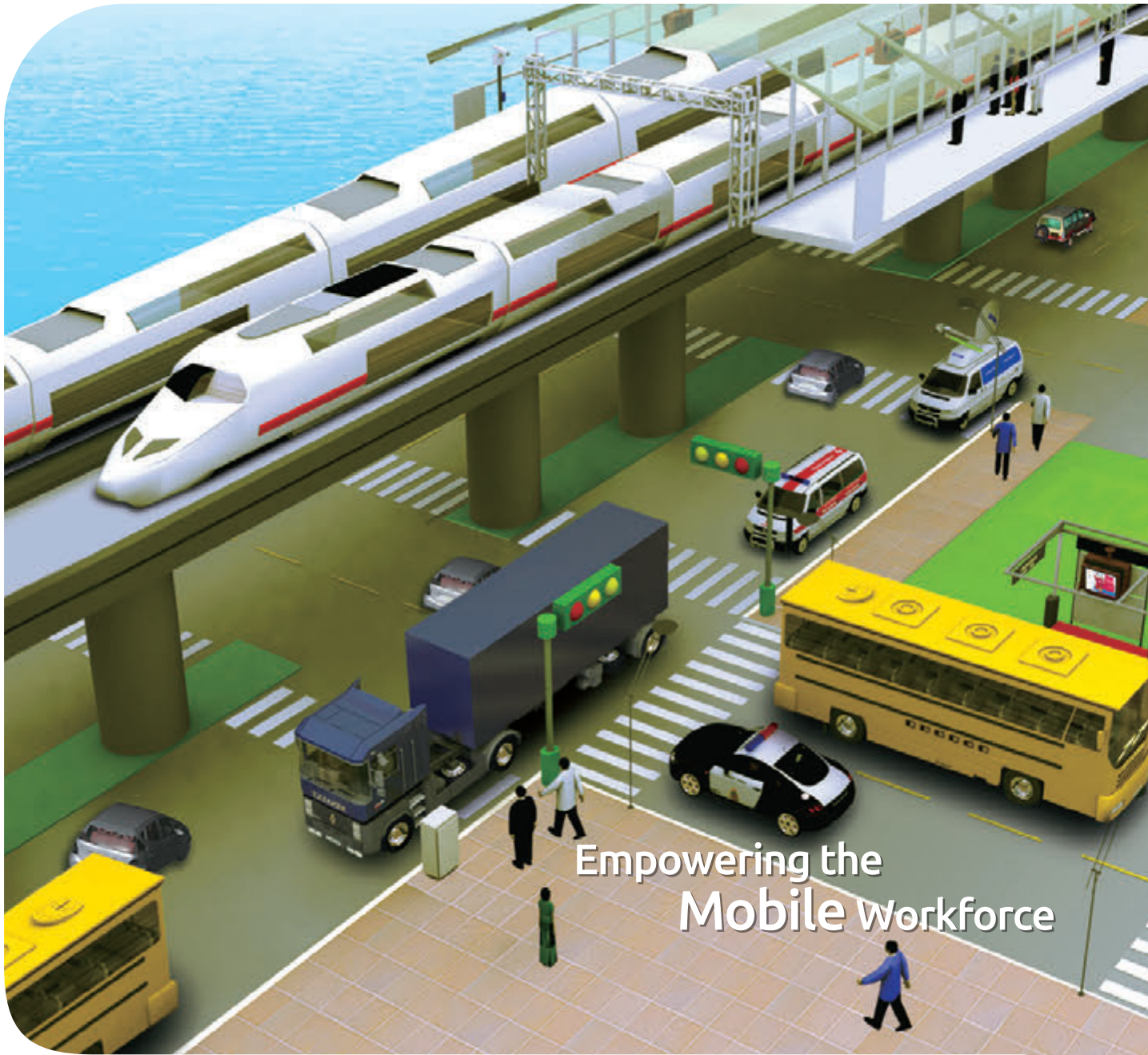




The Intelligent Systems



Empowering the
Mobile Workforce

Mobile Computing Solutions Product Selection Guide

IoT Streamlines the Management of Valuable Mobile Assets

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).



Passenger Transportation

Passenger transportation services—including taxi, bus, mass rapid transit, and railway services—can combine mobile video surveillance, wireless communication and global navigation satellite system (GNSS) tracking technologies to provide unsurpassed passenger services. With enabling technologies that improve information accessibility, safety, travel convenience and comfort, public transportation can provide enhanced traveling experiences to give passengers a more delightful journey.

Logistics

As customer requirements expand and fierce competition from service providers continues to grow, the challenge of logistics is to keep increasing requirements in check in a timely and efficient manner. IoT-based solutions provide a remedy to these growing complications as it can help logistics to work more efficiently and intelligently by collecting dynamic and accurate information in time and without boundaries. By extracting,

analyzing and organizing these information with IoT intelligence, unanticipated difficulties in logistics can be solved swiftly.

Public Service

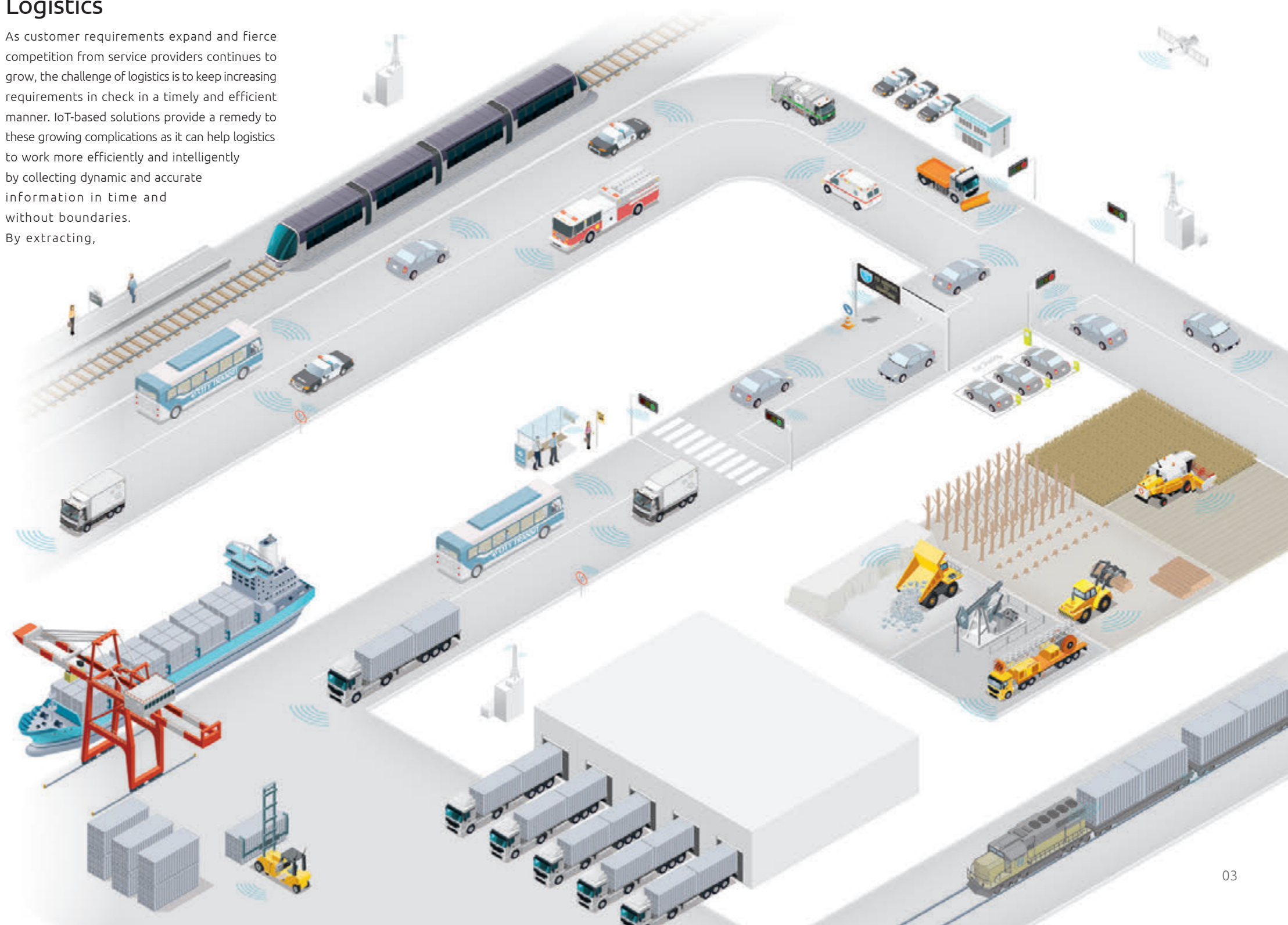
Public services—including fire engine, ambulance, police car and municipal services—can combine fleet management, task dispatching, real-time communication and information exchange technologies to help working fleets arrive at a specific location with optimized routes, receive updated traffic conditions and new tasks,

voice communicate with operators for assistance. At the same time, data such as driving behavior and job records can be collected for database analysis to improve fleet efficiency and even help predict potential traffic events to improve transport safety.

Raw Material Management

Agriculture, mining and oil exploration are the primary sectors of economy, especially in developing countries. However, volatile outdoor conditions challenge fieldworkers

and food productions in many ways. To exploit natural resources and to create a productive and efficient workplace take sophisticated planning and careful execution throughout field operations. Making use of autonomous driving technology—self-steering control systems with precise GPS positioning—along with analysis of sensor-generated data can increase operational efficiency and transparency. This allows fieldworkers and site managers to share the same understanding and to better harvest raw materials with dynamic and precise positioning systems.



Redefine Driving Experience with Connected Car

Overview & How It Works

Vehicles are becoming an expansion of our connected digital lives with drivers and passengers expecting a safer, more efficient and enjoyable driving and riding experience. In passenger vehicles, the dashboard can run on either iOS or Android platforms in a compact in-vehicle infotainment (IVI) head unit with advanced software-defined cockpit. These head units are capable of supporting connection to intelligent transportation systems (ITS), keep 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. The digital dashboard also provides the human interface to vehicle diagnostics and preventive maintenance, giving drivers more control over their vehicles. It also serves as an entertainment purpose, offering location-based information, internet services, and on-demand multimedia services. The digital dashboard evolves continuously to provide new features and flexibilities through add-on apps created by automobile makers or services providers. Similar need for digital dashboard can also be found in taxis and tour buses for dispatching and communication, and for A/V control.

Successful Factors

- The multimedia capability and internet connectivity are directly linked to the entertainment-related features and quality of streaming services
- The vehicle diagnostics relies on effective computing processes to immediately interpret valuable messages from telematics data for drivers to improve road safety
- Establish a connection and communication to the ITS operation to further improve transport safety, efficiency and mobility

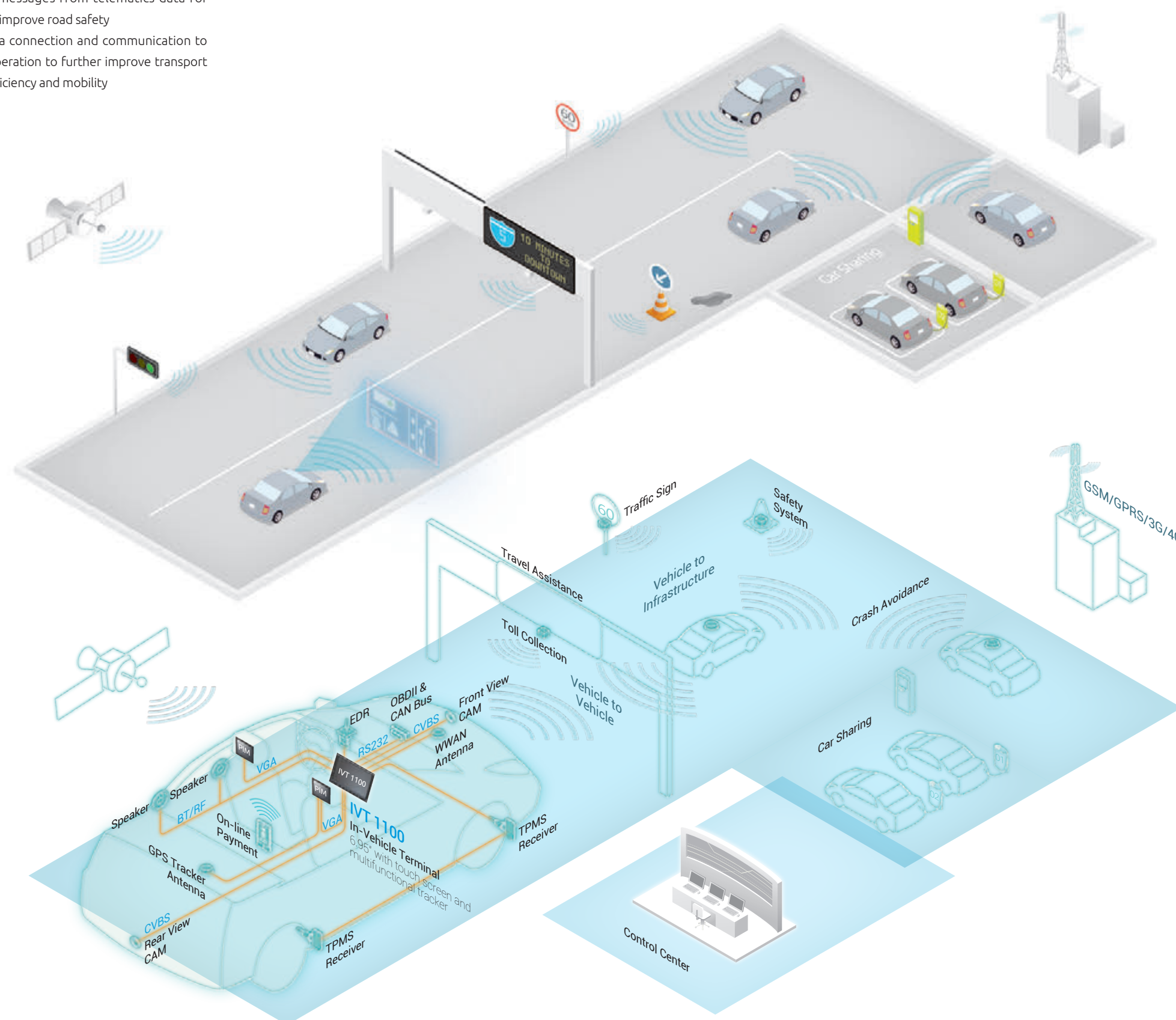
NEXCOM's Strengths

NEXCOM in-vehicle computers boast a powerful graphics engine and FM/AM Radio module to bring immersive multimedia to vehicles while offering ample system headroom for future feature expansions.

With access to automobile electronic systems, NEXCOM in-vehicle computers equipped with CAN bus and optional OBDII API porting integration can harvest a wide variety of data for big data analytics.

Extensive experience in designing in-vehicle hardware solutions that include a variety of connectivity options:

- Long range: Cellular, Wi-Fi and GPS
- Very short range: Bluetooth, NFC and RFID
- Short range: DSRC (802.11p)



Intelligent eBus Provides Public Transport Convenience and Safety

Overview & How It Works

Smart buses provide a solution to the increasing traffic and the demand for streamlined public transportation services. Smart buses offer passengers a convenient and efficient means of traveling, and help bus operators to consolidate fleet management, facilitate daily operations, improve safety and enhance the traveling experience.

Equipped with advanced computing, wireless communication, and global navigation satellite system (GNSS), smart buses can be monitored and co-ordinated meticulously to ensure bus services are performing within standards. In addition, real-time live surveillance and video analytics of bus fleets can be implemented to respond to emergency events and ensure security and safety of drivers and passengers. Furthermore, smart buses can monitor and collect data such as driving behavior and passenger flows, giving bus operators insights into its fleet operation and allowing them to make service improvements or timetable rearrangements when necessary.



Successful Factors

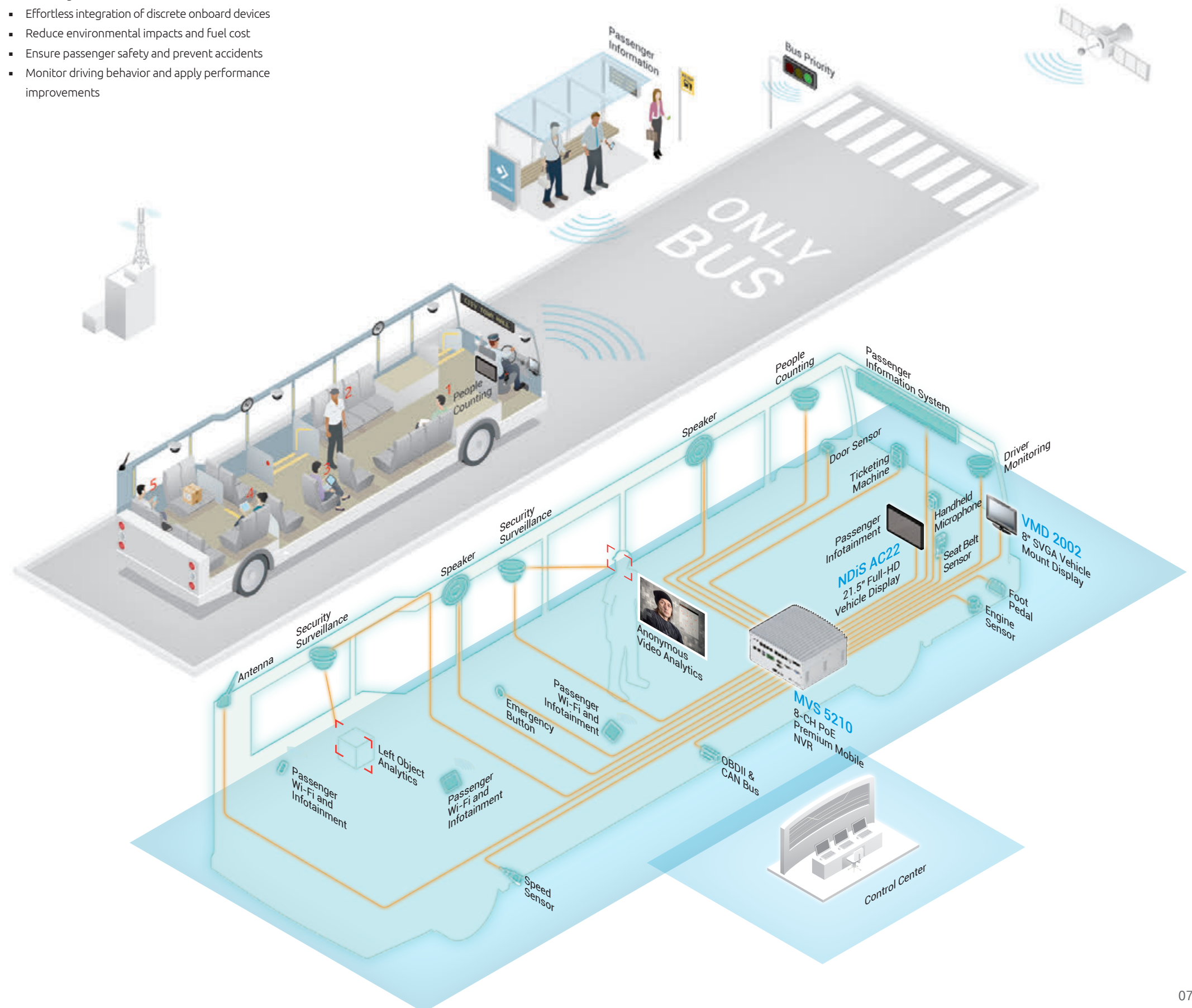
- On schedule bus arrival and departure times
- Smooth communication capability between buses/stations and bus operators
- Flexible bus dispatching for unexpected passenger flow congestion
- Effortless integration of discrete onboard devices
- Reduce environmental impacts and fuel cost
- Ensure passenger safety and prevent accidents
- Monitor driving behavior and apply performance improvements

NEXCOM's Strengths

NEXCOM's solutions enable bus operators to improve travel safety and comfort for passengers with integrated passenger information system, video surveillance and precise bus schedules.

Vehicle maintenance cost and fuel consumption can be reduced significantly through real-time monitoring of driver behavior and vehicle health via a variety of sensors and OBDII/CAN bus.

Efficient operation management and unsurpassed passenger experience are guaranteed with enhanced wireless communication and GNSS tracking capability.



Railway Telematics Brings Unsurpassed Passenger Experience and a Safe Journey

Overview & How It Works

Rail transportation systems fitted with modern telematics offer a smart technological approach to enabling a safe, efficient and economical railway operation.

With global navigation satellite systems (GNSS), wireless data communication and computerized processing of sensor-generated data, railway telematics can collect, process and share vital information such as positioning, vehicle health and railway line data. Operators can leverage these information as a tool to accurately track rolling stock positions, identify traffic events and measure railway performance to improve the safety and efficiency of the entire railway operations.

Successful Factors

- Reliable wireless communication to transmit data correctly and timely
- Powerful system performance to process big data, such as video from surveillance
- Precise positioning of the railway train
- Tough housing design to work on railroads and in harsh environments
- Be able to expand functionality according to customers' needs, such as alert alarm and people counting

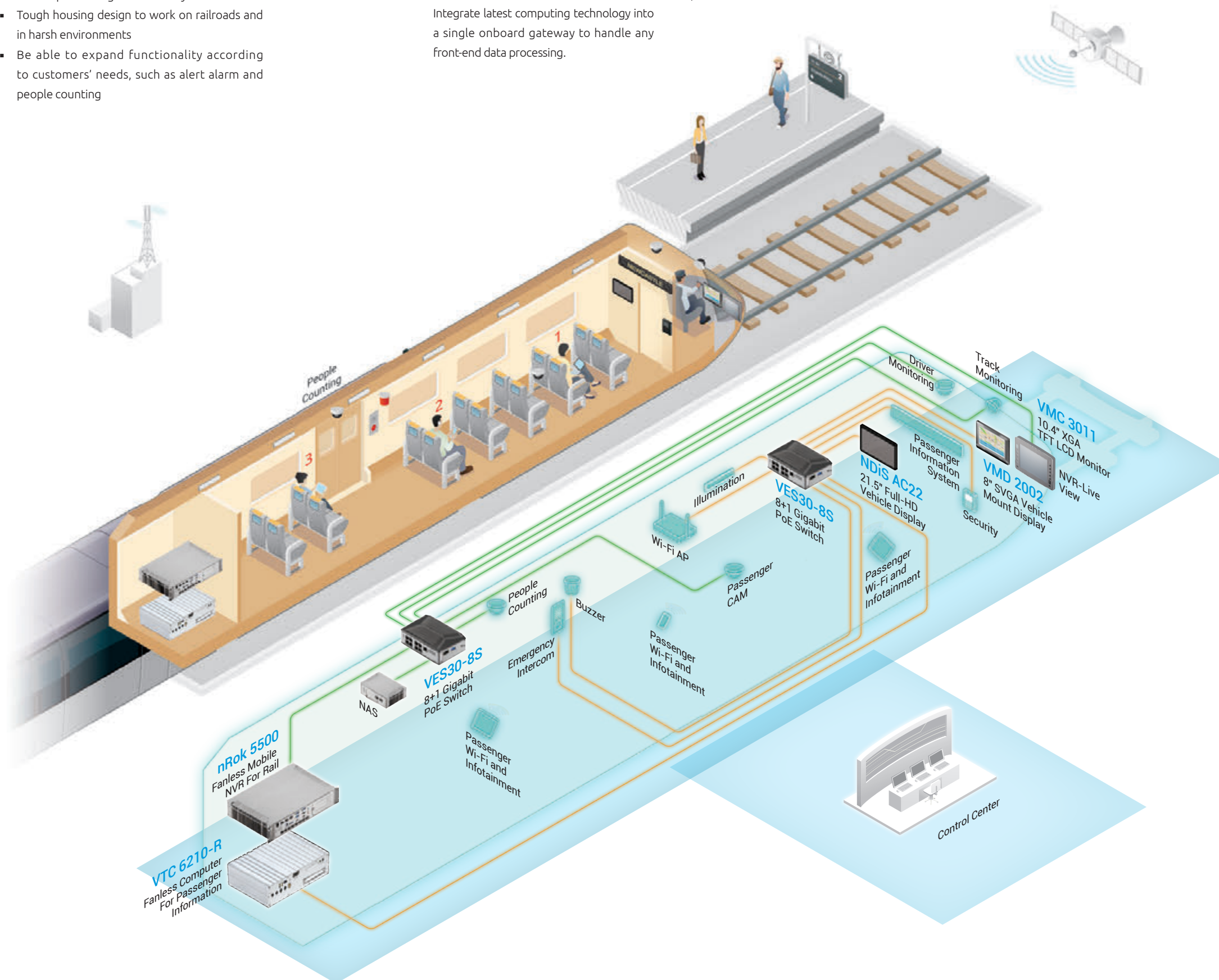
NEXCOM's Strengths

Provide diverse platforms with wireless communication and sensor technology for railway operators to capture all the required data on the rolling stock vehicle.

Integrate latest computing technology into a single onboard gateway to handle any front-end data processing.

All NEXCOM's solutions embed powerful satellite based positioning technology to make sure railway operators get precise and timely location tracking to maximize fleet operations.

Robust and reliable design helps railway operators to deploy onboard gateways in any harsh environment with tremendous maintenance cost savings.



Effective Logistics Leads to Optimal Productivity and Increased Profitability

Overview & How It Works

Fleet, port and warehouse management are the key activities in logistics. To address these three areas, NEXCOM offers three series of vehicle computing and display solutions—the Vehicle Telematics Computer (VTC) series, the Vehicle Mount Display (VMD) series, and the Vehicle Mount Computer (VMC) series—each with a customer-driven design to ensure needs are met. For example, the VMC series implements GPS, RFID and wireless functions to allow precise tracking and control of forklifts. Operators can take advantage of this accurate location tracking to calculate which route can transport goods in less time, which can also result in less fuel consumption. Additionally, the RFID function can assist operators in the administration of inventory, improving accuracy and accelerating workflow.

Successful Factors

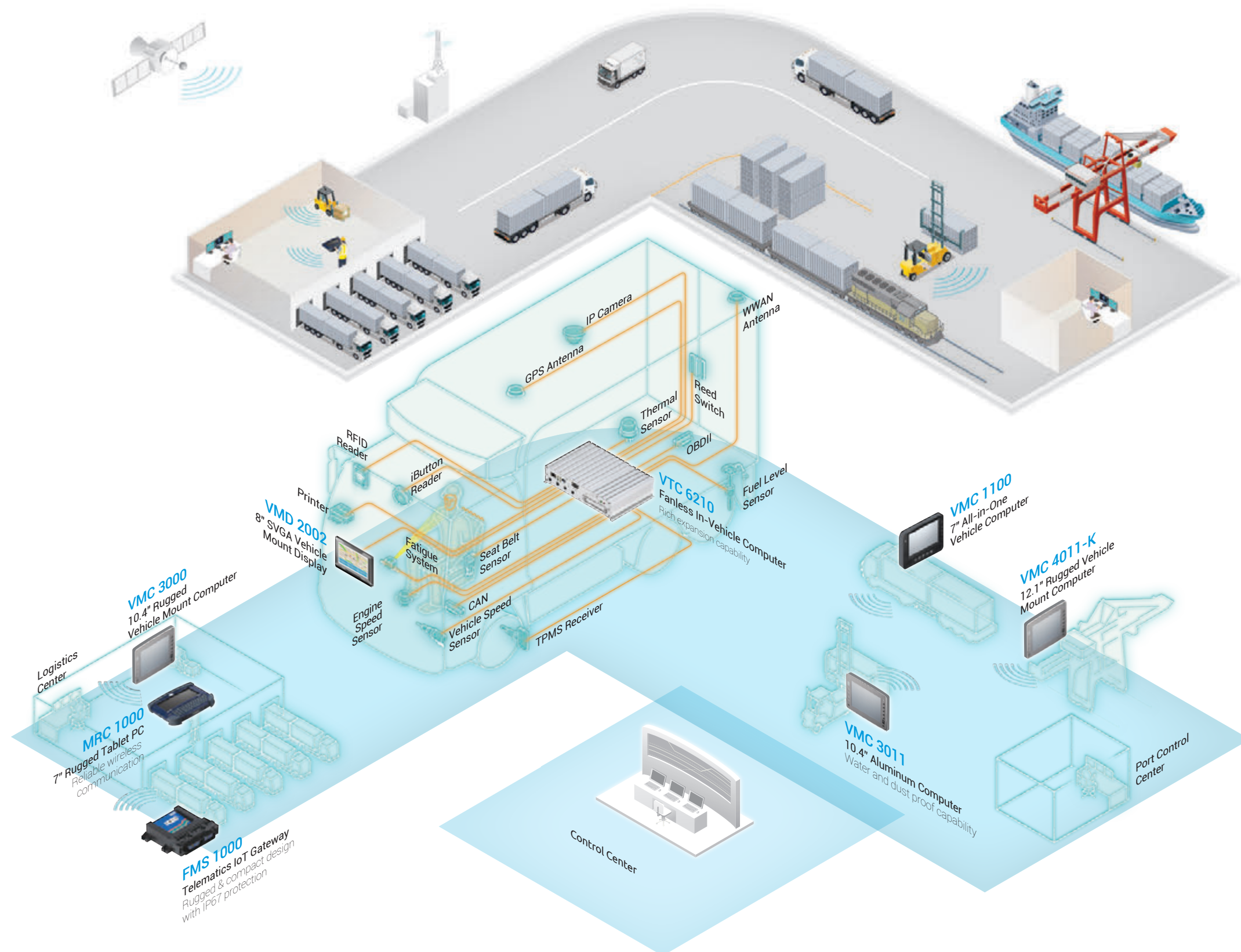
- Monitor and maintain vehicle health
- Plan routes more correctly and in time
- Provide water and dust protection
- Be able to work reliably in harsh environments, such as dust and water prone areas, or on bumpy roads
- Provide more accurate and effective inventory management to maximize warehouse space

NEXCOM's Strengths

NEXCOM's vehicle telematics technology can monitor vehicle conditions, and let drivers know if the vehicle needs to be repaired in advance. This is beneficial for the operators as well, allowing them to maintain vehicle health and dispatch the right vehicles for the job more quickly and efficiently.

NEXCOM's in-vehicle computers and displays support various compact add-on devices for vehicle tracking and management of stocks. This tracking can assist the operators to work more efficiently by mapping the most appropriate route.

Encompass robust housing to withstand extreme heat and cold, rainy and dusty conditions, and feature special durable connectors to provide rigid connections on tough and rugged roads.



Connected and Comprehensive Solution Keeps Public Service Efficient and Secure

Overview & How It Works

Unbalanced utilization of vehicles often hampers peak performance of critical public services such as police, ambulance, fire protection, waste management, municipal services and airport ground handling. To offer fast, efficient and on schedule public services, vehicles on the field need to be connected and managed by the IT systems in service centers. Using telematics-based fleet management, service centers can establish a reliable real-time connection to fleets, allowing operators to monitor vehicle conditions and fleet operations, dispatch vehicles and respond to emergency issues. This well-planned solution can also enable service centers to identify any idle or overused resources so that optimizations can be made to the public services.

In-vehicle computers are one of the most important core components in this IT system. NEXCOM's in-vehicle computers integrate WWAN and WLAN communication and real-time satellite positioning to deliver an always-on, always-visible connection. Combined with the ability to further integrate with vehicle sensors such as siren, fuel and door sensors, in-vehicle computers can provide up-to-date status information and location to service centers, allowing operators to identify and respond to events remotely.



Successful Factors

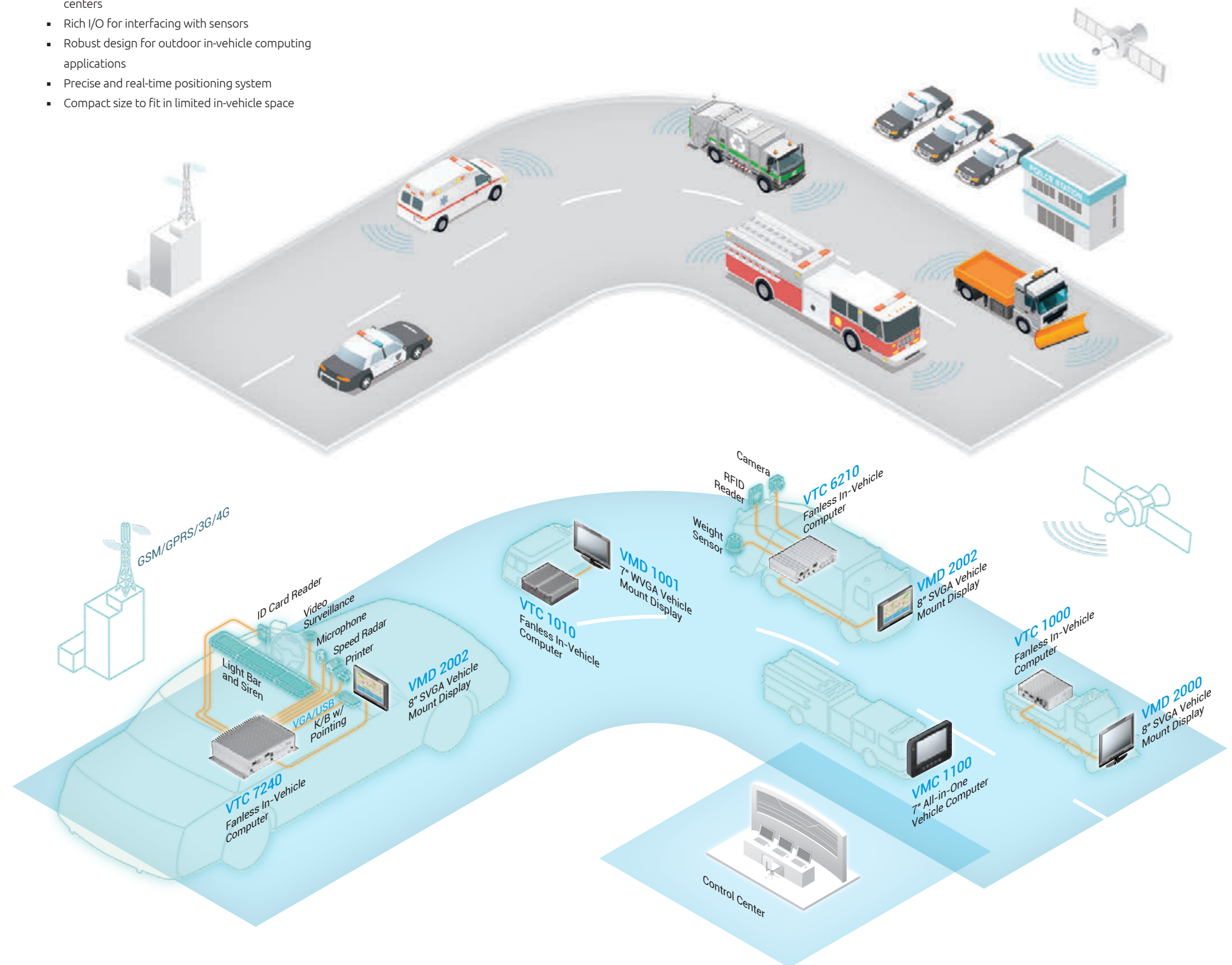
- High processing performance for sophisticated software applications
- Multi-communication methods connecting to the inside of a vehicle and to the outside service centers
- Rich I/O for interfacing with sensors
- Robust design for outdoor in-vehicle computing applications
- Precise and real-time positioning system
- Compact size to fit in limited in-vehicle space

NEXCOM's Strengths

NEXCOM's in-vehicle computer VTC series equips high performance to provide customers powerful computing capability to process big data analytics.

Strong wired and wireless communication capability on NEXCOM's VTC and VMC series brings the IoT into reality.

Ruggedized mechanical design on the VTC and VMC series allows a reliable 24/7 operation in extreme and outdoor environments.



In-vehicle Computing Makes Resource Management Precise and Efficient

Overview & How It Works

In the primary sector, the use of smart raw material management with modern technology and business intelligence is becoming ever more important in providing energy-efficient food production. The global warming has given rise to the food resource crisis and placed the agriculture industry under great pressure; agriculturists need more efficient methods to maximize harvest yields in decreasing arable land. Using in-vehicle computers integrated with GPS and sensor technology, farming equipment can be steered automatically with turn-by-turn navigations without missing an area in the crop field and with improved seed and fertilizer distribution.

On the other hand, in the mining sector, modern mining management systems use a central dispatch controller to monitor all truck and equipment activities within a mine operation. Events such as trucks travelling out of the predefined route or falling behind schedule can be identified in real-time, allowing central dispatch to immediately send on-screen alerts to drivers' vehicle mount computers to take corrective actions. In addition, job reassignments such as dispatching new tasks to drivers can be centrally managed and allocated in real-time to improve mining operations.

Successful Factors

- Position accuracy determines the effectiveness of location-based functions such as dispatching and asset tracking
- Stay connected to the control center and be able to receive real-time work instructions on a trusted human machine interface
- Robust design for long-lasting use in harsh outdoor operating conditions
- In-vehicle systems that enable intelligent management and measurement of workload input and output, work efficiency, harvest quality and operating costs
- Real-time KPI reporting for back-end business intelligence to lower the total cost of ownership
- Allocate resources and make strategic decisions accordingly based on real-time data

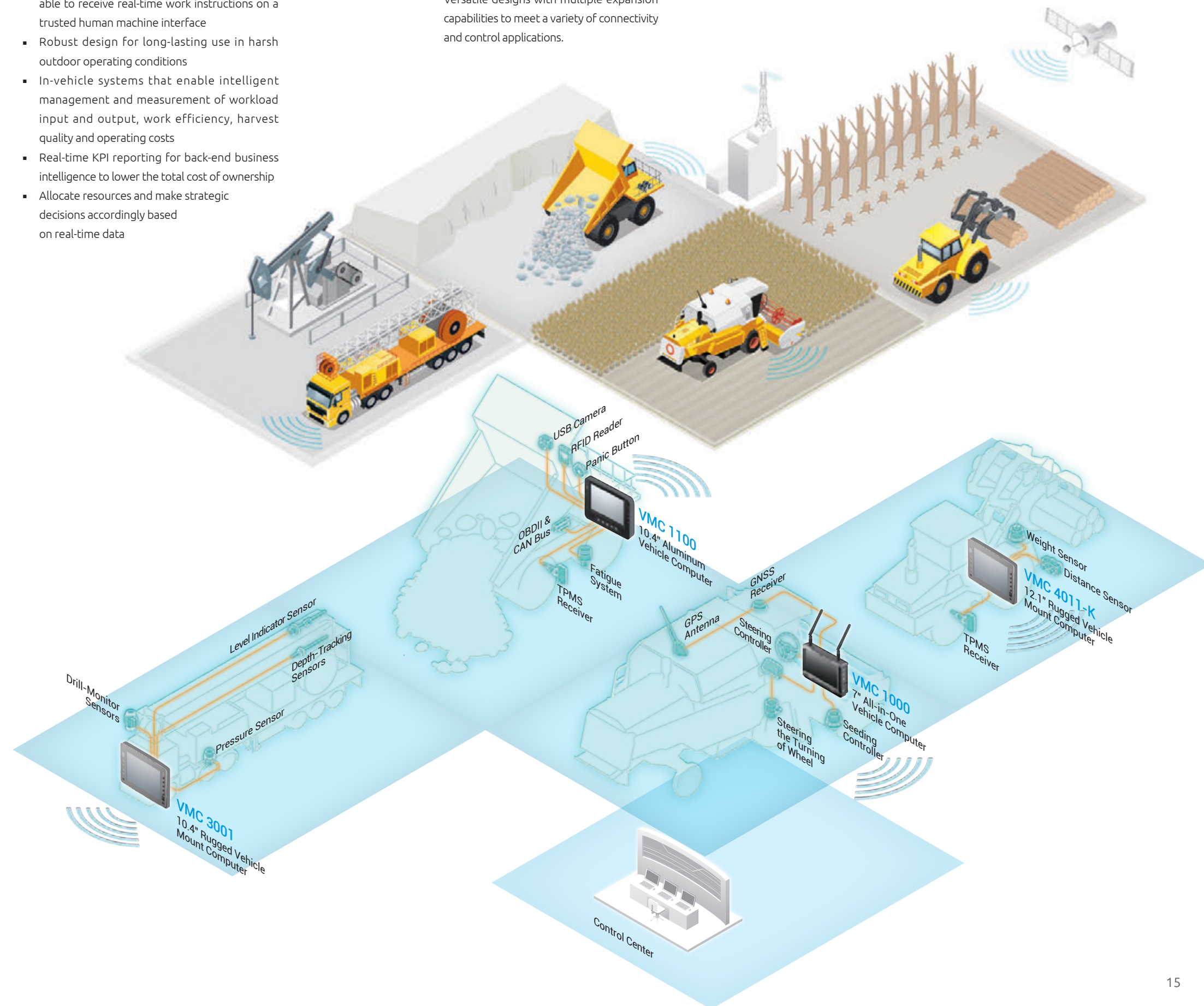
NEXCOM's Strengths

Reliable systems with rugged LCD touch screens, built-in processors, WWAN, WLAN communication and GPS tracking capabilities.

Versatile designs with multiple expansion capabilities to meet a variety of connectivity and control applications.

The VMC series equips robust mechanical system design with added dust and water intrusion protection, and IP-rated rugged panel displays.

The VMC series supports a variety of voltage inputs for different types of vehicles.



Product Selection Guide

Vehicle Telematics Computer

CPU	COM			CAN Bus		Video Output					Mini-PCle				Model
	RS232	RS422	RS485	CAN 2.0B	OB2II	DP	VGA	LVDS	HDMI	DVI-D	1	2	3	4	
ARM	V		V	V	*		V				V				VTC 100
Atom™	V	V	V	V			V					V			VTC 1000
	V	V	V	V	*	V	V					V			VTC 1010
	V		V				V	V				V			VTC 2100
	V		V				V	V				V			VTC 6200
	V		V				V	V				V			VTC 6200-NI
	V		V				V	V				V			VTC 6200-NI-DK
	V		V				V	V				V			VTC 6200-VR4
	V		V				V	V				V			VTC 6201
	V	V	V	V	*	V	V							V	VTC 6210
	V	V	V	*	*		V	V				V			VTC 7100-BK
	V	V	V	*	*		V	V				V			VTC 7100-C8SK
	V	V	V		V		V	V				V			VTC 7100-D1K
	V	V	V	V	*	V	V							V	VTC 6210-VR4
Celeron®	V	V	V	*	*		V	V				V			VTC 7120-BK
	V	V	V	*	*		V	V				V			VTC 7120-C4SK
	V	V	V		V		V	V				V			VTC 7120-D1K
Core™ i	V	V	V	*	*		V	V				V			VTC 7110-BK
	V	V	V	*	*		V	V				V			VTC 7110-C4SK
	V	V	V		V		V	V				V			VTC 7110-D1K
	V	V	V	V	*	V	V	V						V	VTC 7200
	V	V	V	V	*	V	V	V						V	VTC 7210
	V	V	V	V	*	V	V	V						V	VTC 7220
	V	V	V	V	*	V	V	V						V	VTC 7230
	V	V	V	V	*		V	V						V	VTC 7240
	V	V	V	V	*		V	V					V		MVS 5200-BK
	V	V	V	V	*		V	V					V		MVS 5210-BK
MCU	V			V							V				FMS 1000

Vehicle Mount Computer

Display Size	CUP			Touch Type	COM			IP Protection			Model
	ARM	Atom™	Core™ i		RS232	RS422	RS485	IP54 (Front)	IP65 (Front)	IP65 (Enclousure)	
7"	V			V	V		V	V			VMC 100
		V		V	V	V	V	V			VMC 1000
		V		V	V		V	V			VMC 1100
10.4"		V		V	V				V		VMC 3000
		V		V	V					V	VMC 3001
		V		V	V					V	VMC 3011
			V	V	V				V		VMC 3500
			V	V	V					V	VMC 3501
			V	V	V					V	VMC 3511
12.1"		V		V	V					V	VMC 4011

Vehicle Mount Display

Display Size	Video Input			Touch Type		Brightness		Touch Interface		Model
	VGA	LVDS	CVBS	RS	PCT	400 nits	500 nits	USB	RS232	
7"		V		V			V	V		VMD 1000
	V			V			V	V		VMD 1001
8"		V		V			V	V		VMD 2000
	V			V			V	V		VMD 2002
10.4"	V		V		V	V		V		VMD 3002





PoE




PoE No.	Power Output		LAN Port		CPU		Storage			Model
	60W	120W	1	2	Atom™	Core™ i	2	3	4	
4	V			V		V		V		VTC 7110-C4SK
	V			V		V		V		VTC 7120-C4SK
	V		V		None	None	None	None	None	VES 30-4S
8	V			V		V			V	nROK 5300
	V			V		V			V	nROK 5500
	V			V	V			V		VTC 7100-C8SK
	V			V		V			V	MVS 5210-R
		V	V		None	None	None	None	None	VES 30-8S
	V			V		V			V	MVS 5200
	V			V		V			V	MVS 5210

Train Computer



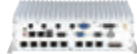
Power Input	PoE No.	LAN			CPU		M12 Connector					Touch Type
		8	10/100	10/100/1000	Atom™	Core™ i	Audio	USB	Power Input	PoE	LAN	
24VDC	DC-DC Isolated		V		V						V	nROK 500
			V		V		V	V	V		V	nROK 3000
		V		V		V		V	V	V	V	nROK 5300
		V		V		V		V	V	V	V	nROK 5500
				V		V			V		V	VTC 7220-RA
	DC-DC Non-Isolated			V	V			V	V		V	VTC 6210-RA
		V		V		V	V		V	V	V	MVS 5210-RA
36VDC	DC-DC Isolated	V		V		V		V	V	V	V	nROK 5300
		V		V		V		V	V	V	V	nROK 5500
				V		V		V	V		V	VTC 7220-RB
	DC-DC Non-Isolated			V	V			V	V		V	VTC 6210-R
72VDC	DC-DC Isolated	V		V		V					V	nROK 5300
		V		V		V					V	nROK 5500
110VDC	DC-DC Isolated		V		V		V	V	V		V	nROK 3000
		V		V		V		V	V	V	V	nROK 5300
		V		V		V		V	V	V	V	nROK 5500
				V	V			V	V		V	VTC 6210-RF
				V		V			V		V	VTC 7220-RF
		V		V		V	V	V	V	V	V	MVS 5210-RF

Vehicle Telematics Computer

Model				
	VTC 100	VTC 1000	VTC 1010	VTC 2100
CPU	ARM® Cortex™-A8, 720MHz	Intel® Atom™ E640	Intel® Atom™ E3827	Intel® Atom™ D410
Chipset	N/A	EG20T	N/A	ICH-8M
Memory	On board DDR2 256MB	1GB DDR2 memory on board Optional: 2GB	DDR3L 1066/1333 SO-DIMM, 2GB (default) up to 8GB	DDR2 667/800 SO-DIMM, 1GB (default) up to 2GB
Storage	Micro SDHC socket, 4GB (default)	2.5" SATA SSD	2.5" SSD	2.5" SSD
Second Storage	N/A	N/A	1 x SD (external)	N/A
Dimension (mm)	180 x 110 x 45	185 x 120 x 40	180 x 180 x 50	248 x 175 x 47
Power Input	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 60V
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	Battery deep discharge protection	Low voltage protection & configuration via software	Low voltage protection & configuration via software	Low voltage protection & configuration via software
GPS	On board u-blox 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)
Optional Communication	Wi-Fi/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN
Voice Communication	N/A	N/A	Yes	N/A
SMS/Ring Wake up	Yes	Yes	Yes	N/A
SIM Socket	1	1	2	1
USB	2 x USB 2.0	2 x USB 2.0	1 x USB 3.0 2 x USB 2.0	4 x USB 2.0
COM	1 x RS232 1 x RS485	1 x RS232, 1 x RS232 or RS422/485	2 x RS232, 1 x RS422/485	2 x RS232, 1 x RS422/485
CAN/OBDII	1 x CAN bus 2.0B (from Cortex™-A8)	1 x CAN bus 2.0B (from EG20T)	CAN bus 2.0B on board Optional CAN/OBDII module	N/A
Video Out	VGA	VGA or LVDS or VGA + LVDS	DP, VGA	LVDS, 2 x VGA (Clone mode)
PCI-104	N/A	N/A	N/A	1
Ethernet	1 x AR8033-AL1A 10/100/1000	1 x RTL8211CL-GR 10/100/1000	1 x Intel® 10/100/1000	1 x RTL8111C-VC-GR 10/100/1000
PoE (802.3af, total 60W)	N/A	N/A	N/A	N/A
Audio	1 x Mic-in, 1 x Line-out	1 x Mic-in, 1 x Line-out	2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out
Mini-PCle Socket	1 x USB	1 x (PCle+USB), 1 x USB	2 x (PCle+USB), 1 x (PCle or mSATA), 1 x USB	1 x (PCle+USB), 1 x USB
SMBus	N/A	1	N/A	1
DC Output	N/A	5V (1A), 12V (1A)	12V (1A)	5V (1A), 12V (1A)
GPIO	3 x In, 3 x Out	4 x In, 4 x Out	6 x Programmable GPIO	4 x In, 4 x Out
Certification	CE, FCC Class B	CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, e13
Operation Temperature	-20°C to 70°C	-20°C to 70°C	-30°C to 70°C	-30°C to 50°C



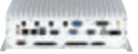

			
VTC 6200	VTC 6200-NI	VTC 6201	VTC 6210-BK
Intel® Atom™ D510	Intel® Atom™ D510	Intel® Atom™ D510	Intel® Atom™ E3845
ICH-8M	ICH-8M	ICH-8M	N/A
DDR2 667/800 SO-DIMM, 1GB (default) up to 2GB	DDR2 667/800 SO-DIMM, 1GB (default) up to 2GB	DDR2 667/800 SO-DIMM, 1GB (default) up to 2GB	DDR3L 1066/1333 SO-DIMM, 2GB (default) up to 8GB
2.5" HDD/SSD	2.5" HDD/SSD	2.5" HDD/SSD	2.5" SSD (external)
1 x SATA DOM	1 x SATA DOM	1 x SATA DOM	1 x CFast slot (accessible)
260 x 176 x 70	260 x 176 x 50	260 x 176 x 50	260 x 176 x 50
DC 9V to 60V	DC 9V to 60V	DC 9V to 60V	DC 9V to 36V
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
Battery deep discharge protection	Battery deep discharge protection	Battery deep discharge protection	Low voltage protection & configuration via software
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)
Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN
Yes	Yes	Yes	Yes
N/A	N/A	N/A	Yes
1	1	1	3
4 x USB 2.0	4 x USB 2.0	4 x USB 2.0	1 x USB 3.0 2 x USB 2.0
2 x RS232 (isolation) 1 x RS485 (isolation) 2 x RS-232	2 x RS232 1 x RS485	2 x RS232 1 x RS485	2 x RS232 1 x RS422/485
N/A	N/A	N/A	CAN bus 2.0B on board Optional CAN/OBDII module
LVDS, 2 x VGA (Clone mode)	LVDS, 2 x VGA (Clone mode)	LVDS, 2 x VGA (Clone mode)	DP, VGA
1	1	1	N/A
1 x RTL8111C-VC-GR 10/100/1000	1 x RTL8111C-VC-GR 10/100/1000	3 x RTL8111C-VC-GR 10/100/1000	2 x Intel® 10/100/1000
N/A	N/A	N/A	N/A
2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out
1 x (PCle+USB), 1 x USB	1 x (PCle+USB), 1 x USB	1 x (PCle+USB), 1 x USB	3 x (PCle+USB), 1 x USB, 3.3V/3.6V selectable
1	1	1	1
5V (1A), 12V (1A)	5V (1A), 12V (1A)	5V (1A), 12V (1A)	12V (2A)
4 x In , 4 x Out (w/ isolation)	4 x In , 4 x Out (w/ isolation)	4 x In , 4 x Out	8 x Programmable PC GPIO 2 x MCU-DI, 2 x MCU-DO D
CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, e13
-30°C to 50°C	-30°C to 50°C	-30°C to 50°C	-30°C to 70°C

Vehicle Telematics Computer

Model			
	VTC 6210-VR4	VTC 7100-BK	VTC 7100-C8SK
CPU	Intel® Atom™ E3845	Intel® Atom™ D2550	Intel® Atom™ D2550
Chipset	N/A	ICH-10R	ICH-10R
Memory	DDR3L 1066/1333 SO-DIMM, 2GB (default) up to 8GB	DDR3 1333MHz, SO-DIMM, 2GB (default) up to 4GB	DDR3 1333MHz, SO-DIMM, 2GB (default) up to 4GB
Storage	2.5" SSD (external)	1 x 2.5" SSD (external)	2 x 2.5" SSD (external)
Second Storage	1 x CFast slot (accessible)	1 x CFast (external)	1 x CFast (external)
Dimension (mm)	260 x 176 x 50	260 x 176 x 50	260 x 176 x 90.1
Power Input	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
Power Management	Low voltage protection & configuration via software	Low voltage protection & configuration via software	Low voltage protection & configuration via software
GPS	VIOB-GPS-02 module (u-blox NEO-M8N)	On board u-blox NEO-6Q	On board u-blox NEO-6Q
Optional Communication	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN
Voice Communication	Yes	Yes	Yes
SMS/Ring Wake up	Yes	Yes	Yes
SIM Socket	3	2	2
USB	1 x USB 3.0 2 x USB 2.0	3 x USB 2.0	3 x USB 2.0
COM	2 x RS232 1 x RS422/485	1 x RS232 1 x RS422/485	1 x RS232 1 x RS422/485
CAN/OBDII	CAN bus 2.0B on board Optional CAN/OBDII module	Optional CAN/OBDII module	Optional CAN/OBDII module
Video Out	DP, VGA	LVDS or DVI-D, VGA	LVDS or DVI-D, VGA
PCI-104	N/A	1	1
Ethernet	2 x Intel® 10/100/1000	2 x 10/100/1000	2 x 10/100/1000
PoE (802.3af, total 60W)	N/A	N/A	8
Audio	2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out
Mini-PCIe Socket	3 x (PCIe+USB), 1 x USB, 3.3V/3.6V selectable	1 x (PCIe+USB), 1 x USB	1 x (PCIe+USB), 1 x USB
SMBus	1	1	1
DC Output	12V (2A)	12V (4A)	12V (4A)
GPIO	8 x Programmable PC GPIO 2 x MCU-DI, 2 x MCU-DO	4 x In, 4 x Out	4 x In, 4 x Out
Certification	CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, e13
Operation Temperature	-30°C to 70°C	-30°C to 55°C	-30°C to 55°C




			
VTC 7100-D1K	VTC 7110-BK	VTC 7110-C4SK	VTC 7110-D1K
Intel® Atom™ D2550	Intel® Core™ i7 2610UE	Intel® Core™ i7 2610UE	Intel® Core™ i7 2610UE
ICH-10R	QM67	QM67	QM67
DDR3 1333MHz, SO-DIMM, 2GB (default) up to 4GB	DDR3 1333MHz, 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
1 x 2.5" SSD (external)	2.5" SSD (external)	2 x 2.5" SSD (external)	1 x 2.5" SSD (external)
1 x CFast (external)	1 x CFast (external)	1 x CFast (external)	1 x CFast (external)
260 x 176 x 73	260 x 176 x 50	260 x 176 x 90.1	260 x 176 x 73
DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V
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
Low voltage protection & configuration via software	Low voltage protection & configuration via software	Low voltage protection & configuration via software	Low voltage protection & configuration via software
On board u-blox NEO-6Q	On board u-blox NEO-6Q	On board u-blox NEO-6Q	On board u-blox NEO-6Q
Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
2	2	2	2
3 x USB 2.0	3 x USB 2.0	3 x USB 2.0	3 x USB 2.0
3 x RS232 (isolation) 2 x RS422/485(isolation), 1 x RS232 1 x RS422/485	1 x RS232 1 x RS422/485	1 x RS232 1 x RS422/485	3 x RS232 (isolation) 2 x RS422/485(isolation), 1 x RS232 1 x RS422/485
OBDII module (SAE J1939 or J1708)	Optional CAN/OBDII module	Optional CAN/OBDII module	OBDII module (SAE J1939 or J1708)
LVDS or DVI-D, VGA	LVDS or DVI-D, VGA	LVDS or DVI-D, VGA	LVDS or DVI-D, VGA
1	1	1	1
2 x 10/100/1000	2 x Intel® 10/100/1000	2 x Intel® 10/100/1000	2 x 10/100/1000
N/A	N/A	4	N/A
2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out
1 x (PCIe+USB), 1 x USB	1 x (PCIe+USB), 1 x USB	1 x (PCIe+USB), 1 x USB	1 x (PCIe+USB), 1 x USB
1	1	1	1
12V (4A)	12V (4A)	12V (4A)	12V (4A)
4 x DI, 4 x DO (w/ isolation)	4 x In, 4 x Out	4 x In, 4 x Out	4 x DI, 4 x DO (w/ isolation)
CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, e13
-30°C to 55°C	-30°C to 50°C	-30°C to 50°C	-30°C to 55°C

Vehicle Telematics Computer

Model				
	VTC 7120-BK	VTC 7120-C4SK	VTC 7120-D1K	VTC 7200
CPU	Intel® Celeron® 847E	Intel® Celeron® 847E	Intel® Celeron® 847E	4th Generation Intel® Core™ i3-4010U
Chipset	QM67	QM67	QM67	N/A
Memory	DDR3 1333MHz, 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	2 channel DDR3L 1333/1600 SO-DIMM, 2GB (default) up to 16GB
Storage	1 x 2.5" SSD (external)	2 x 2.5" SSD (external)	1 x 2.5" SSD (external)	2 x 2.5" SSD SATA 3.0 (external)
Second Storage	1 x CFast (external)	1 x CFast (external)	1 x CFast (external)	1 x CFast slot (accessible)
Dimension (mm)	260 x 176 x 50	260 x 176 x 90.1	260 x 176 x 73	260 x 206 x 79.5
Power Input	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
Power Management	Low voltage protection & configuration via software	Low voltage protection & configuration via software	Low voltage protection & configuration via software	Low voltage protection
GPS	On board u-blox NEO-6Q	On board u-blox NEO-6Q	On board u-blox NEO-6Q	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	Yes	Yes	Yes	Yes
SMS/Ring Wake up	Yes	Yes	Yes	Yes
SIM Socket	2	2	2	3
USB 2.0	3 x USB 2.0	3 x USB 2.0	3 x USB 2.0	2 x USB 3.0 2 x USB 2.0
COM	1 x RS232 1 x RS422/485	1 x RS232 1 x RS422/485	3 x RS232 (isolation) 2 x RS422/485 (isolation), 1 x RS232 1 x RS422/485	2 x RS232 1 x RS232/485/422
CAN/OBDII	Optional CAN/OBDII module	Optional CAN/OBDII module	OBDII module (SAE J1939 or J1708)	CAN bus 2.0B on board Optional CAN/OBDII module
Video Out	LVDS or DVI-D, VGA	LVDS or DVI-D, VGA	LVDS or DVI-D, VGA	DP, VGA, LVDS (internal)
PCI-104	1	1	1	N/A
Ethernet	2 x Intel® 10/100/1000	2 x Intel® 10/100/1000	2 x 10/100/1000	2 x Intel® 10/100/1000
PoE (802.3af, total 60W)	N/A	4	N/A	N/A
Audio	2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out
Mini-PCle Socket	1 x (PCle+USB), 1 x USB	1 x (PCle+USB), 1 x USB	1 x (PCle+USB), 1 x USB	3 x (PCle+USB), 1 x USB
SMBus	1	1	1	1
DC Output	12V (4A)	12V (4A)	12V (4A)	12V (2A)
GPIO	4 x In, 4 x Out	4 x In, 4 x Out	4 x DI, 4 x DO (w/ isolation)	MCU: 2 x DI, 2 x DO 4 x In, 4 x Out
Certification	CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, e13
Operation Temperature	-30°C to 50°C	-30°C to 50°C	-30°C to 55°C	-30°C to 55°C






			
VTC 7210	VTC 7220	VTC 7230	VTC 7240
Intel® Core™ i5-4300U	Intel® Core™ i74650U	Intel® Core™ i3-5010U	Intel® Core™ i74650U
N/A	N/A	N/A	N/A
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 x 2.5" SSD SATA 3.0 (external)	2 x 2.5" SSD SATA 3.0 (external)	2 x 2.5" SSD SATA 3.0 (external)	2 x 2.5" SSD SATA 3.0 (external)
1 x CFast slot (accessible)	1 x CFast slot (accessible)	1 x CFast slot (accessible)	1 x CFast slot (accessible)
260 x 206 x 79.5	260 x 206 x 79.5	260 x 206 x 79.5	260 x 206 x 79.5
DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V
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
Low voltage protection & configuration via software	Low voltage protection & configuration via software	Low voltage protection & configuration via software	Low voltage protection & configuration via software
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)
Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN
Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes
3	3	3	3
2 x USB 3.0 2 x USB 2.0	2 x USB 3.0 2 x USB 2.0	2 x USB 3.0 2 x USB 2.0	2 x USB 3.0 2 x USB 2.0
2 x RS232 1 x RS232/485/422	2 x RS232 1 x RS232/485/422	2 x RS232 1 x RS232/485/422	2 x RS232 1 x RS232/485/422
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
DP, VGA, LVDS (internal)	DP, VGA, LVDS (internal)	DP, VGA, LVDS (internal)	DP, VGA, LVDS (internal)
N/A	N/A	N/A	N/A
2 x Intel® 10/100/1000	2 x Intel® 10/100/1000	2 x Intel® 10/100/1000	2 x Intel® 10/100/1000
N/A	N/A	N/A	N/A
2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out
3 x (PCle+USB), 1 x USB, 3.3V/3.6V selectable	3 x (PCle+USB), 1 x USB, 3.3V/3.6V selectable	3 x (PCle+USB), 1 x USB, 3.3V/3.6V selectable	3 x (PCle+USB), 1 x USB, 3.3V/3.6V selectable
1	1	1	1
12V (2A)	12V (2A)	12V (2A)	12V (2A)
4 x In, 4 x Out	4 x In, 4 x Out	4 x In, 4 x Out	4 x In, 4 x Out
CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, e13
-30°C to 60°C	-30°C to 60°C	-30°C to 60°C	-30°C to 60°C

Vehicle Mount Computer



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 (Typ.)	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	2 x Built-in Speaker	2 x Built-in Speaker	2 x Built-in Speaker
Touch Screen	4-wire antiglare	4-wire antiglare	4-wire antiglare
Camera	N/A	N/A	N/A
Control Button	F1~ F5 Functions key 1 x Power button 2 x Brightness/volume control 2 x System reset button	1 x Display button 2 x Brightness/volume control 2 x System reset button	F1~ F5 Functions key 1 x Power button 2 x Brightness/volume control 2 x System reset button
Mounting	VESA 75	VESA 75	VESA 75
Ingress Protection	Front panel IP54	Front panel IP54	Front panel IP54
Dimension (mm)	213 x 145 x 49.3	185.4 x 141.1 x 50.42	213 x 145 x 50
CPU	ARM Cortex™-A8	Intel® Atom™ E640	Intel® Atom™ E3825
Chipset	N/A	N/A	N/A
Memory	512 DDR3 on board	1GB DDR2 on board	DDR3L 1600MHz SO-DIMM slot (up to 4GB)
Storage Interface	4GB Micro SDHC up to 16GB	1 x mSATA	SATA DOM
Power Input	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
Power Management	Low voltage protection & configuration via software	Low voltage protection & configuration via software	Low voltage protection & configuration via software
GPS	u-blox NEO-M8N on board	u-blox NEO-6Q on board	u-blox NEO-M8N on board
Optional Communication	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN
USB	1 x USB 2.0	3 x USB 2.0	1 x USB 3.0
COM	1 x RS232 1 x RS485	1 x RS232 1 x RS485	1 x RS232 1 x RS485
CAN	1 x CAN bus 2.0B Optional OBDII	1 x CAN bus 2.0B	1 x CAN bus 2.0B Optional OBDII
Ethernet	1 x 10/100/1000	1 x 10/100/1000	1 x 10/100/1000
Audio	1 x Mic-in 1 x Line-out	1 x Line-in 1 x Line-out	1 x Mic-in 1 x Line-out
Mini-Card	1 x (USB+UART)	1 x (PCIe+USB+SATA) 1 x USB	1 x (PCIe+USB) 1 x (USB+UART)
GPIO	3 x In, 3 x Out	3 x In, 3 x Out	2 x PWM, 2 x Analog input, 3 x In, 3 x Out
Certification	CE, FCC Class B	CE, FCC Class B, e13	CE, FCC Class B, e13 SAE J1113, SAE J1455, ISO7637-2 EN 60950-1 LVD
Operation Temperature	-20°C to 70°C	-20°C to 50°C	-20°C to 60°C

			
VMC 3000/3500	VMC 3001/3501	VMC 3011/3511	VMC 4011-K
10.4" TFT LCD	10.4" TFT LCD	10.4" TFT LCD	12.1" TFT LCD
1024 x 768	1024 x 768	1024 x 768	1024 x 768
400cd/m²	400cd/m²	1200cd/m²	1300cd/m²
600 : 1	600 : 1	600 : 1	600 : 1
V: 60/60 H: 70/70	V: 60/60 H: 70/70	V: 60/60 H: 70/70	V: 60/60 H: 70/70
Auto via light sensor	Auto via light sensor	Auto via light sensor	Auto via light sensor
2 x Built-in Speaker	2 x Built-in Speaker	2 x Built-in Speaker	2 x Built-in Speaker
5-wire antiglare	5-wire antiglare	5-wire antiglare	5-wire antiglare
N/A	N/A	N/A	N/A
1 x Power button 2 x Brightness control 2 x Volume control 5 x Function key 1 x Shift key	1 x Power button 2 x Brightness control 2 x Volume control 5 x Function key 1 x Shift key	1 x Power button 2 x Brightness control 2 x Volume control 5 x Function key 1 x Shift key	1 x Power button 2 x Brightness control 2 x Volume control 5 x Function key 1 x Shift key
VESA 75/100	VESA 75/100	VESA 75/100	VESA 75/100
IP65 (excluding I/O)	IP65	IP65	IP65
290 x 230 x 68	290 x 230 x 68	290 x 230 x 68	340 x 262 x 75.1
Intel® Atom™ D2550 Intel® Core™ i7 2610UE	Intel® Atom™ D2550 Intel® Core™ i7 2610UE	Intel® Atom™ D2550 Intel® Core™ i7 2610UE	Intel® Atom™ D2550
Intel® ICH10R Intel® QM67	Intel® ICH10R Intel® QM67	Intel® ICH10R Intel® QM67	Intel® ICH10R
DDR3 1333MHz SO-DIMM slot (up to 4GB)	DDR3 1333MHz SO-DIMM slot (up to 4GB)	DDR3 1333MHz SO-DIMM slot (up to 4GB)	DDR3 1333MHz SO-DIMM slot (up to 4GB)
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
DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V
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
Low voltage protection & configuration via software	Low voltage protection & configuration via software	Low voltage protection & configuration via software	Low voltage protection & configuration via software
u-blox NEO-6Q on board	u-blox NEO-6Q on board	u-blox NEO-6Q on board	u-blox NEO-M8N on board
Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN
2 x USB 2.0	1 x USB 2.0	1 x USB 2.0	2 x USB 2.0
2 x RS232	1 x RS232	1 x RS232	1 x RS232/422/485 2 x RS232
1 x CAN bus 2.0B Optional OBDII	1 x CAN bus 2.0B Optional OBDII	1 x CAN bus 2.0B Optional OBDII	1 x CAN bus 2.0B Optional OBDII
1 x 10/100/1000	1 x 10/100/1000	1 x 10/100/1000	2 x 10/100/1000
1 x Mic-in 1 x Line-out	1 x Mic-in 1 x Line-out	1 x Mic-in 1 x Line-out	1 x Mic-in 1 x Line-out
1 x (PCIe+USB+SATA) 1 x USB	1 x (PCIe+USB+SATA) 1 x USB	1 x (PCIe+USB+SATA) 1 x USB	1 x (PCIe+USB+SATA) 1 x USB
3 x In, 3 x Out	3 x In, 3 x Out	3 x In, 3 x Out	2 x In, 2 x Out
CE, FCC Class B	CE, FCC Class B	CE, FCC Class B	CE, FCC Class B
-30°C to 60°C	-30°C to 60°C	-30°C to 60°C	-30°C to 60°C



Vehicle Mount Display

Model					
	VMD 1000	VMD 1001	VMD 2000	VMD 2002	VMD 3002
LCD Size	7" TFT LCD	7" TFT LCD	8" TFT LCD	8" TFT LCD	10.4" TFT LCD
Resolution	800 x 480	800 x 480	800 x 600	800 x 600	1024 x 768
Brightness (Typ.)	500cd/m²	500cd/m²	400cd/m²	400cd/m²	1200cd/m²
Contrast Ratio	600 : 1	600 : 1	500 : 1	500 : 1	500 : 1
View Angle	V: 60/60 H: 70/70	V: 60/60 H: 70/70	V: 50/70 H: 70/70	V: 50/70 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
Speaker	2 x Built-in speaker	2 x Built-in speaker	2 x Built-in speaker	2 x Built-in speaker	2 x Built-in speaker
Touch Screen	4-wire antiglare	4-wire antiglare	4-wire antiglare	4-wire antiglare	Projected capacitive
Camera	1 (option)	1 (option)	1 (option)	1 (option)	N/A
Control Button	1 x Monitor power button 2 x Brightness control 2 x Volume control	1 x Monitor power button 2 x Brightness control 2 x Volume control	1 x Monitor power button 2 x Brightness control 2 x Volume control	1 x Monitor power button 2 x Brightness control 2 x Volume control	1 x Monitor power button 2 x Brightness control 2 x Volume control 1 x Auto config
Mounting	VESA 75	VESA 75	VESA 75	VESA 75	VESA 75/100
Ingress Protection	Front panel IP54	Front panel IP54	Front panel IP54	Front panel IP54	IP65
Dimension (mm)	182 x 138 x 36.3	182 x 138 x 36.3	207 x 173 x 36.7	207 x 173 x 36.7	256.5 x 202.1 x 31.5
Power Input	12V (via LVDS)	6 ~ 36V	12V (via LVDS)	6 ~ 36V	6 ~ 36V
Video Input	1 x Intergrated DVI CONN (LVDS, USB, 2V, 5V)	1 x VGA	1 x Intergrated DVI CONN (LVDS, USB, 2V, 5V)	1 x VGA	4 x CVBS connector 1 x VGA
Audio Input	1 x Line-in (lateral side) 1 x Mic-out (lateral side) 1 x Line-in (bottom side) 1 x Mic-out (bottom side)	1 x Line-in (lateral side) 1 x Mic-out (lateral side)	1 x Line-in (lateral side) 1 x Mic-out (lateral side) 1 x Line-in (bottom side) 1 x Mic-out (bottom side)	1 x Line-in (lateral side) 1 x Mic-out (lateral side)	1 x Line-in
USB	1 x USB 2.0	2 x USB 2.0	1 x USB 2.0	2 x USB 2.0	1 x USB 2.0
Storage	1 x SD/MMC/MS card reader	1 x SD/MMC/MS card reader	1 x SD/MMC/MS card reader	1 x SD/MMC/MS card reader	1 x SD/MMC/MS card reader
Power Button	Yes	N/A	Yes	N/A	Yes
Certification	CE, FCC Class B	CE, FCC Class B	CE, FCC Class B	CE, FCC Class B	CE, FCC Class B
Operation Temperature	-20°C to 70°C	-20°C to 70°C	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C





Vehical Network Switch

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, e13 Mark	CE, FCC Class B, e13 Mark
Operation Temperature	-30°C to 70°C	-30°C to 70°C




Modular Vehicle Computer System


Model		
	MVS 5200	MVS 5210
CPU	Intel® Core™ i3-5010U	Intel® Core™ i7-5650U
Chipset	N/A	N/A
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 x 2.5" SSD SATA 3.0, 1 x mSATA	2 x 2.5" SSD SATA 3.0, 1 x mSATA
Second Storage	1 x CFast slot (accessible)	1 x CFast slot (accessible)
Dimension (mm)	260 x 206 x 137	260 x 206 x137
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 & configuration via software	Low voltage protection & configuration via software
GPS	VI0B-GPS-02 module (u-blox NEO-M8N)	VI0B-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	2 x USB 3.0 2 x USB 2.0	2 x USB 3.0 2 x USB 2.0
COM	2 x RS232/422/485	2 x RS232/422/485
CAN/OBDII	CAN bus 2.0B on board Optional CAN/ OBDII module	CAN bus 2.0B on board Optional CAN/ OBDII module
Video Out	2 x VGA, LVDS	2 x VGA, LVDS
PCI-104	N/A	N/A
Ethernet	2 x Intel® 10/100/1000	2 x Intel® 10/100/1000
PoE (802.3af, total 60W)	8	8
Audio	1 x Mic-in, 2 x Line-out	1 x Mic-in, 2 x Line-out
Mini-PCle Socket	1 x (PCle+USB) 1 x USB 1 x mSATA	1 x (PCle+USB) 1 x USB 1 x mSATA
SMBus	1	1
DC Output	12V (2A)	12V (2A)
GPIO	PC: 4 x DI, 4 x DO MCU: 3 x DI, 2 x DO 2 x Analog-in, 1 x Speed frequency	PC: 4 x DI, 4 x DO MCU: 3 x DI, 2 x DO 2 x Analog-in, 1 x Speed frequency
Certification	CE, FCC Class B, e13, EN50155	CE, FCC Class B, e13, EN50155
Operation Temperature	-30°C to 50°C (w/o internal back up battery)	-30°C to 50°C (w/o internal back up battery)

Train Computer


Model				
	nROK 500	nROK 3000	nROK 5300	nROK 5500
CPU	Intel® Atom™ D525	Intel® Atom™ D525	Intel® Core™ i5 3610ME	Intel® Core™ i7 3517UE
Chipset	ICH-8M	ICH-8M	Intel® QM77	Intel® QM77
Memory	DDR2 667 SO-DIMM 2GB (default)	DDR3 1333 SO-DIMM 1GB (default), up to 4GB	DDR3 1333 SO-DIMM 2GB (up to 16G)	DDR3 1333 SO-DIMM 2GB (up to 16G)
Storage	2.5" SATA SSD tray	2.5" SATA SSD removable tray	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)
Second Storage	1 x CF socket (external)	1 x CFast socket (external)	1 x Mini-PCIe SSD	1 x Mini-PCIe SSD
Dimension (mm)	264 x 142 x 65	260 x 178 x 70	482 x 400 x 88	482 x 400 x 88
Power Input	24VDC (w/ isolation)	24VDC/110VDC (w/ isolation)	24/36/72/110 VDC (w/ isolation)	24/36/72/110 VDC (w/ isolation)
Ignition Control	Yes	Yes	Yes	Yes
Power Management	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
GPS	N/A	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	Bluetooth/WWAN	WiFi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN
SMS/ Ring Wake Up	Yes	Yes	Yes	Yes
SIM Socket	1 (external)	1 (external)	2	2
USB	2 x USB 2.0	1 x USB 2.0 1 x USB 2.0 (M12)	1 x M12 with 2 x USB 2.0 signal 2 x USB 3.0	1 x M12 with 2 x USB 2.0 signal 2 x USB 3.0
COM	1 x RS232 1 x RS232/422/485	1 x RS232 (w/ isolation) 1 x RS422 (w/ isolation) 2 x RS485 (w/ isolation)	2 x RS232 1 x RS422/485	2 x RS232 1 x RS422/485
CAN/OBDII	N/A	N/A	N/A	N/A
Video Out	1 x VGA	1 x VGA, 1 x DVI-D	VGA, HDMI	VGA, HDMI
PCI-104	N/A	1	1	1
Ethernet	1 x 10/100/1000 (M12)	3 x 10/100/1000 (M12)	2 x 10/100/1000 (M12)	2 x 10/100/1000 (M12)
PoE (802.3af, total 60W)	N/A	N/A	8 (M12)	8 (M12)
Audio	1 x Mic-in, 1 x Line-out	1 x Mic-in, 1 x Line-out	1 x Mic-in, 1 x Line-out, 1 x Line-in	1 x Mic-in, 1 x Line-out, 1 x Line-in
Mini-PCIe Socket	1 x USB	1 x (PCIe+USB), 1 x USB	2 x (PCIe+USB), 1 x USB	2 x (PCIe+USB), 1 x USB
SMBus	N/A	N/A	N/A	N/A
DC Output	Optional, 12VDC	N/A	N/A	N/A
GPIO	4 x in, 4 x out	4 x in, 4 x out	4 x DI, 4 x DO	4 x DI, 4 x DO
Certification	CE, FCC Class A, EN50155	CE, FCC Class A, EN50155	CE, FCC Class A EN50155 EN45545-2	CE, FCC Class A EN50155 EN45545-2
Operation Temperature	-25°C to 55°C (Class T1)	-40°C to 70°C (Class TX)	-40°C to 70°C (TX)	-40°C to 70°C (TX)

In-VehicleTerminal

		
MVS 5210-R	VTC 6210-R	VTC 7220-R
Intel® Core™ i7-5650U	Intel® Atom™ E3845	Intel® Core™ i74650U
N/A	N/A	N/A
DDR3L 1333 SO-DIMM 2GB (up to 16G)	DDR3L 1333 SO-DIMM 2GB (up to 8G)	DDR3L 1333 SO-DIMM 2GB (up to 16G)
2 x 2.5" SSD SATA 3.0	1 x 2.5" SSD SATA 2	2 x 2.5" SSD SATA 3.0
1 x CFast slot (accessible) 1 x mSATA	1 x CFast slot (accessible)	1 x CFast slot (accessible)
260 x 206 x 137	260 x 176 x 70	260 x 206 x 137.5
24VDC (w/o isolation)/ 110VDC (w/ isolation) (w/ optional internal back up battery)	24VDC/36VDC (w/o isolaiton) 110 VDC (w/ isolation)	24/36/110 VDC (w/ isolation)
Yes	Yes	Yes
Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting
VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)
Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN
Yes	Yes	Yes
3	3	3
2 x USB 3.0 2 x USB 2.0	1 x USB 3.0 2 x USB 2.0 (one M12)	2 x USB 3.0 type A 2 x USB 2.0 type A
2 x RS232/422/485	2 x RS232 (isolation) 1 x RS422/485 (isolation)	2 x RS232 1 x RS232/485/422
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
2 x VGA, LVDS	VGA, DP	VGA, DP
N/A	N/A	N/A
2 x 10/100/1000 (M12)	2 x 10/100/1000 (M12)	2 x 10/100/1000 (M12)
8 (M12)	N/A	N/A
1 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out	2 x Mic-in, 2 x Line-out
1 x (PCIe+USB), 1 x USB 1 x mSATA	2 x (PCIe+USB), 1 x USB	3 x (PCIe+USB), 1 x USB
1	N/A	1
12V (2A)	N/A	12V (2A)
PC: 4 x DI, 4 x DO MCU: 3 x DI, 2 x DO 2 x Analog-in 1 x Speed frequency	4 x DI (isolation) 4 x DO (isolation)	8 x Programmable DI/DO
CE, FCC Class B, e13, EN50155	CE, FCC Class A, EN50155	CE, FCC Class A, EN50155
-40°C to 70°C (TX)	-40°C to 70°C (TX)	-40°C to 70°C (TX)

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	SATA DOM
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 & configuration via software
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, 1 x Mic-in, 1 x Line-in
Mini-PCIe Socket	1 x (PCIe+USB) 1 x (USB+UART)
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°C to 50°C

Fleet Management System Rugged Tablet Computer

Model	 FMS 1000
CPU	ST MCU
Chipset	N/A
Memory	PSRAM 1MB
Storage	Optional USB flash
Second Storage	N/A
Dimension (mm)	120 x 30 x 100
Power Input	DC 9V to 36V (w/ internal back up battery)
Ignition Control	Yes, w/ 8 level delay time setting
Power Management	Battery deep discharge protection
GPS	uBlox NEO-M8N on board
Wireless Communication	Wi-Fi (optional)/WWAN
Voice Communication	Yes
SMS/Ring Wake up	Yes
SIM Socket	1
USB 2.0	1
COM	1 x RS232 (w/12VDC) for RFID reader
CAN/OBDII	2 x CAN 2.0B
Video Out	N/A
PCI-104	N/A
Ethernet	1 x 10/100
PoE	N/A
Audio	1 x Mic-in, 1 x Line-out
Mini-PCle Socket	1 x SPI
SMBus	N/A
DC Output	12VDC (1A)
GPIO	3 x DI, 3 x DO 2 x Analog-in 1 x Speed frequency
Certification	IP67
Operation Temperature	-40°C to 70°C (w/o battery) -20°C to 40°C (w/ battery)

Model	 MRC 1000	 MRC 1100
LCD	7" WVGA TFT (LED type)	7" WVGA TFT (LED type)
Touch	4-wire resistive	4-wire resistive/ anti-reflection
CPU	Intel® Atom™ Z530	Intel® Atom™ Z530
Memery	2GB DDR2	2GB DDR2
Storage	32G SSD	64GB SSD
Wireless	802.11a/b/g/n, BT v2.1+EDR Option: GSM/GPRS/3.5G	802.11a/b/g/n, BT v2.1+EDR Option: GSM/GPRS/3.5G
GPS	Optional	Optional
Camera	Rear: 2.0M Pixel CMOS	Rear: 2.0M Pixel CMOS
Optional Modules	Barcode scanner/ MSR module	Barcode scanner/ MSR module
Power	DC in 19V/3.42A	DC in 19V/3.42A
IO Interface	1 x Audio jack 2 x USB 2.0 1 x Finger print reader	1 x Audio jack 2 x USB 2.0 1 x Finger print reader
IP Rating	IP65	IP65
Weight (kg)	0.99	0.99
Dimension (mm)	206 x 200 x 34	206 x 200 x 34
Operation Temperature	-20°C to 50°C	-20°C to 50°C
Certification	CE, FCC Class B	CE, FCC Class B

About NEXCOM

Reliable Partner for the Intelligent Solutions

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 these core values to better serve customers, NEXCOM integrates its capabilities and operates six global businesses, which are IoT Automation Solutions (IAS), Intelligent Digital Security (IDS), Internet of Things (IoT), Interactive Signage Platform (ISP), Mobile Computing Solutions (MCS), and Network and Communication Solutions (NCS). 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), robotics, industrial PC & PPC, IoT gateway Industrial Wireless & Firewall Solutions Intelligent System Services: embedded computing and customization services
IDS	Intelligent Digital Security: IP Cam, NVR, mobile server platform
IoT	Internet of Things: total solutions for vertical IoT applications Healthcare and Medical Informatics: total solutions with a variety of medical IT systems
ISP	Interactive Signage Platform: digital signage, interactive kiosk
MCS	Mobile Computing Solutions: rugged computer devices, rugged mobile computer Vehicle Telematics Computer: Car PC, heavy duty vehicle, train PC
NCS	Network and Communication Solutions : network security, HPC, telecommunication, storage, SDN/NFV, industrial security

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

- 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 Industry 4.0 solutions.

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The Intelligent Systems

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