Our Product Portfolio

Product Series

- AI Edge Telematics Solution
- Vehicle Telematics Computer
- Railway Computer
- Vehicle Mount Computer
- Modular Vehicle Computer System
- Vehicle Mount Display
- In-Vehicle Networking

ATC Series
Advanced Telematics Computer w/ GPU
- Designed for AI applications: ANPR, video analytics, and autonomous driving
- Selected NVIDIA GPU, Google TPU, and Intel GPU add-ons
- SC/TE, Wi-Fi, BT, CAN/OBD, GPS + DR, POE, and multi-SIM integration

VTC Series
In-Vehicle Computer
- General purpose, high-performance telematics computer
- SC/TE, Wi-Fi, BT, CAN/OBD, GPS + DR, POE, and multi-SIM integration
- IP protection
- NEXCOM proprietary power management
- AI applications with add-on GPU cards
- Backup battery

nROK Series
Railway Computer
- Fanless and rugged design
- SC/TE, Wi-Fi, BT, CAN/OBD, GPS + DR, POE, and multi-SIM integration
- Optional isolated 24-110VDC power input
- AI applications with add-on GPU cards
- EN50155 & EN45545 certifications

MVS Series
Modular Vehicle Computer Systems
- Modular CPU board + I/O board + expandable I/O board
- Flexible integration of LTE, Wi-Fi, BT, POE, and other I/Os
- Easy customization of different I/O interfaces, with quick respins for faster time-to-market

VMC Series
Rugged Vehicle Terminal
- Driver’s operational display
- Designed for outdoor applications
- Full IP66 certification
- 808-rated screens
- Vibration, shock, dust, and water-resistant
- SC/TE, Wi-Fi, CAN/OBD, GPS + DR

PoE and 10G LAN Solutions
- 2 to 8 PoE ports for entry-level to high-end VTC/MVS/ATC/nROK models
- Designed for video surveillance, ANPR, and video analytics applications
- 802.3af/at compliance with RJ45 or M12 connector (D, A, X-coded)
- Mobile PoE switches and cards

IP Solutions
- IP65-IP67 protection against water and dust
- Compact and robust design to withstand tough environments
- Reliability and longevity for critical applications
Computing Design Capability

Computing power drives vehicle applications, which is why NEXCOM offers a wide range of computing platforms to meet different vehicle needs

- RISC platform (NXP i.MX6, i.MX8, Rockchip)
- Intel Atom™ platform (Baytrail, Apollo Lake, Elkhart Lake)
- Intel Core™ platform (Core i 8th, 9th, 12th Gen)
- Intel high-end Xeon® platform

Specialization in AI Technology

- Specialize in NVIDIA® (PCIe x 16), Intel® Movidius™ (MXM, PCIe x 4, mini-PCIe) and Google Coral (M.2, mini-PCIe) AI accelerators
- Support partners to drive deeper customer engagement in AI + mobile edge computing applications
- Provide edge processing and AI capabilities to software partners/developers to innovate and create new business models

RF Communication Expansion

For the array of wireless usage cases, NEXCOM specializes in RF communication expansion, providing a comprehensive series of proprietary mini-PCIe/M.2 modules that, when incorporated in NEXCOM’s Mobile Computing Solution platforms, allow users maximum flexibility in optimizing vehicle configurations

- GNSS (RTK, Dead reckoning)
- DSR/CC/VEX, LoRa
- NB-IoT, 4G LTE, 5G NR
- WiFi 6

Our Core Competencise -
Building a Foundation for Interconnected IoV and Value-Added Innovation

Premium Design

Over 20 years of experience in designing rugged devices and over 10 in vehicle/railway computers

Reliability Quality

- Fanless design and IP67 protection for extreme environmental conditions
- IK08 impact resistance rating on external mechanics
- Meets CISPR25 standard
- Vehicle (E-Mark) and railway (EN50155, EN45545) certifications
- CE EMC (Electromagnetic Compatibility) and FCC conducted and radiated emissions certifications
- Increasingly more certifications (Safety, RED, LVD, MIL-STD-810, etc.)

Software Solutions

- SDK (API, programming guide, demo API) support for Linux, Android and Windows OS
- BSP (bootloader, kernel driver, OS (Android, Yocto, Ubuntu))
- MCU (customized MCU for small quantities)
- BIOS (customized BIOS for small quantities)
- Secure System Development (TPM, Secure Boot, Boot Guard)

OEM/ODM Services

- Over 20 years of experience in industrial-grade computer design and manufacturing
- Seasoned design capabilities in customizing system and software integration
- Certified, 100%-owned manufacturing facilities in Taiwan
- Expertise in mobile transport technologies, with vertical domain know-how
- Acceptance of small to medium quantities, with fast time-to-market delivery

Core Competency

Over 20 years of experience in designing rugged devices and over 10 in vehicle/railway computers
Core Competency: Premium Design
For Rugged Devices and Vehicle/Railway Computers

Uninterrupted Power Means Uninterrupted Operations

- **External Battery**
  - Intelligent and rechargeable battery kit provides uninterrupted power and capacity information via RS-232 and SMBus interface

- **Internal Battery**
  - Optional intelligent and rechargeable internal battery provides uninterrupted power for 10 to 15 minutes

- **Internal SuperCap**
  - Built-in supercap for 3-second protection against temporary voltage dips

Smart and Effective Cooling System

- **Smart Fan**
  - Power efficient: RPM adjusts to temperature changes
  - Quiet: lower speeds at lower temperatures
  - Convenient: easy setup in BIOS
  - Highly reliable: longer lifetime

- **Heat Pipe and Heatsink**
  - More efficient thermal conductivity with copper pipe
  - Better heat dissipation with heatsink dedicated to high-temperature components

Strong Ingress Protection: IP65/IP67

- **Dustproof and Water Resistant**
  - Protects against dust and water from cleaning or accidents
  - Mechanical casings prevent intrusion and accidental contact
  - Inhibits deterioration and damage due to moisture and atmospheric contaminants

Sturdy System for Securing Cards While Driving

- **Fixture Design for GPU and PCIe Cards**
  - Avoids vibration issues, absorbing 2.0g at 5 to 500Hz (SSD + graphics card)
  - Supports a variety of graphic cards and PCIe add-on cards

- **Damping Bracket**
  - Optional damping bracket enhances anti-vibration capabilities for HDD, GPU, and PCIe cards
  - Absorbs 1.6g at 5 to 500Hz (HDD + graphics card)

Diverse Camera Input Interface for Video Capture

- **PoE Port**
  - PoE B02.3a/3at, max. 25W per port
  - Choice of M12 X-coded or RJ45
  - Independent 10/100/1000 Mbps
  - LAN and power isolation
  - Avoids LOM system damage from transient surges

- **Fakra with MIPI Port**
  - Supports MIPI camera input with FAKRA, 1080p60 2M pixel
  - SerDes V-by-One technology
  - Uncompressed video data over 15m
  - Transmission of up to 1.2Gbps per CSI-2 data lane

- **CVBS Port**
  - Supports mini-PoE capture module and analog camera with H.264 compression
  - HD capture solution
    - Video input for 1x SDI
    - HD/SDI, 1x HDMI, 1x YPbPr
    - Video format for 3G/SDI, HD-SDI, SD-SDI
  - SD capture solution
    - Video input for CVBS
    - Video format for NTSC, PAL

- **Internal SuperCap**
  - Built-in supercap for 3-second protection against transient voltage dips
Internet of Vehicles (IoV) -
Creating a Fully-encompassing Car Ecosystem Through IoV Innovation

Build Your Next-Gen Mobile Computing Solutions

Enable smart transportation and traffic infrastructure with AI inference

Connect to next-gen wireless 5G NR, Wi-Fi 6, DSRC/C-V2X network technologies

Perform intelligent surveillance with event prediction and detection

First Response
AI for ANPR & Facial Recognition

AI Edge Computing
AI Vision for Inspection/People Counting

AI Edge Computing
Autonomous Driving/ADAS

Smart Public Transit
Infotainment & PIS

Smart Traffic Control & Management

V2X

Wi-Fi 6

5G

Material Handling
Positioning Management

Logistics
Fleet Management

Vertical Industry Applications

Internet of Vehicles (IoV) -
Creating a Fully-encompassing Car Ecosystem Through IoV Innovation

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Autonomous Driving/ADAS

Smart Public Transit
Infotainment & PIS

Smart Public Transit
Intelligent Video Surveillance

Smart Public Transit
Infotainment & PIS

Smart Traffic Control & Management

V2X

Wi-Fi 6

5G

Material Handling
Positioning Management

Logistics
Fleet Management

Vertical Industry Applications

**Autonomous Driving - Deep Learning Makes Autonomous Driving Perceptive and Practical**

**NEXCOM’s Solutions**
- Intel® Core™ 8th/10th, 12th Gen. processor with high performance
- Wide selection of GPU engines from NVIDIA's GeForce GTX10/RTX20/RTX30 series, Intel® Movidius™, and Google Coral
- GPU acceleration via MXM (Mobile PCI Express Module) and PCIe x16 cards, specially designed for mobile applications
- Multiple I/O connections: PoE, DIO, USB, and RS232/422/485 for external peripherals
- 2.5G/10G LAN port for demanding data loads
- RAID 0, 1, 5 and 10 increase data security and integrity
- Global navigation satellite system (GNSS) and WWAN connections for accurate vehicular positioning

**Recommended Models**
- **ATC 8010**
  - AI Inference, In-Vehicle, Fanless Computer with Intel® Core™ 8th Gen. CPU + Intel® Movidius™ Myriad® X MA2485 VPU
  - Customized NVIDIA MXM GPU (up to RTX2080)
  - Up to 8 independent GbE PoE+
- **VTC 7251-7C4**
  - Fanless In-Vehicle Computer, Intel® Core™ i7-8700T
  - 1 x LAN + 4 x independent PoE supported
  - 4 x mini-PCIe + 1 x M.2 Key B expansion slots
- **ATC 3200**
  - AIoT Gateway & In-Vehicle Fanless Computer with built-in NVIDIA® Jetson™ TX2/SoM
  - Supports 4 CH MIPI SerDes (VBOC) cameras (up to 25m cable reach)
  - 2 x GbE (PoE+), CANBus, console
- **ATC 8110**
  - AI Powered In-Vehicle Computer, Intel® Coffee Lake S/Refresh
  - Add-on NVIDIA graphics card up to RTX3090 (350W)
  - MIL-STD-810G for anti-vibration/shock to protect graphics card

**Precision Agriculture Application Requirements**
- Flexible design fulfills various AI recognition performance requirements
- Extended connectivity with different peripherals such as MIPI/FP/DP cameras, light detection and ranging (LiDAR), and radar
- Low-latency signal transmission and rapid cloud computing access
- Built-in NVIDIA® Jetson™ TX2/Xavier NX SOM, up to 21TOPS compute
- Waterproof/dustproof & fanless design for OHV (off highway vehicle) applications
- Rugged design with add-on, built-in GPU module or SoM to sustain vibration and shock for OHV applications
- Precise tracking/positioning through GNSS, RTK, and WWAN

**Vertical Industry Applications**
NEXCOM’s Solutions

• PC-based, In-vehicle NVRs for real-time surveillance, with live view, recording, and playback features
• Built-in global navigation satellite system (GNSS) with dead reckoning (DR) function for continuous route tracking from remote locations
• Built-in communication ports connect devices such as vehicle signage, card readers, safety sensors, and IP cameras

• Powerful face detection technology enables passenger counting for better management: adjust departure frequency, assign better bus routes, and compute revenue forecasts
• Multiple Wi-Fi and cellular modules, each with multiple SIM slots, act as mobile routers to provide uninterrupted Internet service via various ISPs

eBus Application Requirements

• IoT cloud services allow real-time transmission of bus information to command centers, stations, and passenger mobile applications
• Wi-Fi 6 high-speed connection improves passengers’ video streaming, social media, and online shopping experiences
• PoE cameras can first capture external images, then combine with Movidius VPU and OpenVINO to perform pedestrian detection and issue collision warnings
• GNSS/DR module can obtain vehicle location whenever needed to ensure vehicle is on course
• Rich I/Os connect to other devices, such as people counters, door sensors, and ticketing machines

Recommended Models

VTC 1021-C2K
Fanless In-Vehicle Computer, Intel Atom® Quad Core x5-E3940
• 2 x LAN + 2 x independent PoE supported
• 3 x Expansion slots for various applications

VTC 6220-BK
Fanless In-Vehicle Computer, Intel Atom® Quad Core x7-E3950
• 2 x WWAN modules + 4 x SIM cards supported
• VGA/HDMI (ultraONE+ up to 10m or LVDS, by request)

VTC 6221
Fanless In-Vehicle Computer, Intel Atom® Quad Core x7-E3950T
• 3 x mini-PCIe + 2 x M.2 Key B expansion slots
• 2 x LTE/5G modules supported

VTC 7251-7C4
Fanless In-Vehicle Computer, Intel® Core™ i7-8700T
• 1 x LAN + 4 x independent PoE supported
• 4 x mini-PCIe + 1 x M.2 Key B expansion slots
Vertical Industry Applications

Smart Public Rail Transit -
Telematics for Transportation Security and Efficiency, Plus Passenger Satisfaction

NEXCOM’s Solutions

- Compliance with rolling stock regulations EN50155 and EN45545-2
- Power isolation and protection against voltage dips
- AI-powered platform for intelligent surveillance
- Real-time facial recognition on every carriage, using AI at the Edge
- Mobile router supporting different Internet service providers (ISP) with multiple Wi-Fi and cellular networks to provide uninterrupted Internet onboard
- Multi-SIM design and carrier switch means better signals and no roaming charges on international journeys

Recommended Models

- **nROK 6221**
  - Fanless Rolling Stock Computer, Intel Atom® x7-E3950
  - 3 x mini-PCIe + 2 x M.2 socket expansion
  - 2 x LTE/4G module supported

- **nROK 7251-7A**
  - Fanless Rolling Stock Computer, Intel® Core™ i7-9700TE
  - 3 x mini-PCIe + 2 x M.2 Key B slots
  - 2 x external SSD/HDD and 2 x mSATA for RAID 0, 1

- **aROK 5510**
  - Powerful Platform for AI Applications, Storage Server, Intel® Core™/Xeon® CPU
  - Graphics card supports 3 x mini-PCIe + 3 x M.2 socket expansion
  - 6 x external SSD and 1 x PCIe 3.0 x4 NVMe 1.3 SSD supported

- **aROK 8110**
  - AI Powered for Autonomous and Machine Vision Platform, Intel® Core™/Xeon® CPU
  - 4 x PCIe 3.0 slots for discrete graphics/inference/frame grabber cards
  - 4 x external storage for 2.5" SSD/M.2/ U.2 NVMe SSD

Vision Application Requirements

- Rugged design protects graphics cards against shock and vibration
- Multipurpose I/O connectors with different sensor/controller connections collect data
- PoE high-resolution cameras with PoE ports to supply vision
- Applications include pantograph inspection, track obstacle inspection, and traffic light/sign recognition, using graphics card’s vision technology

Traffic light, traffic sign recognition

Track obstacle/intrusion inspection

Pantograph inspection
Public Works -

Playing the Key Roles of Enriching the Community and Enhancing the Quality of Life

NEXCOM’s Solutions

- The most diverse line of vehicle computers, powered by Intel® processors to quickly handle strenuous tasks
- GNSS tracking and VLAN/MVLAN communication with multi-SIM capabilities
- Built-in communication ports, such as USB, COM, GPIO, CANBus, and mini-PClE, connect peripherals and acquire relevant data
- Extended operating temperature range: -40°C to 70°C

- Rugged design, compact size, and IP65/67 protection for reliable operation in extreme and outdoor environments
- Optional backup battery ensures consistent operation when power supply is unstable
- ultraDINE+ technology supports 10-meter video transmission over a single cable

Recommended Models

**VMC 2020**
- 8” Rugged Vehicle Mount Computer, Intel Atom® Quad x7-E3950
  - 1280 x 720 resolution, sunlight readable (1000 nits), PCAP touch screen
  - IP65 water-resistant and IK08 external damage protection ratings

**VTC 1911-IPK**
- Fanless In-Vehicle Computer, Intel Atom® Single Core E3915
  - Telematics IoT gateway with super slim and ruggedized design
  - IP67 water- and dust-resistant rating

**VTC 6220-BK**
- Fanless In-Vehicle Computer, Intel Atom® Quad Core x7-E3950
  - 1 x M.2 Key B & 1 x mini-PClE for WiFi/WAN module + 2 x mini-PClEs for various applications
  - Dual externally accessible 2.5” SSD trays

**VTC 7252-7C4IP**
- Fanless In-Vehicle Computer, Intel® Core™ i7-9700TE
  - 2 x LAN + 4 x independent PoE supported
  - IP65 water- and dust-resistant rating

**Garbage Truck Application Requirements**

- Fuel savings and reduction of empty runs
- Connection with a variety of sensors for secure operation and control
- Robust design for outdoor and off-road environments
- Compact size to fit limited spaces in cabins
- Precise and real-time vehicle location via AVL technology
- Uninterrupted power for system stability
- Easy wiring installation and maintenance
- IP65 rating means machine reliability and resistance in harsh environments

Savings in waste disposal costs
Capacity optimization
Empty run reductions
Anti-vibration military standard, IP65 rating, and easy maintenance
NEXCOM’s Solutions

- 360-degree view from up to 8 IP cameras over PoE ports
- Fast automatic license plate recognition (ALPR) and face detection is powered by Intel® Core™ i 8th, 9th and 12th Gen high-performance processors and NVIDIA GeForce® RTX 30xx and 16xx/10xx series graphics cards
- ultraONE+ technology resolves cabling issues and video signal degradation from harsh vehicular operating environments
- CANbus 2.0B reads vehicle status accurately and quickly
- Vehicle mount computer shows job assignments and route maps
- Supports multiple telecom carriers (3G/LTE and 5G) to guarantee communication and data transmission between vehicle and control center
- Backup battery ensures uninterrupted system operation
- Supports IEEE 802.3 af/at PoE for IP cameras and other PD devices

Smart AI Patrol Application Requirements

- Ability to aggregate video feeds from multiple IP cameras
- High AI performance for sophisticated image processing (facial recognition, ANPR)
- Real-time surveillance on multiple video displays
- Easy system installation to fit limited spaces in vehicles
- Real-time vehicle status monitoring
- Rapid emergency dispatches with most optimal route
- Quick and trusted communication with emergency and control center
- Uninterrupted power supply to systems
- Display and system integration with simplified cabling for large trucks
- All-in-one PoE design lowers total cost of ownership (TCO) and facilitates maintenance
- High-speed storage available for high-speed multi-cam needs

Recommended Models

<table>
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<tr>
<th>Model</th>
<th>Description</th>
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| VTC 7251-7C4 | Fanless In-Vehicle Computer, Intel® Core™ i7-8700T  
  - 1 x LAN + 4 x independent PoE supported, total 60W  
  - 4 x mini PCIe slots + 1 x M.2 KeyB expansion |
| VTC 6222-C4S | In-Vehicle Computer, Intel® Atom® Quad Core E3950  
  - 1 x LAN + 4 x PoE supported  
  - 1 x RS232 (L), 1 x RS232 (Tx/Rx), 1 x RS422/485 |
| ATC 6210 |  
  - All-in-one PoE design lowers total cost of ownership (TCO) and facilitates maintenance  
  - MIL-STD-810G for anti-vibration/shock to protect graphics card |
| ATC 8010 | Powerful Intelligent Platform, Intel® Core™ i7-8700T + NVIDIA® MXM GPU, supporting up to 8 x QSE PoE+  
  - Customized NVIDIA® MXM GPU (up to RTX2080)  
  - Up to 8 independent QZE PoE+ |
| VTC 7251-7C4 | Fanless In-Vehicle Computer, Intel® Core™ i7-8700T  
  - 1 x LAN + 4 x independent PoE supported, total 60W  
  - 4 x mini PCIe slots + 1 x M.2 KeyB expansion |
| VTC 6222-C4S | In-Vehicle Computer, Intel® Atom® Quad Core E3950  
  - 1 x LAN + 4 x PoE supported  
  - 1 x RS232 (L), 1 x RS232 (Tx/Rx), 1 x RS422/485 |
| ATC 6210 |  
  - All-in-one PoE design lowers total cost of ownership (TCO) and facilitates maintenance  
  - MIL-STD-810G for anti-vibration/shock to protect graphics card |
NEXCOM’s Solutions
- High brightness LCD touchscreen panel for sunlight readability
- Global navigation satellite system for precise and real-time vehicle location
- Vehicle status updates via the CANBus 2.0B, OBD II, and SAE J1708/J1939 interface
- Aluminum die casting housing protects against any large fluctuations in temperature or humidity
- IP65 rating ensures that it withstands extreme weather conditions
- Wide-range power input (9V~60V) fits different vehicles’ UPS batteries
- Built-in backup battery ensures protection of data critical to operations
- Built-in communication modules connects analog or IP cameras and other peripherals

Forklift Application Requirements
- IP65 rating ensures lower risk of water/dust damaging interior electronic parts
- Sunlight readability (high brightness over 1000 nits) enhances display visibility
- 9V~60V DC power in
- IK08/09 vandal-proof rating: reduces injuries and RMA costs, while prolonging lifetime
- Backup battery for approx. 15 min. of operation when forklift battery needs to be replaced

Recommended Models
- **VMC 1100**
  7" All-In-One Vehicle Computer, Intel Atom® E3825
  - 800 x 480 resolution, 4-wire resistive, anti-glare touch screen
  - RFID and F1–F5 function keys
- **VMC 220/2020**
  8" Rugged Vehicle Computer, NXP i.MX 8M Quad/Intel Atom® x7-E3950
  - 1280 x 720 resolution, sunlight readable (1000 nits), PCAP touch screen
  - IP65 water-resistant and IK08 external damage protection ratings
- **VMC 3020**
  10.4" Rugged Vehicle Mount Computer, Intel Atom® x5-E3930
  - 1024 x 768 resolution, sunlight readable (1200 nits), 5-wire resistive touch screen
  - Front panel IP65 water-resistant
  - 9V~60V DC power in
- **VMC 4020**
  12.1" Rugged Vehicle Mount Computer, Intel Atom® x7-E3950
  - 1024 x 768 resolution, sunlight readable (1200 nits), 5-wire resistive touch screen
  - IP65 water-resistant rating (VMC 4020-4A1)
  - 9V~60V DC power in

*Vertical Industry Applications*

**Port Management & Warehouse**
Around-The-Clock, Reliable Delivery: Your Trust is Our Commitment

*WARNING*

1. Vertical Industry Applications

2. Vertical Industry Applications

3. Vertical Industry Applications

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12. Vertical Industry Applications
Fleet Management -

Improving Driver Safety, Saving Energy, and Increasing Overall Fleet Efficiency

NEXCOM’s Solutions

- Powered by Intel® processors to quickly handle strenuous tasks
- Supports various displays: VGA, HDMI, ultraONE+
- Supports GNSS and WiLAN/WWAN modules for tracking and communication
- Built-in communication ports, such as USB, COM, GPIO, and CANBus, connect peripherals and acquire vehicle data
- Rugged design and IP65 protection for reliable operations in extreme and outdoor environments
- Alternative power source with optional backup battery ensures uninterrupted data storage and transmission, regardless of vehicular power instability
- Powerful CVBS design for blind spot monitoring and collision avoidance
- SIM card switching for better signals and no roaming charges on international journeys

Cold Chain Logistics Application Requirements

- Real-time 5G telematics easily connects all vehicles and command center
- GNSS/RD module can obtain vehicle location whenever needed to ensure that the vehicle is on course, as well as for more efficient scheduling
- CANBus function obtains car information such as internal vehicle speeds and fuel volume for better eco-driving
- PoE cameras can first capture images, then combine with Movidius VPU and OpenVINO to perform driver safety monitoring
- Uninterrupted monitoring of temperature and humidity-controlled sensors, followed by data uploads to the cloud

Recommended Models

VTC 1910
Fanless In-Vehicle Computer, Intel Atom® Single Core E3915
- Telematics IoT gateway, super slim and ruggedized design
- Dual SIM cards for WWAN modules

VTC 1020
Fanless In-Vehicle Computer, Intel Atom® Quad Core x5-E3930
- PoE and HDMI for dual display
- 5 x RS232 + 2 x RS485

VTC 1021-BK
Fanless In-Vehicle Computer, Intel Atom® Quad Core x5-E3940
- 3 x Expansion slots for various applications
- Built-in U-blox M8N, CANBus 2.0B, 3 x DI, 3 x DO

VMC 220/2020
8” Rugged Vehicle Mount Computer, NXP i.MX 8M Quad/Intel Atom® x7-E3950
- 1280 x 720 resolution, sunlight readable (1000 nits), PCAP touch screen
- IP65 water-resistant and IK08 external damage protection ratings

Vertical Industry Applications
Raw Material Management -
Born Tough to Increase Efficiency and Productivity

NEXCOM’s Solutions

- Powered by Intel® processors to quickly handle strenuous tasks
- High-brightness LCD touchscreen panel, with reduced reflection
- Global navigation satellite system (GPS/Elonar/Galileo/BeiDou) with RTK for accurate vehicle positioning
- Rugged design and IP65 protection for reliable operation in extreme and outdoor environments
- Built-in communication ports, such as USB, COM, GPIO, and CANBus, connect peripherals and acquire vehicle data
- AI applications, including object and driver behavior detection, prevent accidents

Mining Application Requirements

- Rugged IP65 design prevents dust and water ingress
- PoE cameras can first capture external images, then combine with Movidius™ VPU and OpenVINO™ to perform AI applications, such as intrusion detection to avoid car collisions and face detection to identify driver fatigue
- GNSS RTK module can obtain vehicle location whenever needed to ensure vehicle is on course, as well as to reduce risk of theft
- DSRC/C-V2X module can communicate with nearby construction vehicles and signs at any time to achieve path prediction and consequently avoid the possibility of collisions
- RFID detection can protect heavy trucks from being driven arbitrarily

Recommended Models

**VMC 1100**
7” All-In-One Vehicle Computer, Intel Atom® x5-E3827
- 800x480 resolution with 4-wire resistive, anti-glare touch screen
- Operating temperature: -20°C~60°C

**VMC 2020**
8” Rugged Vehicle Mount Computer, Intel Atom® x7-E3950
- 1280 x 720 resolution, sunlight readable (1000 nits), PCAP touch screen
- IP65 water-resistant and IK08 external damage protection ratings

**VTC 7252-7C4IP**
Fanless In-Vehicle Computer, Intel Core™ i7-9700TE
- 2 x LAN + 4 x independent PoE
- 3 x expansion slots for various applications
- Built-in U-blox M8N, CANBus 2.0B, 3 x DI, 3 x DO

**VTC 1021-BK**
Fanless In-Vehicle Computer, Intel Atom® Quad Core x5-E3940
- 3 x expansion slots for various applications
- Built-in U-blox M8N, CANBus 2.0B, 3 x DI, 3 x DO
Video Surveillance -
Enhance Mobile Security: Watch, Analyze, and React in Real Time

NEXCOM’s Solutions
- Connections to high-resolution IP cameras with PoE to capture clear images
- In-vehicle computer with GPU acceleration to analyze multiple video sources
- Industrial-grade vehicle displays for seamless video output
- Supports multiple WWAN networks with multiple SIMs for reliable video transmission and remote monitoring

Recommended Models

**VTC 6222-C4S**
Fanless In-Vehicle Computer, Intel® Atom™ Quad Core x7-E3950
- 1 x LAN + 4 x PoE supported
- 2 x External 2.5" SATA 3.0 SSD, 1 x External SD

**VTC 7250-7C8**
Fanless In-Vehicle Computer, Intel® Core™ i7-8700T
- 1 x LAN + 8 x independent PoE supported
- 2 x External 2.5" SATA 3.0 SSD supported

**nROK 6222-AC4S**
Fanless 4-CH PoE Rolling Stock Computer, Intel® Atom™ x7-E3950
- 4 x M12 X-coded PoE (802.3af/at), max. 60W
- 3 x mini-PCIe expansion sockets
- Dual external storage (compatible with 15mm disk)

**nROK 7251-7C4**
Fanless 4-CH PoE Rolling Stock Computer, Intel® Core™ i7-9700TE
- 1 x LAN + 4 x independent PoE supported
- 3 x mini-PCIe and 2 x M.2 Key B slots

Smart Bus Application Requirements
- Clear images, detailed information, and solid quality
- Extended compute-intensive analysis capabilities
- Rugged vehicle display shows captured images and video analytics results in real time
- Wireless communication with high bandwidth for video transmission
- Rugged and ample storage capacity

Recommended Models

**VTC 6222-C4S**
Fanless In-Vehicle Computer, Intel® Atom™ Quad Core x7-E3950
- 1 x LAN + 4 x PoE supported
- 2 x External 2.5" SATA 3.0 SSD, 1 x External SD

**VTC 7250-7C8**
Fanless In-Vehicle Computer, Intel® Core™ i7-8700T
- 1 x LAN + 8 x independent PoE supported
- 2 x External 2.5" SATA 3.0 SSD supported

**nROK 6222-AC4S**
Fanless 4-CH PoE Rolling Stock Computer, Intel® Atom™ x7-E3950
- 4 x M12 X-coded PoE (802.3af/at), max. 60W
- 3 x mini-PCIe expansion sockets
- Dual external storage (compatible with 15mm disk)

**nROK 7251-7C4**
Fanless 4-CH PoE Rolling Stock Computer, Intel® Core™ i7-9700TE
- 1 x LAN + 4 x independent PoE supported
- 3 x mini-PCIe and 2 x M.2 Key B slots
2021 New Products

**ATC 3200**
Advanced Telematics Computer for AI Applications
- NVIDIA® Jetson™ TX2 SOM
- 2 x 10/100/1000 Mbps, PoE: 802.3af/at, total 30W
- Optional 4-Ch MPR Serial input for MPR cameras
- 1 x mini PCIe socket (PCIe 2.0 x 16)
- 1 x M.2 3042/3052 Key B (USB 2.0) for LTE/5G
- 9–36V DC-in with IGN control
- CE, FCC, E-mark

**nROK 7251-7A**
Fanless Rolling Stock Computer
- Intel® Coffee Lake-S Refresh Desktop, i7-9700TE, 35W, 8 Core
- 4 x 10/100/1000 Mbps, PoE: 802.3af/at, total 60W
- 2 x mini PCIe (USB 2.0, PCIe 3.0/SATA 3.0) and 1 x mini PCIe (USB 2.0) for LTE
- 2 x M.2 3042/3052 Key B (USB 2.0, USB 3.1 Gen2) for LTE/5G
- 24VDC power input
- CE, FCC, EN 50155 class DT4 conformity

**aROK 5510**
Advanced Rolling Stock Computer for Video Server and AI Applications
- Intel® Core™ 8/9th Gen./Xeon® Coffee Lake-S platform
- 6 x External SATA 3.0 2.5” SSD with RAID 0, 1, 5, 10 supported
- Discrete PCIe x16 graphics card (100W) supported
- 8 x SIM cards + 4 x eWAN modules supported
- 1 x M.2 2280/2242/2260 Key M, NVMe SSD (PCIe 3.0 x4)
- DC 24/110V with isolation

**nROK 7251-7C4**
Fanless Rolling Stock Computer for Video Surveillance Applications
- Intel® Coffee Lake-S Refresh Desktop, i7-9700TE, 35W, 8 Core
- 4 x 10/100/1000 Mbps, PoE: 802.3af/at, total 60W
- 2 x mini PCIe (USB 2.0, PCIe 3.0/SATA 3.0) and 1 x mini PCIe (USB 2.0) for LTE
- 2 x M.2 3042/3052 Key B (USB 2.0, USB 3.1 Gen2) for LTE/5G
- 24VDC power input
- CE, FCC, EN 50155 class DT4 conformity

**aROK 8110**
Advanced Rolling Stock Computer for AI Applications
- Intel® Core™ 8/9th Gen./Xeon® Coffee Lake-S platform
- 1 x PCIe 3.0 x16 slot and 3 x PCIe 3.0 x4 slot
- Dedicated fixture design for discrete graphic card and PCIe cards
- 4 x External 2.5” SATA 3.0 SSD/HDD (15mm thickness) with RAID 0/1/5/10 supported
- 24/36VDC power input
- CE, FCC, EN 50155 class DT4 conformity

**nROK 7252-WI2-C8S**
Fanless Rolling Stock Computer for Video Surveillance Applications
- Intel® Core™ 8/9th Gen./Xeon® Coffee Lake-S platform
- 8 x 10/100/1000 Mbps, PoE: 802.3af/at, total 60W
- 6 x SIM cards + 3 x WWAN modules supported
- Wide power voltage input: 24, 36, 48, 72, 96 and 110VDC with isolation
- Up to 3-second protection against temporary voltage dips
- CE, FCC, EN 50155 class DT4 conformity

**ATC 3200**
Advanced Telematics Computer for AI Applications
- NVIDIA® Jetson™ TX2 SOM
- 2 x 10/100/1000 Mbps, PoE: 802.3af/at, total 30W
- Optional 4-Ch MPR Serial input for MPR cameras
- 1 x mini PCIe socket (PCIe 2.0 x 16)
- 1 x M.2 3042/3052 Key B (USB 2.0) for LTE/5G
- 9–36V DC-in with IGN control
- CE, FCC, E-mark

**nROK 7251-7A**
Fanless Rolling Stock Computer
- Intel® Coffee Lake-S Refresh Desktop, i7-9700TE, 35W, 8 Core
- 4 x 10/100/1000 Mbps, PoE: 802.3af/at, total 60W
- 2 x mini PCIe (USB 2.0, PCIe 3.0/SATA 3.0) and 1 x mini PCIe (USB 2.0) for LTE
- 2 x M.2 3042/3052 Key B (USB 2.0, USB 3.1 Gen2) for LTE/5G
- 24VDC power input
- CE, FCC, EN 50155 class DT4 conformity

**VTC 7252-7C4IP**
IP65 Fanless In-Vehicle Computer for Video Surveillance Applications
- Intel® Coffee Lake-S Refresh Desktop, i7-9700TE, 35W, 8 Core
- IP65-rated rugged design
- 4 x 10/100/1000 Mbps, PoE: 802.3af/at, total 60W
- 1 x M.2 3042/3052 Key B (USB 2.0, USB 3.1) for LTE/5G
- 2 x mini PCIe (USB 2.0, PCIe 3.0/SATA 3.0) and 1 x mini PCIe (USB 3.0)
- CE, FCC, E-mark

**nROK 7251-7C4**
Fanless Rolling Stock Computer for Video Surveillance Applications
- Intel® Coffee Lake-S Refresh Desktop, i7-9700TE, 35W, 8 Core
- 4 x 10/100/1000 Mbps, PoE: 802.3af/at, total 60W
- 2 x mini PCIe (USB 2.0, PCIe 3.0/SATA 3.0) and 1 x mini PCIe (USB 2.0) for LTE
- 2 x M.2 3042/3052 Key B (USB 2.0, USB 3.1 Gen2) for LTE/5G
- 24VDC power input
- CE, FCC, EN 50155 class DT4 conformity

**VTC 7252-7C4IP**
IP65 Fanless In-Vehicle Computer for Video Surveillance Applications
- Intel® Coffee Lake-S Refresh Desktop, i7-9700TE, 35W, 8 Core
- IP65-rated rugged design
- 4 x 10/100/1000 Mbps, PoE: 802.3af/at, total 60W
- 1 x M.2 3042/3052 Key B (USB 2.0, USB 3.1) for LTE/5G
- 2 x mini PCIe (USB 2.0, PCIe 3.0/SATA 3.0) and 1 x mini PCIe (USB 2.0, PCIe 3.0)
- CE, FCC, E-mark

**nROK 7252-WI2-C8S**
Fanless Rolling Stock Computer for Video Surveillance Applications
- Intel® Core™ 8/9th Gen./Xeon® Coffee Lake-S platform
- 8 x 10/100/1000 Mbps M12 X-coded, PoE: 802.3af/at, total 60W
- 6 x SIM cards + 3 x WWAN modules supported
- Wide power voltage input: 24, 36, 48, 72, 96 and 110VDC with isolation
- Up to 3-second protection against temporary voltage dips
- CE, FCC, EN 50155 class DT4 conformity

**VMC 2020-PC1**
IP65 Rugged Vehicle Mount Computer
- 8” HD IPS TFT LCD with projected capacitive touch
- Brightness: 1000 cd/m² (typical), Contrast ratio: 1000:1 (typical)
- Intel® Atom™ x7-E3950, 4 Core, 2.0GHz
- IP65-rated and IK08-rated rugged design
- Backup battery & RFID module (optional)
- Wide range power input: 9V – 60VDC
- CE, FCC, E-mark, IK08
### Industrial AI Edge Telematics Computer

<table>
<thead>
<tr>
<th>Model</th>
<th>CPU</th>
<th>Chipset</th>
<th>Power Management</th>
<th>Ingress Protection</th>
<th>Storage</th>
<th>Second Storage</th>
<th>GPU/Video/TPU/Compass</th>
<th>Audio</th>
<th>Ethernet</th>
<th>PMC</th>
<th>Pin</th>
<th>CAN</th>
<th>DC Output</th>
<th>SIM Socket</th>
<th>WinVxW</th>
<th>M.2 Socket</th>
<th>Expansion PCIe Slot</th>
<th>Power Input</th>
<th>Ignition Control</th>
<th>Power Management</th>
<th>Memory</th>
<th>Interface</th>
<th>OS</th>
<th>Dimensions (mm)</th>
<th>Operating Temperature</th>
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<tbody>
<tr>
<td>ATC 8010-7A</td>
<td>Intel® Coffee Lake™/Refresh Core™/&lt;br&gt;Intel® Q170</td>
<td>Fan &amp; Fanless pre-installed</td>
<td>2 x 240V/240V SD-PPSM, 4GB + 4GB (default)</td>
<td>N/A</td>
<td>2 x 2.5&quot; SATA 3.0 SSD (removable, 15mm)</td>
<td>2 x eMAG (mini-PCIe socket)</td>
<td>NVIDIA® GTX 1050 Ti</td>
<td>1 x U.2</td>
<td>1 x M.2 3042 Key B (USB 2.0, PCIe 1.0)</td>
<td>N/A</td>
<td>1 x (USB 2.0, PCIe 1.0)</td>
<td>1 x CANBus (optional)</td>
<td>1 x USB 2.0 (PCIe 2.0)</td>
<td>N/A</td>
<td>1 x M.2 3042 Key B (USB 2.0, PCIe 1.0)</td>
<td>VORBIS2-GPS-02 module</td>
<td>N/A</td>
<td>N/A</td>
<td>Win 10, Linux (Kernel 4.4)</td>
<td>210 x 156 x 60 (w/ mount bracket)</td>
<td>-30°C to 70°C</td>
<td>30°C to 85°C</td>
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<tr>
<td>ATC 8010-7B</td>
<td>Intel® Coffee Lake™/Refresh Core™/&lt;br&gt;Intel® Q170</td>
<td>Fan &amp; Fanless pre-installed</td>
<td>2 x 240V/240V SD-PPSM, 4GB + 4GB (default)</td>
<td>N/A</td>
<td>2 x 2.5&quot; SATA 3.0 SSD (removable, 15mm)</td>
<td>2 x eMAG (mini-PCIe socket)</td>
<td>NVIDIA® GTX 1050 Ti</td>
<td>1 x U.2</td>
<td>1 x M.2 3042 Key B (USB 2.0, PCIe 1.0)</td>
<td>N/A</td>
<td>1 x (USB 2.0, PCIe 1.0)</td>
<td>1 x CANBus (optional)</td>
<td>1 x USB 2.0 (PCIe 2.0)</td>
<td>N/A</td>
<td>1 x M.2 3042 Key B (USB 2.0, PCIe 1.0)</td>
<td>VORBIS2-GPS-02 module</td>
<td>N/A</td>
<td>N/A</td>
<td>Win 10, Linux (Kernel 4.4)</td>
<td>210 x 156 x 60 (w/ mount bracket)</td>
<td>-30°C to 70°C</td>
<td>30°C to 85°C</td>
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<td>ATC 8010-7D</td>
<td>Intel® Coffee Lake™/Refresh Core™/&lt;br&gt;Intel® Q170</td>
<td>Fan &amp; Fanless pre-installed</td>
<td>2 x 240V/240V SD-PPSM, 4GB + 4GB (default)</td>
<td>N/A</td>
<td>2 x 2.5&quot; SATA 3.0 SSD (removable, 15mm)</td>
<td>2 x eMAG (mini-PCIe socket)</td>
<td>NVIDIA® GTX 1050 Ti</td>
<td>1 x U.2</td>
<td>1 x M.2 3042 Key B (USB 2.0, PCIe 1.0)</td>
<td>N/A</td>
<td>1 x (USB 2.0, PCIe 1.0)</td>
<td>1 x CANBus (optional)</td>
<td>1 x USB 2.0 (PCIe 2.0)</td>
<td>N/A</td>
<td>1 x M.2 3042 Key B (USB 2.0, PCIe 1.0)</td>
<td>VORBIS2-GPS-02 module</td>
<td>N/A</td>
<td>N/A</td>
<td>Win 10, Linux (Kernel 4.4)</td>
<td>210 x 156 x 60 (w/ mount bracket)</td>
<td>-30°C to 70°C</td>
<td>30°C to 85°C</td>
<td></td>
<td></td>
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<tr>
<td>ATC 8110</td>
<td>Intel® Coffee Lake™/Refresh Core™/&lt;br&gt;Intel® Q170</td>
<td>Fan &amp; Fanless pre-installed</td>
<td>2 x 240V/240V SD-PPSM, 4GB + 4GB (default)</td>
<td>N/A</td>
<td>2 x 2.5&quot; SATA 3.0 SSD (removable, 15mm)</td>
<td>2 x eMAG (mini-PCIe socket)</td>
<td>NVIDIA® GTX 1050 Ti</td>
<td>1 x U.2</td>
<td>1 x M.2 3042 Key B (USB 2.0, PCIe 1.0)</td>
<td>N/A</td>
<td>1 x (USB 2.0, PCIe 1.0)</td>
<td>1 x CANBus (optional)</td>
<td>1 x USB 2.0 (PCIe 2.0)</td>
<td>N/A</td>
<td>1 x M.2 3042 Key B (USB 2.0, PCIe 1.0)</td>
<td>VORBIS2-GPS-02 module</td>
<td>N/A</td>
<td>N/A</td>
<td>Win 10, Linux (Kernel 4.4)</td>
<td>210 x 156 x 60 (w/ mount bracket)</td>
<td>-30°C to 70°C</td>
<td>30°C to 85°C</td>
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<tr>
<td>ATC 8110-F</td>
<td>Intel® Coffee Lake™/Refresh Core™/&lt;br&gt;Intel® Q170</td>
<td>Fan &amp; Fanless pre-installed</td>
<td>2 x 240V/240V SD-PPSM, 4GB + 4GB (default)</td>
<td>N/A</td>
<td>2 x 2.5&quot; SATA 3.0 SSD (removable, 15mm)</td>
<td>2 x eMAG (mini-PCIe socket)</td>
<td>NVIDIA® GTX 1050 Ti</td>
<td>1 x U.2</td>
<td>1 x M.2 3042 Key B (USB 2.0, PCIe 1.0)</td>
<td>N/A</td>
<td>1 x (USB 2.0, PCIe 1.0)</td>
<td>1 x CANBus (optional)</td>
<td>1 x USB 2.0 (PCIe 2.0)</td>
<td>N/A</td>
<td>1 x M.2 3042 Key B (USB 2.0, PCIe 1.0)</td>
<td>VORBIS2-GPS-02 module</td>
<td>N/A</td>
<td>N/A</td>
<td>Win 10, Linux (Kernel 4.4)</td>
<td>210 x 156 x 60 (w/ mount bracket)</td>
<td>-30°C to 70°C</td>
<td>30°C to 85°C</td>
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</tbody>
</table>
# Vehicle Telematics Computer

## Model Selection

| Model           | CPU                        | Chipset                  | Memory                  | Storage                  | Second Storage          | Video-Out                | Audio                  | Ethernet                | PoE                     | USB                        | COM                        | DIO                        | CAN                     | DC Output                | SPIBUS                  | SIM Socket               | Wi-Fi                    | Dimensions (mm)         | Operating Temperature   |
|-----------------|----------------------------|--------------------------|-------------------------|--------------------------|--------------------------|--------------------------|-------------------------|-------------------------|--------------------------|----------------------------|----------------------------|----------------------------|--------------------------|--------------------------|-------------------------|-------------------------|--------------------------|--------------------------|
| VTC-1910-S      | Intel® Atom® E8185 1 Core, 1.4GHz | N/A                      | 1 x DDR3L 1600 SO-DIMM (eMMC if default CPU) up to 12GB | 1 x SATA (occupied mPCIe socket) | 1 x mSD (optional) | 1 x VGA, 1 x HDMI or 1 x LVDS | 1 x Mic-in, 1 Line-out | 1 x Intel® 10/100/1000 | 1 x RS232 (Tx, Rx) | 1 x DDR3L 1600 (optional) | 3 x DI, 3 x DO | 1 x CANBus 2.0B | 12V (±5%) | N/A                     | N/A                     | 1 2 2 1                   | -40°C to 70°C           |
| VTC-1911-IPK    | Intel® Atom® E8185 1 Core, 1.4GHz | N/A                      | 1 x DDR3L 1600 SO-DIMM (eMMC if default CPU) up to 12GB | 1 x SATA (occupied mPCIe socket) | 1 x mSD (optional) | 1 x VGA, 1 x HDMI or 1 x LVDS | 1 x Mic-in, 1 Line-out | 2 x Intel® 10/100/1000 | 2 x RS232 (Tx, Rx) | 1 x DDR3L 1600 (optional) | 4 x DI, 4 x DO | 2 x CANBus 2.0B | 12V (±5%) | N/A                     | N/A                     | 1 2 2 1                   | -40°C to 70°C           |
| VTC-1011-C2K    | Intel® Atom® E8185, 2 Core, 3.1GHz | N/A                      | 1 x DDR3L 2400 UDIMM (occupied mPCIe socket) | 1 x SATA (occupied mPCIe socket) | N/A | 1 x VGA, 1 x HDMI or 1 x LVDS | 1 x Mic-in, 1 Line-out | 2 x Intel® 10/100/1000 | 2 x RS232 (Tx, Rx) | 1 x DDR3L 1600 (optional) | 5 x DI, 5 x DO | 1 x CANBus 2.0B | 12V (±5%) | N/A                     | N/A                     | 1 2 2 1                   | -40°C to 70°C           |
| VTC-1011-C2KX   | Intel® Atom® E8185, 2 Core, 3.1GHz | N/A                      | 1 x DDR3L 2400 UDIMM (occupied mPCIe socket) | 1 x SATA (occupied mPCIe socket) | N/A | 1 x VGA, 1 x HDMI or 1 x LVDS | 1 x Mic-in, 1 Line-out | 2 x Intel® 10/100/1000 | 2 x RS232 (Tx, Rx) | 1 x DDR3L 1600 (optional) | 6 x DI, 6 x DO | 1 x CANBus 2.0B | 12V (±5%) | N/A                     | N/A                     | 1 2 2 1                   | -40°C to 70°C           |
| VTC-1020        | Intel® Atom® E8185, 2 Core, 3.1GHz | N/A                      | 1 x DDR3L 2400 UDIMM (occupied mPCIe socket) | 1 x SATA (occupied mPCIe socket) | N/A | 1 x VGA, 1 x HDMI or 1 x LVDS | 1 x Mic-in, 1 Line-out | 2 x Intel® 10/100/1000 | 2 x RS232 (Tx, Rx) | 1 x DDR3L 1600 (optional) | 7 x DI, 7 x DO | 1 x CANBus 2.0B | 12V (±5%) | N/A                     | N/A                     | 1 2 2 1                   | -40°C to 70°C           |

## Performance

| Model           | CPU                        | Chipset                  | Memory                  | Storage                  | Second Storage          | Video-Out                | Audio                  | Ethernet                | PoE                     | USB                        | COM                        | DIO                        | CAN                     | DC Output                | SPIBUS                  | SIM Socket               | Wi-Fi                    | Dimensions (mm)         | Operating Temperature   |
|-----------------|----------------------------|--------------------------|-------------------------|--------------------------|--------------------------|--------------------------|-------------------------|-------------------------|--------------------------|----------------------------|----------------------------|----------------------------|--------------------------|--------------------------|-------------------------|-------------------------|--------------------------|--------------------------|
| VTC-1020-PA     | Intel® Atom® E8185, 2 Core, 1.8GHz | N/A                      | 1 x DDR3L 1600 SO-DIMM (eMMC if default CPU) up to 8GB | 1 x SATA 2.0 SSD | 1 x mSD (optional) | 1 x VGA, 1 x HDMI or 1 x LVDS | 1 x Mic-in, 1 Line-out | 1 x Intel® 10/100/1000 | 1 x RS232 (Tx, Rx) | 1 x DDR3L 1600 (optional) | 8 x DI, 8 x DO | 2 x CANBus 2.0B | 12V (±5%) | N/A                     | N/A                     | 1 2 2 1                   | -40°C to 70°C           |
| VTC-1010        | Intel® Atom® E8185, 2 Core, 1.8GHz | N/A                      | 1 x DDR3L 2400 UDIMM (occupied mPCIe socket) | 1 x SATA 2.0 SSD | 1 x mSD (optional) | 2 x RS232 (Tx, Rx) | 2 x RS232 (Tx, Rx) | 1 x Intel® 10/100/1000 | 2 x RS232 (Tx, Rx) | 1 x DDR3L 1600 (optional) | 9 x DI, 9 x DO | 2 x CANBus 2.0B | 12V (±5%) | N/A                     | N/A                     | 1 2 2 1                   | -40°C to 70°C           |
| VTC-1021-OK     | Intel® Atom® E8185, 2 Core, 1.8GHz | N/A                      | 1 x DDR3L 2400 UDIMM (occupied mPCIe socket) | 1 x SATA 2.0 SSD | 1 x mSD (optional) | 2 x RS232 (Tx, Rx) | 2 x RS232 (Tx, Rx) | 1 x Intel® 10/100/1000 | 2 x RS232 (Tx, Rx) | 1 x DDR3L 1600 (optional) | 10 x DI, 10 x DO | 2 x CANBus 2.0B | 12V (±5%) | N/A                     | N/A                     | 1 2 2 1                   | -40°C to 70°C           |
| VTC-1021-C2K    | Intel® Atom® E8185, 2 Core, 1.8GHz | N/A                      | 1 x DDR3L 2400 UDIMM (occupied mPCIe socket) | 1 x SATA 2.0 SSD | 1 x mSD (optional) | 2 x RS232 (Tx, Rx) | 2 x RS232 (Tx, Rx) | 1 x Intel® 10/100/1000 | 2 x RS232 (Tx, Rx) | 1 x DDR3L 1600 (optional) | 11 x DI, 11 x DO | 3 x CANBus 2.0B | 12V (±5%) | N/A                     | N/A                     | 1 2 2 1                   | -40°C to 70°C           |
| VTC-6210-OK     | Intel® Atom® E8185, 4 Core, 1.9GHz | N/A                      | 1 x DDR3L 2400 UDIMM (occupied mPCIe socket) | 1 x SATA 2.0 SSD | 1 x mSD (optional) | 2 x RS232 (Tx, Rx) | 2 x RS232 (Tx, Rx) | 1 x Intel® 10/100/1000 | 2 x RS232 (Tx, Rx) | 1 x DDR3L 1600 (optional) | 12 x DI, 12 x DO | 2 x CANBus 2.0B | 12V (±5%) | N/A                     | N/A                     | 1 2 2 1                   | -40°C to 70°C           |
| VTC-6210-H4     | Intel® Atom® E8185, 4 Core, 1.9GHz | N/A                      | 1 x DDR3L 2400 UDIMM (occupied mPCIe socket) | 1 x SATA 2.0 SSD | 1 x mSD (optional) | 2 x RS232 (Tx, Rx) | 2 x RS232 (Tx, Rx) | 1 x Intel® 10/100/1000 | 2 x RS232 (Tx, Rx) | 1 x DDR3L 1600 (optional) | 13 x DI, 13 x DO | 3 x CANBus 2.0B | 12V (±5%) | N/A                     | N/A                     | 1 2 2 1                   | -40°C to 70°C           |
## Vehicle Telematics Computer

<table>
<thead>
<tr>
<th>Model</th>
<th>VTC 6220-8K</th>
<th>VTC 6222-4S</th>
<th>VTC 7230</th>
<th>VTC 7240</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU</strong></td>
<td>Intel® Atom™ x7-E3950, 4-Core, 2.0GHz</td>
<td>Intel® Atom™ x7-E3950, 4-Core, 2.0GHz</td>
<td>Intel® Core™ i5-5257U, 2.1GHz</td>
<td>Intel® Core™ i7-7500U, 2.7GHz</td>
</tr>
<tr>
<td><strong>Chipset</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>1 x DDR3L 1600 SO-DIMM, 4GB (default) up to 8GB</td>
<td>1 x DDR3L 1600 SO-DIMM, 4GB (default) up to 8GB</td>
<td>2 x DDR4 2666 SO-DIMM, 4GB (default) up to 32GB</td>
<td>2 x DDR4 2666 SO-DIMM, 4GB (default) up to 32GB</td>
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<tr>
<td><strong>Storage</strong></td>
<td>2 x 2.5&quot; SATA 3.0 SSD/HDD (removable, 9.5mm)</td>
<td>2 x 2.5&quot; SATA 3.0 SSD/HDD (removable, 9.5mm)</td>
<td>2 x mSATA 3.0 (default)</td>
<td>2 x mSATA 3.0</td>
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<td><strong>Second Storage</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>Video Out</strong></td>
<td>2 x VGA, 1 x HDMI</td>
<td>2 x VGA, 1 x HDMI</td>
<td>1 x VGA, 1 x DisplayPort</td>
<td>1 x VGA, 1 x DisplayPort</td>
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<tr>
<td><strong>Audio</strong></td>
<td>2 x Mic-in, 2 x Line-out</td>
<td>2 x Mic-in, 2 x Line-out</td>
<td>2 x Mic-in, 2 x Line-out</td>
<td>2 x Mic-in, 2 x Line-out</td>
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<tr>
<td><strong>Ethernet</strong></td>
<td>3 x Intel® 10/100/1000 (2 x LAN, 1 x WAN)</td>
<td>3 x Intel® 10/100/1000</td>
<td>1 x Intel® 10/100/1000</td>
<td>1 x Intel® 10/100/1000</td>
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<tr>
<td><strong>PoE</strong></td>
<td>2 x Independent Intel® 10/100/1000 (w/o Gigabit Ethernet switch)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<td><strong>USB</strong></td>
<td>2 x USB 3.1, 1 x USB 2.0, 2 x RS232 (full), 1 x RS232/422/485</td>
<td>2 x USB 3.1, 1 x USB 2.0, 2 x RS232 (full), 1 x RS232/422/485</td>
<td>2 x USB 3.1, 1 x USB 2.0, 2 x RS232 (full), 1 x RS232/422/485</td>
<td>2 x USB 3.1, 1 x USB 2.0, 2 x RS232 (full), 1 x RS232/422/485</td>
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<tr>
<td><strong>COM</strong></td>
<td>4 x RS232, 4 x RS422/485 (w/o isolation)</td>
<td>4 x RS232, 4 x RS422/485 (w/o isolation)</td>
<td>4 x RS232, 4 x RS422/485 (w/o isolation)</td>
<td>4 x RS232, 4 x RS422/485 (w/o isolation)</td>
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<tr>
<td><strong>CAN</strong></td>
<td>1 x CANbus 2.0B (w/o isolation)</td>
<td>1 x CANbus 2.0B (w/o isolation)</td>
<td>1 x CANbus 2.0B (w/o isolation)</td>
<td>1 x CANbus 2.0B (w/o isolation)</td>
</tr>
<tr>
<td><strong>SMBus</strong></td>
<td>1 x SMBus 2.0B (w/o isolation)</td>
<td>1 x SMBus 2.0B (w/o isolation)</td>
<td>1 x SMBus 2.0B (w/o isolation)</td>
<td>1 x SMBus 2.0B (w/o isolation)</td>
</tr>
<tr>
<td><strong>SIM Socket</strong></td>
<td>4 (w/ SIM Option B)</td>
<td>4 (w/ SIM Option B)</td>
<td>2 (w/ SIM Option B)</td>
<td>2 (w/ SIM Option B)</td>
</tr>
<tr>
<td><strong>WHAN</strong></td>
<td>2 (w/ SIM Option B)</td>
<td>2 (w/ SIM Option B)</td>
<td>2 (w/ SIM Option B)</td>
<td>2 (w/ SIM Option B)</td>
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<tr>
<td><strong>Mini PCIe Socket</strong></td>
<td>2 (w/ SIM Option B)</td>
<td>2 (w/ SIM Option B)</td>
<td>2 (w/ SIM Option B)</td>
<td>2 (w/ SIM Option B)</td>
</tr>
<tr>
<td><strong>M.2 Socket</strong></td>
<td>1 x M.2 3042 Key B (w/ SIM Option B)</td>
<td>1 x M.2 3042 Key B (w/ SIM Option B)</td>
<td>1 x M.2 3042 Key B (w/ SIM Option B)</td>
<td>1 x M.2 3042 Key B (w/ SIM Option B)</td>
</tr>
<tr>
<td><strong>GNSS</strong></td>
<td>u-blox NEO-M8N</td>
<td>u-blox NEO-M8N</td>
<td>u-blox NEO-M5</td>
<td>u-blox NEO-M5</td>
</tr>
<tr>
<td><strong>Power Input</strong></td>
<td>DC 9V to 36V</td>
<td>DC 9V to 36V</td>
<td>DC 9V to 36V</td>
<td>DC 9V to 36V</td>
</tr>
<tr>
<td><strong>Ignition Control</strong></td>
<td>Low voltage protection &amp; configuration via software</td>
<td>Low voltage protection &amp; configuration via software</td>
<td>Low voltage protection &amp; configuration via software</td>
<td>Low voltage protection &amp; configuration via software</td>
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<tr>
<td><strong>Power Management</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>Backup Battery</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>Certification</strong></td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>OS</strong></td>
<td>Linux® (Core i5, Core i7)</td>
<td>Linux® (Core i5, Core i7)</td>
<td>Linux® (Core i5, Core i7)</td>
<td>Linux® (Core i5, Core i7)</td>
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<tr>
<td><strong>Dimensions (mm)</strong></td>
<td>260 x 196 x 50 (40°C to 70°C)</td>
<td>260 x 196 x 50 (40°C to 70°C)</td>
<td>260 x 206 x 79.5 (40°C to 70°C)</td>
<td>260 x 206 x 79.5 (40°C to 70°C)</td>
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<tr>
<td><strong>Operating Backup Battery</strong></td>
<td>-40°C to 70°C</td>
<td>-40°C to 70°C</td>
<td>-40°C to 70°C</td>
<td>-40°C to 70°C</td>
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</table>

**NOTE:** All products comply with CE, FCC, and other relevant certifications. The specifications are subject to change without notice.
<table>
<thead>
<tr>
<th>Model</th>
<th>nRok 1020-A</th>
<th>VTC 1911-IPK</th>
<th>VTC 6210-R</th>
<th>nRok 6221</th>
<th>nRok 6221-IP</th>
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<tbody>
<tr>
<td>CPU</td>
<td>Intel Atom® x5-E3930, 2 Core, 1.9GHz</td>
<td>Intel Atom® x5-E3853, 4 Core, 1.6GHz</td>
<td>Intel Atom® x5-E3853, 4 Core, 1.9GHz</td>
<td>Intel Atom® x7-E3950, 4 Core, 2.0GHz</td>
<td>Intel Atom® x7-E3930, 4 Core, 2.0GHz</td>
</tr>
<tr>
<td>Cache</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Memory</td>
<td>1 x DDR3L 1666 MHz DIMM, 4GB (default) up to 8GB</td>
<td>1 x DDR3L 1666 MHz DIMM, 4GB (default) up to 8GB</td>
<td>1 x DDR3L 1666 MHz DIMM, 4GB (default) up to 8GB</td>
<td>1 x DDR4 2400 MHz 8GB SO-DIMM (optional)</td>
<td>1 x DDR4 2400 MHz 8GB SO-DIMM (optional)</td>
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<tr>
<td>Storage</td>
<td>1 x mSATA (occupied mPCIe socket)</td>
<td>1 x SATA 2.5&quot; SSD (removable, 15mmn)</td>
<td>1 x mSATA (occupied mPCIe socket)</td>
<td>1 x mSATA (occupied mPCIe socket)</td>
<td>1 x mSATA (occupied mPCIe socket)</td>
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<tr>
<td>Second Storage</td>
<td>1 x mSATA (occupied mPCIe socket)</td>
<td>1 x mSATA (occupied mPCIe socket)</td>
<td>1 x mSATA (occupied mPCIe socket)</td>
<td>1 x mSATA (occupied mPCIe socket)</td>
<td>1 x mSATA (occupied mPCIe socket)</td>
</tr>
<tr>
<td>Video Out</td>
<td>1 x VGA, 1 x HDMI (optional)</td>
<td>1 x HDMI (optional)</td>
<td>1 x HDMI (optional)</td>
<td>1 x HDMI (optional)</td>
<td>1 x HDMI (optional)</td>
</tr>
<tr>
<td>Audio</td>
<td>1 x Mic in, 1 x Line-out (M12)</td>
<td>1 x Mic in, 1 x Line-out (M12)</td>
<td>1 x Mic in, 1 x Line-out (M12)</td>
<td>1 x Mic in, 1 x Line-out (M12)</td>
<td>1 x Mic in, 1 x Line-out (M12)</td>
</tr>
<tr>
<td>Ethernet</td>
<td>1 x RJ45 10/100/1000 (M12)</td>
<td>1 x RJ45 10/100/1000 (M12)</td>
<td>2 x RJ45 10/100/1000 (M12)</td>
<td>1 x RJ45 10/100/1000 (M12)</td>
<td>1 x RJ45 10/100/1000 (M12)</td>
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<tr>
<td>PoE</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>USB</td>
<td>2 x USB 2.0, 1 x USB 2.0 signal, 1 x USB 2.0 (full)</td>
<td>1 x USB 2.0 signal, 1 x USB 2.0 (full)</td>
<td>1 x USB 2.0 signal, 1 x USB 2.0 (full)</td>
<td>1 x USB 2.0 signal, 1 x USB 2.0 (full)</td>
<td>1 x USB 2.0 signal, 1 x USB 2.0 (full)</td>
</tr>
<tr>
<td>COM</td>
<td>5 x RS232 (Tx, Rx), 2 x RS232 (Full)</td>
<td>2 x RS232 (Tx, Rx), 1 x RS422/485 (Full)</td>
<td>2 x RS232 (Tx, Rx), 1 x RS422/485 (Full)</td>
<td>2 x RS232 (Tx, Rx), 1 x RS422/485 (Full)</td>
<td>2 x RS232 (Tx, Rx), 1 x RS422/485 (Full)</td>
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<tr>
<td>DIO</td>
<td>5 x Programmable DIO</td>
<td>3 x DIO</td>
<td>4 x DIO</td>
<td>4 x DIO</td>
<td>4 x DIO</td>
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<tr>
<td>CAN</td>
<td>1 x CANbus 2.0B</td>
<td>1 x CANbus 2.0B</td>
<td>1 x CANbus 2.0B</td>
<td>1 x CANbus 2.0B</td>
<td>1 x CANbus 2.0B</td>
</tr>
<tr>
<td>DC Output</td>
<td>12V (2A)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>M.2 Socket</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>SIM Socket</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Width</td>
<td>129 mm (5.1&quot;)</td>
<td>129 mm (5.1&quot;)</td>
<td>129 mm (5.1&quot;)</td>
<td>129 mm (5.1&quot;)</td>
<td>129 mm (5.1&quot;)</td>
</tr>
<tr>
<td>Height</td>
<td>120 mm (4.7&quot;)</td>
<td>120 mm (4.7&quot;)</td>
<td>120 mm (4.7&quot;)</td>
<td>120 mm (4.7&quot;)</td>
<td>120 mm (4.7&quot;)</td>
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<tr>
<td>Depth</td>
<td>45 mm (1.8&quot;)</td>
<td>45 mm (1.8&quot;)</td>
<td>45 mm (1.8&quot;)</td>
<td>45 mm (1.8&quot;)</td>
<td>45 mm (1.8&quot;)</td>
</tr>
</tbody>
</table>

Railway Computer

- **Technical Specifications**
- **Product Features**
- **Environmental Conditions**
- **Regulatory Compliance**
- **Support and Services**
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<thead>
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<th>Model</th>
<th>CPU</th>
<th>Chipset</th>
<th>Memory</th>
<th>Storage</th>
<th>Second Storage</th>
<th>Video Out</th>
<th>Audio</th>
<th>Ethernet</th>
<th>PoE</th>
<th>USB</th>
<th>COM</th>
<th>DIO</th>
<th>CAN</th>
<th>DC Output</th>
<th>SIM Slot</th>
<th>SWANN</th>
<th>Product Selection Tables</th>
</tr>
</thead>
<tbody>
<tr>
<td>MVS 2620-PK</td>
<td>Intel® Atom™ x7-E3950, 4 Core, 2.0GHz</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>1 x Chfad (external/accessible)</td>
<td>1 x VGA, 1 x HDMI</td>
<td>1 x Mic In, 2 x Line-out</td>
<td>2 x Intel® 1070/1000</td>
<td>6 x GbE in switching (M12, 5A)</td>
<td>3 x USB 2.0, 1 x USB 3.0</td>
<td>3 x RS232, 3 x RS485</td>
<td>3 x DI (if isolation)</td>
<td>1 x CANbus 2.0/B (if isolation)</td>
<td>12V (DA)</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>MVS 2623-C56K</td>
<td>Intel® Atom™ x7-E3950, 4 Core, 2.0GHz</td>
<td>N/A</td>
<td>N/A</td>
<td>1 x SD 256 GB (removable, 9.5mm)</td>
<td>1 x Chfad (external/accessible)</td>
<td>1 x VGA, 1 x HDMI</td>
<td>1 x Mic In, 2 x Line-out</td>
<td>2 x Intel® 1070/1000</td>
<td>6 x GbE in switching (M12, 5A)</td>
<td>3 x USB 2.0, 1 x USB 3.0</td>
<td>3 x RS232, 3 x RS485</td>
<td>3 x DI (if isolation)</td>
<td>1 x CANbus 2.0/B (if isolation)</td>
<td>12V (DA)</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>MVS 2623-C85K</td>
<td>Intel® Atom™ x7-E3950, 4 Core, 2.0GHz</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>1 x Chfad (external/accessible)</td>
<td>1 x VGA, 1 x HDMI</td>
<td>1 x Mic In, 2 x Line-out</td>
<td>2 x Intel® 1070/1000</td>
<td>6 x GbE in switching (M12, 5A)</td>
<td>3 x USB 2.0, 1 x USB 3.0</td>
<td>3 x RS232, 3 x RS485</td>
<td>3 x DI (if isolation)</td>
<td>1 x CANbus 2.0/B (if isolation)</td>
<td>12V (DA)</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
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<tr>
<td>MVS 5620-3BU</td>
<td>Intel® Core™ i7-6600U, 2 Core, 2.3GHz</td>
<td>N/A</td>
<td>2 x DDR3L</td>
<td>1 x 2.5” SATA 3.0 SSD (removable, 9.5mm)</td>
<td>1 x Chfad (external/accessible)</td>
<td>1 x VGA, 1 x HDMI</td>
<td>1 x Mic In, 2 x Line-out</td>
<td>2 x Intel® 1070/1000</td>
<td>6 x GbE in switching (M12, 5A)</td>
<td>3 x USB 2.0, 1 x USB 3.0</td>
<td>3 x RS232, 3 x RS485</td>
<td>3 x DI (if isolation)</td>
<td>1 x CANbus 2.0/B (if isolation)</td>
<td>12V (DA)</td>
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<td>N/A</td>
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<tr>
<td>MVS 5600-TBU</td>
<td>Intel® Core™ i7-6600U, 2 Core, 2.3GHz</td>
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<td>2 x DDR3L</td>
<td>1 x 2.5” SATA 3.0 SSD (removable, 9.5mm)</td>
<td>1 x Chfad (external/accessible)</td>
<td>1 x VGA, 1 x HDMI</td>
<td>1 x Mic In, 2 x Line-out</td>
<td>2 x Intel® 1070/1000</td>
<td>6 x GbE in switching (M12, 5A)</td>
<td>3 x USB 2.0, 1 x USB 3.0</td>
<td>3 x RS232, 3 x RS485</td>
<td>3 x DI (if isolation)</td>
<td>1 x CANbus 2.0/B (if isolation)</td>
<td>12V (DA)</td>
<td>N/A</td>
<td>N/A</td>
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</table>

**Modular Vehicle Computer System**
# Vehicle Mount Computer

<table>
<thead>
<tr>
<th>Model</th>
<th>VMC 110/111</th>
<th>VMC 220-PC1</th>
<th>VMC 1100</th>
<th>VMC 2020-PC1</th>
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</thead>
<tbody>
<tr>
<td><strong>CPU</strong></td>
<td>NXP i.MX6 Dual Lite, 2 Core, 900 MHz</td>
<td>NXP i.MX6 BH Quad</td>
<td>Intel Atom x5-E3930, 4 Core, 2.0GHz</td>
<td>Intel Atom x7-E3950, 4 Core, 2.0GHz</td>
</tr>
<tr>
<td><strong>Clirsent</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<td><strong>Memory</strong></td>
<td>1 x 2GB DDR3/3133</td>
<td>1 x 4GB DDR3/3133</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>Storage</strong></td>
<td>1 x eMMC 64GB</td>
<td>1 x microSD</td>
<td>1 x eMMC, 8GB</td>
<td>1 x eMMC, 8GB</td>
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<tr>
<td><strong>OS</strong></td>
<td>SAE J1113, SAE J1455, Windows 10</td>
<td>SAE J1113, SAE J1455, Windows 10</td>
<td>Linux (Kernel 4.x)</td>
<td>Linux (Kernel 4.x)</td>
</tr>
<tr>
<td><strong>Ethernet</strong></td>
<td>1 x Intel(R) 10/100/1000</td>
<td>1 x Intel(R) 10/100/1000</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Video Input</strong></td>
<td>1 x HDMI, 1 x Line-out</td>
<td>1 x HDMI, 1 x Line-out</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Audio</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>Power</strong></td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>USB</strong></td>
<td>3 x USB 2.0</td>
<td>3 x USB 2.0</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>COM</strong></td>
<td>1 x RS232 (full), 1 x RS232 (full)</td>
<td>1 x RS232 (full), 1 x RS232 (full)</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>DIO</strong></td>
<td>2 x CANBus 2.0B</td>
<td>1 x CANBus 2.0B</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>CAN</strong></td>
<td>1 x CANBus 2.0B</td>
<td>1 x CANBus 2.0B</td>
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<tr>
<td><strong>SIM Socket</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
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<tr>
<td><strong>M.2 Socket</strong></td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>GNSS</strong></td>
<td>Onboard Ublox NEO-M8N</td>
<td>Onboard Ublox NEO-M8N</td>
<td>Onboard Ublox NEO-M8N</td>
<td>Onboard Ublox NEO-M8N</td>
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<tr>
<td><strong>Power Input</strong></td>
<td>DC 9V to 36V</td>
<td>DC 9V to 36V</td>
<td>DC 9V to 36V</td>
<td>DC 9V to 36V</td>
</tr>
<tr>
<td><strong>Ignition Control</strong></td>
<td>Yes, w/ 6 level delay setting</td>
<td>Yes, w/ 6 level delay setting</td>
<td>Yes, w/ 6 level delay setting</td>
<td>Yes, w/ 6 level delay setting</td>
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<tr>
<td><strong>Low Voltage Protection</strong></td>
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<td>Optional</td>
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<td>Optional</td>
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<td><strong>Power Management</strong></td>
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<td>optional</td>
<td>optional</td>
<td>optional</td>
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<tr>
<td><strong>Internal Back Up Battery</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td><strong>Emgess Protection</strong></td>
<td>Front panel IP5x</td>
<td>Front panel IP5x</td>
<td>Front panel IP5x</td>
<td>Front panel IP5x</td>
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<tr>
<td><strong>Certification</strong></td>
<td>CE, FCC Class B, E13</td>
<td>CE, FCC Class B, E13</td>
<td>CE, FCC Class B, E13</td>
<td>CE, FCC Class B, E13</td>
</tr>
<tr>
<td><strong>OS</strong></td>
<td>Android 5.1 (Linux/SDC 3.0)</td>
<td>Android 5.1 (Linux/SDC 3.0)</td>
<td>Android 5.1 (Linux/SDC 3.0)</td>
<td>Android 5.1 (Linux/SDC 3.0)</td>
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<tr>
<td><strong>Mounting</strong></td>
<td>VESA 75</td>
<td>VESA 75</td>
<td>VESA 75</td>
<td>VESA 75</td>
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<tr>
<td><strong>Operating Temperature</strong></td>
<td>-20°C to 70°C</td>
<td>-20°C to 70°C</td>
<td>-20°C to 70°C</td>
<td>-20°C to 70°C</td>
</tr>
</tbody>
</table>

## Vehicle Mount Computer Specifications

- **Product Selection Tables**
- **Vehicle Mount Computer**

### VMC 110/111
- **CPU:** NXP i.MX6 Dual Lite, 2 Core, 900 MHz
- **Clirsent:** N/A
- **Memory:** 1 x 2GB DDR3/3133
- **Storage:** 1 x eMMC 64GB
- **OS:** SAE J1113, SAE J1455, Windows 10
- **Ethernet:** 1 x Intel(R) 10/100/1000
- **Video Input:** 1 x HDMI, 1 x Line-out
- **Audio:** N/A
- **Power:** N/A
- **USB:** 3 x USB 2.0
- **COM:** 1 x RS232 (full), 1 x RS232 (full)
- **DIO:** 2 x CANBus 2.0B
- **CAN:** 1 x CANBus 2.0B
- **SIM Socket:** 1
- **M.2 Socket:** N/A
- **GNSS:** Onboard Ublox NEO-M8N
- **Power Input:** DC 9V to 36V
- **Ignition Control:** Yes, w/ 6 level delay setting
- **Low Voltage Protection:** Optional
- **Power Management:** Optional
- **Internal Back Up Battery:** N/A
- **Emgess Protection:** Front panel IP5x
- **Certification:** CE, FCC Class B, E13
- **OS:** Android 5.1 (Linux/SDC 3.0)
- **Mounting:** VESA 75
- **Operating Temperature:** -20°C to 70°C

### VMC 220-PC1
- **CPU:** NXP i.MX6 BH Quad
- **Clirsent:** N/A
- **Memory:** 1 x 4GB DDR3/3133
- **Storage:** 1 x eMMC, 8GB
- **OS:** SAE J1113, SAE J1455, Windows 10
- **Ethernet:** 1 x Intel(R) 10/100/1000
- **Video Input:** 1 x HDMI, 1 x Line-out
- **Audio:** N/A
- **Power:** N/A
- **USB:** 3 x USB 2.0
- **COM:** 1 x RS232 (full), 1 x RS232 (full)
- **DIO:** 2 x CANBus 2.0B
- **CAN:** 1 x CANBus 2.0B
- **SIM Socket:** 1
- **M.2 Socket:** N/A
- **GNSS:** Onboard Ublox NEO-M8N
- **Power Input:** DC 9V to 36V
- **Ignition Control:** Yes, w/ 6 level delay setting
- **Low Voltage Protection:** Optional
- **Power Management:** Optional
- **Internal Back Up Battery:** N/A
- **Emgess Protection:** Front panel IP5x
- **Certification:** CE, FCC Class B, E13
- **OS:** Android 5.1 (Linux/SDC 3.0)
- **Mounting:** VESA 75
- **Operating Temperature:** -20°C to 70°C

### VMC 1100
- **CPU:** Intel Atom x5-E3930, 4 Core, 2.0GHz
- **Clirsent:** N/A
- **Memory:** 1 x eMMC, 8GB
- **Storage:** 1 x eMMC, 8GB
- **OS:** Linux (Kernel 4.x)
- **Ethernet:** N/A
- **Video Input:** N/A
- **Audio:** N/A
- **Power:** N/A
- **USB:** N/A
- **COM:** N/A
- **DIO:** N/A
- **CAN:** N/A
- **SIM Socket:** N/A
- **M.2 Socket:** N/A
- **GNSS:** Onboard Ublox NEO-M8N
- **Power Input:** DC 9V to 36V
- **Ignition Control:** Yes, w/ 6 level delay setting
- **Low Voltage Protection:** Optional
- **Power Management:** Optional
- **Internal Back Up Battery:** N/A
- **Emgess Protection:** Front panel IP5x
- **Certification:** CE, FCC Class B, E13
- **OS:** Android 5.1 (Linux/SDC 3.0)
- **Mounting:** VESA 75
- **Operating Temperature:** -20°C to 70°C

### VMC 2020-PC1
- **CPU:** Intel Atom x7-E3950, 4 Core, 2.0GHz
- **Clirsent:** N/A
- **Memory:** N/A
- **Storage:** N/A
- **OS:** Linux (Kernel 4.x)
- **Ethernet:** N/A
- **Video Input:** N/A
- **Audio:** N/A
- **Power:** N/A
- **USB:** N/A
- **COM:** N/A
- **DIO:** N/A
- **CAN:** N/A
- **SIM Socket:** N/A
- **M.2 Socket:** N/A
- **GNSS:** Onboard Ublox NEO-M8N
- **Power Input:** DC 9V to 36V
- **Ignition Control:** Yes, w/ 6 level delay setting
- **Low Voltage Protection:** Optional
- **Power Management:** Optional
- **Internal Back Up Battery:** N/A
- **Emgess Protection:** Front panel IP5x
- **Certification:** CE, FCC Class B, E13
- **OS:** Android 5.1 (Linux/SDC 3.0)
- **Mounting:** VESA 75
- **Operating Temperature:** -20°C to 70°C
<table>
<thead>
<tr>
<th>Model</th>
<th>VMD 1000</th>
<th>VMD 1001</th>
<th>VMD 2000</th>
<th>VMD 2002</th>
<th>VMD 2003</th>
<th>VMD 3002</th>
<th>VMD 3110</th>
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<tbody>
<tr>
<td>LCD Size</td>
<td>7” TFT LCD</td>
<td>7” TFT LCD</td>
<td>8” TFT LCD</td>
<td>8” TFT LCD</td>
<td>8” TFT LCD</td>
<td>10.4” TFT LCD</td>
<td>10.4” TFT LCD</td>
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<tr>
<td>Resolution</td>
<td>800 x 480</td>
<td>800 x 480</td>
<td>800 x 600</td>
<td>1024 x 768</td>
<td>1024 x 768</td>
<td>1024 x 768</td>
<td>1024 x 768</td>
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<tr>
<td>Brightness (Typ.)</td>
<td>500cd/m²</td>
<td>500cd/m²</td>
<td>400cd/m²</td>
<td>500cd/m²</td>
<td>500cd/m²</td>
<td>1200cd/m²</td>
<td>1200cd/m²</td>
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<tr>
<td>Contrast Ratio</td>
<td>600:1</td>
<td>600:1</td>
<td>500:1</td>
<td>500:1</td>
<td>500:1</td>
<td>900:1</td>
<td>900:1</td>
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<tr>
<td>Brightness Adjustment</td>
<td>Auto via light sensor</td>
<td>Auto via light sensor</td>
<td>Auto via light sensor</td>
<td>Auto via light sensor</td>
<td>Auto via light sensor</td>
<td>Auto via light sensor</td>
<td>Auto via light sensor</td>
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<tr>
<td>Touch Screen</td>
<td>4-wire resistive, anti-glare</td>
<td>4-wire resistive, anti-glare</td>
<td>4-wire resistive, anti-glare</td>
<td>4-wire resistive, anti-glare</td>
<td>4-wire resistive, anti-glare</td>
<td>Projected capacitive</td>
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<tr>
<td>Speaker</td>
<td>2 x Built-in speaker</td>
<td>2 x Built-in speaker</td>
<td>2 x Built-in speaker</td>
<td>2 x Built-in speaker</td>
<td>2 x Built-in speaker</td>
<td>2 x Built-in speaker</td>
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<tr>
<td>Camera</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Control Button</td>
<td>1 x Monitor power button</td>
<td>2 x Brightness control</td>
<td>2 x Volume control</td>
<td>1 x Monitor power button</td>
<td>2 x Brightness control</td>
<td>2 x Volume control</td>
<td>1 x Monitor power button</td>
</tr>
<tr>
<td>Video Input</td>
<td>Integrated LVDS CONN (LVDS, USB, 12V)</td>
<td>VGA</td>
<td>Integrated LVDS CONN (LVDS, USB, 12V)</td>
<td>Integrated LVDS CONN (LVDS, USB, 12V)</td>
<td>Integrated LVDS CONN (LVDS, USB, 12V)</td>
<td>Integrated LVDS CONN (LVDS, USB, 12V)</td>
<td>Integrated LVDS CONN (LVDS, USB, 12V)</td>
</tr>
<tr>
<td>Audio</td>
<td>1 x Mic-in (lateral side)</td>
<td>1 x Line-in (lateral side)</td>
<td>1 x Mic-out (bottom side)</td>
<td>1 x Mic-out (lateral side)</td>
<td>1 x Line-in (lateral side)</td>
<td>1 x Mic-in (lateral side)</td>
<td>1 x Mic-out (bottom side)</td>
</tr>
<tr>
<td>USB</td>
<td>1 x USB 2.0</td>
<td>2 x USB 2.0</td>
<td>1 x USB 2.0</td>
<td>1 x USB 2.0</td>
<td>1 x USB 2.0</td>
<td>1 x USB 2.0</td>
<td>1 x USB 2.0</td>
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<tr>
<td>Remote Power Button</td>
<td>Remotely power on/off VTC, MVS &amp; ATC</td>
<td>Remotely power on/off VTC, MVS &amp; ATC</td>
<td>N/A</td>
<td>Remotely power on/off VTC, MVS &amp; ATC</td>
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<td>Remotely power on/off VTC, MVS &amp; ATC</td>
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<tr>
<td>Power Input</td>
<td>DC 12V (via LVDS)</td>
<td>DC 9V to 36V</td>
<td>DC 12V (via LVDS)</td>
<td>DC 12V (via LVDS)</td>
<td>DC 9V to 36V</td>
<td>DC 12V (via LVDS)</td>
<td>DC 12V (via LVDS)</td>
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<tr>
<td>Ingress Protection</td>
<td>Front panel IP54</td>
<td>Front panel IP54</td>
<td>Front panel IP54</td>
<td>Front panel IP54</td>
<td>Front panel IP54</td>
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<tr>
<td>Mounting</td>
<td>VESA 75</td>
<td>VESA 75</td>
<td>VESA 75</td>
<td>VESA 75</td>
<td>VESA 75</td>
<td>VESA 75/100</td>
<td>VESA 75/100</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>182 x 138 x 36.3</td>
<td>182 x 138 x 36.3</td>
<td>207 x 173 x 36.7</td>
<td>207 x 173 x 36.7</td>
<td>207 x 173 x 36.7</td>
<td>256.5 x 202.1 x 31.5</td>
<td>256.5 x 202.1 x 31.5</td>
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<tr>
<td>Operating Temperature</td>
<td>-20°C to 70°C</td>
<td>-20°C to 70°C</td>
<td>-20°C to 60°C</td>
<td>-20°C to 60°C</td>
<td>-20°C to 60°C</td>
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</table>
### Add-On Modules and Devices

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Input I/F</th>
<th>Input Connector</th>
<th>Output I/F</th>
<th>Operating Temperature</th>
<th>Form Factor</th>
<th>Dimensions (mm)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>AllBooster-X1</td>
<td>Intel® Movidius™ VPU AI module</td>
<td>PCIe</td>
<td>mini-PcIe socket</td>
<td>N/A</td>
<td>-30°C to 70°C</td>
<td>Full-size mini-PCIe</td>
<td>51 x 30</td>
<td>* Only for Sierra ENF7430/ENF7455</td>
</tr>
<tr>
<td>VIOB-CAN-03</td>
<td>CANbus 2.0B to OBD SAE J1939 module</td>
<td>USB 2.0</td>
<td>mini-PcIe</td>
<td>CANbus 2.0B</td>
<td>-40°C to 85°C</td>
<td>Full-size mini-PCIe</td>
<td>51 x 30</td>
<td></td>
</tr>
<tr>
<td>VIOB-CAN-04-RAG</td>
<td>Dual CANbus 2.0B module</td>
<td>PCIe</td>
<td>mini-PcIe</td>
<td>CANbus 2.0B</td>
<td>-40°C to 85°C</td>
<td>Proprietary</td>
<td>25.4 x 25.4</td>
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<tr>
<td>VIOB-CAN-05</td>
<td>SAE J1939 module</td>
<td>PCIe</td>
<td>mini-PcIe</td>
<td>SAE J1939</td>
<td>-40°C to 85°C</td>
<td>Proprietary</td>
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<tr>
<td>VIOB-CAN-06</td>
<td>OBD SAE J1939 module</td>
<td>PCIe</td>
<td>mini-PcIe</td>
<td>OBD SAE J1939</td>
<td>-40°C to 85°C</td>
<td>Proprietary</td>
<td>25.4 x 25.4</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Input I/F</th>
<th>Input Connector</th>
<th>Output I/F</th>
<th>Operating Temperature</th>
<th>Form Factor</th>
<th>Dimensions (mm)</th>
<th>Remark</th>
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<tbody>
<tr>
<td>VIOB-CAN5</td>
<td>Intel® Movidius™ VPU AI module</td>
<td>PCIe</td>
<td>mini-PcIe</td>
<td>mini-PcIe</td>
<td>-30°C to 85°C</td>
<td>Full-size mini-PCIe</td>
<td>51 x 30</td>
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<tr>
<td>VIOB-CAN5</td>
<td>CANbus 2.0B to OBD SAE J1939 module</td>
<td>USB 2.0</td>
<td>mini-PcIe</td>
<td>CANbus 2.0B</td>
<td>-40°C to 85°C</td>
<td>Proprietary</td>
<td>25.4 x 25.4</td>
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<tr>
<td>VIOB-CAN5</td>
<td>Dual CANbus 2.0B module</td>
<td>PCIe</td>
<td>mini-PcIe</td>
<td>SAE J1939</td>
<td>-40°C to 85°C</td>
<td>Proprietary</td>
<td>25.4 x 25.4</td>
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<td>VIOB-CAN5</td>
<td>SAE J1939 module</td>
<td>PCIe</td>
<td>mini-PcIe</td>
<td>OBD SAE J1939</td>
<td>-40°C to 85°C</td>
<td>Proprietary</td>
<td>25.4 x 25.4</td>
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<tr>
<td>VIOB-CAN5</td>
<td>OBD SAE J1939 module</td>
<td>PCIe</td>
<td>mini-PcIe</td>
<td>OBD SAE J1939</td>
<td>-40°C to 85°C</td>
<td>Proprietary</td>
<td>25.4 x 25.4</td>
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<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Input I/F</th>
<th>Input Connector</th>
<th>Output I/F</th>
<th>Operating Temperature</th>
<th>Form Factor</th>
<th>Dimensions (mm)</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIOB-PA22-01</td>
<td>2 x Mini-PCI &amp; 2 x Line-out module</td>
<td>USB 2.0</td>
<td>mini-PcIe or USB wafer</td>
<td>mini-PcIe Socket or USB wafer</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>6-pin wafer</td>
<td>* Only for Mini-PCI module</td>
</tr>
<tr>
<td>VIOB-TPMS-01</td>
<td>Tire Pressure Monitoring System (TPMS) module</td>
<td>USB 2.0</td>
<td>mini-PcIe or USB wafer</td>
<td>mini-PcIe Socket or USB wafer</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>6-pin wafer</td>
<td></td>
</tr>
<tr>
<td>VIOB-GPS-02</td>
<td>u-blox M8N module</td>
<td>USB 2.0</td>
<td>mini-PcIe or USB wafer</td>
<td>mini-PcIe Socket or USB wafer</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>6-pin wafer</td>
<td></td>
</tr>
<tr>
<td>VIOB-GPS-DR02</td>
<td>u-blox M8 module</td>
<td>USB 2.0</td>
<td>mini-PcIe or USB wafer</td>
<td>mini-PcIe Socket or USB wafer</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>6-pin wafer</td>
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<tr>
<td>VIOB-GPS-DR03</td>
<td>u-blox M8 module</td>
<td>USB 2.0</td>
<td>mini-PcIe or USB wafer</td>
<td>mini-PcIe Socket or USB wafer</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>6-pin wafer</td>
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<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Input I/F</th>
<th>Input Connector</th>
<th>Output I/F</th>
<th>Operating Temperature</th>
<th>Form Factor</th>
<th>Dimensions (mm)</th>
<th>Remark</th>
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<tbody>
<tr>
<td>VTK-GE64</td>
<td>4-port GbE/GigE PoE PCIe card</td>
<td>PCIe 3.0</td>
<td>mini-PcIe or USB wafer</td>
<td>Proprietary</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>6-pin wafer</td>
<td></td>
</tr>
<tr>
<td>VIOB-LTE-AD-02</td>
<td>Mini-PcIe to M.2 converter module</td>
<td>USB 2.0</td>
<td>mini-PcIe</td>
<td>Proprietary</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>6-pin wafer</td>
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<tr>
<td>VIOB-LTE-AD-03</td>
<td>M.2 to mini-PcIe converter module</td>
<td>USB 2.0</td>
<td>mini-PcIe</td>
<td>Proprietary</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>6-pin wafer</td>
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<tr>
<td>VIOB-AE1M-01</td>
<td>1-port 100Mbps automotive Ethernet module</td>
<td>PCIe 3.0</td>
<td>mini-PcIe</td>
<td>Proprietary</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>6-pin wafer</td>
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<tr>
<td>VTK-GE74</td>
<td>4-port GbE/GigE PoE PCIe card</td>
<td>PCIe 3.0</td>
<td>mini-PcIe</td>
<td>Proprietary</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>6-pin wafer</td>
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<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Input I/F</th>
<th>Input Connector</th>
<th>Output I/F</th>
<th>Operating Temperature</th>
<th>Form Factor</th>
<th>Dimensions (mm)</th>
<th>Remark</th>
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<tbody>
<tr>
<td>VTK-GEM640</td>
<td>Smart backup battery kit</td>
<td>Power input: 9~36VDC</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>2-metal plate, 6-pin wafer</td>
<td></td>
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<tr>
<td>VTK-6222-AFK/VTK-6222-8K</td>
<td>External attachable power isolation kit</td>
<td>Power input: 9~36VDC</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>2-metal plate, 6-pin wafer</td>
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<tr>
<td>VTK-6222-AFK/VTK-6222-9K</td>
<td>Vehicle relay module</td>
<td>Power input: 9~36VDC</td>
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<td>Proprietary</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>2-metal plate, 6-pin wafer</td>
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<tr>
<td>VTK-RELAY-01</td>
<td>HDMI over IP extender</td>
<td>Power input: 9~36VDC</td>
<td>Proprietary</td>
<td>Proprietary</td>
<td>-10°C to 85°C</td>
<td>Proprietary</td>
<td>2-metal plate, 6-pin wafer</td>
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<tr>
<td>VTP-1000-T/VIP-1000-H</td>
<td>HDMI over IP extender</td>
<td>Power input: 9~36VDC</td>
<td>Proprietary</td>
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<td>Proprietary</td>
<td>2-metal plate, 6-pin wafer</td>
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### Railway Computer - Panel PC

<table>
<thead>
<tr>
<th>Model</th>
<th>CPU</th>
<th>Chipset</th>
<th>Memory</th>
<th>Storage</th>
<th>LED Size</th>
<th>Resolution</th>
<th>Brightness (Typ.)</th>
<th>Contrast Ratio</th>
<th>Audio</th>
<th>Speaker</th>
<th>Control Button</th>
<th>Video Input</th>
<th>Power</th>
<th>Management</th>
<th>Dimensions (mm)</th>
<th>LED</th>
<th>Ignition Control</th>
<th>Power Management</th>
<th>Power Input</th>
<th>Certification</th>
<th>Operating Temperature</th>
<th>Operating Temperature</th>
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<tbody>
<tr>
<td>vROK 3030</td>
<td>Intel Atom® x5-A1445E, 4-Core, 1.50GHz</td>
<td>N/A</td>
<td>1 x EMCCD 384x480/40MP, 4GB (5keV) up to 8GB</td>
<td>1 x mSATA (occupied mini-PCIe socket) 1 x 2.5” 542 bay (0.9mm)</td>
<td>10.4” TFT LED</td>
<td>1024 x 768</td>
<td>12800 cd/m²</td>
<td>900:1</td>
<td>1 x Line-in, 2 x Line-out</td>
<td>N/A</td>
<td>4 x CVBS</td>
<td>Yes</td>
<td>167 x 139.8 x 51.49</td>
<td>1 x power indicator</td>
<td>Low-voltage protection &amp; power on/off delay time</td>
<td>DC 9V to 36V</td>
<td>CE, FCC Class B, E13</td>
<td>-30°C to 70°C</td>
<td>-30°C to 70°C</td>
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<td></td>
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</tr>
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</table>

### Vehicle Network Switch

<table>
<thead>
<tr>
<th>Model</th>
<th>Architecture</th>
<th>PoE</th>
<th>Ethernet</th>
<th>Dimensions (mm)</th>
<th>LED</th>
<th>Power Management</th>
<th>Power Input</th>
<th>Certification</th>
<th>Operating Temperature</th>
<th>Operating Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>VES30-4S</td>
<td>Unmanaged GbE switch</td>
<td>4 x 10/100/1000 (w/ 802.3af), Total 100W</td>
<td>1 x Intel® 10/100/1000</td>
<td>167 x 139.8 x 51.49</td>
<td>1 x power indicator</td>
<td>Low-voltage protection &amp; power on/off delay time</td>
<td>DC 9V to 36V</td>
<td>CE, FCC Class B, E13</td>
<td>-30°C to 70°C</td>
<td>-30°C to 70°C</td>
</tr>
<tr>
<td>VES30-8S</td>
<td>Unmanaged GbE switch</td>
<td>8 x 10/100/1000 (w/ 802.3af), Total 120W</td>
<td>1 x Intel® 10/100/1000</td>
<td>167 x 139.8 x 51.49</td>
<td>1 x power indicator</td>
<td>Low-voltage protection &amp; power on/off delay time</td>
<td>DC 9V to 36V</td>
<td>CE, FCC Class B, E13</td>
<td>-30°C to 70°C</td>
<td>-30°C to 70°C</td>
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### About NEXCOM

**Reliable Partner for the Intelligent Solutions — Committed to Customer Success**

Founded in 1992 and headquartered in Taipei, Taiwan, NEXCOM is committed to being your trustworthy partner in building the intelligent solutions. 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 core values to better serve customers, NEXCOM integrates its capabilities and operates six global businesses, which are IoT Automation Solutions, Intelligent Video Security, Intelligent Platform @ Smart City, Mobile Computing Solutions, Medical and Healthcare Informatics, Network and Communication Solutions. 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, 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.

### Corporate Vision

**To become the industrial leader in providing intelligent solutions, 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

**Committed to Customer Success**

**Reliable Partner for the Intelligent Solutions**

**Intelligent Platform @ Smart City, Mobile Computing Solutions, Medical and Healthcare Informatics, Network and Communication Solutions.**

**Business Strategy**

Aim to better support the activities of all its partners, NEXCOM divides its sales force into eight 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 Industry 4.0 solutions.