



# Mobile Computing Solutions Product Selection Guide

vehicles to reduce road accidents, communicate with transportation infrastructure to optimize routes,

amass sensor-generated data to acquire vehicle

#### Fleet Vehicle

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

#### status, and provide in-vehicle infotainment for drivers and passengers, making driving and riding safe, smooth and enjoyable.

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

**Public Transportation** 

information systems.

Redefine Driving Experience with Connected Car

#### Overview & How It Works

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

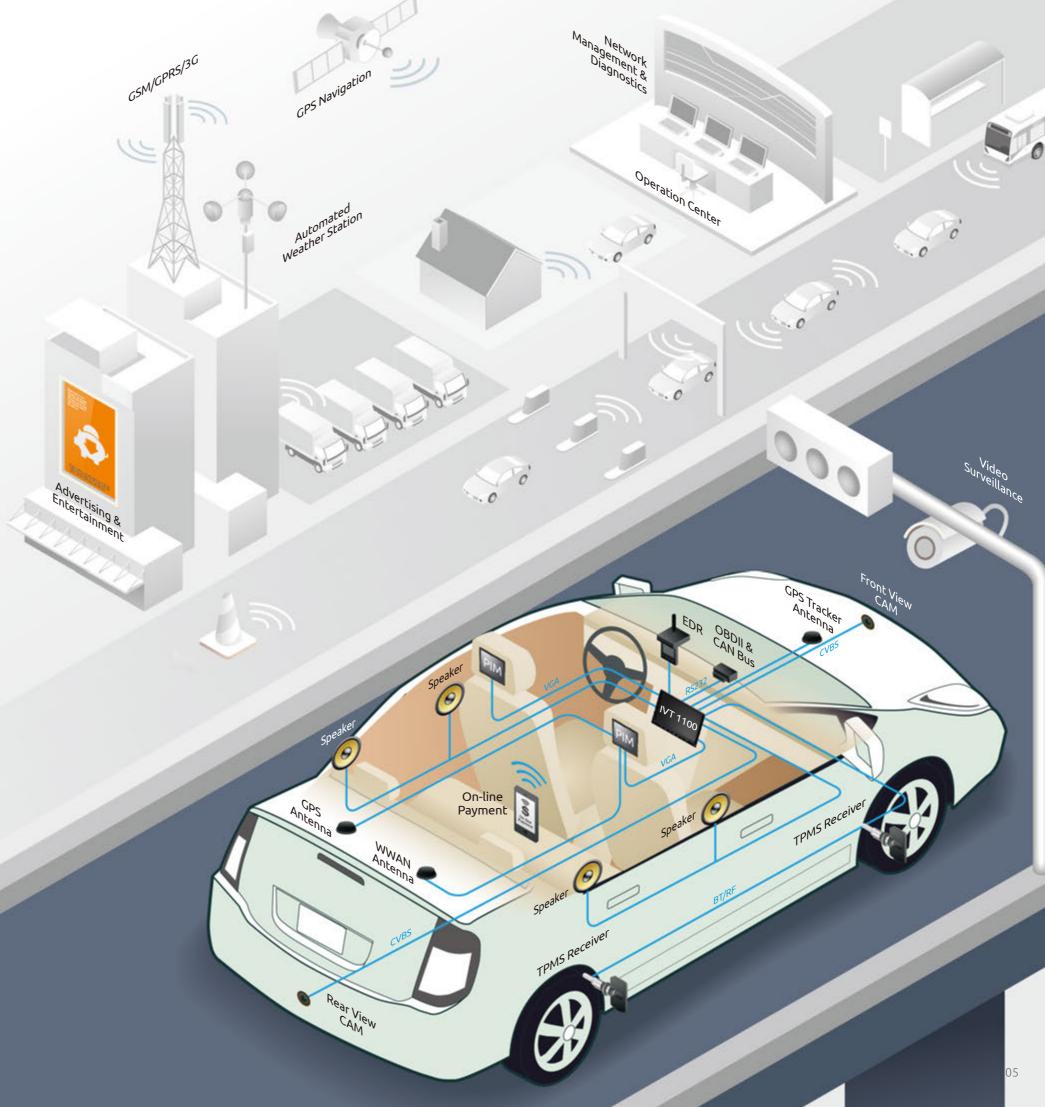
#### Successful Factors

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

#### NEXCOM's Strengths

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

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



## Strengthen Security with Mobile Surveillance for A Safe Ride

# CP2

#### Overview & How It Works

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

#### Successful Factors

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

#### NEXCOM's Strengths

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



Mobile Computing Solutions Product Selection Guide

## Mobile Surveillance - Vehicle

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

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VTC 7110-C4SK	VTC 7120-C4SK	VTC 7200	VTC 7210	VTC 7220	VTC 7230	VTC 7240
2nd Generation Intel <sup>®</sup> Core™ i7- 2610UE	2nd Generation Intel® Celeron® 874E	4th Generation Intel <sup>®</sup> Core™ i3- 4010U	4th Generation Intel <sup>®</sup> Core™ i5- 4300U	4th Generation Intel <sup>®</sup> Core™ i7- 4650U	5th Generation Intel <sup>®</sup> Core™ i3- 5010U	5th Generation Intel <sup>®</sup> Core™ i7- 5650U
Intel® QM67	Intel® QM67	No	No	No	No	No
DDR3 1333MHz, SO-DIMM, 2GB (default) up to 8GB	DDR3 1333MHz, SO-DIMM, 2GB (default) up to 8GB	2 channel DDR3L 1333/1600 SO-DIMM, 2GB (default) up to 16GB	2 channel DDR3L 1333/1600 SO-DIMM, 2GB (default) up to 16GB	2 channel DDR3L 1333/1600 SO-DIMM, 2GB (default) up to 16GB	2 channel DDR3L 1333/1600 SO-DIMM, 2GB (default) up to 16GB	2 channel DDR3L 1333/1600 SO-DIMM, 2GB (default) up to 16GB
2.5" SSD x 2 (external)	2.5" SSD x 2 (external)	2.5" HDD/SSD 2 x SATA 3.0 (external)	2.5" HDD/SSD 2 x SATA 3.0 (external)	2.5" HDD/SSD 2 x SATA 3.0 (external)	2.5" HDD/SSD 2 x SATA 3.0 (external)	2.5" HDD/SSD 2 x SATA 3.0 (external)
1 x CFast (external)	1 x CFast (external)	1 x CFast (external)	1 x CFast (external)	1 x CFast (external)	1 x CFast (external)	1 x CFast (external)
260 x 176 x 90.1	260 x 176 x 90.1	260 x 206 x 79.5	260 x 206 x 79.5	260 x 206 x 79.5	260 x 206 x 79.5	260 x 206 x 79.5
DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V	DC 9V to 36V
Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting
Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection	Low voltage protection
On board uBlox NEO-6Q	On board uBlox NEO-6Q	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)
Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN
Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	2	3	3	3	3	3
3	3	USB 3.0 x 2 USB 2.0 x 2	USB 3.0 x 2 USB 2.0 x 2	USB 3.0 x 2 USB 2.0 x 2	USB 3.0 x 2 USB 2.0 x 2	USB 3.0 x 2 USB 2.0 x 2
RS-232 x 1 RS-422/485 x1	RS-232 x 1 RS-422/485 x1	RS-232 x2 RS-232/485/422 x1	RS-232 x2 RS-232/485/422 x1	RS-232 x2 RS-232/485/422 x1	RS-232 x2 RS-232/485/422 x1	RS-232 x2 RS-232/485/422 x1
Optional CAN/ OBDII module	Optional CAN/ OBDII module	CAN bus 2.0B on board. Optional CAN/ OBDII module	CAN bus 2.0B on board. Optional CAN/ OBDII module	CAN bus 2.0B on board. Optional CAN/ OBDII module	CAN bus 2.0B on board. Optional CAN/ OBDII module	CAN bus 2.0B on board. Optional CAN/ OBDII module
LVDS or DVI-D, VGA	LVDS or DVI-D, VGA	DP, VGA. LVDS (internal)	DP, VGA. LVDS (internal)	DP, VGA. LVDS (internal)	DP, VGA. LVDS (internal)	DP, VGA. LVDS (internal)
1	1	No	No	No	No	No
Intel <sup>®</sup> 10/100/1000 x 2	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2	Intel <sup>®</sup> 10/100/1000 x 2	Intel® 10/100/1000 x 2	Intel® 10/100/1000 x 2	Intel <sup>®</sup> 10/100/1000 x 2
4	4	No	No	No	No	No
Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2
(PCIe+USB) x1, USB x 1	(PCIe+USB) x1, USB x 1	(PCIe+USB) x 3, USB x 1	(PCIe+USB) x 3, USB x 1	(PCIe+USB) x 3, USB x 1	(PCIe+USB) x 3, USB x 1	(PCIe+USB) x 3, USB x 1
1	1	1	1	1	1	1
12V (4A)	12V (4A)	12V (2A)	12V (2A)	12V (2A)	12V (2A)	12V (2A)
In x 4, Out x 4	In x 4, Out x 4	MCU: DI x 2, DO x 2 In x 4, Out x 4	MCU: DI x 2, DO x 2 In x 4, Out x 4	MCU: DI x 2, DO x 2 In x 4, Out x 4	MCU: DI x 2, DO x 2 In x 4, Out x 4	MCU: DI x 2, DO x 2 In x 4, Out x 4
CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, E13	CE, FCC Class B, E13	CE, FCC Class B, E13	CE, FCC Class B, E13	CE, FCC Class B, E13
-30°C to 50°C	-30°C to 50°C	-30°C to 55°C	-30°C to 50°C	-30°C to 50°C	-30°C to 55°C	-30°C to 50°C

### Mobile Surveillance - Vehicle

MVS 5200     MVS 5210       Sth Generation Intel® Core™ i3-5010U     Sth Generation Intel® Core™ i7-50 Inte	n 550U 1600 16GB 0 x 2 ssible) 0
CPU         Intel® Core™ i3-5010U         Intel® Core™ i7-56           Chipset         No         No           Memory         2 channel DDR3L 1600 SO-DIMM, 2GB (default) up to 16GB         2 channel DDR3L SO-DIMM, 2GB (default) up to 16GB           Storage         2.5" SSD SATA 3.0 x 2 mSATA x 1         2.5" SSD SATA 3.0 x 2 mSATA x 1           Second Storage         1 x CFast slot (accessible)         1 x CFast slot (accessible)	1600 16GB 0 x 2 sssible) 0 bitonal
Memory  2 channel DDR3L 1600 SO-DIMM, 2GB (default) up to 16GB 2CB 2CB 2CB 2CB 2CB 2CB 2CB 2CB 2CB 2C	o 16GB O x 2 sssible) O obitonal attery)
Storage  Sto	o 16GB O x 2 sssible) O obitonal attery)
Second Storage mSATA x 1 mSATA x 1  Second Storage 1 x CFast slot (accessible) 1 x CFast slot (acce	ssible) 0 pitonal attery)
	0 pitonal attery)
260 206 420	oitonal attery)
Dimension (mm) 260 x 206 x 130 260 x 206 x 13	ittery)
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	y time
Power Management Low voltage protection Low voltage protection	ction
GPS VIOB-GPS-02 module (u-blox NEO-M8N) VIOB-GPS-02 mo (u-blox NEO-M8N)	
Optional Communication Wi-Fi/Bluetooth/WWAN Wi-Fi/Bluetooth/W	/WAN
Voice Communication Yes Yes	
SMS/Ring Wake Up Yes Yes	
SIM Socket 3 3	
USB 2.0 USB 3.0 x 3 USB 3.0 x 3 USB 2.0 x 3	
COM RS-232/422/485 x 2 RS-232/422/485	x2
CAN bus 2.0B on board. Optional CAN/ OBDII module  CAN bus 2.0B on board. Optional CAN/ OBDII module OBDII module	/
Video Out VGA x 2, LVDS VGA x 2, LVDS	ò
PCI-104 No No	
Ethernet Intel® 10/100/1000 x 2 Intel® 10/100/100	0 x 2
PoE (802.3af,total 60W) 8 8	
Audio Mic-in x 1, Line-out x 2 Mic-in x 1, Line-out	ıt x 2
Mini-PCle Socket (PCle+USB) x 1 (PCle+USB) x USB x 1, mSATA x1 USB x 1, mSATA	
SMBus 1 1	
DC Output 12V (2A) 12V (2A)	
PC: DI x 4, DO x 4 MCU: DI x 2, DO x 2 Analog-In x 1, Speed Frequency x 1  PC: DI x 4, DO x MCU: DI x 2, DO x 2 Analog-In x 1, Speed Frequency x 1	x 1,
Certification CE, FCC Class B, E13 CE, FCC Class B,	E13
Operation Temperature  -30°C to 50°C (w/o internal back up battery)  -30°C to 50°C (w/o internal back up battery)	

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

## Mobile Surveillance - Railway

Model	MALL	MALL	Coming Soon	Coming Soon
	nROK 5300	nROK 5500	VTC 6210-R	VTC 7220-R
CPU	3rd Generation Intel® Core™ i5 3610ME	3rd Generation Intel® Core™ i7-3517UE	Intel <sup>®</sup> Atom™ E3845	4th Generation Intel <sup>®</sup> Core™ i74650U
Chipset	Intel® QM77	Intel® QM77	No	No
Memory	DDR3 1333 SO-DIMM 2GB (up to 16G)	DDR3 1333 SO-DIMM 2GB (up to 16G)	DDR3L 1066/1333 SO-DIMM, 2GB (default) up to 8GB	2 channel DDR3L 1333/1600 SO-DIMM, 2GB (default) up to 16GB
Storage	4 x 2.5" SATA SSD removable Tray (3 x removable + 1 x fixed HDD Tray for optional)	4 x 2.5" SATA SSD removable Tray (3 x removable + 1 x fixed HDD Tray for optional)	2.5" SSD (external)	2.5" SSD SATA 3.0 x 2 (external)
Second Storage	1 x mini-PCle SSD	1 x mini-PCle SSD	1 x CFast slot (accessible)	1 x CFast slot (accessible)
Dimension (mm)	482 x 400 x 88	482 x 400 x 88	260 x 176 x 50 (24/36 VDC) 260 x 176 x TBD (110 VDC)	260 x 206 x 117
Power Input	24/36/72/110 VDC (w/ isolation protection)	24/36/72/110 VDC (w/ isolation protection)	24/36/110 VDC (w/ isolation protection)	24/36/72/110 VDC (w/ isolation protection)
Ignition Control	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting
Power Management	Low voltage protection & configuration via software	Low voltage protection & configuration via software	Low voltage protection	Low voltage protection
GPS	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)
Optional Communication	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/WWAN	Wi-Fi/Bluetooth/WWAN
Voice Communication	No	No	Yes	Yes
SMS/Ring Wake Up	No	No	Yes	Yes
SIM Socket	2	2	3	3
USB 2.0	1 x M12 with 2 x USB2.0 signal 2 x USB 3.0	1 x M12 with 2 x USB2.0 signal 2 x USB 3.0	1 x USB 3.0 Type A 1 x M12 with two USB2.0	2 x USB3.0 Type A 2 x USB2.0 Type A
СОМ	2 x RS232 (isolation) 1 x RS422/485 (isolation)	2 x RS232 (isolation) 1 x RS422/485 (isolation)	2 x RS232 (isolation) 1 x RS422/485 (isolation)	2 x RS232 (isolation) 1 x RS422/485 (isolation)
CAN/OBDII	No	No	CAN bus 2.0B on board	CAN bus 2.0B on board. Optional CAN/OBDII module
Video Out	VGA, HDMI	VGA, HDMI	DP, VGA	DP, VGA. LVDS (internal)
PCI-104	1	1	No	No
Ethernet	2 x 10/100/1000 (M12)	2 x 10/100/1000 (M12)	2 x 10/100/1000 (M12)	2 x 10/100/1000 (M12)
PoE (802.3af,total 60W)	8	8	N/A	N/A
Audio	Mic-in x 1, Line-out x 1 Line In x 1	Mic-in x 1, Line-out x 1 Line in x 1	Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2
Mini-PCle Socket	2 x (PCle+USB), 1 x USB	2 x (PCIe+USB), 1 x USB	(PCIe+USB) x 3	(PCIe+USB) x 3, USB x 1
SMBus	N/A	N/A	N/A	1
DC Output	N/A	N/A	N/A	N/A
GPIO	PC: DI x 4, DO x 4 w/ isolation	PC: DI x 4, DO x 4 w/ isolation	PC: DI x 4, DO x 4 w/ isolation	PC: DI x 4, DO x 4
Certification	CE, FCC Class A, EN50155, EN45545-2	CE, FCC Class A, EN50155, EN45545-2	CE, FCC Class B, EN50155	CE, FCC Class B, EN50155
Operation Temperature	-40°C to 70°C (TX)	-40°C to 70°C (TX)	-40°C to 70°C (TX)	-40°C to 70°C (TX)

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## Fleet Management Boosts Operational Transparency to Raise Fleet Productivity

#### Overview & How It Works

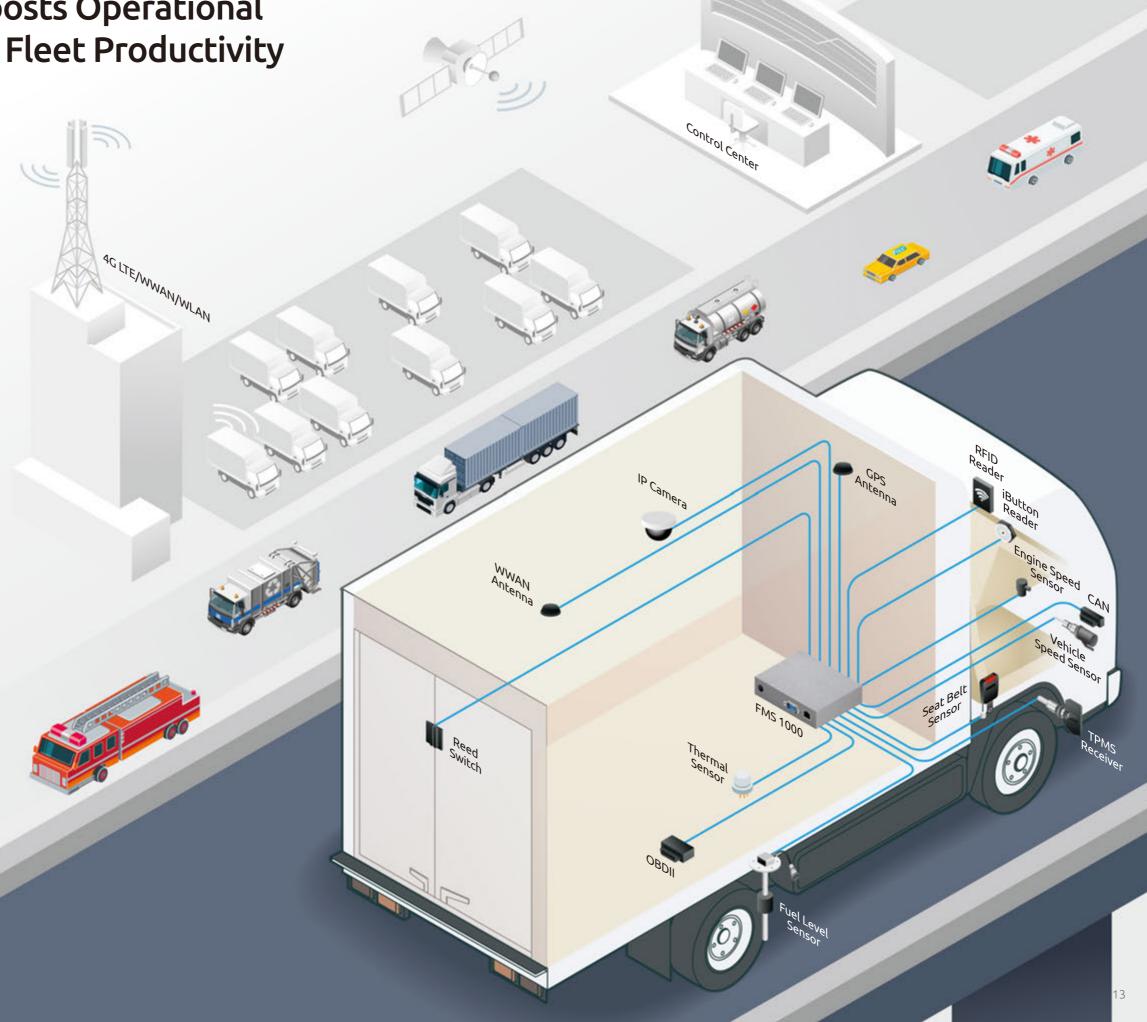
In quest to drive revenue, curb costs, and ensure regulatory and company compliance, commercial fleets are installing fleet management systems on fleet vehicles. Fleet management systems are used as an information hub offering various information ranging from work orders and routing and navigation suggestions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

#### Successful Factors

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

#### NEXCOM's Strengths

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



## Fleet Management

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

1999	1419572	Coming Soon
VTC 7110-D1K	VTC 7120-D1K	FMS 1000
2nd Generation Intel <sup>®</sup> Core™ i7 2610UE	2nd Generation Intel <sup>®</sup> Celeron™ 847E	ARM 32-bit Cortex™-M4 CPU
Intel® QM67	Intel® QM67	No
DDR3 1333MHz SO-DIMM, 2GB (default) up to 4GB	DDR3 1333MHz SO-DIMM, 2GB (default) up to 4GB	PSRAM 1MB
2.5" SSD (external)	2.5" SSD (external)	N/A
1 x CFast (external)	1 x CFast (external)	No
260 x 176 x 73.6	260 x 176 x 73.6	146 x 153 x 56
DC 9V to 36V	DC 9V to 36V	DC 9V to 36V (w/ internal back up battery)
Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting	Yes, w/ 8 level delay time setting
Low voltage protection	Low voltage protection	Low voltage protection
On board uBlox NEO-6Q	On board uBlox NEO-6Q	uBlox NEO-M8N on board
Wi-Fi/Bluetooth/ WWAN	Wi-Fi/Bluetooth/ WWAN	Wi-Fi/WWAN
Yes	Yes	Yes
Yes	Yes	Yes
2	2	1
3	3	No
RS-232 x 1, RS-232 x 3 (w/isolation) RS-422/485 x 1, RS-422/485 x 2 (w/isolation)	RS-232 x 1, RS-232 x 3 (w/isolation) RS-422/485 x 1, RS-422/485 x 2 (w/isolation)	RS-232 x 1
OBDII (SAE J1939 or J1708)	OBDII (SAE J1939 or J1708)	OBDII on board (SAE J1939)
LVDS or DVI-D, VGA	LVDS or DVI-D, VGA	No
1	1	No
Intel <sup>®</sup> 10/100/1000 x 2	Intel <sup>®</sup> 10/100/1000 x 2	10/100 x 1
No	No	No
Mic-in x 2, Line-out x 2	Mic-in x 2, Line-out x 2	Mic-in x 1, Line-out x 1
(PCIe+USB) x1, USB x 1	(PCIe+USB) x1, USB x 1	SPI x 1
1	1	No
12V (4A)	12V (4A)	12V (1A)
In x 4, Out x 4	In x 4, Out x 4	DI x 3, DO x 3 Analog-In x 3 Speed frequency x 1
CE, FCC Class B, e13	CE, FCC Class B, e13	CE, FCC Class B, E13
-30°C to 55°C	-30°C to 55°C	-40°C to 70°C (w/o battery) -20°C to 60°C (w/ battery)

VMC 100	
Resolution  Brightness  400cd/m²  500cd/m²  500cd/m²  400cd/m²  600:1  View Angle  V:50/70 H:70/70  V:60/60 H:70/70  V:50/70 H:70/  Brightness Adjustment Addio  Built-in Speaker x 2  Touch Screen  4-wire antiglare  Auto via light sensor Aluto via light sensor Aluto via light sensor Aduto via light sensor Auto via light sensor N/A  F1-F5 functions key Power button x 1 Brightness/ volume control x 2 Volume control x 2 Volume control x 2 VeSA 75 Front Panel IPS  ingress Protection Pomension (mm)  213 x 145 x 49.3 Intel® Atom™ E640 Intel® Atom™ E34 DRP3. 1600Mths DRP3. 1600Mth	
Brightness 400cd/m² 500cd/m² 400cd/m² Contrast Ratio 600:1 600:1 600:1 View Angle V:50/70 H:70/70 V:60/60 H:70/70 V:50/70 H:70/ Brightness Adjustment Auto via light sensor Adjustment Audio Built-in Speaker x 2 Built-in	/70
Contrast Ratio  View Angle  V: 50/70 H: 70/70  V: 60/60 H: 70/70  V: 50/70 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  V: 50/70 H: 70/70  Auto via light sensor  Brightness, volume control vale wire entiglar  Power button x 1  Brightness, volume control x 2  VESA 75  Intel® Atom me fedu  Intel® At	/70
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 <t< td=""><td>/70</td></t<>	/70
Brightness Adjustment         Auto via light sensor	1/10
Audio       Built-in Speaker x 2       Built-in Speaker x 2       Built-in Speaker x 2       Built-in Speaker x 2         Touch Screen       4-wire antiglare       4-wire antiglare       4-wire antiglare       4-wire antiglare         Camera       N/A       1 (option)       N/A         F1~F5 functions key Power button x 1 Brightness / wolume control x 2 System reset button x 2 System reset button x 2         Mounting       VESA 75       VESA 75       VESA 75         Ingress Protection       Front Panel IP54       IP54       Front Panel IP5         Dimension (mm)       213 x 145 x 49.3       182 x 138 x 50       213 x 145 x 55         CPU       ARM® Cortex™-A8       Intel® Atom™ E640       Intel® Atom™ E3         Chipset       N/A       EG20T       N/A         Memory       512MB DDR3 on board       1GB DDR2 on board       DDR3L 1600MHz DIMM, 2GB (defaupt of 4GB)         Storage Interface       4GB Micro SDHC up to 16GB       mSATA       SATA DOM         Power Input       DC 9V to 36V       DC 6V to 36V       DC 9V to 36V         Ignition Control       Yes w/8 level delay time setting       Low voltage protection       Low voltage on board       Low voltage on board	ensor
Touch Screen  Camera  N/A  N/A  1 (option)  N/A  F1~F5 functions key Power button x 1 Brightness/ volume control x 2 System reset button x 2 Volume control x 2 Volume control x 2 Volume control x 2 System reset button x 1 Brightness control x 2 Volume control	гх 2
Camera       N/A       1 (option)       N/A         F1~F5 functions key Power button x 1 Brightness/ volume control x 2 System reset button x 2 System reset button x 2       Power button x 1 Brightness control x 2 Volume control x 2 Volume control x 2 Volume control x 2 Volume control x 2       F1~F5 functions Power button x 1 Brightness control x 2 Volume control x 2 Volume control x 2 Volume control x 2 Volume control x 2 VESA 75       Front Panel IP54	
The Figure 1 section of the section	
Ingress Protection       Front Panel IP54       IP54       Front Panel IP5         Dimension (mm)       213 x 145 x 49.3       182 x 138 x 50       213 x 145 x 50         CPU       ARM® Cortex™-A8       Intel® Atom™ E640       Intel® Atom™ E3         Chipset       N/A       EG20T       N/A         Memory       512MB DDR3 on board       1GB DDR2 on board       DDR3L 1600MHz DIMM, 2GB (defaup to 4GB         Storage Interface       4GB Micro SDHC up to 16GB       mSATA       SATA DOM         Power Input       DC 9V to 36V       DC 6V to 36V       DC 9V to 36V         Ignition Control       Yes w/ 8 level delay time setting       Yes w/ 8 level delay time setting       Low voltage protection       Low voltage protection       Low voltage protection       Low voltage protection       UBlox NEO-M8N on board       UBlox NEO-M8N on board       UBlox NEO-M8 on board       Wi-Fi/Bluetooth/WMAN       Wi-Fi/Bluetooth/WMAN       Wi-Fi/Bluetooth/WMAN       Wi-Fi/Bluetooth/WMAN         USB       USB2.0 x 1       USB2.0 x 3       USB3.0 x 1       RS232 x 2 RS232 x 1 RS485 x 1       RS485 x 1       RS485 x 1       RS485 x 1       CAN bus 2 0B x 1	x 1 / l x 2
Dimension (mm)       213 x 145 x 49.3       182 x 138 x 50       213 x 145 x 50         CPU       ARM® Cortex™-A8       Intel® Atom™ E640       Intel® Atom™ E3         Chipset       N/A       EG20T       N/A         Memory       512MB DDR3 on board       1GB DDR2 on board       DDR3L 1600MHz DIMM, 2GB (defaup to 4GB         Storage Interface       4GB Micro SDHC up to 16GB       mSATA       SATA DOM         Power Input       DC 9V to 36V       DC 6V to 36V       DC 9V to 36V         Ignition Control       Yes w/ 8 level delay time setting       Yes w/ 8 level delay time setting       Low voltage protection       Low voltage protection       Low voltage protection         Power Management       UBlox NEO-M8N on board       UBlox NEO-M8N on board       UBlox NEO-M8N on board       UBlox NEO-M8 on board         Optional Communication       Wi-Fi/Bluetooth/WMAN       Wi-Fi/Bluetoot WWAN       Wi-Fi/Bluetoot WWAN         USB       USB2.0 x 1       USB2.0 x 3       USB3.0 x 1         COM       RS232 x 1 RS485 x 1       RS485 x 1       RS485 x 1	
CPU  ARM® Cortex™-A8  Intel® Atom™ E640  Intel® Atom™ E3  Chipset  N/A  EG20T  N/A  Memory  512MB DDR3 on board  1GB DDR2 on board  DDR3L 1600MHz DIMM, 2GB (defa up to 4GB  Storage Interface  4GB Micro SDHC up to 16GB  Power Input  DC 9V to 36V  DC 6V to 36V  Ignition Control  Yes w/ 8 level delay time setting  Power Management  Low voltage protection  Protection  UBlox NEO-M8N on board  UBlox NEO-M8N on board  USB2.0 x 1  Wi-Fi/Bluetooth/ WWAN  Wi-Fi/Bluetooth/ WWAN  USB  USB2.0 x 1  CAN bus 2 0B x 1	54
Chipset       N/A       EG20T       N/A         Memory       512MB DDR3 on board on board       1GB DDR2 on board DIMM, 2GB (defaup to 4GB Up to 4GB Up to 4GB Up to 4GB Up to 16GB Up to 36V DC 6V to 36V DC 9V to 36V Up t	50
Memory       512MB DDR3 on board       1GB DDR2 on board       DDR3L 1600MHz DIMM, 2GB (defaup to 4GB up to 36V up to	3825
Storage   4GB Micro SDHC   up to 16GB	
Interface up to 16GB mSAIA SAIADOM  Power Input DC 9V to 36V DC 6V to 36V Pes w/ 8 level delay time setting delay time setting low voltage protection protection uBlox NEO-M8N on board USB USB2.0 x 1 USB2.0 x 3 USB3.0 x 1 RS485 x 1 RS485 x 1 CAN bus 2 0B x 1	ault),
Yes w/ 8 level delay time control       Power Management     Low voltage protection     low voltage protection     Low voltage protection       GPS     uBlox NEO-M8N on board     uBlox 6 on board     uBlox NEO-M8 on board       Optional Communication     Wi-Fi/Bluetooth/WWAN     Wi-Fi/WWAN     Wi-Fi/Bluetooth/WWAN       USB     USB2.0 x 1     USB2.0 x 3     USB3.0 x 1       COM     RS232 x 1 RS485 x 1     RS232 x 2 RS232 x 1 RS485 x 1     RS485 x 1	i
Power	V
Management         protection         protection         protection           GPS         uBlox NEO-M8N on board         uBlox 0 board         uBlox NEO-M8 on board           Optional Communication         Wi-Fi/Bluetooth/WWAN         Wi-Fi/WWAN         Wi-Fi/Bluetooth/WWAN           USB         USB2.0 x 1         USB2.0 x 3         USB3.0 x 1           COM         RS232 x 1 RS485 x 1         RS232 x 2 RS422/485 x 1         RS485 x 1           CAN bus 2 0B x 1         CAN bus 2 0B x 1         CAN bus 2 0B x 1	
Optional Communication         Wi-Fi/Bluetooth/ WWAN         Wi-Fi/WWAN         Wi-Fi/Bluetooth/ WWAN           USB         USB2.0 x 1         USB2.0 x 3         USB3.0 x 1           COM         RS232 x 1 RS485 x 1         RS232 x 2 RS485 x 1         RS485 x 1           CAN bus 2 0B x 1         CAN bus 2 0B x 1         CAN bus 2 0B x 1	
Communication         WWAN         WFF/WWAN         WWAN           USB         USB2.0 x 1         USB2.0 x 3         USB3.0 x 1           COM         RS232 x 1 RS485 x 1         RS232 x 2 RS485 x 1         RS232 x 1 RS485 x 1         RS485 x 1	8N
COM RS232 x 1 RS232 x 2 RS232 x 1 RS485 x 1	th/
RS485 x 1 RS422/485 x 1 RS485 x 1  CAN bus 2 0R x 1  CAN bus 2 0R x 1	
CAN bus 2 OR v 1 CAN bus 2 OR v	
OBDII Module Optional OBDII N/A Optional OBDI	
Ethernet 10/100/1000 x 1 10/100/1000 x 1 10/100/1000 x	x 1
Audio     Mic-in x 1 Line-out x 1     Mic-in x 1 Line-out x 1     Mic-in x 1 Line-out x 1	i
Mini-Card (USB+ UART) x1 (PCle+ USB+ SATA) x1 (PCle+ USB) x (USB+ UART) x	x1
GPIO         In x 3, Out x 3         In x 3, Out x 3         2 x PWM, 2 x analog inpu 3 x GPO, 3 x G	ut,
CE, FCC Class B SAE J1113, SAE J1455, ISO7637-2 EN 60950-1 LVD  CE, FCC Class B, e13 CE, FCC	
Operation -20°C to 70°C -20°C to 50°C -20°C to 60°C	37-2

14 15

Increase Yield and On-site Safety for Field Operation

#### Overview & How It Works

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

#### Successful Factors

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

#### NEXCOM's Strengths

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



Mobile Computing Solutions Product Selection Guide

Mobile Computing Solutions Product Selection Guide

#### Field Operation

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

### **About NEXCOM**

## Reliable Partner for the Intelligent Systems

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

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

deployment enables NEXCOM to offer time-to-market, time-to-solution products and service without compromising cost.

In addition, the service-to-market business model gives NEXCOM core competence to build a strong world-class service network by providing customized service, global logistics, local access, and real-time support. Operating six subsidiaries, from China, Italy, Japan, Taiwan, the United States, to the United Kingdom,

NEXCOM is able to better facilitate customers' requirements as well as closely work with global partners in different regions.

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



Automiation: factory automation (FA), PPC & HMI, machine automation (MA), machine vision
IoT: IoT gateway, industrial wireless solutions
Intelligent System Services: embedded computer, single board computer, computer-on-module, POS, kiosk PPC, ODM/OEM services

IDS Intelligent Digital Security: IP Cam, NVR, mobile server platform

MCS Mobile Computing Solutions: rugged computer devices, rugged mobile computer
Vehicle Telematics Computer: Car PC, train PC

MMS Multimedia Solutions: digital signage

MHI Medical and Healthcare Informatics: total solutions with a variety of medical IT systems

NCS Network and Communication Solutions: network security, VoIP, HPC, telecommunication, storage, switch, industrial firewall

#### Corporate Vision

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

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

#### Corporate Mission

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

#### **Business Strategy**

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

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

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