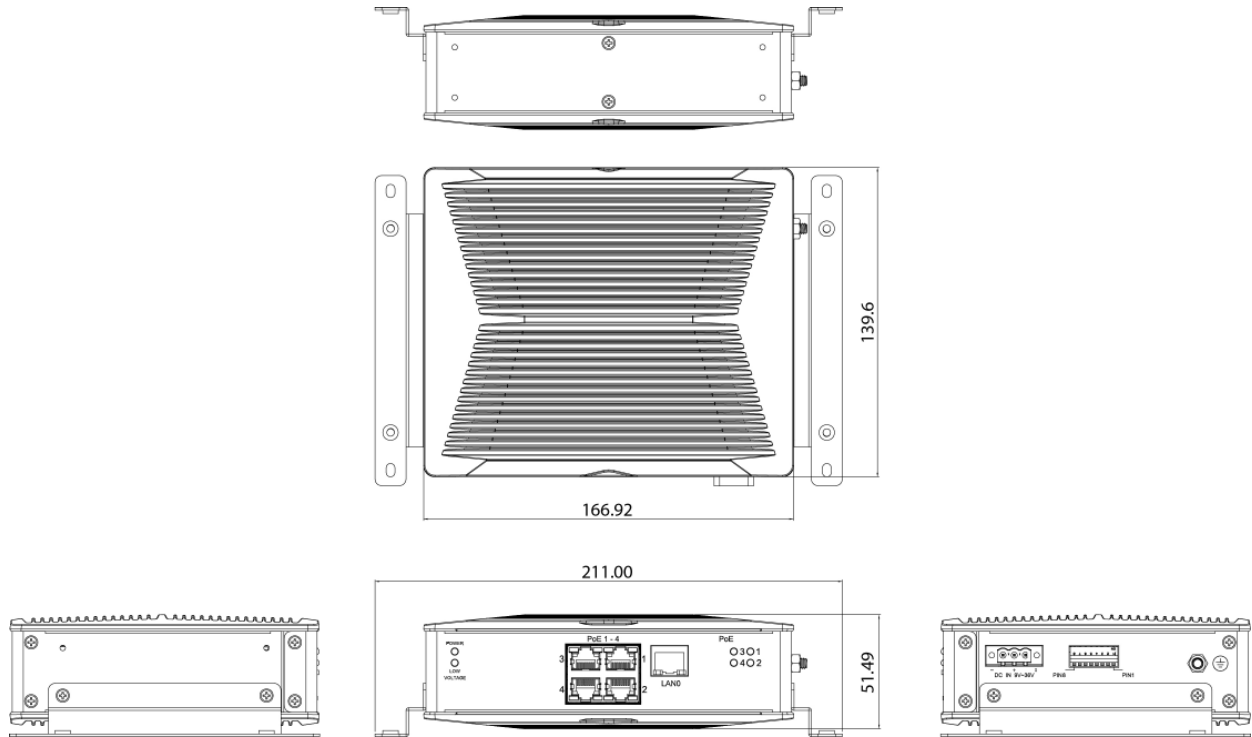- Power on/ off delay time setting by Dip switch

Dimensions
- 167 x 58.8 x 139.6 mm (65.75" x 23.14" x 54.96")
- Weight: 1kg
- Support Horizontal Mounting, DIN- Rail Mounting (option) and vertical Mounting (option)

Environment
- Operating temperatures: Ambient with air -30°C to 70°C
- Storage temperatures: -35°C to 85°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 1g@5~500 Hz

Dimension Drawing

- Vibration:
  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:
  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

Standards/Certifications
- CE approval
- FCC Class B
- E13 Mark

Ordering Information

- **VES30-4S (P/N: 10VE0003000X0)**
  4 x RJ45 10/100/1000 PoE port (802.3af), 1 x RJ45 10/100/1000 Ethernet port, 9 ~ 36VDC input, ignition detection, low voltage protection, delay timer, E13 mark

VES30-8S

Main Features

- 8 x 10/100/1000 Mbps PoE port (802.3af compliance)
- 15.4W at 48VDC for each PoE port
- Low battery voltage protection
- CE/FCC, E13 mark certification
- Wide power input range 9 ~ 36VDC
- -30 ~ 70°C operating temperature
- Ignition power on/off support
- Power on/off delay time setting

Product Overview

VES30-8S mobile PoE switch is designed for telematics applications in harsh environments with fanless enclosure. It provides 9 Giga bit Fast Ethernet ports including 8 IEEE 802.3af compliance PoE ports to transfer large amounts of video streaming, voice and critical data across Ethernet network smoothly and quickly.

As the power source from a vehicle is unstable by nature, the mobile PoE switches support a wide voltage input range of 9VDC to 36VDC and provide smart power management with low battery voltage protection, power-on and power-off delay timer, and auto ignition power on/off functions. These unique features can secure reliable operation and prevent premature failure of both the PoE switches and vehicle.

VES30-8S is encased in a fanless dustproof enclosure and can operate under shock, vibration, and temperature extremes from -30 to 70°C. The mobile PoE switches are also small in size and support din rail mounting for ease of installation with PD devices such as IP cameras and Wi-Fi access points.

Specifications

Architecture
- Switch architecture. Highly integrated, unmanaged-smart gigabit, store and forward switch
- 4K entry MAC address table with automatic learning and aging

Power over Ethernet
- PoE standard IEEE 802.3af Power over Ethernet/PSE
- PoE power supply type end-span
- PoE power output per port 48V DC, 350mA. max. 15.4 watts

Network Connector
- 8-port RJ45 for 10/100/1000 base-T. PoE IEEE 802.3af compliance, total 120W
- 1-port RJ45 for 10/100/1000 base-T

Standard Compliance
- IEEE 802.3 for 10BaseT Ethernet
- IEEE 802.3u for 100BaseT(X) Fast Ethernet
- IEEE 802.3ab for 1000BaseT(X) Gigabit Ethernet
- IEEE 802.3x for flow control
- IEEE 802.3af Power Over Ethernet

I/O Interface
- Power: 1 x 9~36VDC input with ignition

Ethernet:
- Ethernet:
  8 x RJ45 10/100/1000 Mbps PoE port, 802.3af compliance
  1 x RJ45 10/100/1000 Mbps
- LED:
  1 x power indicator
  8 x PoE indicator
  1 x low voltage protection indicator

Power Management
- Selectable boot-up & shut-down voltage for low power protection by Dip switch
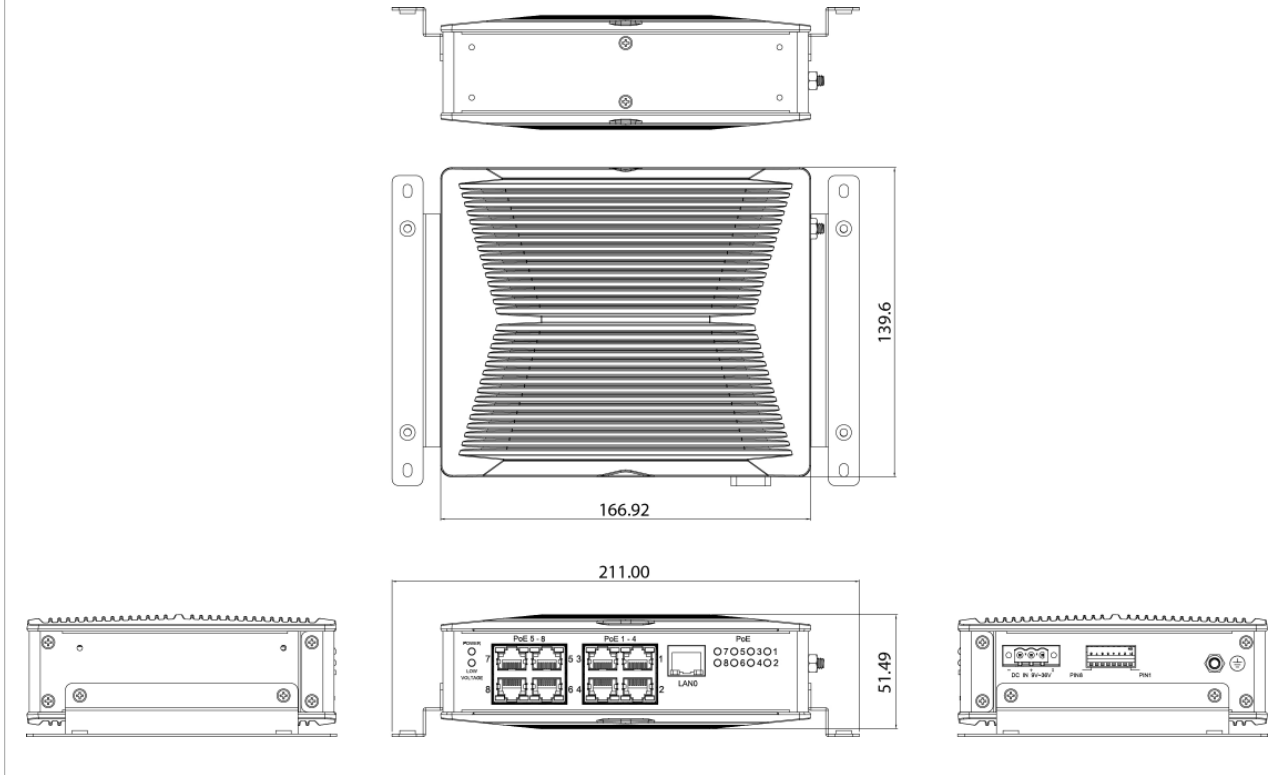- Power on/ off delay time setting by Dip switch

Dimensions
- 167 x 58.8 x 139.6 mm (65.75" x 23.14" x 54.96")
- Weight: 1kg
- Support Horizontal Mounting, DIN- Rail Mounting (option) and vertical Mounting (option)

Environment
- Operating temperatures: Ambient with air -30°C to 70°C
- Storage temperatures: -35°C to 85°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 1g@5~500 Hz

Dimension Drawing

- Vibration:
  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:
  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

Standards/Certifications
- CE approval
- FCC Class B
- E13 Mark

Ordering Information

- **VES30-8S (P/N: 10VE0003001X0)**
  8 x RJ45 10/100/1000 PoE port (802.3af), 1 x RJ45 10/100/1000 Ethernet port, 9 ~ 36VDC input, ignition detection, low voltage protection, delay timer, E13 mark

VMD 1000

Main Features

- 7" WVGA TFT LCD monitor
- Automatic/manual brightness control
- Remote system power control
- On screen control buttons

- Support USB 2.0 and card reader
- Camera sensor on front panel (Optional)
- Optional daylight readable touch support
- Front panel compliant with IP54

Product Overview

VMD 1000 is a 7-inch TFT LCD monitor with 4 wire resistant touch screen sensor. With the high brightness display and automatically brightness control, it is designed for in-vehicle application. It also provides USB and card reader features, and reserves camera sensor as an option. Those friendly interfaces benefit the technicians during maintenances. Its front panel is compliant to IP54 to meet with industrial application. VMD 1000 can perfectly match with any VTC series devices via the 26-pin LVDS cable.

Specifications

General
- Enclosure: Plastic PC + ABS
- Mounting: Support VESA 75, panel and wall mounting
- Power Input: 12VDC
- Power Consumption: 12W
- Ingress Protection: Front panel IP54
- Dimension: 182mm (W) x 138mm (H) x 36.3mm (D) (7.17" x 5.43" x 1.43")
- Weight (Net): 0.45Kg, 0.99Lb

LCD Panel
- 7-inch TFT LCD panel with LED backlight
- 800 x 480 pixels (WVGA)
- Brightness: 500 cd/m² (typical)
- Contrast ratio: 600:1 (typical)

Touch Screen Sensor
- 4-wire resistant touch
- Anti-glare coating surface
- Transmission rate: 82 ± 3%

I/O Interface-Front
- 5 x Control buttons
  Power on/off
  Volume control (+/-)
  Brightness control (+/-)
- Light sensor
- 2 x LED indicators
- 2 x Built-in speakers (1W)

I/O Interface-Lateral
- 1 x SD/MMC/MS Card Reader
- 1 x USB type A for Storage
- 1 x Line-out (switch to external speaker by auto detection)
- 1 x Mic-in (from external microphone)

I/O Interface-Bottom
- Remote System Power On/Off Button
- 1 x Mic-out
- 1 x Line-in
- 1 x LVDS Connector (integrating LVDS, USB x 1 and 12VDC x 1)

Environment
- Operating temperature: -20°C to 70°C
- Storage temperature: -30°C to 80°C
- Vibration (random): 2.5g@5 ~ 500 Hz
- Vibration
  Operating: MIL-STD-810G, 514.6 Procedure 1, Category 4, Ground Vehicle – Highway Truck
  Storage: MIL-STD-810G, 514.6 Procedure 1, Category 4, Integrity Test
- Shock
  Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=20g
  Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, Ground equipment=75g

Optional Features
- 2.0M pixels CCD camera on front panel
- Sunlight-readable touch screen (4 wires resistive w/anti-glare coating)

NEXCOM

Dimension Drawing
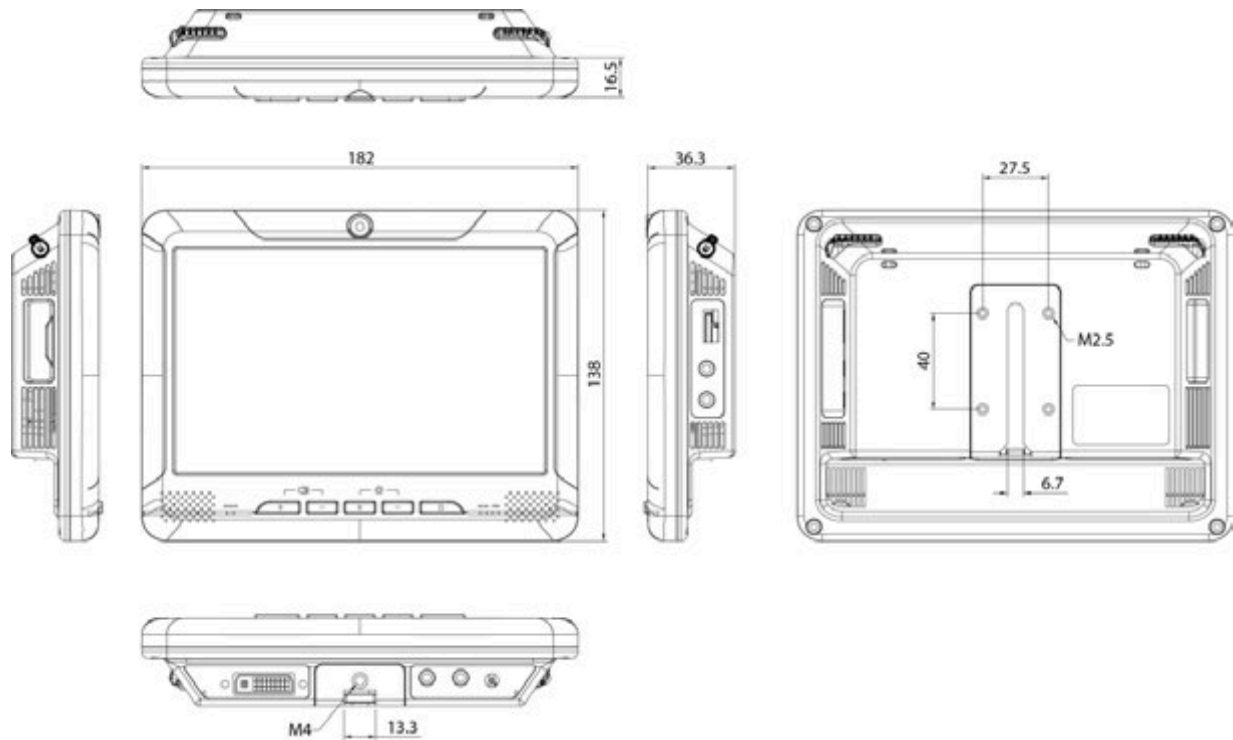
- Support VESA 75, wall and stand mount kit

Standards/Certifications
- CE approval
- FCC Class B

Ordering Information

- **VMD 1000-B (P/N: 10VD0100000X0)**
  7" WVGA vehicle mount display with touch screen and LVDS interface

- **VMD 1000-BS (P/N: 10VD0100003X0)**
  7" WVGA vehicle mount display with touch screen, LVDS and daylight readable

- **VMD 1000-P (P/N: TBD)**
  7" WVGA vehicle mount display with touch screen, LVDS and CCD camera

- **VMD 1000-PS (P/N: 10VD0100002X2)**
  7" WVGA vehicle mount display with touch screen, LVDS, CCD camera and daylight readable

- **Bundle Accessories**
  LVDS cable (1.5M)
  Metal stand kit
  Cable fastener
  Driver CD

VMD 1001

Main Features

- 7" VGA TFT LCD monitor
- Automatic/manual brightness control
- Wide range DC input from 9 ~ 36V
- Direct VGA input interface
- Support USB 2.0 and card reader
- Camera sensor on front panel (Optional)
- Optional daylight readable touch support
- Front panel compliant with IP54

Product Overview

VMD 1001 is a 7-inch TFT LCD monitor with 4 wire resistant touch screen sensor. With the high brightness display and automatically brightness control, it is designed for in-vehicle application. In support of standard VGA interface, it can be configured to link to the most of vehicle computers. It also provides USB and card reader features, and reserves camera sensor as an option. Those friendly interfaces benefit the technicians during maintenances. Its front panel is compliant to IP54, and wide range power input and operating temperature to meet with industrial application.

Specifications

General
- Enclosure: Plastic PC + ABS
- Mounting: Support VESA 75, panel and wall mounting
- Power Input: 9 ~ 36VDC
- Power Consumption: 18W
- Ingress Protection: Front panel IP54
- Dimension: 182mm (W) x 138mm (H) x 36.3mm (D) (7.17" x 5.43" x 1.43")
- Weight (Net): 0.45Kg, 0.99Lb

LCD Panel
- 7-inch TFT LCD panel with LED backlight
- 800 x 480 pixels (WVGA)
- Brightness: 500 cd/m² (typical)
- Contrast ratio: 600: 1 (typical)

Touch Screen Sensor
- 4-wire resistant touch
- Anti-glare coatingsurface
- Transmission rate: 82 ± 3%

I/O Interface-Front
- 5 x Control buttons
  Power on/off
  Volume control (+/-)
  Brightness control (+/-)
- Light sensor
- 2 x LED indicators
- 2 x Built-in speakers (1W)

I/O Interface-Lateral
- 1 x SD/MMC/MS card reader
- 1 x USB type A for storage
- 1 x Line-in
- 1 x Line-out (automatic detection/switch to external speaker)

I/O Interface-Bottom
- 1 x Power connector
- 1 x USB type B for touch screen and USB hub
- 1 x VGA

Optional Features
- 2.0M pixels CCD camera on front panel
- Sunlight-readable touch screen (4 wires resistive w/anti-glare coating)
- Support VESA 75, wall and stand mount kit

Environment
- Operating temperature: -20℃ to 70℃
- Storage temperature: -30℃ to 80℃
- Vibration (random): 2.5g@5 ~ 500 Hz
- Vibration
  Operating: MIL-STD-810G, 514.6 Procedure 1, Category 4, Ground Vehicle – Highway Truck
  Storage: MIL-STD-810G, 514.6 Procedure 1, Category 4, Integrity Test
- Shock
  Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=20g
  Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, Ground equipment=75g

Dimension Drawing

181.9

34.1

137.9
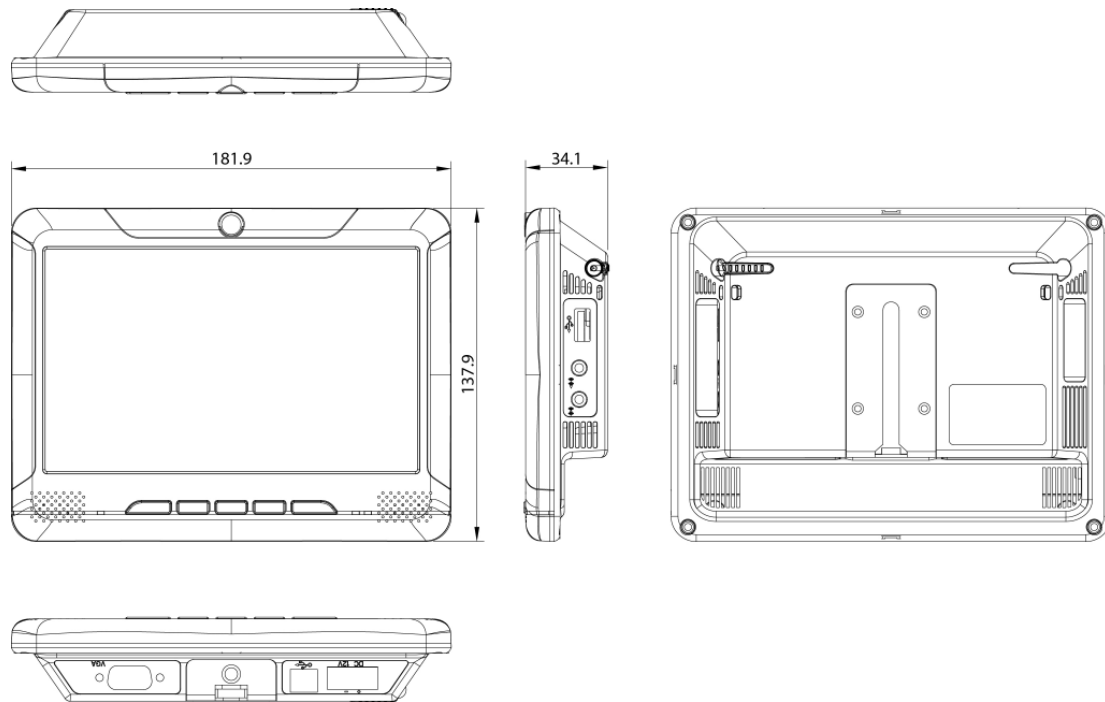
Standards/Certifications
* CE approval
* FCC Class B

Ordering Information

* **VMD 1001-B (P/N: 10VD0100101X0)**
  7" VGA vehicle mount display with touch screen and VGA interface

* **VMD 1001-BS (P/N: 10VD0100102X0)**
  7" VGA vehicle mount display with touch screen, VGA and daylight readable

* **VMD 1001-P (P/N: TBD)**
  7" VGA vehicle mount display with touch screen, VGA and CCD camera

* **VMD 1001-PS (P/N: TBD)**
  7" VGA vehicle mount display with touch screen, VGA, CCD camera and daylight readable

* **Bundle Accessories**
  VGA cable (1.5M)
  USB cable (1.5M)
  Metal stand kit
  Cable fastener
  Power connector
  Driver CD

VMD 2000

Main Features

- 8" SVGA TFT LCD monitor
- Automatic/Manual brightness control
- Remote system power control
- On screen control buttons
- Support USB 2.0 and card reader
- Camera sensor on front panel (Optional)
- Sunlight readable solution with 800cd/m² high brightness support
- Front panel compliant with IP54

Product Overview

VMD 2000 is an 8-inch TFT LCD monitor with 4 wire resistant touch screen sensor. With the high brightness display and automatically brightness control, it is designed for in-vehicle applications. It also provides USB and card reader features, and reserves camera sensor as an option. Those friendly interfaces benefit the technicians during maintenances. Its front panel is compliant to IP54 to meet with industrial applications. VMD 2000 can perfectly match with any VTC series devices via the 26-pin LVDS cable.

Specifications

General

- Enclosure: Plastic PC + ABS
- Mounting: Support VESA 75, panel and wall mounting
- Power Input: 12VDC
- Power Consumption: 15W
- Ingress Protection: Front panel IP54
- Dimension: 207mm (W) x 173mm (H) x 36.7mm (D) (8.15" x 6.81" x 1.44")
- Weight (Net): 0.7Kg, 1.54Lb

LCD Panel

- 8-inch TFT LCD panel with LED backlight
- 800 x 600 pixels (SVGA)
- Brightness: 400 cd/m² (typical)
- Optional high brightness for sunlight-readable with 800cd/m² After touch screen is 640cd/m²
- Contrast ratio: 500: 1 (typical)

Touch Screen Sensor

- 4-wire resistant touch
- Anti-glare coating surface
- Transmission rate: 82 ± 3%

I/O Interface-Front

- On screen display buttons x 5
  Power on/off
  Brightness control (+/-)
  Volume control (+/-)

- Light sensor
- 2 x LED indicators
- 2 x Built-in speakers (1.2W)

I/O Interface-Lateral

- 1 x SD/MMC/MS card reader
- 1 x USB type A for storage
- 1 x Line-out (automatic detection/switch to external speaker)
- 1 x Mic-in

I/O Interface-Bottom

- Remote System Power On/Off Button
- 1 x Mic-out
- 1 x Line-in
- 1 x LVDS Connector (integrating LVDS, USB x 1 and 12VDC x 1)

Optional Features

- 2.0M pixels CCD camera on front panel
- Sunlight-Readable Display with High Brightness LCD (800 cd/m²)
- Support Panel and wall mount kit

Environment

- Operating temperature: -20°C to 60°C
- Storage temperature: -30°C to 70°C
- Vibration (random): 2.5g@5 ~ 500 Hz
- Vibration
  Operating: MIL-STD-810G, 514.6 Procedure 1, Category 4, Ground Vehicle – Highway Truck

Dimension Drawing
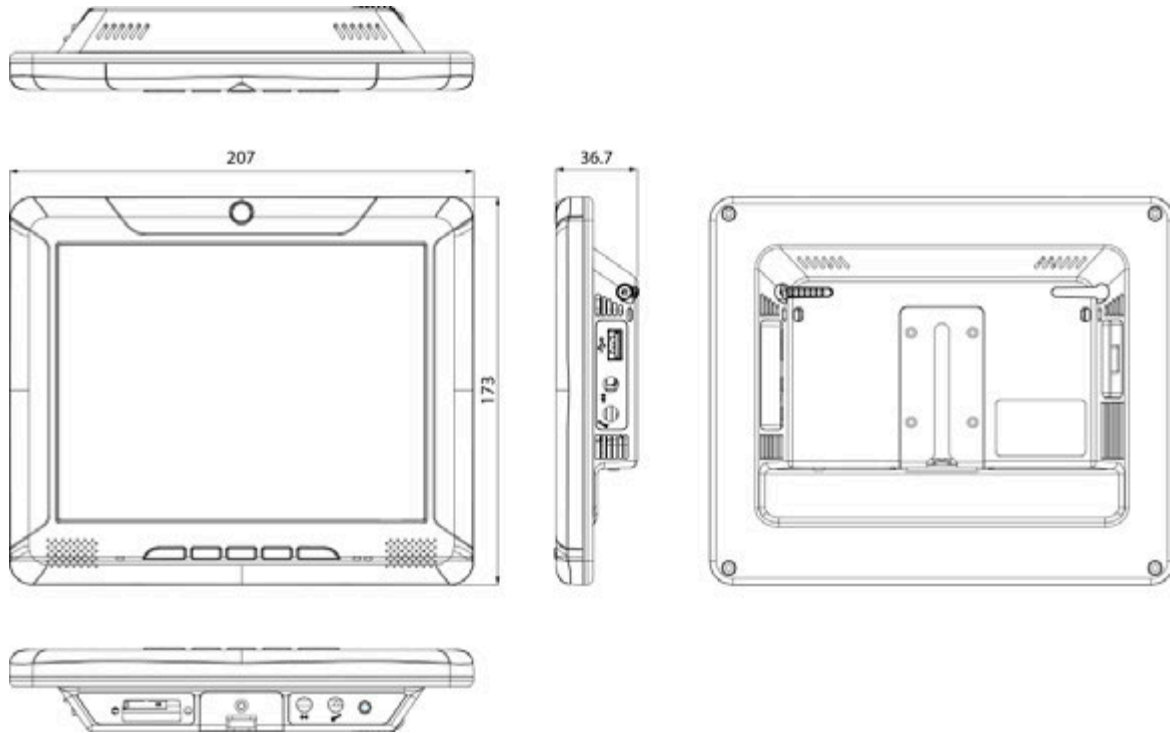
Storage: MIL-STD-810G, 514.6 Procedure 1, Category 4, Integrity Test
- Shock
  Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=20g
  Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, Ground equipment=75g

Standards/Certifications
- CE approval
- FCC Class B

Ordering Information

- **VMD 2000 (P/N: 10VD0200000X0)**
  8" SVGA vehicle mount display with touch screen and LVDS interface

- **VMD 2000-BS (P/N: 10VD0200001X0)**
  8" SVGA vehicle mount display with touch screen, LVDS and sunlight readable

- **VMD 2000-P (P/N: 10VD0200002X0)**
  8" SVGA vehicle mount display with touch screen, LVDS and CCD camera

- **VMD 2000-PS (P/N: 10VD0200003X0)**
  8" SVGA vehicle mount display with touch screen, LVDS, CCD camera and sunlight readable

- **Bundle Accessories**
  LVDS cable (1.5M)
  Audio cable
  Cable fastener
  Driver CD

VMD 2002

Main Features

- 8" SVGA TFT LCD Monitor
- Automatic/Manual brightness control
- On screen control buttons
- Support USB 2.0 and card reader

- Camera sensor on front panel (Optional)
- Sunlight readable solution with 800cd/m² high brightness LCD support
- Front panel compliant with IP54

Product Overview

VMD 2002 is an 8-inch TFT LCD monitor with 4 wire resistant touch screen sensor. With the high brightness display and automatically brightness control, it is designed for in-vehicle applications. In support of standard VGA interface, it can be configured to link to the most of vehicle computers. It also provides USB and card reader features, and reserves camera sensor as an option. Those friendly interfaces benefit the technicians during maintenances. Its front panel is compliant to IP54, and operating temperature to meet with industrial applications.

Specifications

General
- Enclosure: Plastic PC + ABS
- Mounting: Support VESA 75, panel and wall mounting
- Power Input: 9 ~ 36VDC
- Power Consumption: 15W
- Ingress Protection: Front panel IP54
- Dimension: 207mm (W) x 173mm (H) x 36.7mm (D) (8.15" x 6.81" x 1.44")
- Weight (Net): 0.7Kg, 1.54Lb

LCD Panel
- 8-inch TFT LCD panel with LED backlight
- 800 x 600 pixels (SVGA)
- Brightness: 400 cd/m² (typical)
- Optional high brightness for sunlight-readable with 800cd/m² After touch screen is 640cd/m²
- Contrast ratio: 500 : 1 (typical)

Touch Screen Sensor
- 4-wire resistant touch
- Anti-glare coating surface
- Transmission rate: 82 ± 3%

I/O Interface-Front
- On screen display buttons x 5
  Power on/off
  Brightness control (+/-)
  Volume control (+/-)

- Light sensor
- 2 x LED indicators
- 2 x Built-in speakers (1.2W)

I/O Interface-Lateral
- 1 x SD/MMC/MS card reader
- 1 x USB type A Host
- 1 x Line-out (automatic detection/switch to external speaker)
- 1 x Mic-in

I/O Interface-Bottom
- 1 x Mic-out
- 1 x Line-in
- 1 x DVI-D Connector (integrating VGA, USB x 1 and 12VDC x 1)

Optional Features
- 2.0M pixels CCD camera on front panel
- Sunlight-Readable Display with High Brightness LCD (800 cd/m²)
- Support Panel and wall mount kit

Environment
- Operating temperature: -20℃ to 60℃
- Storage temperature: -30℃ to 70℃
- Vibration (random): 2.5g@5 ~ 500 Hz
- Vibration
  Operating: MIL-STD-810G, 514.6 Procedure 1, Category 4, Ground Vehicle – Highway Truck
  Storage: MIL-STD-810G, 514.6 Procedure 1, Category 4, Integrity Test

Dimension Drawing
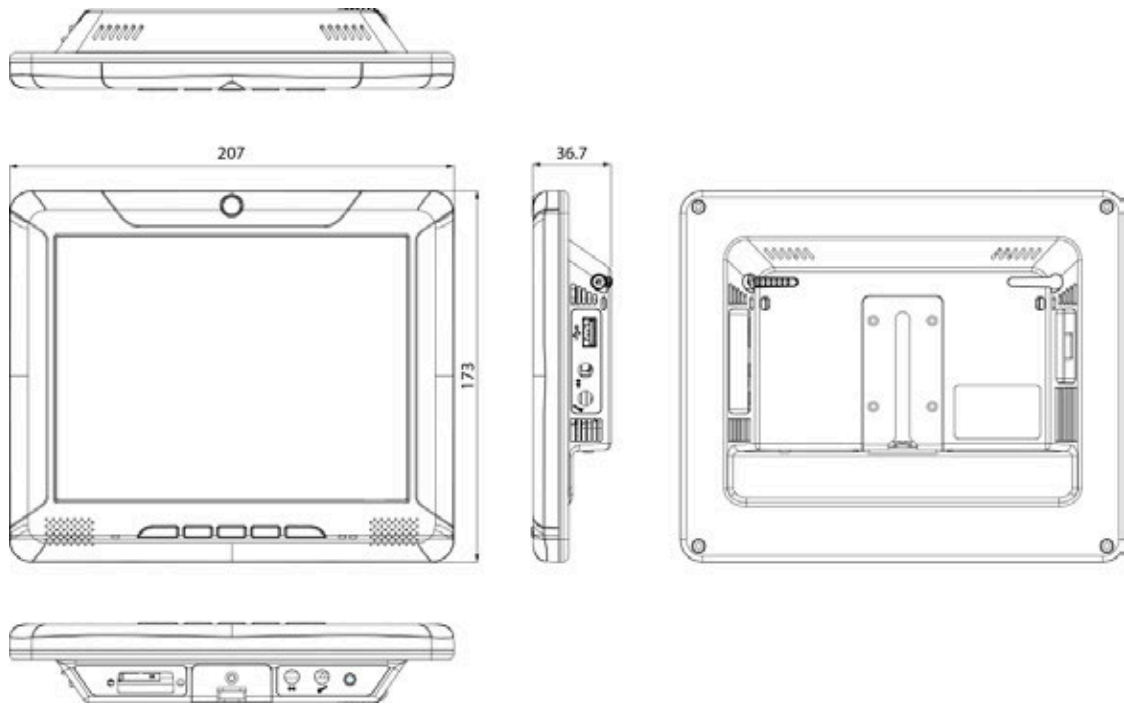
- Shock
  Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and
  semi-trailers=20g
  Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, Ground
  equipment=75g

Standards/Certifications
- CE approval
- FCC Class B

Ordering Information

- **VMD 2002-B (P/N: 10VD0200202X0)**
  8" SVGA vehicle mount display with touch screen and USB, VGA and
  Power cable integrated

- **VMD 2002-BS (P/N: 10VD0200203X0)**
  8" SVGA vehicle mount display with touch screen, USB, VGA, Power
  cable integrated and sunlight readable

- **VMD 2002-P (P/N: TBD)**
  8" SVGA vehicle mount display with touch screen, USB, VGA, Power
  cable integrated and CCD camera

- **VMD 2002-PS (P/N: TBD)**
  8" SVGA vehicle mount display with touch screen, USB, VGA, Power
  cable integrated, CCD camera and sunlight readable

- **Bundle Accessories**
  VGA, USB and Power integrated cable (1.5M)
  Audio cable
  Cable fastener
  Driver CD

VMD 3002

Main Features

- 10.4" XGA TFT LCD panel
- Slim bezel and compact design
- Automatic/Manual brightness control
- Wide range power input from 9 ~ 36VDC
- Projected capacitive touch screen with multi-touch
- Support four CVBS inputs to connect rear view camera
- High brightness display for outdoor applications
- Compliant with IP65

Product Overview

VMD 3002 is a robust 10.4-inch TFT LCD monitor with enhanced brightness, projected capacitive touchscreen, and high performance loud speaker. It is designed with a single cable to consolidate power, display, and other control signal to ease the installation and secure the connection. It also features four analog video inputs to feed the real time video from the rear view cameras to the display. VMD 3002 mechanical design is compliant with IP65. With the 1000nits ultra high brightness display and adaptive brightness control, it is an ideal solution for in-vehicle and outdoor applications.

Specifications

General

- Enclosure: Plastic PC + ABS
- Mounting: Support VESA 75/100
- Power Input: 9 ~ 36VDC
- Power Consumption: 18W
- Ingress Protection: IP65
- Dimension: 256.5 x 202.1 x 31.5 mm
- Weight: 1.64Kg, 4.16Lb

LCD Panel

- 10.4-inch TFT LCD panel with LED backlight
- 1024 x 768 pixels (XGA)
- Brightness: 1200 cd/m² (typical, after touch screen is 1080cd/m²)
- Contrast Ratio: 500: 1 (typical)

Touch Screen Sensor

- Projected capacitive touchscreen
- Surface Hardness: 6H
- Multiple touch

I/O Interface-Front

- 1 x LED indicators (Power on/off, Auto Back-light, MCU update)
- IR remote sensor

I/O Interface-Lateral

- On screen display buttons x 7
  Display power on/off
  OSD Menu
  Volume control (+/-)
  Brightness control (+/-)
  Auto Configuration

I/O Interface-Bottom

- Pigtail with multiple IO interface
  4 x CVBS connector
  1 x Line-in
  1 x VGA
  1 x USB
  1 x COM (TX/RX)
  1 x Power input connector (9 ~ 36VDC)

Environment

- Operating temperature: -30°C to 70°C
- Storage temperature: -30°C to 80°C
- Vibration (random): 2.5g@5 ~ 500 Hz
- Vibration
  Operating: MIL-STD-810G, 514.6 Procedure 1, Category 4, Ground Vehicle – Highway Truck
  Storage: MIL-STD-810G, 514.6 Procedure 1, Category 4, Integrity Test
- Shock
  Operating: MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=20g
  Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, Ground equipment=75g

Standards/Certifications

- CE approval
- FCC Class B

Dimension Drawing

256.5

202.1

31.5

100.0

75.0

M5 (Screw hole),TYP.8

75.0
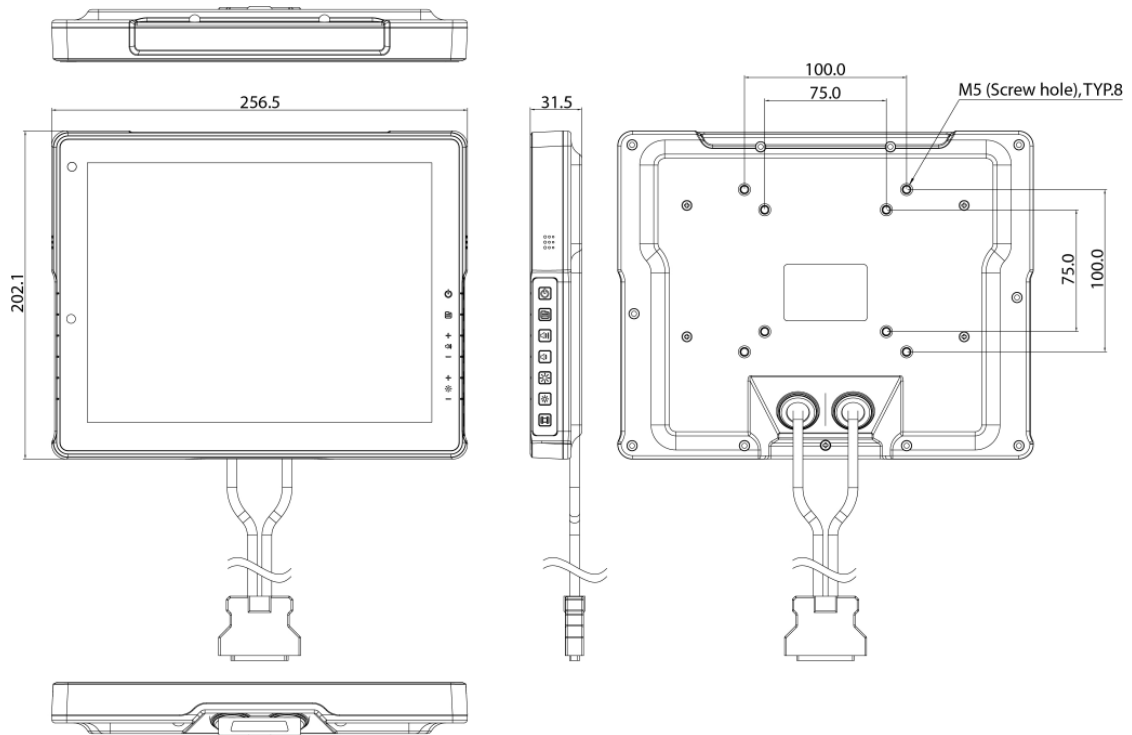
100.0

Ordering Information

- **VMD 3002-BS (P/N: 10VD0100002X2)**
  10.4" XGA vehicle mount display with touch screen, VGA and CVBS Interfaces

- **Bundle Accessories**
  External Pigtail Cable for Multi-I/O
  Driver CD

VMC 100

Main Features

- 7" WVGA TFT LCD Monitor with resistor touch screen
- ARM® Cortex®-A8 Processor with 720MHz frequency
- Compact and fanless design
- On screen F1 ~ F5 function key
- Support Linux and Android system

- Built-in GPS (Option: Dead Reckoning Support)
- Variety wireless communication options (Support LTE)
- Dual CAN bus support and support option OBDII (SAE J1939)
- Wide Range DC input from 9 ~ 36V
- SAE J1113, ISO7637-2 and SAE J1455 compliance for power design

Product Overview

VMC 100, a 7-inch all in one vehicle computer, is designed for the cost-effective solution for transportation application. Same as all VMC series, the fanless and wide temperature support are reserved in VMC 100 design. VMC 100 adopts Linux and Android system with Cortex®-A8 processor, it integrates the high resolution LCD with the brightness of 400 nits and 4-wire resistive touch sensor. VMC 100 is equipped with Bluetooth, Wi-Fi and WWAN for option, provide the connection capability for real-time communication. It provides RS-232/422/485, USB 2.0, GPIO and LAN signal to link with the peripherals. Its mounting hole is compatible with VESA75 and can be installed in the vehicle with limited space via RAM mount kits.

Specifications

General
- Cooling System: Fanless
- Enclosure: Plastic PC + ABS
- Mounting: Support VESA 75, stand mounting
- Four SMA Type antenna connectors of BT/Wi-Fi /WWAN/GPS
- Power Input: 9 ~ 36VDC input with Ignition
- Power Consumption: 15W
- Ingress Protection: Front panel IP54
- Dimension: 213mm (W) x 145mm (H) x 50mm (D)(8.3" x 5.7" x 1.9")
- Weight: TBD

LCD Panel
- 7-inch TFT LCD Panel with LED Backlight
- 800 x 480 pixels (WVGA)
- Brightness: 400 cd/m² (typical)
- Contrast ratio: 600:1 (typical)

Touch Screen Sensor
- 4-wire resistant touch
- Anti-glare coating surface
- Transmission rate: 78 ± 3%

CPU & Chipset
- ARM® Cortex®-A8 Processor with 720MHz frequency

Memory
- On-board DDR3 512MB

Expandable Storage
- 1 x Micro SDHC Slot (Bundle with 8GB)

Expansion
- 1 x Pin Head for WLAN option
- 1 x mini-PCIe socket ((USB + UART) for WWAN option)
- OBD option and support protocols
  - ISO 15765-4, ISO 14230-4, ISO 9141-2, SAE J1850
  - ISO 15765, ISO 11898
  - SAE J1939
- Battery module option

I/O Interface-Front
- F1 ~ F5 functions key
- Light Sensor
- Internal Mic-in
- 2 x Built-in 2W speakers
- 3 x LED indicators (Power mode, Storage and WWAN status)
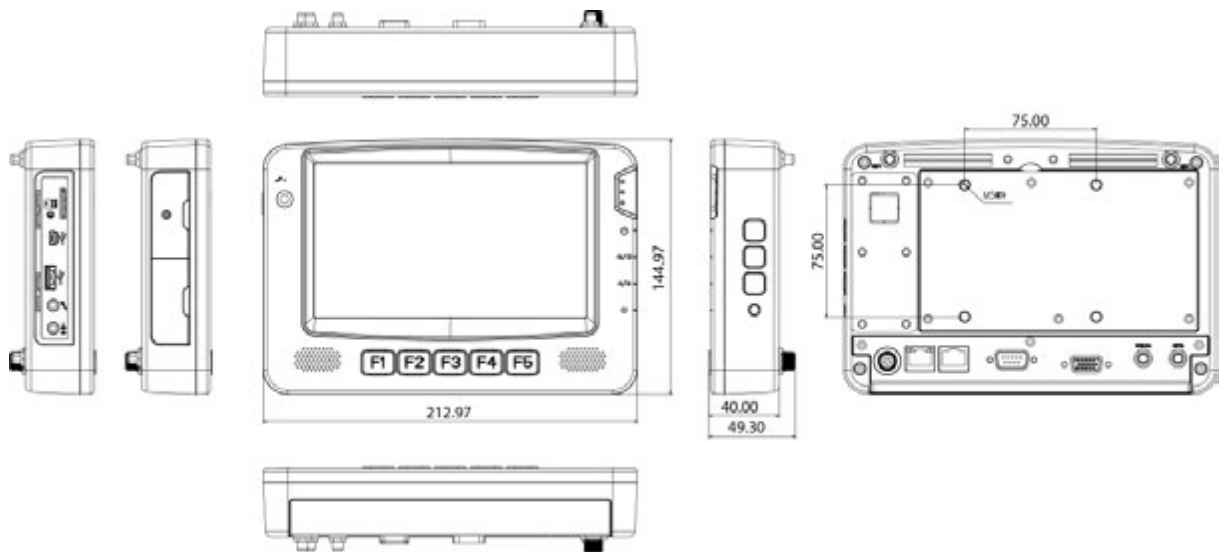
I/O Interface-Lateral
- Right side
  - 1 x Micro SD card socket
  - 1 x SIM card socket
  - 1 x USB 2.0 host type A connector
  - 1 x Mic-in, Line-out
- Left side
  - 1 x Power button
  - 1 x System reset button
  - Volume up/down or Brightness up/dow

I/O Interface-Rear
- 1 x 5-pin Circular connector for Power/Ignition input

NEXCOM

Dimension Drawing

- 1 x RJ45 for LAN
- 1 x RJ45 for Full RS-232 with 0V/5V/12V power supply (0.5A)
- 1 x DB9 (Male) for
  - RX/TX or RS-485
  - 2 x CAN Bus 2.0
- 1 x DB15 (Female) for
  - GPS dead reckoning interface (optional)
  - 3 x GPO, 3 x GPI

Communication Module
- 1 x On board GPS module
- 1 x WLAN or Bluetooth module for optional
- 1 x WWAN module for optional

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

Operating System
- Linux Ubuntu (kernel V3.2.0)

Environment
- Operating temperatures: Ambient with air -20°C to 60°C
- Storage temperatures: -30°C to 80°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 3g @5 ~ 500Hz
- Vibration
  Operating: MIL-STD-810G, 514.6 Procedure 1, Category 4
  Storage: MIL-STD-810G, 514.6 Procedure 1, Category 24
- Shock
  Operating: MIL-STD-810G, Method 516.6, Procedure I, trucks and semi-trailers=20g
  Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, ground equipment=75g

Power Design & Protection
- Load dump and inductive load protection
- Cold cranking protection
- Transient voltage protection

- Electrostatic discharge protection

Standards/Certifications
- EMC
  - CE, FCC class B
- Power
  - SAE J1113
  - SAE J1455
  - ISO 7637-2
- Safety
  - EN 60950-1 LVD

Ordering Information

- **VMC 100-A1U (P/N: 10VC0010000X0)**
  7" All-In-One Vehicle Computer with Touch Screen and ARM®
  Cortex®-A8 720MHz Processor with 512MB DDR3, GPS, Dual CAN Bus
  2.0B, Linux Ubuntu OS

- **Bundle Accessories**
  Driver CD
  GPS antenna
  Multi-I/O cable
  External Power cable (13cm)

VMC 1100

Main Features

- 7" WVGA TFT LCD Monitor with resistor touch screen
- Built-in Intel® Atom™ Dual Core E3825 1.33GHz
- Compact and fanless design
- On screen F1 ~ F5 function key
- Support GPS/GPRS/GSM tracker function

- Built-in GPS (Option: Dead Reckoning Support)
- Variety wireless communication options (Support LTE)
- Dual CAN bus support and support option OBDII (SAE J1939)
- Wide Range DC input from 9 ~ 36V
- SAE J1113, ISO7637-2 and SAE J1455 compliance for power design

Product Overview

VMC 1100, a new generation 7-inch vehicle mount computer with dual core Intel® Atom™ processor, is designed for transportation applications requiring real-time vehicle tracking. Adopting the latest low power consumption processor and integrating a WVGA LCD with a brightness of 400nits and a 4-wire resistive touch sensor, VMC 1100 does not compromise with its space to sacrifice its functional features. It provides dual CANbus, RS-232, RS-485, USB 3.0, GPIO, analog input, PWM and LAN signal. For security, VMC 1100 supports real-time vehicle tracking through GPS and SMS/GSM/GPRS. VMC 1100 can also be upgraded to a different LCD resolution and include other features such as LTE, projected capacitive touch, CANbus protocol support and backup battery.

Specifications

General
- Cooling System: Fanless
- Enclosure: Plastic PC + ABS with aluminum die casting heatsink
- Mounting: Support VESA 75, stand mounting
- Four SMA Type antenna connectors of BT/Wi-Fi /WWAN/GPS
- Power Input: 9 ~ 36VDC input with Ignition
- Power Consumption: 26W
- Ingress Protection: Front panel IP54
- Dimension: 213mm (W) x 145mm (H) x 50mm (D)(8.3" x 5.7" x 1.9")
- Weight: TBD

LCD Panel
- 7-inch TFT LCD Panel with LED Backlight
- 800 x 480 pixels (WVGA)
- Brightness: 400 cd/m² (typical)
- Contrast ratio: 600:1 (typical)

Touch Screen Sensor
- 4-wire resistant touch
- Anti-glare coating surface
- Transmission rate: 78 ± 3%

CPU & Chipset
- Intel® Atom™ Dual Core E3825 1.33GHz

Memory
- One 204-pin DDR3L 1600MHz SO-DIMM slot (up to 4GB)
  - Default 2GB

Expandable Storage
- 1 x SATAIII SATA DOM Slot (available option 16G and 32G)

Expansion
- 1 x Half mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket ((USB + UART) for WWAN option)
- 1 x External module for OBD/Battery module option (UART + USB)

I/O Interface-Front
- F1 ~ F5 functions key
- Light Sensor
- Internal Mic-in
- 2 x Built-in 2W speakers
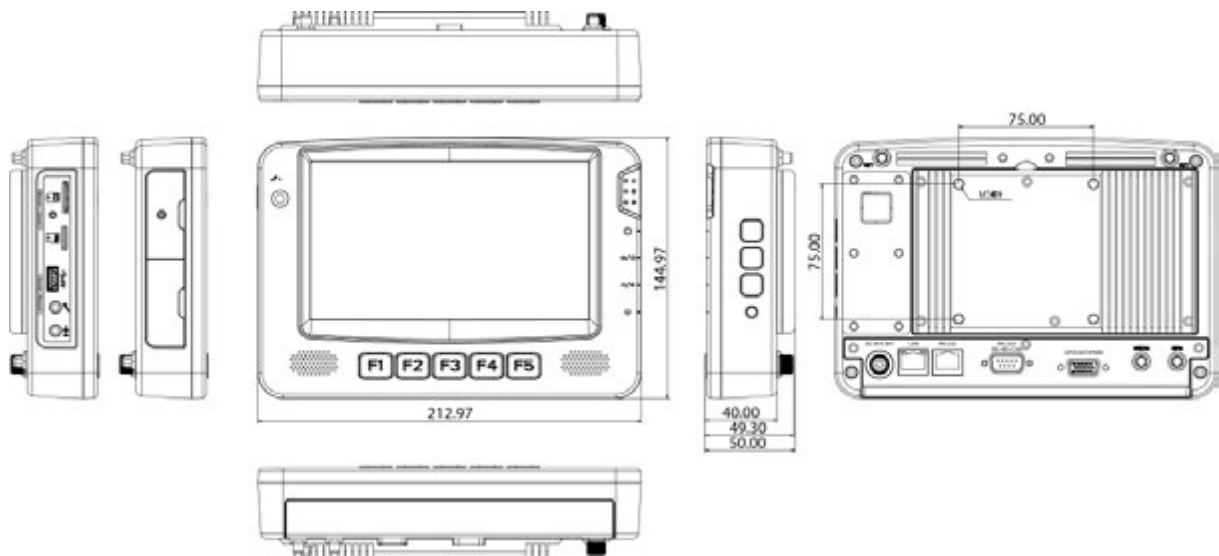- 3 x LED indicators (Power mode, Storage and WWAN status)

I/O Interface-Lateral
- Right side
  - 1 x Micro SD card socket
  - 1 x SIM card socket
  - 1 x USB 3.0 host type A connector
  - 1 x Mic-in, Line-out
- Left side
  - 1 x Power button
  - 1 x System reset button
  - Volume up/down or Brightness up/dow

I/O Interface-Rear
- 1 x 5-pin Circular connector for Power/Ignition input

Dimension Drawing

- 1 x RJ45 for LAN
- 1 x RJ45 for Full RS-232 with 0V/5V/12V power supply (0.5A)
- 1 x DB9 (Male) for
  - RX/TX or RS-485
  - 2 x CAN Bus 2.0
- 1 x DB15 (Female) for
  - GPS dead reckoning interface (optional)
  - 2 x PWM, 2 x Analog Input, 3 x GPO, 3 x GPI
    Analog Input requirement for Voltages are measured
    Channel: 8
    Voltage range: 0 ~ 38V
    Resolution: 8 bit

    Analog Input requirement for Frequency, Speed
    Square wave
    Frequency signal offset voltage range: 0 ~ 15VDC
    Protection: +/- 500V spike
    Frequency signal duty cycle range: 10% ~ 90%

Communication Module
- 1 x On board GPS module
- 1 x WLAN or Bluetooth module for optional
- 1 x WWAN module for optional

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 S3 and S4 suspend mode; wake on RTC and SMS

Operating System
- Windows 8 Professional, WES8
- Windows 7, WES7
- Linux Fedora (kernel V3.2.0)

Environment
- Operating temperatures: Ambient with air -20°C to 60°C
- Storage temperatures: -30°C to 80°C
- Relative humidity: 10% to 95% (non-condensing)

- Vibration (random): 3g @5 ~ 500Hz
- Vibration
  Operating: MIL-STD-810G, 514.6 Procedure 1, Category 4
  Storage: MIL-STD-810G, 514.6 Procedure 1, Category 24
- Shock
  Operating: MIL-STD-810G, Method 516.6, Procedure I, trucks and semi-trailers=20g
  Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, ground equipment=75g

Power Design & Protection
- Load dump and inductive load protection
- Cold cranking protection
- Transient voltage protection
- Electrostatic discharge protection

Standards/Certifications
- EMC
  - CE, FCC class B
- Power
  - SAE J1113
  - SAE J1455
  - ISO 7637-2
- Safety
  - EN 60950-1 LVD

Ordering Information

- **VMC 1100 (P/N: 10VC0110000X0)**
  7" All-In-One Vehicle Computer with Touch Screen and Multifunctional Tracker and Intel® Atom™ Dual Core E3825 1.33GHz processor with 2GB DDR3L, GPS module and GPS antenna

- **Bundle Accessories**
  External Power cable (13cm)
  Driver CD

VMC 3000/3001

Main Features

- 10.4" XGA TFT LCD monitor
- Compact and fanless design
- Built-in Intel® Atom™ D2550 processor
- Automatic/manual brightness control
- On screen F1 ~ F10 function key
- Wake on RTC/SMS/LAN

- Variety wireless communication options
- Robust design with Die-cast aluminum
- All enclosure compliant with IP65
- Wide range DC input from 9 ~ 36V
- Optional sunlight readable solution with 1000nits

Product Overview

VMC 3000/3001, 10.4-inch all in one robust vehicle mount computer, is designed for the transportation, warehouses and material handling application. Adopting the latest high performance processor Intel® Atom™, it integrates the high resolution LCD with the brightness of 400 nits and 5-wire resistive touch sensor. VMC 3000/3001 is extreme ruggedness, the aluminum enclosure compliant with NEMA4/IP65 is designed against vibration, dust, moisture and chemical impacts. It does not compromise with its space to scarify its functional features. It provides RS-232, USB 2.0, CFast, LAN and two mini-PCIe extensions for variety communication options. The latitude of mounting methods offers easy installation in the vehicles. Thus, the VMC 3000/3001 is an ideal solution for vehicle terminal on forklifts, straddle carriers, truck, mining vehicles, construction machines and marine.

Specifications

General
- Cooling System: Fanless
- Enclosure: Die-cast aluminum
- Mounting: Support VESA 75/100, Panel and stand mounting
- Three SMA Type antenna connectors of BT/Wi-Fi/WWAN
- Power Input: 9 ~ 36VDC input with Ignition
- Power Consumption: 26W typical
- Ingress Protection: IP65 (VMC 3000 only Front Panel IP65)
- Dimension: 290mm (W) x 230mm (H) x 68mm (D) (11.4" x 9" x 2.7")
- Weight: 3Kg, 6.61Lb

LCD Panel
- 10.4-inch TFT LCD panel with LED backlight
- 1024 x 768 pixels (XGA)
- Brightness: 400 cd/m² (typical)
- Optional high brightness for sunlight-readable with 1200cd/m² After touch screen is 1000 cd/m²
- Contrast ratio: 600:1 (typical)

Touch Screen Sensor
- 5-wire resistant touch
- Anti-glare coating surface
- Transmission rate: 81 ± 3%

CPU & Chipset
- Intel® Atom™ D2550 1.86GHz
- Intel® ICH10R

Memory
- One 204-pin DDR3 1333MHz SO-DIMM slot (up to 4GB)

Expandable Storage
- 1 x CFast
- 1 x 2.5" SATA SSD bay

Expansion
- 1 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) x 1 for WWAN option
- 2 x OBDII module with J1939/J1708 for option

I/O Interface-Front
- On screen display buttons x 5
  Power on/off
  Volume control (+/-)
  Brightness control (+/-)
- Light sensor
- 4 x LED indicators (Power on/off, Storage, Warning, Shift)
- F1 ~ F10 functions key
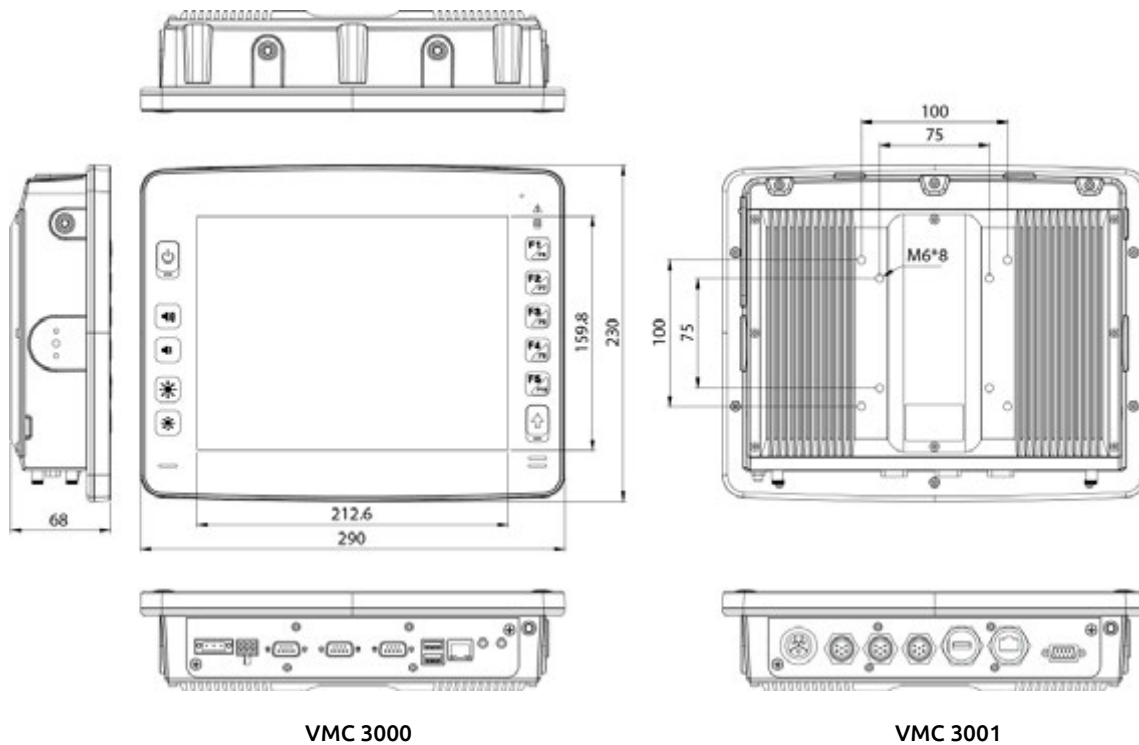- 2 x Built-in 2W speakers

I/O Interface-Lateral
- 1 x CFast card slot
- System reset button
- USB 2.0 host type A connector

I/O Interface-Bottom
- Power connector (power, ignition, ground)
- 1 x RS-232 (VMC 3000 only)
- 1 x RS-232 with either 0, 5 or 12V on pin 9 for external devices
- 2 x USB 2.0 host (VMC 3501 only one USB)
- 1 x 10/100/1000Base-T1 x Mic-in, 1 x Line-out

Dimension Drawing

VMC 3000

VMC 3001

- 1 x Mic-in, 1 x Line-out
- 1 x 3GPI and 3GPO or CAN Bus with J1939/J1708 optional
  Digital Input (source type; 0 ~ 30V)
  Digital Output (sink type; 20mA max)
- SMBus to support VTK 61B back up smart battery with charger
- 1 x SMA-type GPS antenna connector

Communication Module
- 1 x GPS module
- 1 x WLAN or Bluetooth module for optional
- 1 x WWAN module for optional

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

Operating System
- WES2009
- WES 7E
- Win7 Pro Embedded

Environment
- Operating temperatures: Ambient with air -30°C to 60°C
- Storage temperatures: -30°C to 70°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 2g @5 ~ 500Hz
- Vibration
  Operating: MIL-STD-810G, 514.6 Procedure 1, Category 4
  Storage: MIL-STD-810G, 514.6 Procedure 1, Category 24
- Shock
  Operating: MIL-STD-810G, Method 516.6, Procedure I, trucks and semi-trailers= 20g
  Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, ground equipment= 75g

Standards/Certifications
- CE approval , FCC Class B

Ordering Information

- **VMC 3000 (P/N: 10VC0300003X0)**
  10.4" rugged vehicle mount computer with Intel® Atom™ D2550, 1G DDR3, touch screen, Front Panel IP65

- **VMC 3001 (P/N: 10VC0300100X0)**
  10.4" rugged vehicle mount computer with Intel® Atom™ D2550, 1G DDR3, touch screen, IP65

- **VMC 3010 (P/N: 10VC0301000X0)**
  10.4" rugged vehicle mount computer with Intel® Atom™ D2550, 1G DDR3, touch screen, Front Panel IP65, Sunlight readable

- **VMC 3011 (P/N: 10VC0301100X0)**
  10.4" rugged vehicle mount computer with Intel® Atom™ D2550, 1G DDR3, touch screen, IP65, Sunlight readable

- **Bundle Accessories**
  SSD bracket and screws, GPS antenna (5M), Power connector, Driver CD

- **Optional Accessories**

Part No.	Description
4NCPF00314X00	External Power Input Connector (Waterproof)
4NCPF00613X00	External Power Output and SM bus Connector (Waterproof)
4NBDF00907X00	External DB9 Connector
4NBQF01001X00	External GPIO Connector
4NBQF00601X00	External Audio Connector (Waterproof)
5060600230X00	External RJ45 Holder (Waterproof)
60233US110X00	External USB Cable 100cm (Waterproof)

VMC 3500/3501

Main Features

- 10.4" XGA TFT LCD monitor
- Compact and fanless design
- Built-in Intel® Core™ i7-2610UE processor
- Automatic/manual brightness control
- On screen F1 ~ F10 function key
- Wake on RTC/SMS/LAN

- Variety wireless communication options
- Robust design with Die-cast aluminum
- All enclosure compliant with IP65
- Wide range DC input from 9 ~ 36V
- Optional sunlight readable solution with 1000nits

Product Overview

VMC 3500/3501, 10.4-inch all in one robust vehicle mount computer, is designed for the transportation, warehouses and material handling application. Adopting the latest high performance processor Intel® Core™ i7, it integrates the high resolution LCD with the brightness of 400 nits and 5-wire resistive touch sensor. VMC 3500/3501 is extreme ruggedness, the aluminum enclosure compliant with IP65 is designed against vibration, dust, moisture and chemical impacts. It does not compromise with its space to scarify its functional features. It provides RS-232, USB 2.0, CFast, LAN and two mini-PCIe extensions for variety communication options. The latitude of mounting methods offers easy installation in the vehicles. Thus, the VMC 3500/3501 is an ideal solution for vehicle terminal on forklifts, straddle carriers, truck, mining vehicles, construction machines and marine.

Specifications

General
- Cooling System: Fanless
- Enclosure: Die-cast aluminum
- Mounting: Support VESA 75/100, Panel and stand mounting
- Three SMA Type antenna connectors of BT/Wi-Fi /WWAN
- Power Input: 9 ~ 36VDC input with Ignition
- Power Consumption: 32W typical
- Ingress Protection: IP65 (VMC 3500 only Front Panel IP65)
- Dimension: 290mm (W) x 230mm (H) x 68mm (D) (11.4" x 9" x 2.7")
- Weight: 3Kg, 6.61Lb

LCD Panel
- 10.4-inch TFT LCD panel with LED backlight
- 1024x 768 pixels (XGA)
- Brightness: 400 cd/m² (typical)
- Optional high brightness for sunlight-readable with 1200cd/m²
  After touch screen is 1000 cd/m²
- Contrast ratio: 600:1 (typical)

Touch Screen Sensor
- 5-wire resistant touch
- Anti-glare coating surface
- Transmission rate: 81 ± 3%

CPU & Chipset
- Intel® Core™ i7 2610UE 1.5GHz
- Intel® QM67

Memory
- One 204-pin DDR3 1333MHz SO-DIMM slot (up to 8GB)

Expandable Storage
- 1 x CFast
- 1 x 2.5" SATA SSD bay

Expansion
- 1 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) x 1 for WWAN option
- 2 x OBDII module with J1939/J1708 for option

I/O Interface-Front
- On screen display buttons x 5
  Power on/off
  Volume control (+/-)
  Brightness control (+/-)
- Light sensor
- 4 x LED indicators (Power on/off, Storage, Warning, Shift)
- F1 ~ F10 functions key
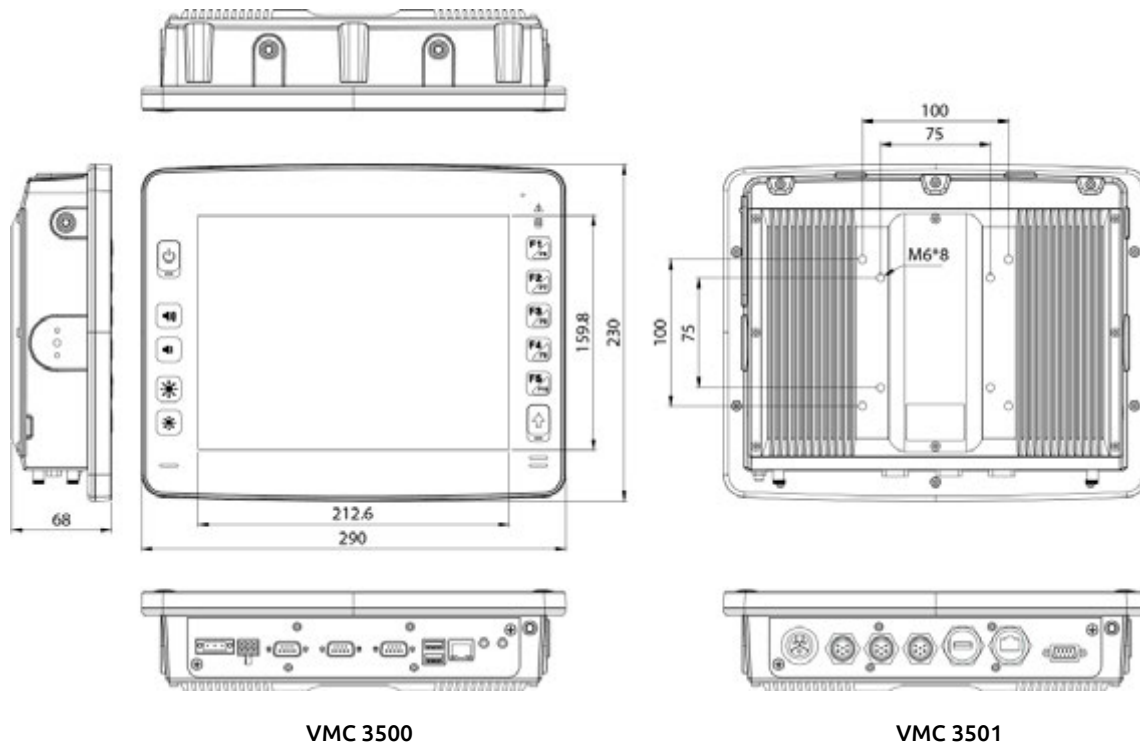- 2 x Built-in 2W speakers

I/O Interface-Lateral
- 1 x CFast card slot
- System reset button
- USB 2.0 host type A connector

I/O Interface-Bottom
- Power connector (power, ignition, ground)
- 1 x RS-232 (VMC 3500 only)
- 1 x RS-232 with either 0, 5 or 12V on pin 9 for external devices
- USB 2.0 host (VMC 3501 only one USB)
- 1 x 10/100/1000Base-T

NEXCOM

Dimension Drawing

VMC 3500

VMC 3501

- 1 x Mic-in, 1 x Line-out
- 1 x 3GPI and 3GPO or CAN Bus with J1939/J1708 optional
  Digital Input (source type; 0 ~ 30V)
  Digital Output (sink type; 20mA max)
- SMBus to support VTK 61B back up smart battery with charger
- 1 x SMA-type GPS antenna connector

Communication Module
- 1 x GPS module
- 1 x WLAN or Bluetooth module for optional
- 1 x WWAN module for optional

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

Operating System
- WES2009
- WES 7E
- Win7 Pro Embedded

Environment
- Operating temperatures: Ambient with air -30°C to 60°C
- Storage temperatures: -30°C to 70°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 2g @5 ~ 500Hz
- Vibration
  Operating: MIL-STD-810G, 514.6 Procedure 1, Category 4
  Storage: MIL-STD-810G, 514.6 Procedure 1, Category 24
- Shock
  Operating: MIL-STD-810G, Method 516.6, Procedure I, trucks and semi-trailers=20g
- Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, ground equipment=75g

Standards/Certifications
- CE approval
- FCC Class B

Ordering Information

- **VMC 3500 (P/N: 10VC0350000X0)**
  10.4" rugged vehicle mount computer with Intel® Core™ i7, 2GB DDR3, touch screen, Front Panel IP65

- **VMC 3501 (P/N: 10VC0350100X0)**
  10.4" rugged vehicle mount computer with Intel® Core™ i7, 2GB DDR3, touch screen, IP65

- **VMC 3510 (P/N: 10VC0351000X0)**
  10.4" rugged vehicle mount computer with Intel® Core™ i7, 2GB DDR3, touch screen, Front Panel IP65, Sunlight readable

- **VMC 3501 (P/N: 10VC0351100X0)**
  10.4" rugged vehicle mount computer with Intel® Core™ i7, 2GB DDR3, touch screen, IP65, Sunlight readable

- **Bundle Accessories**
  SSD bracket and screws, GPS antenna (5M), Power connector, Driver CD

- **Optional Accessories**

Part No.	Description
4NCPF00314X00	External Power Input Connector (Waterproof)
4NCPF00613X00	External Power Output and SM bus Connector (Waterproof)
4NBDF00907X00	External DB9 Connector
4NBQF01001X00	External GPIO Connector
4NBQF00601X00	External Audio Connector (Waterproof)
5060600230X00	External RJ45 Holder (Waterproof)
60233US110X00	External USB Cable 100cm (Waterproof)

VMC 4011

Main Features

- 12.1" XGA TFT LCD monitor
- Compact and fanless design
- Built-in Intel® Atom™ D2550 processor
- Automatic/manual brightness control
- On screen F1 ~ F10 function key
- Wake on RTC/SMS/LAN

- Variety wireless communication options
- Robust design with Die-cast aluminum
- All enclosure compliant with IP65
- Wide range DC input from 9 ~ 36V
- Sunlight readable solution with 1000nits display

Product Overview

VMC 4011, 12.1-inch all in one robust vehicle mount computer, is designed for the transportation, warehouses and material handling application. Adopting the latest high performance processor Intel® Atom™, it integrates the high resolution LCD with the brightness of 1000 nits and 5-wire resistive touch sensor. VMC 4011 is extreme ruggedness, the aluminum enclosure compliant with IP65 is designed against vibration, dust, moisture and chemical impacts. It does not compromise with its space to scarify its functional features. It provides RS-232, USB 2.0, CFast, LAN and two mini-PCIe extensions for variety communication options. The latitude of mounting methods offers easy installation in the vehicles. Thus, the VMC 4011 is an ideal solution for vehicle terminal on forklifts, straddle carriers, truck, mining vehicles, construction machines and marine.

Specifications

General
- Cooling System: Fanless
- Enclosure: Die-cast aluminum
- Mounting: Support VESA 75/100, Panel and stand mounting
- Three SMA Type antenna connectors of BT/Wi-Fi/WWAN
- Power Input: 9 ~ 36VDC input with Ignition
- Power Consumption: 26W typical
- Ingress Protection: IP65 (VMC 4000 only front panel IP65)
- Dimension: 340mm (W) x 262mm (H) x 75.1mm (D) (13.38" x 10.31" x 2.96")
- Weight: 3.5Kg, 7.72Lb

LCD Panel
- 12.1-inch TFT LCD panel with LED backlight
- 1024 x 768 pixels (XGA)
- Brightness: 1000 cd/m² (typical, after touch screen)
- Contrast ratio: 600:1 (typical)
- Life time: 100,000 hours

Touch Screen Sensor
- 5-wire resistant touch
- Anti-glare coating surface
- Transmission rate: 81 ± 3%

CPU & Chipset
- Intel® Atom™ D2550 1.86GHz
- Intel® ICH10R

Memory
- One 204-pin DDR3 1333MHz SO-DIMM slot (up to 4GB)

Expandable Storage
- 1 x CFast
- 1 x x 2.5" SATA SSD bay

Expansion
- 2 x mini-PCIe socket (PCIe + USB) for WLAN/mSATA option
- 1 x mini-PCIe socket (USB) x 1 for WWAN option
- 2 x OBDII module with J1939/J1708 for option

I/O Interface-Front
- On screen display buttons x 5
  Power on/off
  Volume control (+/-)
  Brightness control (+/-)
- Light sensor
- 4 x LED indicators (Power on/off, Storage, Warning, Shift)
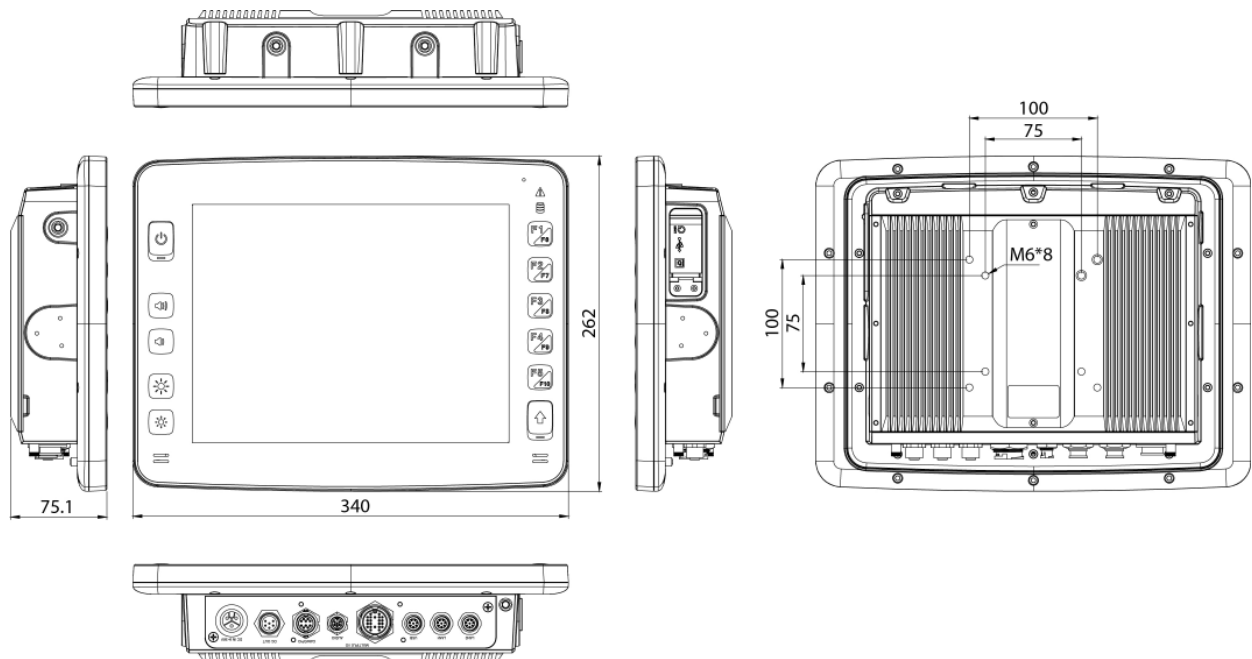- F1 ~ F10 functions key
- 2 x Built-in 2W speakers

I/O Interface-Lateral
- 1 x CFast card slot
- System reset button
- USB 2.0 host type A connector

I/O Interface-Bottom
- 1 x GPS Antenna SMA connector(On housing)

Dimension Drawing

- 1 x Mic-in, 1 x Line out
- 2 x USB 2.0/Ethernet (Host)
- 2 x LAN interface for 10/100/1000Base-T
- 1 x 9 ~ 36V, 3-pin (Power, Ignition, Ground), 10A
- 1 x Circle Type 22-pin Multi-I/O Connector
  - 1 x COM (optional RS-232/422/485; default RS-232)
  - 1 x COM (RS-232 Tx/Rx)
  - 1 x COM RS-232 (with either 0, 5 or 12V @ 600mA on pin9)
- 1 x Circle Type 10-pin CONN
  - 1 x OBDII module (option)
  - 2 x DI and 2 x DO
  - 1 x Circle Type 6-pin CONN for 5V/12VDC-out

Communication Module
- 1 x GPS module
- 1 x WLAN and Bluetooth combo module for optional
- 1 x WWAN module for optional

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

Environment
- Operating temperatures: Ambient with air -30℃ to 60℃
- Storage temperatures: -30℃ to 70℃
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random): 2g @5 ~ 500Hz
  Operating: MIL-STD-810G, 514.6 Procedure 1, Category 4
  Storage: MIL-STD-810G, 514.6 Procedure 1, Category 24
- Shock
  Operating: MIL-STD-810G, Method 516.6, Procedure I, trucks and semi-trailers=20g
  Crash hazard: MIL-STD-810G, Method 516.6, Procedure V, ground equipment=75g

Operating System
- WES2009
- WES 7E
- Win7 Pro Embedded

Standards/Certifications
- CE approval, FCC Class B
- CE EN 60950-1 LVD

Ordering Information

- **VMC 4011 (P/N: 10VC0401100X0)**

  12.1" rugged vehicle mount computer with Intel® Atom™ D2550, 2G RAM, touch screen, IP65 and Sunlight readable

- **Bundle Accessories**

  SSD bracket and screws, GPS antenna (5M), Power connector, Driver CD

- **Optional Accessories**

Part No.	Description
6030000047X00	Circle Type 22-pin, Multi-I/O Cable
603LAN0001X00	External M12 to LAN Cable
603USB0001X00	External M12 to USB Cable

nROK 500

Intel® Atom™ D525 1.8GHz Fanless Railway System

Main Features

- Built-in Intel® Atom™ D525 Dual Core 1.8GHz processor
- Fanless and rugged design
- 1 x M12 LAN port
- 1 x external CF socket and one external SIM card holder
- DC power input with 500V isolated protection
- Support ignition signal for delay-time control
- Support WoL & PXE function
- Certified by EN50155

Product Overview

nROK 500 fanless computer with EN50155 certified is specially designed for transportation computing solution especially in railway related applications. Based on Intel® Atom™ D525 processor, nROK 500 is designed with isolated DC input protection to ensure stable operation in harsh environments. Adopting lock concept, all connectors, for example M12 Ethernet connector, on nROK 500 are designed against vibration. Equipped with a SIM card holder, CF socket and mini-PCIe socket for optional 3G wireless module, nROK 500 allows data to be transmitted over network and stored in a convenient SSD (Solid-State Drive) or CF card for better vibration and shock protection. EN50155 certified nROK 500 is a reliable accredited solution for railway applications.

Specifications

CPU
- Intel® Atom™ D525 Dual Core 1.8GHz

Main Chipset
- Intel® ICH8M chipsets

Memory
- 2GB DDR2 667MHz SODIMM (up to 2GB)

Storage
- CF Card socket: External accessible type, screwed with CF card cover
- 1 x 2.5" SSD drive bay

Expansion
- 1 x mini-PCIe socket (for 3.5G module option)

I/O Interface-Front
- 1 x VGA Output
  DB15 x 1, support analog monitor with pixel resolution up to 2048 x 1536@75 Hz
- 2 x RS-232 COM Port
  DB9 x 2, support 115.2 Kbps baud rate
- 2 x USB Port
  2 x USB 2.0 ports, 500mA per port, covered with plastic cover to against the dust
- 1 x Mic-in & 1 x Speaker-out
  - Audio controller: High definition audio controller, Realtek: ALC888-GR
  - 1 x Speaker-out, Dia. 3.5mm phone jack, covered with plastic cover to against the dust

- 1 x Mic-in, Dia. 3.5mm phone jack, covered with plastic cover to against the dust
- 1 x 10/100 M12 LAN Port
  - LAN Controller: Intel® WG82574L LAN controller x 1
  - Support wake on LAN and boot from LAN function
- Wireless communication
  - 1 x External accessible SIM card socket
  - 1 x Mic-in for wireless communication use
  - 1 x Speaker-out for wireless communication use
  - 2 x Antenna holes (for 3G/3.5G mobile wireless module)
- LEDs
  - 1 x LED for power status
  - 1 x LED for HDD status
  - 1 x LED for 10/100 LAN link
  - 1 x LED for 10/100 LAN active
- DC Input
  - Nominal Voltage: 24V (Range: 16.8V ~ 30V)
  - Ignition signal input (24V, nominal; 0 ~ 10.5V=off, rest=on)
  - 500V Isolated design on DC Input
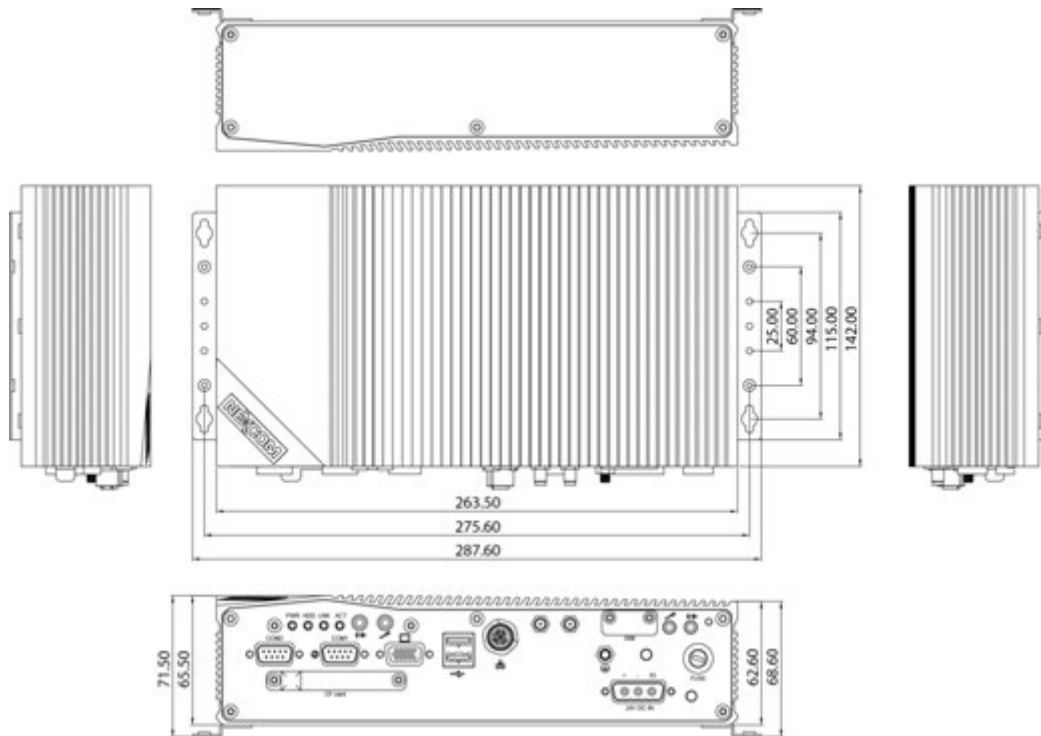 - 1 x External fuse

Power Management
- Status of ignition check by software
- Setting 8 level on/off delay time by software

Operating System
- Windows Embedded Standard 2009
- Windows Embedded Standard 7

110 Train Computer

NEXCOM

Dimension Drawing

System Dimension
* 264mm (W) x 142mm (D) x 65.5mm (H)

Environment
* Operating temperature:
  Ambient with air -25°C to 55°C (EN50155 Class T1)
* Storage temperature: -40°C to 80°C
* Damp heat test: 95% at 55 °C, compliance with EN50155
* Relative humidity: 0% to 90% (non-condensing)
* Vibration (Random): Compliance with EN61373 Category 1, Class B
* Shock: Compliance with EN61373 Category 1, Class B

Ingress Protection
* IP52

Certifications
* CE
* EN50155

Ordering Information

* **nROK 500 (P/N: 10A00050000X0)**
  Intel® Atom™ D525 1.8GHz Fanless Railway Computer with 2G memory pre-installed and Isolated 24VDC Input

nROK 3000

Main Features

- Built-in Intel® Atom™ D525 Dual Core 1.8GHz processor
- Fanless and rugged design
- Support ignition signal for delay-time control
- Easy maintenance
- Rich I/O interface with secure lock

- Removable 2.5" SSD tray
- Isolation RS-232/422/485 and GPIO
- DC power input with isolated protection
- Compliant with IP65 design
- Certified by EN50155

Product Overview

nROK 3000 fanless computer certified with EN50155 is specially designed for railway related applications. Based on Intel® Atom™ D525 processor, nROK 3000 is designed with isolated DC input protection to ensure stable operation in harsh environments. Adopting lock concept, all connectors, such as M12 Ethernet connector on nROK 3000, are designed for anti-vibration. Equipped with a SIM card holder, CFast socket and mini-PCIe socket for optional 3G wireless module, nROK 3000 allows data to be transmitted over network and stored in a convenient SSD (Solid-State Drive) or CFast card for better vibration and shock protection. The EN50155-certified nROK 3000 is a reliable solution for railway applications.

Specifications

CPU
- Intel® Atom™ D525 Dual Core 1.8GHz

Main Chipset
- Intel® ICH8M chipsets

Memory
- 1GB DDR3 1333MHz SODIMM (up to 4GB)

Expansion
- 1 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) for 3.5G module option
- 1 x optional GPS module

I/O Interface-Front
- 1 x DVI-I connector with DVI-D and VGA output
- 1 x 26-pin circular connector in support of 1 x RS232(Full), 1 x RS422 & 2 x RS485
- 1 x USB 2.0 with M12 connector
- 1 x Mic-in & 1 x Line-out
- 3 x 10/100 Ethernet with M12 connector
- Wireless communication
  1 x External accessible SIM card socket
  3 x Antenna holes for WWAN/WLAN/GPS
- 4 x LED for power, SSD, WWAN and WLAN
- DC Input
  nROK 3000-A: 24V with 500V isolated (range: 16.8V ~ 30V)
  nROK 3000-F: 110V with 1.5KV isolation (range: 77V ~ 137.5V)

I/O Interface-Rear
- 1 x 2.5" accessible SATA SSD tray
- 2 x USB 2.0

Expandable Storage
- 1 x 2.5" SATA SSD tray
- 1 x CFast slot with protection cover

Power Management
- Status of ignition check by software
- Setting 8 level on/off delay time by software

Operating System
- Windows Embedded Standard 2009
- Windows Embedded Standard 7

System Dimension
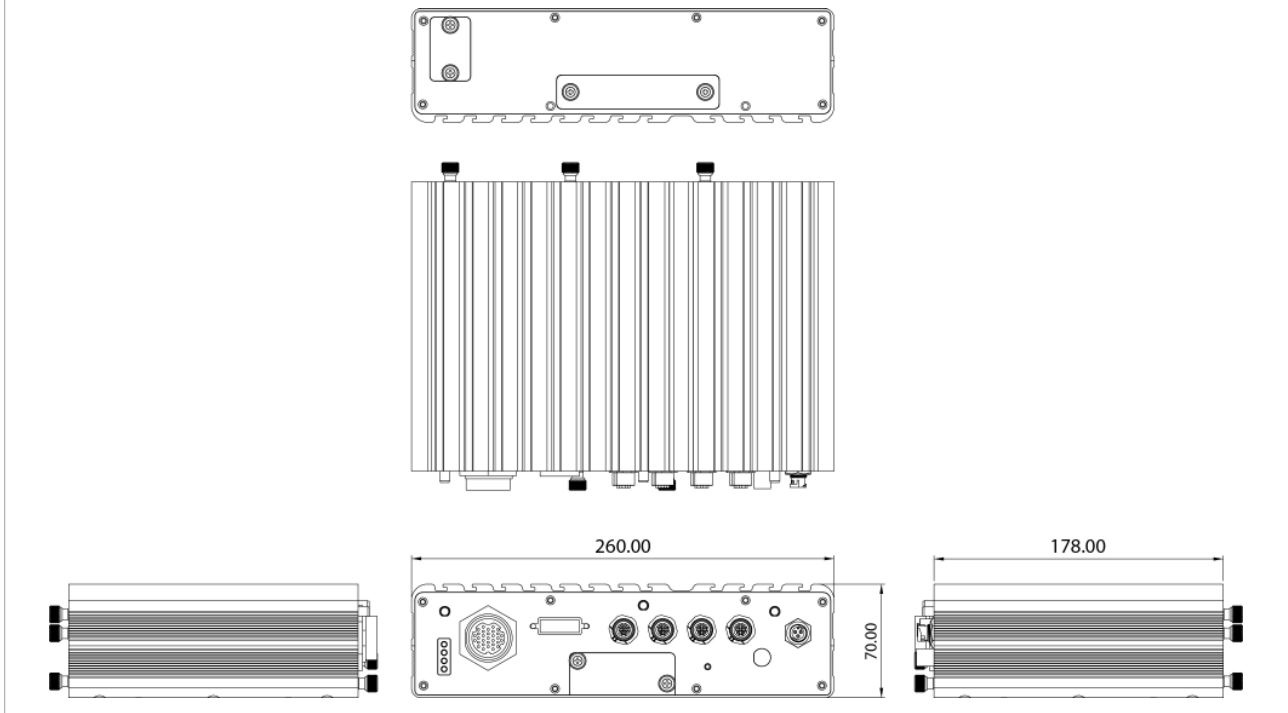- 260mm (W) x 178mm (D) x 70mm (H) (10.24"x 7"x 2.76")

Construction
- Aluminum enclosure with fanless design

Environment
- Operating temperatures:
  Ambient with air -40℃ to 70 ℃ (EN50155 Class TX)
- Storage temperatures: -40℃ to 80℃
- Damp heat test: 55℃, 95% RH (non-operating, EN 50155)
- Relative humidity: 0% to 90% (non-condensing)

Dimension Drawing

- Vibration (random):
  Compliance with EN61373 Category 1 Class B
- Shock:
  Compliance with EN61373 Category 1 Class B

Ingress Protection
- IP65 rating

Standards/Certifications
- CE
- FCC Class A
- Compliance with EN50155

Ordering Information

- **nROK 3000-A (P/N: 10A00300000X0)**
  Intel® Atom™ D525 fanless railway computer with 24VDC isolation power input

- **nROK 3000-F (P/N: 10A00300001X0)**
  Intel® Atom™ D525 fanless railway computer with 110VDC isolation power input

- **Optional Accessories**

Part No.	Description
10VK0006013X0	Wireless mini card kit, Ralink 802.11b/g/n 2T2R, QCOM: Q802XKN5F, w/antenna & cable (without assembly in NEXCOM)
10VK0WWAN01X0	VTK-WWAN: Cinterion PHS8-P kit, Five bands, UMTS/HSPA (850/800, 900, 1900 and 2100 MHz), Quad-Band GSM w/internal cable, antenna & packing
10VK0006007X0	Bluetooth kit, QCOM: QBTM400-01 (V7), w/antenna & cable (without assembly in NEXCOM)
TBD	GPS Module (ublox NEO-M8N solution)
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/ 1800/1900/2100
60233PW243X00	POWER CABLE: Waterproof 4P L: 300mm
60233USB89X00	M12 TO USB CABLE: Waterproof M12 TO USB CON L: 200mm
60233AUD27X00	AUDIO CABLE: Waterproof MINI SIZE 6P TO DC3.5mm FEMALEx2 L: 300mm
60233DVI26X00	DVI Y-CABLE: Waterproof DVI(24+5P) to DVI(24+5P)/ D-SUB(15P) L:100mm
6023331451X00	COM CABLE: Waterproof 31PIN to DB9 MALEx4/ DB9 FEMALEx1 L=150mm

nROK 5300

Main Features

- High performance processor with Intel® Core™ i5 3610ME
- Fanless and rugged design
- Support ignition signal for delay-time control
- Support software base RAID 0/1/5/10
- Isolation RS-232/422/485 and GPIO
- 4 Removable 2.5" SSD tray (3 HDD tray for optional)

- DC power input with isolated protection
- Support 8 channels POE with IEEE802.3af for optional
- Support one PCI express x8 expansion slot for optional
- Certified by EN50155 with TX grade temperature standard (HDD support 0 ~ 45°C only)
- Certified by EN45545-2 class HL3

Product Overview

nROK 5300 series is targeted for the rolling stock market with special design scheme to meet the criteria of installation in the vehicle on the rolling stock. They pass numerous environmental tests and are compliant EN50155 standard. Rapid transit system, metropolitan rail, commuter rail, high speed rail, tram, and train will make the best use of nROK.

nROK 5300 series also offer the powerful computing platform with rack mount form factor to install in the cabinet. It is packed with the eight PoE LAN ports and multiple storage bays with SATA interface and RAID capability for large media program. I/O connections are securely fixed with locks, averting system breakdown caused by loose ends. Wireless communication design is reserved to supports GPS function and Wi-Fi and WWAN connection.

Specifications

CPU
- Intel® Core™ i5 3610ME 2.7GHz

Main Chipset
- Intel® QM77 chipsets

Memory
- 2GB DDR3 1333MHz SODIMM with ECC (up to 16GB)

Expansion
- 2 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) for 3.5G module option
- 1 x GPS or GPS with dead reckoning option

I/O Interface-Front
- 7 x LED for power, storage, WWAN, WLAN, GPS, LAN1 and LAN2
- Power on/off switch
- The system rest button
- 2 x 10/100/1000 Ethernet with M12 connector and support iAMT8.0
- 8 x 10/100/1000 PoE LAN with M12 connector and support IEEE802.3af (Optional with LED, LAN hub switch, Max 60W)
- 2 x USB 3.0 type A connector
- 1 x M12 connector with 2 x USB 2.0 signal
- 1 x DB15 VGA connector
- 2 x HDMI connector
- 2 x DB9 RS-232 connector (Isolation)
- 1 x DB9 RS-422/485 connector (Isolation)

- 1 x DB9 female connector for 4GPI and 4GPO connector (Isolation)
  Digital Input (source type: 0 ~ 30V)
  Digital Output (sink type: 20mA max)
- 1 x Line-in, 1 x Line-out, 1 x Mic-in

I/O Interface-Rear
- Power DC Input
- 5 x Antenna holes for WWAN/WLAN/GPS/BT

Expandable Storage
- 4 x 2.5" SATA SSD removable tray (3 removable tray plus 1 fixed tray for HDD)

Power Management
- Setting 8-level on/off delay time by software
- Status of ignition detected by software

Operating System
- Windows Embedded Standard 7

System Dimension
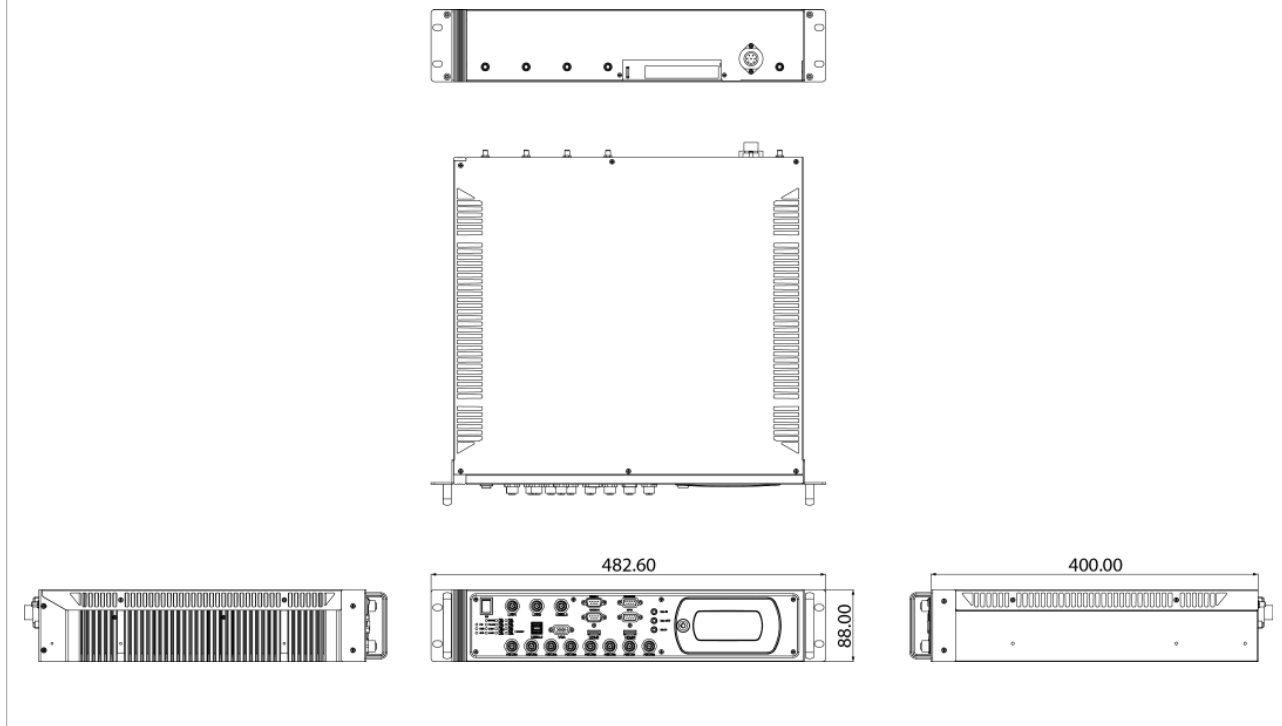- 482.6mm (W) x 400mm (D) x 88mm (H) (19" x 15.75" x 3.46")

Construction
- Sheet metal with heat sink

Environment
- Operating temperatures:
  Ambient with air -40°C to 70°C (EN50155 Class TX, 0°C to 45°C for HDD)

NEXCOM

Dimension Drawing

- Storage temperatures: -40°C to 80°C
- Damp heat test: 55°C, 95% RH (non-operating, EN 50155)
- Relative humidity: 0% to 90% (non-condensing)
- Vibration (random):
  Compliance with EN61373 Category 1 Class B
- Shock:
  Compliance with EN61373 Category 1 Class B

Ingress Protection
- IP40 rating

Standards/Certifications
- CE
- FCC Class A
- Compliance with EN50155
- Compliance with EN45545-2

Ordering Information

- **nROK 5300-AC8 (P/N: 10A00530000X0)**
  Intel® Core™ i5 3610ME fanless rackmount railway computer with 8-channel PoE and 24VDC isolation power input

The following options are also available, please contact NEXCOM Global Service for further information

Power Input : 24/36/48/72/110 VDC

Storage Cage : SSD/HDD Kits

PoE Port : non-POE/M12(4P)/M12(8P)

- **Optional Accessories**

Part No.	Description
10VK0006013X0	WLAN Kits QCOM Q802XKN5F, W/ANTENNA & CABLE
10VK0WWAN01X0	WWAN Kits CINTERION: CM8000(PHS8-P), W/ANTENNA & CABLE
10VK00GPS01X0	GPS Kits u-blox NEO-M8N w/Cable & Antenna & Bracket
10A005X0003X0	One PCI x 8 expansion Kits
603LAN0001X00	External LAN Cable WATERPROOF 8P TO RJ45, L=300mm
603USB0001X00	External USB Cable WATERPROOF 8P TO USB, L=300mm
603POW0001X00	External Power Cable WATERPROOF 7P to Wire, L=300mm
603POW0007X00	External Power CONN Circle Type CONN only (for Power),7Pin Waterproof
603LAN0004X00	External LAN CONN Circle Type CONN
60233SAM03X00	Internal Antenna ANTENNA GSM EDI:201012010221-RS
60233SAM16X00	External Antenna(WLAN) WLAN 2.4G, SANAV: 41EN01-11B0105-000N
60233SAM17X00	External Antenna(WWAN) GSM/UMTS/HSDPA
60233SAM05X00	External Antenna(GPS) ARKNAV: A-130 GPS Antenna 5M SMA180P

nROK 5500

Main Features

- High performance processor with Intel® Core™ i7 3517UE
- Fanless and rugged design
- Support ignition signal for delay-time control
- Support software base RAID 0/1/5/10
- Isolation RS-232/422/485 and GPIO
- 4 Removable 2.5" SSD tray (3 HDD tray for optional)

- DC power input with isolated protection
- Support 8 channels POE with IEEE802.3af for optional
- Support one PCI express x8 expansion slot for optional
- Certified by EN50155 with TX grade temperature standard (HDD support 0 °C ~ 45°C only)
- Certified by EN45545-2 class HL3

Product Overview

nROK 5500 series is targeted for the rolling stock market with special design scheme to meet the criteria of installation in the vehicle on the rolling stock. They pass numerous environmental tests and are compliant EN50155 standard. Rapid transit system, metropolitan rail, commuter rail, high speed rail, tram, and train will make the best use of nROK.

nROK 5500 series also offer the powerful computing platform with rack mount form factor to install in the cabinet. It is packed with the eight PoE LAN ports and multiple storage bays with SATA interface and RAID capability for large media program. I/O connections are securely fixed with locks, averting system breakdown caused by loose ends. Wireless communication design is reserved to supports GPS function and Wi-Fi and WWAN connection.

Specifications

CPU
- Intel® Core™ i7 3517UE 1.7GHz

Main Chipset
- Intel® QM77 chipsets

Memory
- 2GB DDR3 1333MHz SODIMM with ECC (up to 16GB)

Expansion
- 2 x mini-PCIe socket (PCIe + USB) for WLAN option
- 1 x mini-PCIe socket (USB) for 3.5G module option
- 1 x GPS or GPS with dead reckoning option

I/O Interface-Front
- 7 x LED for power, storage, WWAN, WLAN, GPS, LAN1 and LAN2
- Power on/off switch
- The system rest button
- 2 x 10/100/1000 Ethernet with M12 connector and support iAMT8.0
- 8 x 10/100/1000 PoE LAN with M12 connector and support IEEE802.3af (Optional with LED, LAN hub switch, Max 60W)
- 2 x USB 3.0 type A connector
- 1 x M12 connector with 2 x USB 2.0 signal
- 1 x DB15 VGA connector
- 2 x HDMI connector
- 2 x DB9 RS-232 connector (Isolation)
- 1 x DB9 RS-422/485 connector (Isolation)

- 1 x DB9 female connector for 4GPI and 4GPO connector(Isolation)
  Digital Input (source type: 0 ~ 30V)
  Digital Output (sink type: 20mA max)
- 1 x Line-in, 1 x Line-out, 1 x Mic-in

I/O Interface-Rear
- Power DC Input
- 5 x Antenna holes for WWAN/WLAN/GPS/BT

Expandable Storage
- 4 x 2.5" SATA SSD removable tray (3 removable tray plus 1 fixed tray for HDD)

Power Management
- Setting 8-level on/off delay time by software
- Status of ignition detected by software

Operating System
- Windows Embedded Standard 7

System Dimension
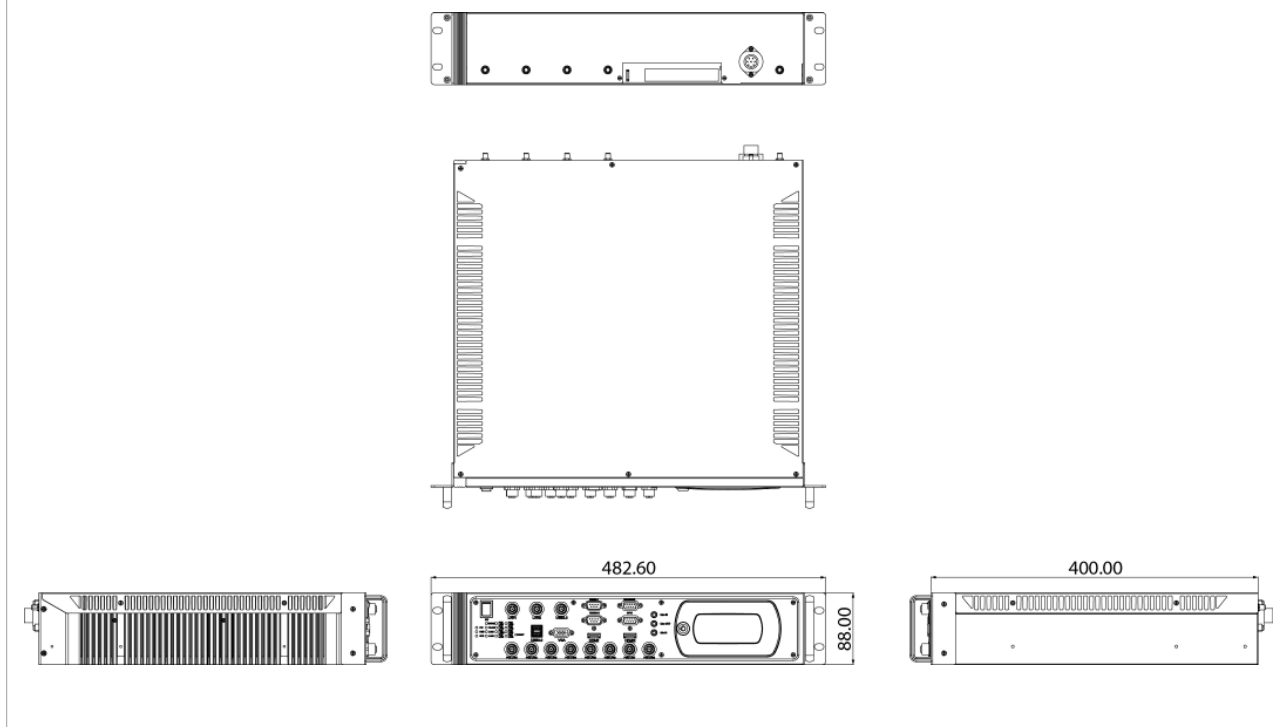- 482.6mm (W) x 400mm (D) x 88mm (H) (19" x 15.75" x 3.46")

Construction
- Sheet metal with heat sink

Environment
- Operating temperatures:
  Ambient with air -40°C to 70°C (EN50155 Class TX, 0°C to 45°C for HDD)
- Storage temperatures: -40°C to 80°C

NEXCOM

Dimension Drawing

- Damp heat test: 55°C, 95% RH (non-operating, EN 50155)
- Relative humidity: 0% to 90% (non-condensing)
- Vibration (random):
  Compliance with EN61373 Category 1 Class B
- Shock:
  Compliance with EN61373 Category 1 Class B

Ingress Protection
- IP40 rating

Standards/Certifications
- CE
- FCC Class A
- Compliance with EN50155
- Compliance with EN45545-2

Ordering Information

- **nROK 5500-FC8 (P/N:10A00550000X0)**
  Intel® Core™ i7 3517UE fanless rackmount railway computer with 8-channel PoE and 110VDC isolation power input

The following options are also available, please contact NEXCOM Global Service for further information

Power Input : 24/36/48/72/110 VDC

Storage Cage : SSD/HDD Kits

PoE Port : non-POE/M12(4P)/M12(8P)

- **Optional Accessories**

Part No.	Description
10VK0006013X0	WLAN Kits QCOM Q802XKN5F, W/ANTENNA & CABLE
10VK0WWAN01X0	WWAN Kits CINTERION: CM8000(PHS8-P), W/ANTENNA & CABLE
10VK00GPS01X0	GPS Kits u-blox NEO-M8N w/Cable & Antenna & Bracket
B000000126X00	One PCI x 8 expansion Kits
603LAN0001X00	External LAN Cable WATERPROOF 8P TO RJ45, L=300mm
603USB0001X00	External USB Cable WATERPROOF 8P TO USB, L=300mm
603POW0001X00	External Power Cable WATERPROOF 7P to Wire, L=300mm
603POW0007X00	External Power CONN Circle Type CONN only (for Power),7Pin Waterproof
603LAN0004X00	External LAN CONN Circle Type CONN only (for Power),7Pin Waterproof
60233SAM03X00	Internal Antenna ANTENNA GSM EDI:201012010221-RS
60233SAM16X00	External Antenna(WLAN) WLAN 2.4G, SANAV: 41EN01-11B0105-000N
60233SAM17X00	External Antenna(WWAN) GSM/UMTS/HSDPA
60233SAM05X00	External Antenna(GPS) ARKNAV: A-130 GPS Antenna 5M SMA180P

VTC 6210-R

Coming Soon

Main Features

- Intel® Atom™ processor quad core E3845, 1.91GHz
- Three SIM cards + dual WWAN modules support
- Built-in u-blox-M8 GPS, optional Dead Reckoning support
- Built-in CAN Bus 2.0B
- Wake on RTC/SMS via WWAN module

- Compliant with EN50155
- 3 x mini-PCIe socket expansion
- 4 x DI + 4 x DO w/ isolation
- 2 x RS232 + 1 x RS422/485 w/ isolation
- Voice communication via WWAN module

Product Overview

VTC6210-R, based on Intel® Core™ quad core processor E3845 (1.91GHz), is specifically designed for rolling stock environment. It allows VTC6210-R to comply with stringent EN50155 standard in rugged, fanless and compact mechanism. VTC6210-R provides complete communication capability between automotive and computer with build-in CAN BUS 2.0B interface. VTC6210-R features rich PAN, WLAN and WWAN wireless connectivity. With dual SIM cards support, VTC6210-R 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, VTC6210-R also supports two-way voice communication. Equipped with intelligent power management, VTC6210-R can be waked on by ignition, RTC timer or SMS message remotely. By integrating the variety of I/O ports and 3 x mini-PCIe sockets expansibility, VTC6210-R keeps the flexibility to meet the demand for different rolling stock applications, such as infotainment, 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 + PCIe)
- 1 x Full size mini-PCIe socket (USB 2.0 + PCIe)
- 1 x Full size mini-PCIe socket (USB 2.0 + PCIe)

Function
- 1 x u-blox NEO-M8 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 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 Circle Type DC Input with ignition (optional 24/36/110 VDC)
- 1 x M12 with two USB 2.0 compliant host, supporting system boot up
- 2 x M12 10/100/1000 Ethernet
- 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
- 2 x DB-9 RS-232
- 1 x DB-9 RS-422/485
- 1 x 16-pin terminal block
  - 1 x CAN Bus 2.0B (on board)
  - 4 x DI, 4 x DO with isolation
    Input Voltage (internal type): 5VDC TTL (default)

NEXCOM

Dimension Drawing

Coming Soon

Input Voltage (source type): 3 ~ 12VDC (Programmable Digital output
or optional isolation)
Digital output (sink type): 5VDC TTL (default), max current: 20mA
Digital output (source type): 3 ~ 24VDC, max current: 150mA

Power Management
- Ignition On/Off control
- Programmable On/Off delay timer
- System wake up event
  Ignition switch
  RTC timer ALARM interrupt
  Cellular MODEM wakeup signal
- System wake up condition
  Wake up event is triggered, and DC input voltage is greater than UVP threshold
  Timer delay is only applicable for Ignition on
- System power down condition
  Soft off, or Ignition off, or DC input voltage is lower than UVP threshold
- Timer delay is only applicable for Ignition off

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:
  -40°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)
- 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
- EN50155 Compliance
  - Ambient Temperature EN 50155 TX (-40 ~ 70° C)
  - Shock and Vibration IEC 61373 class B
  - Interruptions of Voltage Supply Class S1,S2
  - Supply Change Over Class C1,C2
  - EMC EN 50121-3-2

Ordering Information

- **VTC 6210-RA (P/N: 10V00621003X0)**
  Intel® Atom™ processor E3845 1.91GHz CPU, 2GB DDR3L SO-DIMM, DC Input 24/36 VDC, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-422/485, 4 x GPIO, 3 x USB

- **VTC 6210-RF (P/N: TBD)**
  Intel® Atom™ processor E3845 1.91GHz CPU, 2GB DDR3L SO-DIMM, DC Input 110 VDC, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-422/485, 4 x GPIO, 3 x USB

VTC 7220-R

Coming Soon

Main Features

- Intel® Core™ processor dual core i7-4650U
- Three SIM cards + dual WWAN modules support
- Dual externally accessible SATA 3.0 SSD/HDD
- Built-in u-blox NEO-M8 module, optional Dead Reckoning support
- Built-in CAN 2.0B. Optional CAN/OBDII module

- Wake on RTC/SMS via WWAN module
- Voice communication via WWAN module
- Compliant with EN50155
- 4 x mini-PCIe socket rich expansion capability

Product Overview

VTC7220-R features powerful new generation Intel® Core™ processor i7-4650U. Its CPU performance gives users the ability to adapt to what they need in any rolling stock applications. Its Intel® HD graphics 5000 engine allows users to fully take advantage of VTC7220-R to achieve smooth, seamless and stunning graphic performance on 3 different video outputs (VGA, DP, LVDS). VTC7220-R is equipped with 2 externally accessible SSD/HDD trays; users can easily download or upload the data on other devices by just removing the storage devices from VTC7220-R. By integrating the variety of I/O ports and 4 x mini-PCIe sockets expansibility, VTC7220-R is not only suitable for video surveillance application, but also can meet the demand for other applications, such as infotainment and dispatching system. With dual SIM cards support, VTC7220-R allows three SIM cards backup each other for a better connectivity quality by software. In addition, three SIM cards + dual WWAN modules architecture can increase the bandwidth for a faster data transfer speed. Not only data transmission, VTC7220-R also supports two-way voice communication. Equipped with intelligent power management, VTC7220-R can be waked on by ignition, RTC timer or SMS/Ring remotely.

Specifications

CPU
- Intel® Core™ processor dual core i7-4650U, 1.7GHz

Memory
- 2 channel 204-pin DDR3L SO-DMIM socket support 1333/1600MHz up to 16GB, default 2GB

Storage
- 2 x 2.5" SATA 3.0 SSD/HDD (externally accessible), RAID 0,1 supported (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 + PCIe)
- 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-M8 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

- 1 x Power Switch
- 2 x Externally accessible SATA 3.0 SSD/HDD tray, RFID 0, 1 supported (optional lockable storage available)
- 1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 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 CFast card socket with cover
- 1 x Reset button
- 3 x antenna hole for WWAN/WLAN/BT

I/O Interface-Rear
- 1 x Circle Type DC Input with ignition (optional 24/36/48/110 VDC) 1 x Dual USB type A connector for USB 3.0 port + USB 2.0 port
- 2 x M12 10/100/1000 Ethernet
- 1 x Phone jack 3.5mm for 1 x Mic-in
- 1 x Phone jack 3.5mm for 1 x Line-out with 1.5W output each
- 1 x DB-15 VGA. Resolution up to 2560 x 1600 @60Hz
- 1 x DP port. Resolution up to 2560 x 1600 @60Hz
- 2 x DB-9 RS-232
- 1 x DB-9 RS-232/422/485 (RI/5V/12V selectable)
- 1 x 16-pin terminal block
  - 1 x CAN Bus 2.0B (on board)

Dimension Drawing
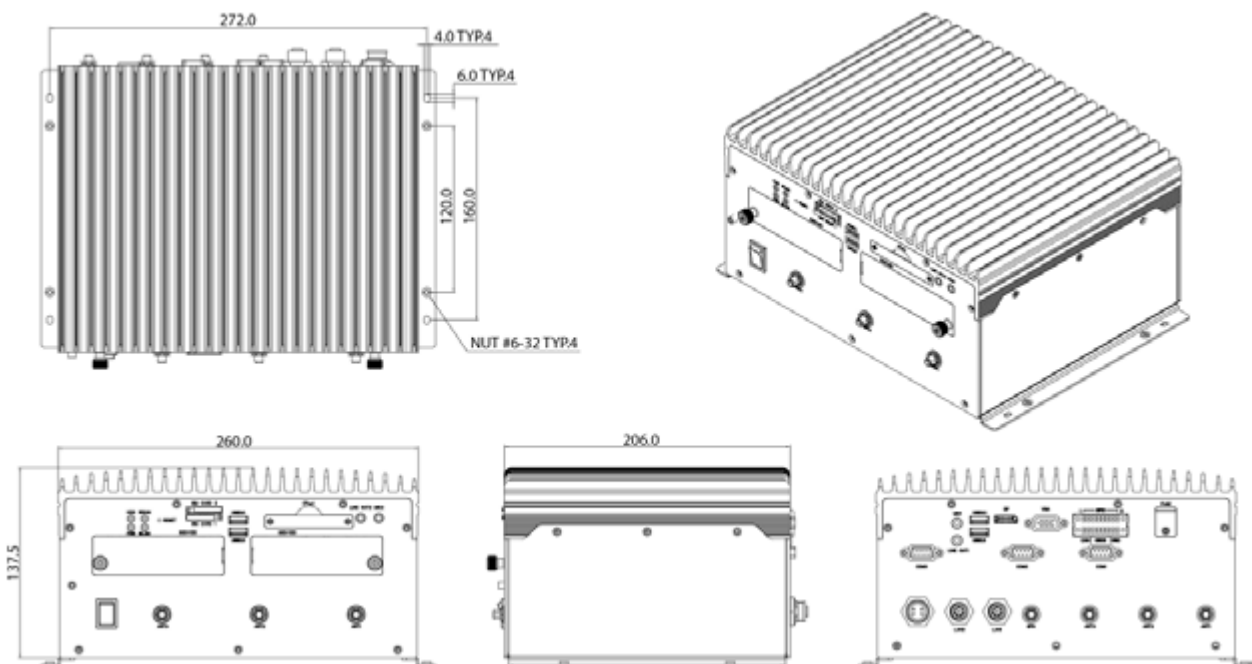
- 1 x optional CAN/OBDII module (CAN Bus 2.0B or OBDII SAE J1939)
- 4 x DI, 4 x DO
  (Digital Input)
    Input voltage (internal type): 5VDC TTL (default)
    Input voltage (source type): 3 ~ 12VDC
  (Digital Output)
    Digital output (sink type): 5VDC TTL (default), max current: 20mA
    Digital output (source type): 3 ~ 24VDC, max current: 150mA
- 4 x Antenna hole for WWAN/WLAN/BT/GPS
- 1 x Fuse (15A)

Power Management
- Ignition On/Off control
- Programmable On/Off delay timer
- System wake up event
  Ignition switch
  RTC timer ALARM interrupt
  Cellular MODEM wakeup signal
- System wake up condition
  Wake up event is triggered, and DC input voltage is greater than UVP threshold
  Timer delay is only applicable for Ignition on
- System power down condition
  Soft off, or Ignition off, or DC input voltage is lower than UVP threshold
  Timer delay is only applicable for Ignition off

Operating System
- Windows 8, WES8
- Window 7, WES7
- Linux kernel 3.X

Dimensions
- 260mm (W) x 206mm (D) x 137.5mm (H) (10.24" x 8.11" x 5.39")
- Weight: 2.5kg

Environment
- Operating temperatures:
  -40℃ to 70℃ (w/ industrial SSD) with air flow

-20℃ to 45℃ (w/ commercial HDD) with air flow
- Storage temperatures: -35℃ to 85℃
- Relative humidity: 10% to 90% (non-condensing)

Standards/Certifications
- CE approval
- FCC Class B
- EN50155 Compliance
  - Ambient Temperature EN 50155 TX (-40 ~ 70° C)
  - Shock and Vibration IEC 61373 class B
  - Interruptions of Voltage Supply Class S1,S2
  - Supply Change Over Class C1,C2
  - EMC EN 50121-3-2

Ordering Information

- **VTC 7220-RA (P/N: 10V00722001X0)**
  Intel® Core™ processor i7-4650U, 1.7GHz, dual core CPU, 24VDC Input, Industrial Grade 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-232/422/485, 4 x GPIO, 3 x USB

- **VTC 7220-RB (P/N: TBD)**
  Intel® Core™ processor i7-4650U, 1.7GHz, dual core CPU, 36VDC Input, Industrial Grade 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-232/422/485, 4 x GPIO, 3 x USB

- **VTC 7220-RC (P/N: TBD)**
  Intel® Core™ processor i7-4650U, 1.7GHz, dual core CPU, 48VDC Input, Industrial Grade 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-232/422/485, 4 x GPIO, 3 x USB

- **VTC 7220-RF (P/N: TBD)**
  Intel® Core™ processor i7-4650U, 1.7GHz, dual core CPU, 110VDC Input, Industrial Grade 2GB DDR3L SO-DIMM, VGA/DP output, 2 LAN, 2 x RS-232, 1 x RS-232/422/485, 4 x GPIO, 3 x USB

MRC 1000

Main Features

- 7" WVGA TFT LCD with LED backlight
- Intel® Atom™ Z530 1.6GHz processor
- Full QWERTY keyboard w/number pad
- Built-in fingerprint reader for data security
- Built-in 2.0 Mega Pixels camera sensor
- Built-in Class 2 bluetooth V2.1 with EDR

- Support high performance dual-band Wi-Fi
- Optional GSM/GPRS/HSPA/CDMA
- Integrated 2D barcode scanner (Optional)
- Integrated MSR module (Optional)
- Support hot swappable extended battery pack
- Compliance with IP65 and MIL-STD-810F

Product Overview

MRC 1000, rugged tablet PC, features 7-inch WVGA TFT LCD with and low power processor. Its full communication capability including Wi-Fi 802.11 a/b/g/n and 3.5G WWAN makes seamless communication among the fields and control center. It also reserves the design to equip barcode scanner and MSR for the demand of data collection. Its ergonomics design with the full QWERTY keyboard allows easy operation for filed mobile worker. More accessible IO interfaces can be extended via the docking port. MRC 1000 is a powerful device for mobile workers to increase the efficiency and productivity.

Specifications

CPU & Chipset
- Intel® Atom™ processor Z530
- Intel® US15W

Memory
- 2GB DDR2 SDRAM

Storage
- Built-in 32GB Solid State Disk

Audio
- Intel® high definition audio
- AC '97 Compatible
- 2 x 1W build-in speakers
- 1 x iPhone compatible audio jack (line-out/mic-in)

Display
- 7-inch Transmissive TFT LCD panel with LED backlight
  Resolution: 800 x 480 pixels (WVGA)
  Luminance: 400nits
  Contrast: 400:1
- 4-wire resistive touch screen
- Support for finger touch and stylus

I/O Interface
- 2 x USB 2.0 host type A connector
- 1 x 19VDC power input
- 1 x Docking connector
- 1 x SIM card slot located under battery
- 1 x External Li-ion battery connector on rear panel

- 2 x MMCX type RF connectors support WWAN and GPS remote antenna kits

Communication
- 1 x Class 2 Bluetooth Module V 2.1 + EDR
- 1 x WLAN 802.11 a/b/g/n module with built-in antenna
- 1 x WWAN module (optional)

Data Capture
- 1 x 2.0M pixel autofocus Camera
- 1 x GPS module (optional)
- 1 x MSR Module (optional)
- 1 x 2D Barcode scanner (optional)

Indicators and Buttons
- 4 x LED indicators-Power on/off, Storage, Wi-Fi and battery
- Full QWERTY keyboard w/number pad
  - backlit
  - 10 single touch function keys
- Biometric mouse
- Finger print reader
- 1 x Power button on front panel
- 1 x Reset button on front panel

Power Input & Battery
- Power input voltage: DC 19V/3.42A
- AC adapter: 100V-240V AC, 47Hz/63Hz
- Rechargeable lithium ion smart battery pack
- Battery life:
  - Primary Battery: 3 hours
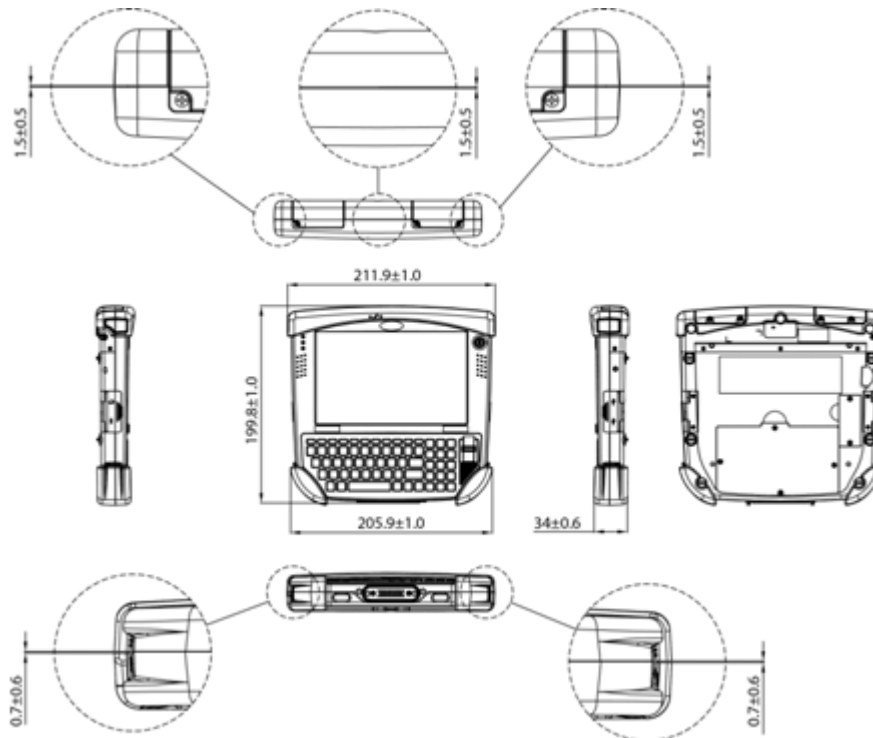
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Dimension Drawing

- Primary with 42Whr extended battery: 7 hours
- Primary with 62Whr extended battery: 11 hours

Dimension
- 206mm x 200mm x 34mm (8.1" x 7.9" x 1.3")
- 0.99kg, 2.2lb with integrated battery

Enclosure
- Magnesium case with plastic upper housing
- Color: Front housing Blue
        Rear housing Grey

Environment
- Operating temperatures: -20℃ to 50℃
- Storage temperature: -30℃ to 60℃
- Relative humidity: 5% to 95% non-condensing

Rugged Grade
- IP65
- Compliance with MIL-STD-810F (Vibration & Shock)
- 4 feet drop

Operating System
- WES2009
- WES7
- Windows 7 Pro Embedded

Certifications
- CE approval
- FCC class B

Ordering Information

- **MRC 1000 (P/N: 10U00100000X0)**
  7" Rugged tablet PC with Intel® Atom™ 1.6GHz processor/32GB SSD/ 2GB memory/4-wires touch screen/Wi-Fi/Bluetooth

- **Optional Device Module**

Part No.	Description
2AUK10MSR00X0	MRC 100-MSR Magnetic Stripe Reader
2AUK10BCI00X0	MRC 1000-BCI 2D imager

- **Optional Accessories**

Part No.	Description
10UK10DTC00X0	MTK 10-DTC Desktop cradle
10UK10VMC00X0	MTK 10-VMC Vehicle cradle
10UK10SBC00X0	MTK 10-SBC 4 slots Battery charge
4ZTSA12901X00	Secondary Battery Pack 3S3P/42Whr
4ZTSA18901X00	Secondary Battery Pack 3S3P/62Whr
7400060010X00	Vehicle Cigarette Adapter

MRC 1100

Main Features

- 7" WVGA TFT LCD with LED backlight
- Intel® Atom™ Z530 1.6GHz processor
- Daylight readable LCD display
- Full QWERTY keyboard w/number pad
- Built-in fingerprint reader for data security
- Built-in 2.0 Mega Pixels camera sensor
- Built-in Class 2 bluetooth V2.1 with EDR

- Support high performance dual-band Wi-Fi
- Support multi-mode and multi-band WWAN
- Integrated 2D barcode scanner (Optional)
- Integrated MSR module (Optional)
- Support hot swappable extended battery pack
- Compliance with IP65 and MIL-STD-810F

Product Overview

MRC 1100, rugged tablet PC, features 7-inch WVGA TFT LCD with the daylight readable solution and low power processor. Its full communication capability including Wi-Fi 802.11 a/b/g/n and 3.5G WWAN makes seamless communication among the fields and control center. It also reserves the design to equip barcode scanner and MSR for the demand of data collection. Its ergonomics design with the full QWERTY keyboard allows easy operation for filed mobile worker. More accessible IO interfaces can be extended via the docking port. MRC 1100 is a powerful device for mobile workers to increase the efficiency and productivity.

Specifications

CPU & Chipset
- Intel® Atom™ processor Z530 (1.6GHz) with 512-KB on-die L2 cache
- Intel® US15W

Memory
- 2GB DDR2 SDRAM

Storage
- Built-in 64GB Solid State Disk

Audio
- Intel® high definition audio
- AC '97 Compatible
- 2 x 1W build-in speakers
- 1 x iPhone compatible audio jack (line-out/mic-in)

Display
- 7-inch Transflective TFT LCD panel with LED backlight
  Resolution: 800 x 480 pixels (WVGA)
  Luminance: 500nits
  Contrast: 400:1
- 4-wire resistive touch screen
- Anti-reflection treatment
- Support for finger touch and stylus

I/O Interface
- 2 x USB 2.0 host type A connector
- 1 x 19VDC power input
- 1 x Docking connector
- 1 x SIM card slot located under battery

- 1 x External Li-ion battery connector on rear panel
- 2 x MMCX type RF connectors support WWAN and GPS remote antenna kits

Communication
- 1 x Class 2 Bluetooth Module V 2.1 + EDR
- 1 x WLAN 802.11 a/b/g/n module with built-in antenna
- 1 x WWAN module

Data Capture
- 1 x 2.0M pixel autofocus Camera
- 1 x GPS module
- 1 x MSR Module (optional)
- 1 x 2D Barcode scanner (optional)

Indicators and Buttons
- 4 x LED indicators-Power on/off, Storage, Wi-Fi and battery
- Full QWERTY keyboard w/number pad
  - backlit
  - 10 single touch function keys
- Biometric mouse
- Finger print reader
- 1 x Power button on front panel
- 1 x Reset button on front panel

Power Input & Battery
- Power input voltage: DC 19V/3.42A
- AC adapter: 100V-240V AC, 47Hz/63Hz
- Rechargeable lithium ion smart battery pack

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Dimension Drawing
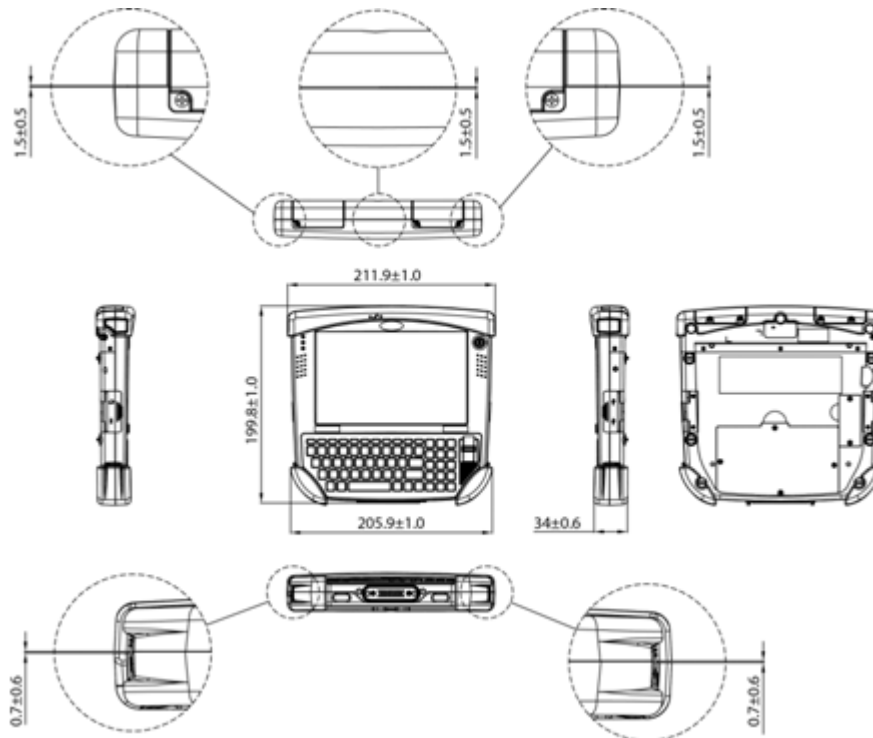
- Battery life:
  - Primary Battery: 3 hours
  - Primary with 42Whr extended battery: 7 hours
  - Primary with 62Whr extended battery: 11 hours

Dimension
- 206mm x 200mm x 34mm (8.1" x 7.9" x 1.3")
- 0.99kg, 2.2lb with integrated battery

Enclosure
- Magnesium case with plastic upper housing
- Color: Front housing Blue
           Rear housing Grey

Environment
- Operating temperatures: -20℃ to 50℃
- Storage temperature: -30℃ to 60℃
- Relative humidity: 5% to 95% non-condensing

Rugged Grade
- IP65
- Compliance with MIL-STD-810F (Vibration & Shock)
- 4 feet drop

Operating System
- WES2009
- WES7
- Windows 7 Pro Embedded

Certifications
- CE approval
- FCC class B

Ordering Information

- **MRC 1100 (P/N: 10U00110000X0)**
  7" Rugged tablet PC with Intel® Atom™ 1.6GHz processor/64GB SSD/
  2GB memory/daylight readable touch/4-wires touch screen/Wi-Fi/
  Bluetooth/GPS/WWAN

- **Optional Device Module**

Part No.	Description
2AUK10MSR00X0	MRC 100-MSR Magnetic Stripe Reader
2AUK10BCI00X0	MRC 1000-BCI 2D imager

- **Optional Accessories**

Part No.	Description
10UK10DTC00X0	MTK 10-DTC Desktop cradle
10UK10VMC00X0	MTK 10-VMC Vehicle cradle
10UK10SBC00X0	MTK 10-SBC 4 slots Battery charge
4ZTSA12901X00	Secondary Battery Pack 3S3P/42Whr
4ZTSA18901X00	Secondary Battery Pack 3S3P/62Whr
7400060010X00	Vehicle Cigarette Adapter

MTK 10-VMC

Main Features

- Support Multiple IO Interface
- Wide Range DC input from 9 ~ 36V
- Support RAM Mount Kit
- External Antenna connector for GPS or WWAN module

Specifications

I/O Ports
- 1 x DB9 with Ethernet LAN x1 & USB x2 Port
- 1 x DB15 VGA
- 1 x DB9 RS-232
- 1 x 32-pin PoGo connector
- 1 x SMA-type GPS antenna connector
- 1 x SMA-type WWAN antenna connector
- 1 x 9 ~ 36VDC power input

Indication LED
- Power on LED Blue
- LAN Link LED Green
- LAN Access LED Yellow

Dimension
- 230mm x 282mmx 71mm
- Weight: 1.95Kg

Construction
- Plastic ABS+PC
- Metal SECC

Environment
- Operating temperature: -20°C to 50°C
- Relative humidity: 5% to 95% non-condensing
- Vibration: 5G with MRC 1000 with SSD
- Shock: 30G with MRC 1000 with SSD

Rugged Grade
- IP54
- Compliance with MIL-STD-810F
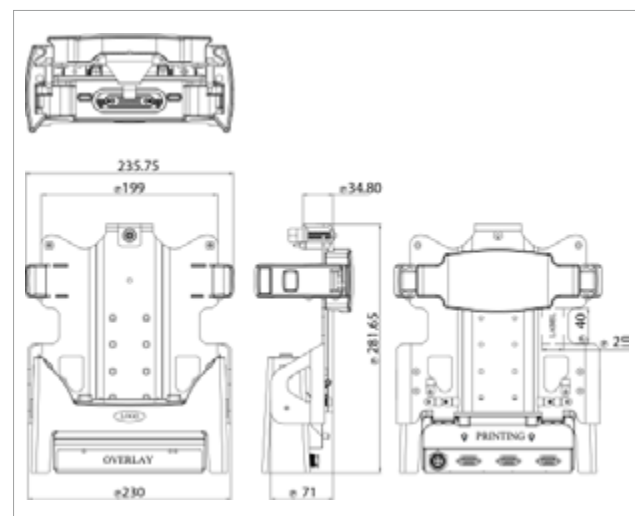
Certifications
- CE approval
- FCC class B

Ordering Information

- **MTK 10-VMC (P/N: 10UK10VMC00X0)**
  Vehicle docking station with USB/VGA/RS-232/LAN

- **Optional Accessories**

Part No.	Description
60233VGA32X00	Vehicle Dock USB/Ethernet adapter cable
60233PW231X00	Vehicle Dock Bare Wire Power Cable
60233PW232X00	12V to 12V Vehicle Power Cable (cigarette adapter)

MTK 10-DTC

Main Features

- Support Multiple I/O Interface
- Support One Charge Bay for Second Battery Pack

Specifications

I/O Ports
- 4 x USB 2.0 Ports
- 1 x RJ45 with LEDs for 10/100/1000Mbps Ethernet
- 1 x DB15 VGA
- 1 x 32-pin PoGo connector

Power Input
- Power Input Voltage: DC 19V/6.32A
- Battery Charger:
  - -Enable charging MRC 1000 and additional secondary battery pack (3S3P) at the same time
  - Support 1 slot battery charging

Indication LED
- Power on LED Blue
- LAN Link LED Green
- LAN Access LED Yellow
- Battery status LED
  - charging: Yellow
  - full charge: Turn Off
  - Battery fault: Red

Dimension
- 230mm x 173mmx 119mm
- Weight: 1.05Kg

Construction
- Plastic ABS+PC
- Metal SECC for I/O pane

Environment
- Normal Charger temperature: 10℃ to 40℃
- Operating temperature: -20℃ to 50℃
- Storage temperature: -30℃ to 60℃
- Relative humidity: 5% to 95% non-condensing
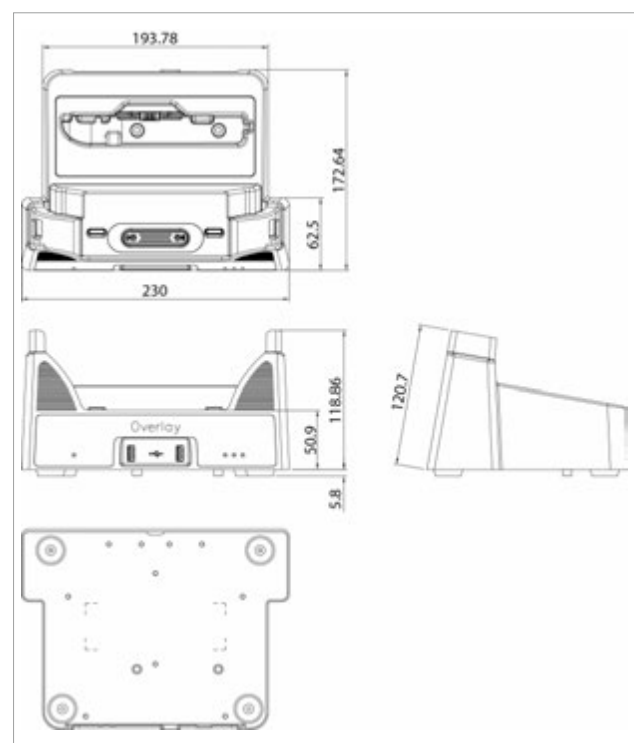
Certifications
- CE approval
- FCC class B

Ordering Information

- **MTK 10-DTC (P/N: 10UK10DTC00X0)**
  Desktop docking station with USB/Giga Ethernet

- **Optional Accessories**

Part No.	Description
4ZTSA12901X00	Secondary Battery Pack for 6 hours
4ZTSA18901X00	Secondary Battery Pack for 8 hours

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