



## 2026 Mobile Computing Solutions Product Selection Guide



# About NEXCOM

## Mobile Computing Solutions

Founded in 1992, NEXCOM is committed to being your trustworthy partner in building the intelligent business. NEXCOM makes the difference by utilizing its industrial computing experience, a highly talented R&D team, strong world-class ODM services, and rapid support to customers. NEXCOM has worldwide customers from more than 50 countries and we never stop growth with our business partners. As we accelerate towards the future, NEXCOM has been playing an important role in bringing intelligence to transportation.

NEXCOM's Mobile Computing Solutions (MCS) has extended and developed many products for use in AI, 5G, and safety related applications. We're creating a safer working environment and saving operational costs through improvements in logistics for more efficient fleet management. Through the application and development of 5G, a better internet experience can be realized. We support our business partners to further promote edge AI computing for ADAS, AMR, and autonomous driving.

We focus on developing practical technologies, and constant growth brings us many advantages in the automotive sphere:

- Superior power designed for uninterrupted operations
- Smart and effective patented designs, resistant to very extreme environments
- Various communication module options (LoRa, V2X, NB-IoT, LTE, 5G NR, Wi-Fi 6/6E)

- Modular designs for the ease of maintenance
- Customized firmware and specialized ODM hardware solutions

NEXCOM has the passion, hope and dedication to keep moving forward making daily lives better through innovation. NEXCOM is forging ahead into the future and making it a success with our business partners!

# Always Moving Forward





**TAIWAN  
EXCELLENCE  
2022**



**Vehicle Mount Computer**  
VMC 2020



**Railway Computer**  
aROK 5510



**Railway Computer**  
aROK 8110



**TAIWAN  
EXCELLENCE  
2025**



**AI Telematics Computer**  
ATC 3750-IP7-8M

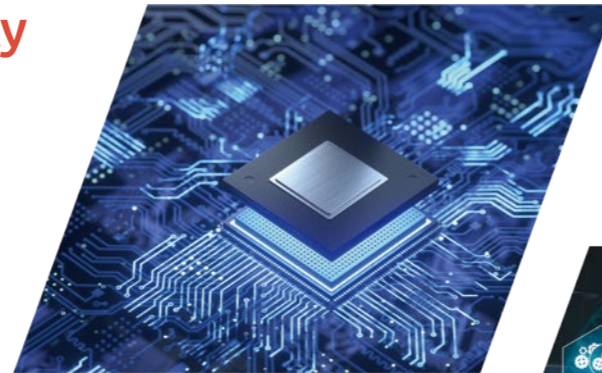


**Backup Battery Unit**  
VTK-SCAP

## Premium Computing Design Capability

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

- RISC platform (NXP i.MX6, i.MX8, Rockchip, TI)
- Intel Atom® platform (Bay Trail, Apollo Lake, Elkhart Lake, Alder Lake-N)
- Intel® Core™ i platform (Core i 8th, 9th, 11th, 12th, 13 th Gen)
- Intel® high-end Xeon® platform
- NVIDIA® Jetson TX2, Xavier™ NX, Orin™ NX, AGX Orin™ integrated
- Over 20 years of experience in designing rugged devices and vehicle/railway computers



## RF Communication Expansion

For the array of wireless usage cases, NEXCOM specializes in RF communication expansion, providing a comprehensive series of proprietary mini-PCIe/M.2 modules, allow users maximum flexibility in optimizing vehicle configurations

- GNSS (RTK, Dead reckoning)
- NB-IoT, 4G LTE, 5G NR
- DSRC/C-V2X, LoRa
- Wi-Fi 6/6E



## Reliability Quality

- Fanless design and IP67 protection for extreme environmental conditions
- IK08 impact resistance rating on external mechanics
- Meets CISPR25 standard
- Vehicle (E-Mark) and railway (EN 50155, EN 45545-2) certifications
- CE EMC (Electromagnetic Compatibility) and FCC conducted and radiated emissions certifications
- Supporting more certifications (Safety, RED, LVD, MIL-STD-810, etc.)

## Software Solutions

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



## OEM/ODM Services

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



## Specialization in AI Technology

- Specialize in NVIDIA® (GeForce/Quadro, PCIe x16/MXM, Jetson), Google Coral (M.2, mini-PCIe), and Hailo AI accelerators (M.2, mini-PCIe, onboard)
- Support partners to drive deeper customer engagement in AI + mobile edge computing applications
- Provide edge processing and AI capabilities to software partners/developers to innovate and create new business models

# Our Product Portfolio



## Product Series

- Edge AI Telematics Solution
- Vehicle Telematics Computer
- Railway Computer
- Vehicle Mount Computer
- Modular Vehicle Computer System
- Vehicle Mount Display
- In-Vehicle Networking
- In-Vehicle HDMI® Extender over IP



### ATC Series

#### Advanced Telematics Computer w/ GPU

- Designed for AI applications: ANPR, video analytics
- Selected NVIDIA® GPU, MXM, Google TPU, and Hailo module add-ons
- 5G/LTE, Wi-Fi 6/6E, BT, CAN/OBD, GNSS + DR, PoE, and multi-SIM integration



### VTC Series

#### In-Vehicle Telematics Computer

- General purpose, high-performance telematics computer
- 5G/LTE, Wi-Fi 6/6E, BT, CAN/OBD, GNSS + DR, PoE, and multi-SIM integration
- IP65/67 ingress protection
- Power management
- Backup battery kit



### nROK/aROK/vROK Series

#### Railway Computer

- Box/Panel PC with fanless and rugged design
- 5G/LTE, Wi-Fi 6/6E, BT, CAN/OBD, GNSS + DR, PoE, and multi-SIM integration
- Optional isolated 24~110VDC power input
- EN 50155 & EN 45545-2 certifications



### VMC Series

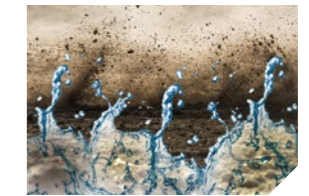
#### Rugged Vehicle Terminal

- Driver's operational display
- Designed for outdoor applications
- Full IP65 certification
- IK08-rated screens
- Vibration-, shock-, dust-, and water-resistant
- 5G/LTE, Wi-Fi 6/6E, CAN/OBD, GNSS + DR



### PoE/10G LAN and RTSP Solutions

- Extends Full HD HDMI® over IP for Passenger Infotainment Systems
- Design for video surveillance and AI video analytics applications
- Comply with 802.3af/at with RJ45 or M12 connector (D, X-coded)
- Mobile PoE switch and 10G PoE cards



### Premium Solutions

- IP65/IP67 protection against water and dust
- IK ratings protection provided by panel PC against external mechanical impacts to display
- Performing conformal coating protection against moisture, dust and chemicals




# 2026 New Products



## ATC 3560 Series

**NVIDIA Jetson Orin Nano™/Orin™ NX IP67 Edge AI Computer**


- Up to 67/157 INT8 Sparse TOPS compute in Super Mode
- 4-port GbE PoE+ for IP CAM/LiDAR sensors
- Fanless/fan kit design with full IP67 rating
- NEXCOM Acceleration Linux (NAL) OS w/ JetPack 6.2 integrated
- CE/FCC UKCA, E-mark, EN 50155 & EN 45545-2 certified



## ATC 3561-NA4C/NX4CF

**NVIDIA Jetson Orin Nano™/Orin™ NX Solution Accelerated Edge AI Computer**


- Up to 67/157 TOPS AI performance in Super Mode
- The rugged, palm size, and fanless/fan kit design
- 4 x GbE PoE+ port for IP CAM/LiDAR sensors
- Expandable for GNSS, LTE/5G NR & Wi-Fi 5/6
- NEXCOM Acceleration Linux (NAL) integrated w/ JetPack 6.2
- CE/FCC, UKCA, and E-mark certified



## ATC 3562-IP7-NA4M/IP7-NX4MF

**NVIDIA Jetson Orin Nano™/Orin™ NX IP67 Edge AI Computer**


- Up to 67/157 TOPS AI performance in Super Mode
- The rugged, palm size, and fanless/fan kit design with full IP67 rating
- 4-CH GMSL2 & 2 x GbE for camera & LiDAR sensors
- Wide range operating temperature of -25°C~65°C
- Expandable for GNSS, LTE/5G NR & Wi-Fi 5/6
- CE/FCC UKCA, E-mark, EN 50155 & EN 45545-2 certified



## ATC 3563 Series

**NVIDIA Jetson Orin Nano™/Orin™ NX Solution Accelerated Edge AI Computer**


- Up to 67/157 TOPS AI performance in Super Mode
- The rugged, compact with fanless design
- Wide range operating temperature of -25°C~60°C (fanless in Super mode)
- 8 x GbE PoE+ (120W in total) for IP CAM & LiDAR sensors
- Expandable for GNSS, LTE/5G NR & Wi-Fi 5/6
- CE/FCC UKCA, E-mark, EN 50155 & EN 45545-2 certified



## VMC 2030

**8" Rugged All-In-One Vehicle Computer with PCAP Touchscreen and IP65**


- Built-in Intel Atom® x7433RE quad-core processor
- Sunlight-readable LCD panel with 1,000-nit brightness
- 3mm thick reinforced touchscreen for added durability
- Isolated CAN FD for reliable communication
- Wide range DC 9V~60V power input for flexible installation



## ATC 8120-C4F/aROK 8120-AC4F

**Intel® Core™ Processor (Series 2) with AI Inference Accelerator**


- Powered by AI inference accelerator for in-vehicle applications
- Configurable for up to 600W discrete graphics card
- Support up to total 4 PCIe 5.0/4.0 x16/x8/x4 slots for expansion
- RAID 0/1/5/10 configurable for data secure
- DC 9V~36V input with ignition control & OCP/UVP (ATC 8120-C4F)
- DC 24V non-isolated power input with ignition control (aROK 8120-AC4F)
- CE/FCC, UKCA, and E-mark certified (ATC 8120-C4F)
- CE/FCC, UKCA, EN 50155, and EN 45545-2 certified (aROK 8120-AC4F)



## rROK 5520 Series

**Intel® Core™ Processors (Series 2) with Rich Storage, Powerful Platform for AI Application and Storage Server**


- Fanless, rackmount platform design
- 8 x 2.5" SSD for data integrity (compatible with 9mm disk)
- 1 x 2.5GbE LAN and 7 x 1GbE PoE 802.3af/at/bt (one port for bt), total 80W
- Wide voltage input DC 24V~110V (w/ isolation)
- Optional MXM graphics module or discrete graphics card support
- CE/FCC, UKCA, EN 50155, and EN 45545-2 certified



## VTC 7280 Series

**Intel® Core™ Ultra Processor Fanless AI Powered Vehicle Computer**


- Fanless, compact and rugged design
- 5 x 2.5GbE PoE, one port supporting PoE++ (VTC 7280-7C5/-5C5)
- Expandable to 2 x WWAN and 2 x WLAN for enhanced mobile router performance
- DC 9V~36V input with ignition control & OCP/OVP
- Wide range operating temperature of -40°C~60°C



## nROK 7280 Series

**Intel® Core™ Ultra Processor Fanless, IP 67 AI In-Vehicle/Rail Computer**

- Powered by Intel® Core™ Ultra processor, up to 26 TOPS AI computing power
- 5 x 2.5GbE M12 X-coded PoE, one port supporting PoE++ (IEEE 802.3bt)
- Expandable to 2 x WWAN and 2 x WLAN for enhanced mobile router performance
- Wide range operating temperature of -40°C~60°C/EN 50155 (OT2)
- CE, FCC, UKCA, E-mark, EN 50155, and EN 45545-2 certified



## VTC 1040/nROK 1040

**Intel Atom® x7213RE Processor Fanless In-Vehicle/Rail Computer**

- Compact and fanless design
- u-blox NEO-M9N onboard
- 4 x SIM card for WWAN modules
- Smart power management w/ ignition control and low voltage protection
- CE, FCC, E13 mark/EN 50155 Class OT4 certified



# Industrial Edge AI Telematics Computer



## ATC/aROK Series Brief Product Introduction

### Product Description

AI has become an essential component of automated vehicle technologies. With built-in state of the art AI accelerator, ATC and aROK series are expertise for edge AI in-vehicle/railway applications. Besides, ATC/

aROK features with extreme wide-range operating temperature, military standard anti-vibration/shock and dust/water proof IP67 rating making it constantly perform 100% workload in harsh environments.

-  NVIDIA® Jetson SOM, Quadro MXM/PCIe x16 AI accelerator support
-  5G/LTE, Wi-Fi 6/6E, BT, PoE, CAN function support

-  EN 50155 & E-Mark certification
-  Optional railway isolated power input

### Application

**ATC:** ADAS, ANPR, AMR, autonomous driving

**aROK:** Pantograph inspection, track obstacle inspection, traffic sign recognition

### Product Highlight



Edge AI, inference accelerator



Sturdy system with securing cards/SOM for OHV and train



Strong ingress protection, IP65/IP67



MIPI SerDes solution support





**aROK 5510**




**rROK 5520-WI**

Coming soon




Model	aROK 5510	rROK 5520-WI
<b>System</b>		
CPU	9/8th Gen Intel® Core™ i/Xeon®/Celeron®	Intel® Bartlett Lake S Core™
Chipset	Intel® C246	Intel® R860E
Fan/Fanless	Fan (fan kit pre-installed)	Fanless
Memory	4 x DDR4 2666 SO-DIMM, up to 128GB, 32GB per DIMM	2 x DDR5 5600 SO-DIMM, up to 96GB, 48GB per DIMM
Storage	6 x 2.5" SATA SSD (removable, 9.5mm)	4 x 2.5" SATA SSD (removable, 9.5mm)
Second Storage	- 1 x mSATA - 1 x M.2 Key M NVMe SSD 2280/2242/2260 (PCIe 3.0 x4) - 1 x Removable SD 3.0	1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)
GPU/VPU/TPU Coprocessor	1 x PCIe 3.0 x16 lane for optional NVIDIA® Graphics card (100W)	NVIDIA Quadro® MXM module (RTX™ 2000 Ada Generation), optional
Video Output	1 x VGA, 1 x HDMI®	2 x HDMI®
Audio	1 x Mic in, 2 x Line out	1 x Mic in, 1 x Line out, 1 x Line in
Ethernet	- 2 x Intel® 1GbE (M12 X-coded) - 2 x 10GbE SFP+ card (optional)	2 x Intel® 2.5GbE (M12 X-coded)
<b>I/O Interface</b>		
PoE	4 x M12 1GbE independent (802.3af/at), total 60W (optional)	N/A
USB	2 x USB 2.0, 3 x USB 3.2 Gen 2, 1 x USB 3.2 Gen 1	6 x USB 3.2 Gen 2 w/ lockable hole
COM	2 x RS-232 full, RS-232 full/422/485 (w/ isolation)	3 x RS-232 full/422/485 (w/ isolation)
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN	1 x CAN bus 2.0B (w/ isolation)	2 x CAN FD (w/ isolation)
SIM Slot	8 (up to 10 BOM option, eSIM BOM option)	16 (eSIM BOM option)
DC Output	N/A	N/A
MIPI Interface	N/A	N/A
<b>Expansion</b>		
WWAN	4 (BOM option up to 5)	4
Mini PCIe Slot	- 1 x (USB 2.0, PCIe 3.0) - 1 x (USB 2.0, PCIe 3.0), BOM option: 1 x Mini PCIe (USB 2.0) for LTE - 1 x (USB 2.0) for LTE, BOM option: 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	2 x (USB 2.0, PCIe 4.0)
M.2 Slot	3 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	- 4 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 3030 (PCIe 4.0 x2, USB 2.0)
Expansion PCIe Slot	1 x PCIe 3.0 x16	1 x Riser card for MXM, optional
GNSS	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-07 module (u-blox NEO-M9N)
<b>Power</b>		
Power Input	DC 24V/110V (w/ isolation)	DC 24V~110V (w/ isolation)
<b>Environment</b>		
Ingress Protection	N/A	N/A
Certifications	CE, FCC Class A, UKCA, EN 50155 (OT4)	CE, FCC Class A, UKCA, EN 50155 (OT4), EN 45545-2, LVD
Operating Temperature	-40°C~70°C	-40°C~70°C
<b>Others</b>		
TPM	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)
Dimensions (mm)	483.0 x 400.0 x 95.0	483.0 x 401.2 x 88.0




# Industrial Edge AI Telematics Computer

	Coming soon		
			
Model	rROK 5520-WIC7S	rROK 5520-WIC7SF	
System	CPU	Intel® Bartlett Lake S Core™	Intel® Bartlett Lake S Core™
	Chipset	Intel® R860E	Intel® R860E
	Fan/Fanless	Fanless	Fan (fan kit pre-installed)
	Memory	2 x DDR5 5600 SO-DIMM, up to 96GB, 48GB per DIMM	2 x DDR5 5600 SO-DIMM, up to 96GB, 48GB per DIMM
	Storage	8 x 2.5" SATA SSD (removable, 9.5mm)	8 x 2.5" SATA SSD (removable, 9.5mm)
	Second Storage	1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)	1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)
	GPU/VPU/TPU Coprocessor	NVIDIA Quadro® MXM module (RTX™ 2000 Ada Generation), optional	NVIDIA Quadro® MXM module (RTX™ 3500/5000 Ada Generation), RTX™ 5000 Ada, optional
	Video Output	2 x HDMI®	2 x HDMI®
	Audio	1 x Mic in, 1 x Line out, 1 x Line in	1 x Mic in, 1 x Line out, 1 x Line in
	Ethernet	1 x Intel® 2.5GbE (M12 X-coded)	1 x Intel® 2.5GbE (M12 X-coded)
I/O Interface	PoE	7 x GbE switching-type (802.3af/at/bt, one port for bt), total 80W (M12 X-coded)	7 x GbE switching-type (802.3af/at/bt, one port for bt), total 80W (M12 X-coded)
	USB	6 x USB 3.2 Gen 2 w/ lockable hole	6 x USB 3.2 Gen 2 w/ lockable hole
	COM	3 x RS-232 full/422/485 (w/ isolation)	3 x RS-232 full/422/485 (w/ isolation)
	DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
	CAN	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)
	SIM Slot	16 (eSIM BOM option)	16 (eSIM BOM option)
	DC Output	N/A	N/A
	MIPI Interface	N/A	N/A
	WWAN	4	4
	Mini PCIe Slot	2 x (USB 2.0, PCIe 4.0)	2 x (USB 2.0, PCIe 4.0)
Expansion	M.2 Slot	- 4 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 3030 (PCIe 4.0 x2, USB 2.0)	- 4 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 3030 (PCIe 4.0 x2, USB 2.0)
	Expansion PCIe Slot	1 x Riser card for MXM, optional	1 x PCIe 5.0 x16 or 1 x Riser card for MXM
	GNSS	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)
	Power	DC 24V~110V (w/ isolation)	DC 24V~110V (w/ isolation)
Environment	Ingress Protection	N/A	N/A
	Certifications	CE, FCC Class A, UKCA, EN 50155 (OT4), EN 45545-2, LVD	CE, FCC Class A, UKCA, EN 50155 (OT3, w/ MXM), EN 45545-2, LVD
	Operating Temperature	-40°C~70°C	-25°C~70°C (w/ MXM) -40°C~70°C (w/o MXM)
Others	TPM	TPM 2.0	TPM 2.0
	OS	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)
	Dimensions (mm)	483.0 x 401.2 x 88.0	483.0 x 401.2 x 88.0

	Coming soon			
				
Model	aROK 8020-A/F	aROK 8020-AC4S/-AC4SF	aROK 8020-AC8S/-AC8SF	
System	CPU	Intel® Panther Lake-H, Core Ultra 5/9	Intel® Panther Lake-H, Core Ultra 5/9	Intel® Panther Lake-H, Core Ultra 5/9
	Chipset	N/A	N/A	N/A
	Fan/Fanless	Fan/Fanless	Fan/Fanless	Fan/Fanless
	Memory	2 x DDR5 7200 SO-DIMM, up to 128GB, 64GB per DIMM	2 x DDR5 7200 SO-DIMM, up to 128GB, 64GB per DIMM	2 x DDR5 7200 SO-DIMM, up to 128GB, 64GB per DIMM
	Storage	2 x M.2 key M 2280 NVMe SSD (PCIe 4.0 x1 each) (removable, 15mm)	2 x M.2 key M 2280 NVMe SSD (PCIe 4.0 x1 each) (removable, 15 mm)	2 x M.2 key M 2280 NVMe SSD (PCIe 4.0 x1 each) (removable, 15mm)
	Second Storage	1 x M.2 Key M 2280 NVMe SSD (PCIe 5.0 x2)	1 x M.2 Key M 2280 NVMe SSD (PCIe 5.0 x2)	1 x M.2 Key M 2280 NVMe SSD (PCIe 5.0 x2)
	GPU/VPU/TPU Coprocessor	NVIDIA RTX™ MXM module	NVIDIA RTX™ MXM module	NVIDIA RTX™ MXM module
	Video Output	1 x VGA, 1 x HDMI®, 4 x DP from MXM	1 x VGA, 1 x HDMI®, 4 x DP from MXM	1 x VGA, 1 x HDMI®, 4 x DP from MXM
	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
	Ethernet	2 x Intel® 2.5GbE (M12 X-coded)	1 x Intel® 2.5GbE (M12 X-coded)	1 x Intel® 2.5GbE (M12 X-coded)
I/O Interface	PoE	N/A	4 x GbE switching-type (802.3af/at), total 60W (M12 X-coded)	8 (4+4) x GbE switching-type (802.3af/at), total 120W (M12 X-coded)
	USB	3 x USB 3.2 Gen 2, 1 x USB 2.0	3 x USB 3.2 Gen 2, 1 x USB 2.0	3 x USB 3.2 Gen 2, 1 x USB 2.0
	COM	2 x RS-232 full, 2 x RS-232 full/422/485 (w/ isolation)	2 x RS-232 full, 2 x RS-232 full/422/485 (w/ isolation)	2 x RS-232 full, 2 x RS-232 full/422/485 (w/ isolation)
	DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
	CAN	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)
	SIM Slot	4 (eSIM BOM option)	4 (eSIM BOM option)	4 (eSIM BOM option)
	DC Output	DC 12V/2A	DC 12V/2A	DC 12V/2A
	MIPI Interface	N/A	N/A	N/A
	WWAN	2	2	2
	Mini PCIe Slot	1 x (USB 2.0, PCIe 4.0)	1 x (USB 2.0, PCIe 4.0)	1 x (USB 2.0, PCIe 4.0)
Expansion	M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)
	Expansion PCIe Slot	N/A	N/A	N/A
	GNSS	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)
	Power	DC 24V (w/o isolation)	DC 24V (w/o isolation)	DC 24V (w/o isolation)
Environment	Ingress Protection	N/A	N/A	N/A
	Certifications	CE, FCC Class A, UKCA, E13, EN 50155 (OT3)	CE, FCC Class A, UKCA, E13, EN 50155 (OT 2)	CE, FCC Class A, UKCA, E13, EN 50155 (OT 2)
	Operating Temperature	-35°C~70°C (35W CPU w/ MXM < 60W, fanless) -35°C~70°C (65W CPU or MXM > 60W, w/ fan kit)	-35°C~65°C (35W CPU w/ MXM < 60W, fanless) -35°C~65°C (65W CPU or MXM > 60W, w/fan kit)	-35°C~65°C (35W CPU w/ MXM < 60W, fanless) -35°C~65°C (65W CPU or MXM > 60W, w/fan kit)
Others	TPM	TPM 2.0	TPM 2.0	TPM 2.0
	OS	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)
	Dimensions (mm)	260.0 x 210.0 x 85.0 263.6 x 223.5 x 114.0 (w/ fan kit)	260.0 x 210.0 x 85.0 263.6 x 223.5 x 114.0 (w/ fan kit)	260.0 x 210.0 x 85.0 263.6 x 223.5 x 114.0 (w/ fan kit)




# Industrial Edge AI Telematics Computer




		
	aROK 8110-A	aROK 8120-AC4F
Model		
CPU	9/8th Gen Intel® Core™ i/Xeon®	Intel® Core™ 7/5/3 processor
Chipset	Intel® C246	Intel® R860E
Fan/Fanless	Fan (fan kit pre-installed)	Fan (fan kit pre-installed)
Memory	2 x DDR4 2666 SO-DIMM, up to 64GB, 32GB per DIMM	2 x DDR5 5600 SO-DIMM, up to 96GB, 48GB per DIMM
Storage	4 x 2.5" SATA 3.0 SSD/HDD (removable, 15mm), or 3 x 2.5" SATA 3.0 SSD/HDD + 2 x M.2 Key M 2280/2242/2260 NVMe SSD (PCIe 3.0 x2), or 3 x 2.5" SATA 3.0 SSD/HDD + 1 x U.2 NVMe SSD (PCIe 3.0 x2)	4 x 2.5" SATA 3.0 SSD/HDD (removable, 15mm)
Second Storage	1 x CFAST slot (top)	1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)
GPU/VPU/TPU Coprocessor	One PCIe 3.0 x16 lane for optional NVIDIA® Graphics card (350W)	One PCIe 5.0 x16 lane for optional NVIDIA® Graphics card (600W)
Video Output	1 x VGA, 1 x HDMI®	1 x VGA, 2 x HDMI®
Audio	1 x Mic in, 2 x Line out	1 x Mic in, 1 x Line out, 1 x Line in (wafer)
Ethernet	2 x Intel® 1GbE (M12 X-coded)	1 x Intel® 1GbE (M12 X-coded)
PoE	Up to 3 x GEM640 card (optional), each card with 4 x M12 Intel® GbE (w/ 802.3af/at), total 60W + 60W + 60W	4 x GbE M12 X-coded (802.3af/at, one-port w/ 802.3af/at/bt), total 80W
USB	2 x USB 2.0, 3 x USB 3.2 Gen 2, 1 x USB 2.0	6 x USB 3.2 Gen 2, 2 x USB 2.0 (wafer)
COM	4 x RS-232 full/422/485 (w/ isolation)	2 x RS-232 full, 2 x RS-232 full/422/485
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN	1 x CAN bus 2.0B (w/ isolation)	2 x CAN FD (w/ isolation)
SIM Slot	4 (eSIM BOM option)	6
DC Output	N/A	DC 12V/3A
MIPI Interface	N/A	N/A
WWAN	2	2+1
Mini PCIe Slot	- 1 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0) for LTE, BOM option: 1 x M.2 Key B 3042 (USB 2.0) for LTE	1 x (USB 2.0, USB 3.2 gen 2, PCIe 3.0 x2)
M.2 Slot	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	- 2 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 3030 (PCIe 3.0, USB 2.0)
Expansion PCIe Slot	1 x PCIe 3.0 x16, 3 x PCIe 3.0 x4	1 x PCIe 5.0 x16, 2 x PCIe 4.0 x8, 1 x PCIe 4.0 x4
GNSS	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-07 module (u-blox NEO-M9N)
Power Input	DC 24/36V (w/o isolation)	DC 24V (w/o isolation)
Ingress Protection	N/A	N/A
Certifications	CE, FCC Class A, UKCA, EN 50155 (OT4)	CE, FCC Class A, UKCA, EN 50155 (OT2), EN 45545-2
Operating Temperature	-40°C~70°C	-40°C~65°C
TPM	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)
Dimensions (mm)	215.0 x 205.0 x 385.0	296.0 x 220.0 x 435.0

		
	ATC 8010	ATC 8010-F
Model		
CPU	9/8th Gen Intel® Core™ i/Xeon®/Celeron®	9/8th Gen Intel® Core™ i/Xeon®/Celeron®
Chipset	Intel® Q370	Intel® Q370
Fan/Fanless	Fanless	Fan (fan kit pre-installed)
Memory	2 x DDR4 2400/2666 SO-DIMM, up to 64GB, 32GB per DIMM	2 x DDR4 2400/2666 SO-DIMM, up to 64GB, 32GB per DIMM
Storage	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)
Second Storage	2 x mSATA (occupies Mini PCIe slot)	2 x mSATA (occupies Mini PCIe slot)
GPU/VPU/TPU Coprocessor	NVIDIA Quadro® MXM module	NVIDIA Quadro® MXM module
Video Output	1 x VGA, *5 x HDMI®, 1 x ultraONE+	1 x VGA, *5 x HDMI®, 1 x ultraONE+
Audio	1 x Mic in, 1 x Line out	1 x Mic in, 1 x Line out
Ethernet	1 x Intel® 1GbE	1 x Intel® 1GbE
PoE	8 x Independent Intel® 1GbE (w/ 802.3af/at), total 60W	8 x Independent Intel® 1GbE (w/ 802.3af/at), total 60W
USB	6 x USB 3.2 Gen 2	6 x USB 3.2 Gen 2
COM	2 x RS-232 full, 1 x RS-232 full/422/485	2 x RS-232 full, 1 x RS-232 full/422/485
DIO	4 x DI, 4 x DO	4 x DI, 4 x DO
CAN	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)
SIM Slot	3 (eSIM BOM option)	3 (eSIM BOM option)
DC Output	12V/2A	12V/2A
MIPI Interface	N/A	N/A
WWAN	2	2
Mini PCIe Slot	- 1 x (USB 2.0) for LTE - 1 x (USB 2.0, PCIe 3.0/SATA 3.0) - 1 x (USB 2.0, PCIe 3.0/SATA 3.0)	- 1 x (USB 2.0) for LTE - 1 x (USB 2.0, PCIe 3.0/SATA 3.0) - 1 x (USB 2.0, PCIe 3.0/SATA 3.0)
M.2 Slot	- 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	- 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G
Expansion PCIe Slot	N/A	N/A
GNSS	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)
Power Input	DC 9V~36V	DC 9V~36V
Ingress Protection	N/A	N/A
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	-30°C~60°C	-30°C~60°C
TPM	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)
Dimensions (mm)	260.0 x 259.7 x 90.1	260.0 x 259.7 x 99.0 (w/ fan kit)




\* Based on different MXM for ATC 8010 and ATC 8010-F, the quantity will be different.




# Industrial Edge AI Telematics Computer

Model	 <b>Coming soon</b> <b>ATC 8020-F</b>	 <b>Coming soon</b> <b>ATC 8020-C4S/-C4SF</b>	 <b>Coming soon</b> <b>ATC 8020-C8S/-C8SF</b>
CPU	Intel® Panther Lake-H, Core Ultra 5/9	Intel® Panther Lake-H, Core Ultra 5/9	Intel® Panther Lake-H, Core Ultra 5/9
Chipset	N/A	N/A	N/A
Fan/Fanless	Fan/Fanless	Fan/Fanless	Fan/Fanless
Memory	2 x DDR5 7200 SO-DIMM, up to 128GB, 64GB per DIMM	2 x DDR5 7200 SO-DIMM, up to 128GB, 64GB per DIMM	2 x DDR5 7200 SO-DIMM, up to 128GB, 64GB per DIMM
Storage	2 x M.2 key M 2280 NVMe SSD (PCIe4.0 x1 each) (removable, 15mm)	2 x M.2 key M 2280 NVMe SSD (PCIe4.0 x1 each) (removable, 15mm)	2 x M.2 key M 2280 NVMe SSD (PCIe4.0 x1 each) (removable, 15mm)
Second Storage	1 x M.2 Key M 2280 NVMe SSD (PCIe 5.0 x2)	1 x M.2 Key M 2280 NVMe SSD (PCIe 5.0 x2)	1 x M.2 Key M 2280 NVMe SSD (PCIe 5.0 x2)
GPU/VPU/TPU Coprocessor	NVIDIA RTX™ MXM module	NVIDIA RTX™ MXM module	NVIDIA RTX™ MXM module
Video Output	1 x VGA, 1 x HDMI®, 4 x DP from MXM	1 x VGA, 1 x HDMI®, 4 x DP from MXM	1 x VGA, 1 x HDMI®, 4 x DP from MXM
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
Ethernet	2 x Intel® 2.5GbE	2 x Intel® 2.5GbE	2 x Intel® 2.5GbE
PoE	N/A	4 x GbE switching-type (802.3af/at), total 60W	8 (4 + 4) x GbE switching-type (802.3af/at), total 120W
USB	3 x USB 3.2 Gen 2, 1 x USB 2.0	3 x USB 3.2 Gen 2, 1 x USB 2.0	3 x USB 3.2 Gen 2, 1 x USB 2.0
COM	2 x RS-232 full, 2 x RS-232 full/422/485	2 x RS-232 full, 2 x RS-232 full/422/485	2 x RS-232 full, 2 x RS-232 full/422/485
DIO	4 x DI, 4 x DO	4 x DI, 4 x DO	4 x DI, 4 x DO
CAN	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)
SIM Slot	4 (eSIM BOM option)	4 (eSIM BOM option)	4 (eSIM BOM option)
DC Output	DC 12V/2A	DC 12V/2A	DC 12V/2A
MIPI Interface	N/A	N/A	N/A
WWAN	2	2	2
Mini PCIe Slot	1 x (USB 2.0, PCIe 4.0)	1 x (USB 2.0, PCIe 4.0)	1 x (USB 2.0, PCIe 4.0)
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)
Expansion PCIe Slot	N/A	N/A	N/A
GNSS	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)
Power	Power Input: DC 9V~36V	Power Input: DC 9V~36V	Power Input: DC 9V~36V
Ingress Protection	N/A	N/A	N/A
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	-35°C~70°C (35W CPU w/ MXM < 60W, fanless) -35°C~70°C (65W CPU or MXM > 60W, w/fan kit)	-35°C~70°C (35W CPU w/ MXM < 60W, fanless) -35°C~70°C (65W CPU or MXM > 60W, w/fan kit)	-35°C~70°C (35W CPU w/ MXM < 60W, fanless) -35°C~70°C (65W CPU or MXM > 60W, w/fan kit)
TPM	TPM 2.0	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)
Dimensions (mm)	260.0 x 210.0 x 85.0 260.0 x 223.5 x 114.0 (w/ fan kit)	260.0 x 210.0 x 85.0 260.0 x 223.5 x 114.0 (w/ fan kit)	260.0 x 210.0 x 85.0 260.0 x 223.5 x 114.0 (w/ fan kit)




Model	 <b>ATC 8110</b>	 <b>ATC 8110-F</b>	 <b>NEW</b> <b>ATC 8120-C4F</b>
CPU	9/8th Gen Intel® Core™ i/Pentium®/Celeron®/Xeon®	9/8th Gen Intel® Core™ i/Pentium®/Celeron®/Xeon®	Intel® Core™ 7/5/3 processor
Chipset	Intel® C246	Intel® C246	Intel® R860E
Fan/Fanless	Fanless	Fan (fan kit pre-installed)	Fan (fan kit pre-installed)
Memory	2 x DDR4 2400/2666 SO-DIMM, up to 64GB, 32GB per DIMM	2 x DDR4 2400/2666 SO-DIMM, up to 64GB, 32GB per DIMM	2 x DDR5 5600 SO-DIMM, up to 48GB + 48GB
Storage	3 x 2.5" SATA 3.0 SSD/HDD (removable, 15mm), or 2 x 2.5" SATA 3.0 SSD/HDD + 1 x 2.5" U.2/NVMe M.2 2280	3 x 2.5" SATA 3.0 SSD/HDD (removable, 15mm) or 2 x 2.5" SATA 3.0 SSD/HDD + 1 x 2.5" U.2/NVMe M.2 2280	4 x 2.5" SATA 3.0 SSD/HDD (removable, 15mm)
Second Storage	1 x CFast slot (top)	1 x CFast slot (top)	1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)
GPU/VPU/TPU Coprocessor	One PCIe 3.0 x16 lane for optional NVIDIA® Graphics card (350W)	One PCIe 3.0 x16 lane for optional NVIDIA® Graphics card (350W)	One PCIe 5.0 x16 lane for optional NVIDIA® Graphics card (600W)
Video Output	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®	1 x VGA, 2 x HDMI®
Audio	1 x Mic in, 1 x Line out	2 x Mic in, 2 x Line out	1 x Mic in, 1 x Line out, 1 x Line in (wafer)
Ethernet	2 x Intel® 1GbE	2 x Intel® 1GbE	1 x Intel® 1GbE
PoE	N/A	N/A	4 x GbE (802.3af/at, one-port w/ 802.3at/at/bt), total 80W
USB	5 x USB 3.2 Gen 2, 1 x USB 2.0	5 x USB 3.2 Gen 2, 1 x USB 2.0	6 x USB 3.2 Gen 2, 2 x USB2.0 (wafer)
COM	4 x RS-232 full/422/485	4 x RS-232 full/422/485	2 x RS-232 full, 2 x RS-232 full/422/485
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)	2 x CAN FD (w/ isolation)
SIM Slot	4 (eSIM BOM option)	4 (eSIM BOM option)	6
DC Output	12V/2A	12V/2A	DC 12V/3A
MIPI Interface	N/A	N/A	N/A
WWAN	2	2	2+1
Mini PCIe Slot	- 1 x (USB 2.0) for LTE - 1 x (USB 2.0, PCIe 2.0)	- 1 x (USB 2.0) for LTE - 1 x (USB 2.0, PCIe 2.0)	- 1 x (USB 2.0, USB 3.2 gen 2, PCIe 3.0 x2)
M.2 Slot	1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen1) for LTE/5G	1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen1) for LTE/5G	- 2 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 3030 Key E (PCIe 3.0, USB 2.0)
Expansion PCIe Slot	- 1 x PCIe 3.0 x16, - 1 x PCIe 3.0 x4 + proprietary - 1 x PCIe 3.0 x4	- 1 x PCIe 3.0 x16, - 1 x PCIe 3.0 x4 + proprietary - 1 x PCIe 3.0 x4	- 1 x PCIe 5.0 x16 - 2 x PCIe 4.0 x8 - 1 x PCIe 4.0 x4
GNSS	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-07 module (u-blox NEO-M9N)
Power	Power Input: DC 9V~36V	Power Input: DC 9V~36V	Power Input: DC 9V~36V
Ingress Protection	N/A	N/A	N/A
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	-30°C~60°C	-30°C~60°C	-40°C~70°C (w/o discrete graphics card)
TPM	TPM 2.0	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)
Dimensions (mm)	207.4 x 176.0 x 350.0	207.4 x 176.0 x 350.0 (w/ fan kit)	230.0 x 206.0 x 435.0




# Industrial Edge AI Telematics Computer

Model	 <b>NEW</b>	 <b>NEW</b>	 <b>NEW</b>
	<b>ATC 3530-IP7-4C</b>	<b>ATC 3560-IP7-NA4C-8</b>	<b>ATC 3560-IP7-NX4C/-16</b>
<b>System</b>			
CPU	NVIDIA Jetson Xavier™ NX, 21 TOPS	NVIDIA Jetson Orin Nano™, 67 TOPS	NVIDIA Jetson Orin™ NX, 70/100 TOPS
Chipset	N/A	N/A	N/A
Fan/Fanless	Fanless	Fanless	Fanless
Super Mode	No	Yes	No
Memory	Onboard LPDDR4, 8GB/16GB	Onboard LPDDR5, 8GB	Onboard LPDDR5, 8GB/16GB
Storage	eMMC 5.1, 16GB	N/A	N/A
Second Storage	- 1 x Removable microSD, - 1 x M.2 Key M 2280 NVMe SSD (PCIe 3.0 x4)	1 x 128GB M.2 Key M 2280 NVMe SSD (PCIe 3.0 x4)	1 x 128GB M.2 Key M 2280 NVMe SSD (PCIe 3.0 x4)
GPU/VPU/TPU Coprocessor	NVIDIA Volta 384-core, 48 Tensor-core integrated GPU@1.1GHz	NVIDIA Ampere 1024-core, 32 Tensor-core integrated GPU@625MHz	NVIDIA Ampere 1024-core, 32 Tensor-core integrated GPU@918MHz
Video Out	1 x HDMI®	1 x HDMI®	1 x HDMI®
Audio	N/A	N/A	N/A
Ethernet	1 x Intel® 1GbE (M12 X-coded)	1 x Intel® 1GbE (M12 X-coded)	1 x Intel® 1GbE (M12 X-coded)
PoE	4 x GbE M12 X-coded (802.3af/at), total 30W	4 x GbE M12 X-coded (802.3af/at), total 30W	4 x GbE M12 X-coded (802.3af/at), total 30W
USB	2 x USB 3.2 Gen 1, 2 x USB 2.0 (reserved), 1 x OTG	2 x USB 3.2 Gen 1, 2 x USB 2.0 (reserved), 1 x OTG	2 x USB 3.2 Gen 1, 2 x USB 2.0 (reserved), 1 x OTG
COM	2 x RS-232, 1 x Console	2 x RS-232, 1 x Console	2 x RS-232, 1 x Console
DIO	4 x DI, 4 x DO	4 x DI, 4 x DO	4 x DI, 4 x DO
CAN	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)
SIM Slot	2	2	2
DC Output	N/A	N/A	N/A
MIPI Interface	N/A	N/A	N/A
WWAN	1	1	1
Mini PCIe slot	1 x (USB 2.0, PCIe 3.0)	1 x (USB 2.0, PCIe 4.0)	1 x (USB 2.0, PCIe 4.0)
<b>Expansion</b>			
M.2 Socket	1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G
Expansion PCIe Slot	N/A	N/A	N/A
GNSS	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)
<b>Power</b>			
Power Input	DC 9V~36V	DC 9V~36V	DC 9V~36V
<b>Environment</b>			
Ingress Protection	IP67	IP67	IP67
Certification	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	-30°C~70°C	-25°C~60°C	-25°C~60°C
TPM	N/A	N/A	N/A
<b>Others</b>			
OS	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 5.1.3, Ubuntu 20.04@Kernel 5.10	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15
Dimensions (mm)	213.0 x 167.0 x 82.8	213.0 x 167.0 x 82.8	213.0 x 167.0 x 82.8

Model	 <b>NEW</b>	 <b>NEW</b>	 <b>NEW</b>
	<b>ATC3560-IP7-NXA14CR/-16</b>	<b>ATC 3560-IP7-NX4CF/-16</b>	<b>ATC 3561-NA4C-8</b>
<b>System</b>			
CPU	NVIDIA Jetson Orin™ NX, 70/100 TOPS	NVIDIA Jetson Orin™ NX, 117/157 TOPS	NVIDIA Jetson Orin Nano™, 67 TOPS
Chipset	N/A	N/A	N/A
Fan/Fanless	Fanless	Fan (fan kit pre-installed)	Fanless
Super Mode	No	Yes	Yes
Memory	Onboard LPDDR5, 8GB/16GB	Onboard LPDDR5, 8GB/16GB	Onboard LPDDR5, 8GB
Storage	N/A	N/A	N/A
Second Storage	1 x 128GB M.2 Key M 2280 NVMe SSD (PCIe 3.0 x4)	1 x 128GB M.2 Key M 2280 NVMe SSD (PCIe 3.0 x4)	1 x 128GB M.2 Key M 2242 NVMe SSD (PCIe 3.0 x4)
GPU/VPU/TPU Coprocessor	NVIDIA Ampere 1024-core, 32 Tensor-core integrated GPU@918MHz	NVIDIA Ampere 1024-core, 32 Tensor-core integrated GPU@918MHz	NVIDIA Ampere 1024-core, 32 Tensor-core integrated GPU@625MHz
Video Out	1 x HDMI®	1 x HDMI®	1 x HDMI®
Audio	N/A	N/A	N/A
Ethernet	1 x Intel® 1GbE (M12 X-coded)	1 x Intel® 1GbE (M12 X-coded)	N/A
PoE	4 x GbE M12 X-coded (802.3af/at), total 30W	4 x GbE M12 X-coded (802.3af/at), total 30W	4 x GbE (802.3af/at), total 30W
USB	2 x USB 3.2 Gen 1, 2 x USB 2.0 (reserved), 1 x OTG	2 x USB 3.2 Gen 1, 2 x USB 2.0 (reserved), 1 x OTG	2 x USB 3.2 Gen 1, 1 x USB 2.0 (reserved), 1 x OTG
COM	2 x RS-232, 1 x Console	2 x RS-232, 1 x Console	1 x RS-232, 1 x Console
DIO	4 x DI, 4 x DO	4 x DI, 4 x DO	4 x DI, 4 x DO
CAN	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)	1 x CAN FD (w/ isolation)
SIM Slot	2	2	2
DC Output	N/A	N/A	N/A
MIPI Interface	N/A	N/A	N/A
WWAN	1	1	1
Mini PCIe Slot	1 x (USB 2.0, PCIe 4.0)	1 x (USB 2.0, PCIe 4.0)	N/A
<b>Expansion</b>			
M.2 Slot	1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 4.0, USB 2.0)
Expansion PCIe Slot	N/A	N/A	N/A
GNSS	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)
<b>Power</b>			
Power Input	DC 24V w/ isolation	DC 9V~36V	DC 9V~36V
<b>Environment</b>			
Ingress Protection	IP67	IP67	IP40
Certifications	CE, FCC Class A, UKCA, EN 50155	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	EN 50155 (OT3)	-25°C~60°C	-25°C~60°C
TPM	N/A	N/A	N/A
<b>Others</b>			
OS	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15
Dimensions (mm)	213.0 x 167.0 x 122.8	213.0 x 167.0 x 104.0	147.0 x 119.0 x 48.0

# Industrial Edge AI Telematics Computer

Model	 <b>NEW</b>	 <b>NEW</b>	 <b>NEW</b>
	<b>ATC 3561-NX4CF-16</b>	<b>ATC 3562-IP7-NA4M-8</b>	<b>ATC 3562-IP7-NX4MF-16</b>
<b>System</b>			
CPU	NVIDIA Jetson Orin™ NX, 117/157 TOPS	NVIDIA Jetson Orin Nano™, 67 TOPS	NVIDIA Jetson Orin™ NX, 117/157 TOPS
Chipset	N/A	N/A	N/A
Fan/Fanless	Fan (fan kit pre-installed)	Fanless	Fan (fan kit pre-installed)
Super Mode	Yes	Yes	Yes
Memory	Onboard LPDDR5, 8GB/16GB	Onboard LPDDR5, 8GB	Onboard LPDDR5, 8GB/16GB
Storage	N/A	N/A	N/A
Second Storage	1 x 128GB M.2 Key M 2242 NVMe SSD (PCIe 3.0 x4)	1 x 128GB M.2 Key M 2242 NVMe SSD (PCIe 3.0 x4)	1 x 128GB M.2 Key M 2242 NVMe SSD (PCIe 3.0 x4)
GPU/VPU/TPU Coprocessor	NVIDIA Ampere 1024-core, 32 Tensor-core integrated GPU@918MHz	NVIDIA Ampere 1024-core, 32 Tensor-core integrated GPU@625MHz	NVIDIA Ampere 1024-core, 32 Tensor-core integrated GPU@918MHz
<b>I/O Interface</b>			
Video Out	1 x HDMI®	1 x HDMI® (waterproof)	1 x HDMI® (waterproof)
Audio	N/A	N/A	N/A
Ethernet	N/A	2 x Intel® 1GbE (M12 X-coded), optional for PoE (802.3at/at, 30W)	2 x Intel® 1GbE (M12 X-coded), optional for PoE (802.3at/at, 30W)
PoE	4 x GbE (802.3af/at), total 30W	N/A	N/A
USB	2 x USB 3.2 Gen 1, 1 x USB 2.0 (reserved), 1 x OTG	2 x USB 3.2 Gen 1 (DB15, waferproof), 1 x OTG	2 x USB 3.2 Gen 1 (DB15, waferproof), 1 x OTG
COM	1 x RS-232, 1 x Console	2 x RS-232, 1 x Console	2 x RS-232, 1 x Console
DIO	4 x DI, 4 x DO	4 x DI, 4 x DO	4 x DI, 4 x DO
CAN	1 x CAN FD (w/ isolation)	1 x CAN FD (w/ isolation)	1 x CAN FD (w/ isolation)
SIM Slot	2	2	2
DC Output	N/A	N/A	N/A
MIPI Interface	N/A	4 (GMSL2)	4 (GMSL2)
<b>Expansion</b>			
WWAN	1	11	1
Mini PCIe Slot	N/A	N/A	N/A
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 4.0, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x M.2 Key E 3030 (PCIe 4.0, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x M.2 Key E 3030 (PCIe 4.0, USB 2.0)
Expansion PCIe Slot	N/A	N/A	N/A
GNSS	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)
<b>Power</b>			
Power Input	DC 9V~36V	DC 9V~36V/24V rail (w/o isolation)	DC 9V~36V/24V rail (w/o isolation)
<b>Environment</b>			
Ingress Protection	IP40	IP67	IP67
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13, EN 50155, EN 45545-2	CE, FCC Class A, UKCA, E13, EN 50155, EN 45545-2
Operating Temperature	-25°C~60°C	- 25°C~65°C - EN 50155 (OT3)	- 25°C~65°C - EN 50155 (OT3)
<b>Others</b>			
TPM	N/A	N/A	N/A
OS	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15
Dimensions (mm)	147.0 x 119.0 x 62.5	213.0 x 167.0 x 76.4	213.0 x 167.0 x 97.4

Model	 <b>NEW</b>	 <b>NEW</b>	 <b>NEW</b>
	<b>ATC 3563-NA8C-8</b>	<b>ATC 3563-NAA8CR-8</b>	<b>ATC 3563-NX8C-16</b>
<b>System</b>			
CPU	NVIDIA Jetson Orin Nano™, 67 TOPS	NVIDIA Jetson Orin Nano™, 67 TOPS	NVIDIA Jetson Orin™ NX, 117/157 TOPS
Chipset	N/A	N/A	N/A
Fan/Fanless	Fanless	Fanless	Fanless
Super Mode	Yes	Yes	Yes
Memory	Onboard LPDDR5, 8GB	Onboard LPDDR5, 8GB	Onboard LPDDR5, 8GB/16GB
Storage	N/A	N/A	N/A
Second Storage	1 x 128GB M.2 Key M 2280 NVMe SSD (PCIe 3.0 x4)	1 x 128GB M.2 Key M 2280 NVMe SSD (PCIe 3.0 x4)	1 x 128GB M.2 Key M 2280 NVMe SSD (PCIe 3.0 x4)
GPU/VPU/TPU Coprocessor	NVIDIA Ampere 1024-core, 32 Tensor-core integrated GPU@625MHz	NVIDIA Ampere 1024-core, 32 Tensor-core integrated GPU@625MHz	NVIDIA Ampere 1024-core, 32 Tensor-core integrated GPU@918MHz
<b>I/O Interface</b>			
Video Out	1 x HDMI®	1 x HDMI®	1 x HDMI®
Audio	N/A	N/A	N/A
Ethernet	N/A	N/A	N/A
PoE	8 x GbE (802.3af/at), total 120W	8 x GbE (802.3af/at), total 120W	8 x GbE (802.3af/at), total 120W
USB	2 x USB 3.2 Gen 1, 1 x USB 2.0 (reserved), 1 x OTG	2 x USB 3.2 Gen 1, 1 x USB 2.0 (reserved), 1 x OTG	2 x USB 3.2 Gen 1, 1 x USB 2.0 (reserved), 1 x OTG
COM	1 x RS-232, 1 x RS-232/ Console/RTK selectable	1 x RS-232, 1 x RS-232/ Console/RTK selectable	1 x RS-232, 1 x RS-232/ Console/RTK selectable
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN	1 x CAN FD (w/ isolation)	1 x CAN FD (w/ isolation)	1 x CAN FD (w/ isolation)
SIM Slot	2	2	2
DC Output	N/A	N/A	N/A
MIPI Interface	N/A	N/A	N/A
<b>Expansion</b>			
WWAN	1	1	1
Mini PCIe Slot	N/A	N/A	N/A
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x M.2 Key E 2230 (PCIe4.0, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x M.2 Key E 2230 (PCIe4.0, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x M.2 Key E 2230 (PCIe4.0, USB 2.0)
Expansion PCIe Slot	N/A	N/A	N/A
GNSS	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)
<b>Power</b>			
Power Input	DC 9V~36V	DC 24V rail (w/o isolation)	DC 9V~36V
<b>Environment</b>			
Ingress Protection	IP50	IP50	IP50
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, EN 50155, EN 45545-2	CE, FCC Class A, UKCA, E13
Operating Temperature	-25°C~60°C	EN 50155 (OT3)	-25°C~60°C
<b>Others</b>			
TPM	N/A	N/A	N/A
OS	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15
Dimensions (mm)	260.0 x 155.0 x 74.5	260.0 x 155.0 x 74.5	260.0 x 155.0 x 74.5

# Industrial Edge AI Telematics Computer

Model			
	<p><b>ATC 3563-NXA8CR/-16</b></p>	<p><b>ATC 3750-6C/-64</b></p>	<p><b>ATC 3750-A6CR /-64</b></p>
CPU	NVIDIA Jetson Orin™ NX, 117/157 TOPS	NVIDIA Jetson AGX Orin™, 200/275 TOPS	NVIDIA Jetson AGX Orin™, 200/275 TOPS
Chipset	N/A	N/A	N/A
Fan/Fanless	Fanless	Fanless	Fanless
Super Mode	Yes	No	No
Memory	Onboard LPDDR5, 8GB/16GB	Onboard LPDDR5, 32GB/64GB	Onboard LPDDR5, 32GB/64GB
Storage	N/A	eMMC 5.1, 64GB	eMMC 5.1, 64GB
Second Storage	1 x 128GB M.2 Key M 2280 NVMe SSD (PCIe 3.0 x4)	- 1 x Removable microSD - 1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)	- 1 x Removable microSD - 1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)
GPU/VPU/TPU Coprocessor	NVIDIA Ampere 1024-core, 32 Tensor-core integrated GPU@918MHz	NVIDIA Ampere 1792/2048-core, 56/64 Tensor-core integrated GPU@939MHz/1.3GHz	NVIDIA Ampere 1792/2048-core, 56/64 Tensor-core integrated GPU@939MHz/1.3GHz
Video Out	1 x HDMI®	1 x HDMI®	1 x HDMI®
Audio	N/A	N/A	N/A
Ethernet	N/A	1 x 10GbE RJ45 (option)	1 x 10GbE M12 X-coded (option)
PoE	8 x GbE (802.3af/at), total 120W	6 x GbE RJ45 (802.3af/at), total 80W	6 x GbE M12 X-coded (802.3af/at), total 80W
USB	2 x USB 3.2 Gen 1, 1 x USB 2.0 (reserved), 1 x OTG	2 x USB 3.2 Gen 2, 1 x OTG	2 x USB 3.2 Gen 2, 1 x OTG
COM	1 x RS-232, 1 x RS-232/Console/RTK selectable	2 x RS-232, 1 x Console	2 x RS-232, 1 x Console
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN	1 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)
SIM Slot	2	2	2
DC Output	N/A	N/A	N/A
MIPI Interface	N/A	N/A	N/A
WWAN	1	1	1
Mini PCIe Slot	N/A	1 x (USB 2.0, PCIe 4.0)	1 x (USB 2.0, PCIe 4.0)
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 4.0, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 3030 Key E (PCIe 4.0, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 3030 Key E (PCIe 4.0, USB 2.0)
Expansion PCIe Slot	N/A	N/A	N/A
GNSS	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)
Power Input	DC 24V rail (w/o isolation)	DC 9V~36V	DC 24V Power isolation box (PWA20-01) in option
Ingress Protection	IP50	IP50	IP50
Certifications	CE, FCC Class A, UKCA, EN 50155, EN 45545-2	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, EN 50155, EN 45545-2
Operating Temperature	EN 50155 (OT3)	-25°C~60°C	EN 50155 (OT3)
TPM	N/A	N/A	N/A
OS	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15
Dimensions (mm)	260.0 x 155.0 x 74.5	234.0 x 172.8 x 80.5	234.0 x 172.8 x 80.5 234.0 x 172.8 x 114.5 (w/ optional power isolation box)

Model		
	<p><b>ATC 3750-IP7-6C/-64</b></p>	<p><b>ATC 3750-IP7-WI6CR/-64</b></p>
CPU	NVIDIA Jetson AGX Orin™, 200/275 TOPS	NVIDIA Jetson AGX Orin™, 200/275 TOPS
Chipset	N/A	N/A
Fan/Fanless	Fanless	Fanless
Super Mode	No	No
Memory	Onboard LPDDR5, 32GB/64GB	Onboard LPDDR5, 32GB/64GB
Storage	eMMC 5.1, 64GB	eMMC 5.1, 64GB
Second Storage	- 1 x Removable microSD - 1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)	- 1 x Removable microSD - 1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)
GPU/VPU/TPU Coprocessor	NVIDIA Ampere 1792/2048-core, 56/64 Tensor-core integrated GPU@939MHz/1.3GHz	NVIDIA Ampere 1792/2048-core, 56/64 Tensor-core integrated GPU@939MHz/1.3GHz
Video Out	1 x HDMI®	1 x HDMI®
Audio	N/A	N/A
Ethernet	1 x 10GbE M12 X-coded (option)	1 x 10GbE M12 X-coded (option)
PoE	6 x GbE M12 X-coded (802.3af/at), total 80W	6 x GbE M12 X-coded (802.3af/at), total 80W
USB	2 x USB 3.2 Gen 2 (M12 X-coded), 1 x OTG	2 x USB 3.2 Gen 2 (M12 X-coded), 1 x OTG
COM	2 x RS-232, 1 x Console	2 x RS-232, 1 x Console
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)
SIM Slot	2	2
DC Output	5V (2A)	5V/2A
MIPI Interface	N/A	N/A
WWAN	1	1
Mini PCIe Slot	1 x (USB 2.0, PCIe 4.0)	1 x (USB 2.0, PCIe 4.0)
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 3030 (PCIe 4.0, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 3030 (PCIe 4.0, USB 2.0)
Expansion PCIe Slot	N/A	N/A
GNSS	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)
Power Input	DC 9V~36V/24V rail	DC 24V~110V
Ingress Protection	IP67	IP67
Certifications	CE, FCC Class A, UKCA, E13, EN 50155	CE, FCC Class A, UKCA, EN 50155, EN 45545-2
Operating Temperature	-25°C~60°C, EN 50155 (OT3)	EN 50155 (OT3)
TPM	N/A	N/A
OS	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15
Dimensions (mm)	260.0 x 153.0 x 66.5	260.0 x 155.0 x 88.0

# Industrial Edge AI Telematics Computer



**ATC 3750-IP7-8M/-64**



**ATC 3750-IP7-WI8MR/-64**

Model	ATC 3750-IP7-8M/-64	ATC 3750-IP7-WI8MR/-64
CPU	NVIDIA Jetson AGX Orin™, 200/275 TOPS	NVIDIA Jetson AGX Orin™, 200/275 TOPS
Chipset	N/A	N/A
Fan/Fanless	Fanless	Fanless
Super Mode	No	No
Memory	Onboard LPDDR5, 32GB/64GB	Onboard LPDDR5, 32GB/64GB
Storage	eMMC 5.1, 64GB	eMMC 5.1, 64GB
Second Storage	- 1 x Removable microSD - 1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)	- 1 x Removable microSD - 1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)
GPU/VPU/TPU Coprocessor	NVIDIA Ampere 1792/2048-core, 56/64 Tensor-core integrated GPU@939MHz/1.3GHz	NVIDIA Ampere 1792/2048-core, 56/64 Tensor-core integrated GPU@939MHz/1.3GHz
Video Out	1 x HDMI®	1 x HDMI®
Audio	N/A	N/A
Ethernet	- 1 x 1GbE (M12 X-coded) - 1 x Intel® 2.5GbE (M12 X-coded)	- 1 x 1GbE (M12 X-coded) - 1 x Intel® 2.5GbE (M12 X-coded)
PoE	N/A	N/A
USB	2 x USB 3.2 Gen 2, 2 x USB 2.0 (M12), 1 x OTG	2 x USB 3.2 Gen 2, 2 x USB 2.0 (M12), 1 x OTG
COM	1 x RS-232, 1 x RS-232/422/485, 1 x Console	1 x RS-232, 1 x RS-232/422/485, 1 x Console
DIO	4 x DI, 4 x DO	4 x DI, 4 x DO
CAN	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)
SIM Slot	2	2
DC Output	N/A	N/A
MIPI Interface	8 (GMSL2)	8 (GMSL2)
WWAN	1	1
Mini PCIe Slot	1 x (USB 2.0)	1 x (USB 2.0)
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 3030 (PCIe 4.0, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 3030 (PCIe 4.0, USB 2.0)
Expansion PCIe Slot	N/A	N/A
GNSS	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)
Power Input	DC 9V~36V/24V rail	DC 24V~110V
Ingress Protection	IP67	IP67
Certifications	CE, FCC Class A, UKCA, EN 50155, EN 45545-2	CE, FCC Class A, UKCA, EN 50155, EN 45545-2
Operating Temperature	-25°C~60°C, EN 50155 (OT3)	EN 50155 (OT3)
TPM	N/A	N/A
OS	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 6.x, Ubuntu 22.04@Kernel 5.15
Dimensions (mm)	260.0 x 155.0 x 66.5	260.0 x 155.0 x 88.0

Coming soon



**ATC 3760-IP7-T4/-T5**



**ATC 3760-IP7-T47C/-T57CF**

Coming soon

Model	ATC 3760-IP7-T4/-T5	ATC 3760-IP7-T47C/-T57CF
CPU	NVIDIA Jetson AGX Thor™ T4000/T5000, 1200/2070 FP4 TFLOP	NVIDIA Jetson AGX Thor™ T4000/T5000, 1200/2070 FP4 TFLOP
Chipset	N/A	N/A
Fan/Fanless	Fanless	Fan/Fanless
Super Mode	No	No
Memory	Onboard LPDDR5X, 64GB/128GB	Onboard LPDDR5X, 64GB/128GB
Storage	N/A	N/A
Second Storage	1 x 1TB M.2 Key M 2280 NVMe SSD (PCIe 5.0 x4)	1 x 1TB M.2 Key M 2280 NVMe SSD (PCIe 5.0 x4)
GPU/VPU/TPU Coprocessor	NVIDIA Blackwell 1536/2560-core, 64/96 Tensor-core integrated GPU@1.53GHz/1.575GHz	NVIDIA Blackwell 1536/2560-core, 64/96 Tensor-core integrated GPU@1.53GHz/1.575GHz
Video Out	1 x HDMI®	1 x HDMI®
Audio	N/A	N/A
Ethernet	- 1 x 2.5GbE M12 X-coded - 1 x 10GbE M12 X-coded - 1 x 2.5GbE M12 X-coded (BOM option) - 1 x 10GbE M12 X-coded (BOM option)	- 1 x 2.5GbE M12 X-coded - 1 x 10GbE M12 X-coded - 1 x 10GbE M12 X-coded (BOM option)
PoE	N/A	7 x 2.5GbE M12 X-coded (802.3af/at), total 120W
USB	2 x USB 3.2 Gen 2 (M12 X-coded), 1 x OTG	2 x USB 3.2 Gen 2 (M12 X-coded), 1 x OTG
COM	1 x RS-232/422/485, 1 x Console	1 x RS-232/422/485, 1 x Console
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN	2 x CAN FD SIC (w/ isolation)	2 x CAN FD SIC (w/ isolation)
SIM Slot	2	2
DC Output	N/A	N/A
MIPI Interface	N/A	N/A
WWAN	1	1
Mini PCIe Slot	1 x (USB 2.0, PCIe 5.0)	1 x (USB 2.0, PCIe 5.0)
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 3030 (PCIe 5.0, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 3030 (PCIe 5.0, USB 2.0)
Expansion PCIe Slot	N/A	N/A
GNSS	VIOB-GPS-07 module w/ PPS (u-blox NEO-M9N)	VIOB-GPS-07 module w/ PPS (u-blox NEO-M9N)
Power Input	DC 9V~36V/24V rail (w/o isolation)	DC 9V~36V/24V rail (w/o isolation)
Ingress Protection	IP67	IP67
Certifications	CE, FCC Class A, UKCA, E13, EN 50155, EN 45545-2	CE, FCC Class A, UKCA, E13, EN 50155, EN 45545-2
Operating Temperature	-25°C~60°C, EN 50155 (OT3)	-25°C~60°C, EN 50155 (OT3)
TPM	Yes	Yes
OS	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 7.x, Ubuntu 22.04@Kernel 5.15	NEXCOM Accelerator Linux (NAL) w/ NVIDIA JetPack™ 7.x, Ubuntu 22.04@Kernel 5.15
Dimensions (mm)	350.0 x 216.0 x 82.0	350.0 x 216.0 x 82.0

# Vehicle Telematics Computer

## VTC Series Brief Product Introduction

### Product Description

VTC and MVS series are fanless embedded telematics system which can sustain in harsh environment, with rich I/O connectivity for external peripherals, and easy RF communication expansion. The modular design makes the

MVS series very flexible to adopt other expansion boards and thus extend I/O functions. Besides, we provide MUT (MCU Utility Tools) SDK for power management & control, which greatly reduces Time-To-Market.

- 5G/LTE, Wi-Fi 6/6E, BT, CAN/OBD module support
- IP65/67 ingress protection

- Ignition power management
- AI accelerator module support

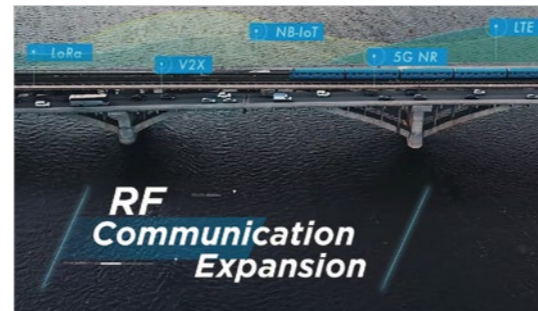
### Application

- Fleet management
- Vehicle gateway
- Video surveillance
- Passenger information system
- Infotainment applications

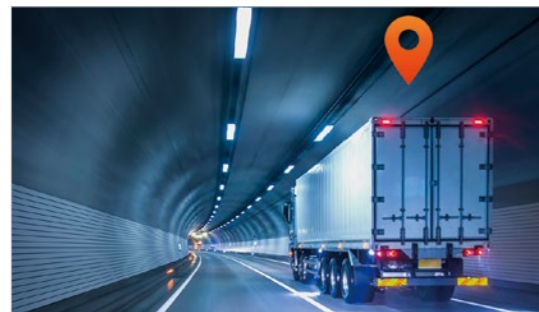
### Product Highlight



Rugged design for harsh environment



Flexible RF communication expansion







Dead reckoning & RTK precise positioning







802.3 af/at PoE+ support





Model				
	VTC 210	VTC 1910-S	VTC 1920	VTC 1921-IP
<b>System</b>				
CPU	Rockchip RK3328	Intel Atom® E3815, 1-core, 1.46GHz	Intel Atom® x7211RE, 2-core, 1.0GHz	Intel Atom® x7211RE, 2-core, 1.0GHz
Chipset	N/A	N/A	N/A	N/A
Memory	Onboard DDR4, default 2GB, up to 4GB	1 x DDR3L 1333 SO-DIMM, default 4GB, up to 8GB	1 x DDR4 3200 SO-DIMM, in-band ECC, default 4GB, up to 32GB	1 x DDR4 3200 SO-DIMM, in-band ECC, default 4GB, up to 32GB
Storage	eMMC 5.1, 16GB	1 x mSATA (SATA 2.0)	1 x M.2 Key M 2242 SSD (SATA 3.0)	1 x 2.5" SATA 3.0 SSD (9.5mm)
Second Storage	1 x microSD	1 x SATA DOM	1 x M.2 Key M 2280 SSD (SATA 3.0), optional on daughter board	1 x mSATA (occupies a Mini PCIe slot)
Video Out	1 x HDMI®	1 x VGA	1 x HDMI®	1 x HDMI®
Audio	N/A	1 x Mic in, 1 x Line out	1 x Mic in, 1 x Line out	1 x Mic in, 1 x Line out
Ethernet	2 x Intel® 1GbE LAN switch	1 x Intel® 1GbE	1 x Intel® 2.5GbE	2 x Intel® 2.5GbE
PoE	N/A	N/A	N/A	N/A
<b>I/O Interface</b>				
USB	- 1 x USB 2.0 (front) - 1 x USB 2.0 for Wi-Fi (internal)	1 x USB 3.0, 1 x USB 2.0	2 x USB 3.2 Gen 2	1 x USB 3.2 (Gen 2), 1 x USB 2.0
COM	1 x RS-232 full	2 x RS-232, 1 x RS-485	2 x RS-232, 1 x RS-485	2 x RS-232, 1 x RS-485
DIO	N/A	3 x DI, 3 x DO	3 x DI, 3 x DO	4 x DI, 4 x DO
CAN bus	N/A	1 x CAN bus 2.0B	1 x CAN FD, 1 x CAN bus 2.0B (w/ isolation)	1 x CAN FD, 1 x CAN bus 2.0B (w/ isolation)
DC Output	N/A	N/A	N/A	N/A
SIM Slot	1	2	2 (up to 3 BOM option, eSIM BOM option)	2 (eSIM BOM option)
<b>Expansion</b>				
WWAN	1	1	1 (up to 2 BOM option)	2
Mini PCIe Slot	N/A	- 1 x (PCIe 2.0/SATA 2.0) - 1 x (USB 2.0) for LTE	1 x (USB 2.0), BOM option: 1 x M.2 Key B 3042/3052 (USB 2.0) for LTE, optional on daughter board	1 x (USB 2.0, PCIe 3.0/SATA 2.0)
M.2 Slot	1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE	N/A	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x1), optional on daughter board	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x1)
GNSS	VIOB-GPS-06 module (u-blox NEO-M9N)	Onboard u-blox NEO-M8N	Onboard u-blox NEO-M9N	Onboard u-blox NEO-M9N
<b>Power</b>				
Power Input	DC 9V~36V	DC 9V~36V	DC 9V~36V	DC 9V~36V
Back Up Battery	N/A	N/A	N/A	N/A
<b>Environment</b>				
Ingress Protection	N/A	N/A	N/A	IP67
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, E13	CE, FCC Class A, E13	CE, FCC Class A, E13, EN 50155, EN 45545-2
Operating Temperature	-20°C~70°C	-40°C~70°C	-40°C~70°C	-40°C~70°C
<b>Others</b>				
TPM	N/A	TPM 2.0	TPM 2.0	TPM 2.0
OS	Linux (Kernel 4.x)	WES 7/Win 10/Win 8/Win 7/ Linux (Kernel 4.x)	Win 11/Win 10/ Linux (Kernel 4.x)	Win 11/Win 10/ Linux (Kernel 4.x)
Dimensions (mm)	130.0 x 100.0 x 31.0	130.0 x 120.0 x 32.0	130.0 x 120.0 x 32.0	185.0 x 167.0 x 56.5




# Vehicle Telematics Computer

Model				
	VTC 1921-C2IP	VTC 1911-IPK	VTC 1011-C2K	VTC 1011-C2VK
<b>System</b>				
CPU	Intel Atom® x7211RE, 2-core, 1.0GHz	Intel Atom® E3815, 1-core, 1.46GHz	Intel Atom® E3825, 2-core, 1.33GHz	Intel Atom® E3825, 2-core, 1.33GHz
Chipset	N/A	N/A	N/A	N/A
Memory	1 x DDR4 3200 SO-DIMM, in-band ECC, default 4GB, up to 32GB	1 x DDR3L 1333 SO-DIMM, default 4GB, up to 8GB	1 x DDR3L 1333 SO-DIMM, default 4GB, up to 8GB	1 x DDR3L 1333 SO-DIMM, default 4GB, up to 8GB
Storage	1 x mSATA (occupies a Mini PCIe slot)	1 x mSATA (SATA 2.0)	1 x 2.5" SATA 3.0 SSD (9.5mm)	1 x 2.5" SATA 3.0 SSD (9.5mm)
Second Storage	1 x M.2 Key M 2280 SSD (SATA 3.0)	1 x 2.5" SATA 3.0 SSD (9.5mm) or 1 x SATA 3.0 SATA DOM	1 x mSATA (occupies a Mini PCIe slot)	1 x mSATA (occupies a Mini PCIe slot)
Video Out	1 x HDMI®	1 x VGA, 1 x HDMI® (option)	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®, 1 x ultraONE+
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 Mic in, 1 x Line out
Ethernet	1 x Intel® 2.5GbE	2 x Intel® 1GbE	2 x Intel® 1GbE (exclusion with PoE)	2 x Intel® 1GbE (exclusion with PoE)
PoE	2 x Intel® 2.5GbE (w/ 802.3af/at), total 30W	N/A	2 x Intel® 1GbE (w/ 802.3af/at), total 30W	2 x Intel® 1GbE (w/ 802.3af/at), total 30W
USB	1 x USB 3.2 Gen 2, 1 x USB 2.0	1 x USB 2.0	2 x USB 2.0	2 x USB 2.0
COM	2 x RS-232, 1 x RS-485	2 x RS-232, 1 x RS-485	1 x RS-232 full, 1 x RS-232/422/485	1 x RS-232 full, 1 x RS-232/422/485
DIO	4 x DI, 4 x DO	3 x DI, 3 x DO	4 x DI, 4 x DO	4 x DI, 4 x DO
CAN bus	1 x CAN FD, 1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B	1 x CAN bus 2.0B	1 x CAN bus 2.0B
DC Output	N/A	N/A	12V/2A	12V/2A
SIM Slot	2 (eSIM BOM option)	2	2	2
WWAN	2	1	1	1
Mini PCIe Slot	1 x (USB 2.0, PCIe 3.0/SATA 2.0)	- 1 x (USB 2.0, PCIe 2.0/SATA 2.0) - 1 x (USB 2.0) for LTE	- 1 x (USB 2.0, PCIe 2.0/SATA 2.0) - 1 x (USB 2.0) for LTE	- 1 x (USB 2.0, PCIe 2.0/SATA 2.0) - 1 x (USB 2.0) for LTE
M.2 Slot	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x1)	N/A	N/A	N/A
GNSS	Onboard u-blox NEO-M9N	Onboard u-blox NEO-M8N	VI0B-GPS-02 module (u-blox NEO-M8N)	VI0B-GPS-02 module (u-blox NEO-M8N)
<b>Power</b>				
Power Input	DC 9V~36V	DC 9V~36V	DC 9V~36V	DC 9V~36V
Back Up Battery	N/A	N/A	N/A	N/A
<b>Environment</b>				
Ingress Protection	IP67	IP67	N/A	N/A
Certifications	CE, FCC Class A, E13, EN 50155, EN 45545-2	CE, FCC Class A, E13, EN 50155	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	-40°C~70°C	-40°C~70°C	-40°C~70°C (LAN mode) -40°C~60°C (PoE mode)	-40°C~70°C (LAN mode) -40°C~60°C (PoE mode)
TPM	TPM 2.0	TPM 2.0	TPM 2.0	TPM 2.0
<b>Others</b>				
OS	Win 11/Win 10/Linux (Kernel 4.x)	WES 7/Win 10/Win 8/Win 7/Linux (Kernel 4.x)	WES 7/Win 10/Win 8/Win 7/Linux (Kernel 4.x)	WES 7/Win 10/Win 8/Win 7/Linux (Kernel 4.x)
Dimensions (mm)	185.0 x 167.0 x 56.5	185.0 x 167.0 x 56.5	185.0 x 150.9 x 45.0	185.0 x 150.9 x 45.0





Model				
	VTC 1020	VTC 1020-PA	VTC 1010	VTC 1021-BK
<b>System</b>				
CPU	Intel Atom® x5-E3930, 2-core, 1.3GHz	Intel Atom® x5-E3930, 2-core, 1.3GHz	Intel Atom® E3827, 2-core, 1.75GHz	Intel Atom® x5-E3940, 4-core, 1.6GHz
Chipset	N/A	N/A	N/A	N/A
Memory	1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB	1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB	1 x DDR3L 1333 SO-DIMM, default 4GB, up to 8GB	1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB
Storage	1 x 2.5" SATA 3.0 SSD (9.5mm)	1 x 2.5" SATA 3.0 SSD (15mm)	1 x 2.5" SATA 2.0 SSD (9.5mm)	1 x 2.5" SATA 3.0 SSD (9.5mm)
Second Storage	1 x mSATA (occupies a Mini PCIe slot)	1 x mSATA (occupies a Mini PCIe slot)	1 x SD card slot (front)	1 x mSATA (occupies a Mini PCIe slot)
Video Out	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®, 1 x LVDS	1 x VGA, 1 x DP	1 x VGA, 1 x HDMI®
Audio	1 x Mic in, 1 x Line out	1 x Mic in, 3 x Line out (selectable)	2 x Mic in, 2 x Line out	1 x Mic in, 1 x Line out
Ethernet	1 x Intel® 1GbE	1 x Intel® 1GbE	1 x Intel® 1GbE	2 x Intel® 1GbE
PoE	N/A	N/A	N/A	N/A
USB	2 x USB 3.2 Gen 1	2 x USB 3.2 Gen 1	1 x USB 3.2 Gen 1, 2 x USB 2.0	1 x USB 3.2 Gen 1, 2 x USB 2.0
COM	5 x RS-232, 2 x RS485	5 x RS-232, 2 x RS485	2 x RS-232 full, 1 x RS-422/485	1 x RS-232 full, 1 x RS-232, 1 x RS-422/485
DIO	5 x Programmable DIO	5 x Programmable DIO	6 x Programmable DIO	3 x DI, 3 x DO
CAN bus	1 x CAN bus 2.0B	1 x CAN bus 2.0B	1 x CAN bus 2.0B	1 x CAN bus 2.0B
DC Output	12V/2A	12V/2A	12V/1A	12V/2A
SIM Slot	1	1	2	2
WWAN	1	1	2	1
Mini PCIe Slot	- 1 x (USB 2.0, PCIe 2.0/SATA 2.0) - 1 x (USB 2.0) for LTE	- 1 x (USB 2.0, PCIe 2.0/SATA 3.0) - 1 x (USB 2.0) for LTE	- 2 x (USB 2.0, PCIe 2.0/SATA 2.0) - 1 x (USB 2.0, PCIe 2.0/SATA 3.0) - 1 x (USB 2.0) for LTE	- 1 x (USB 2.0, PCIe 2.0/SATA 3.0) - 1 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0) for LTE
M.2 Slot	N/A	N/A	N/A	N/A
GNSS	VI0B-GPS-02 module (u-blox NEO-M8N)	VI0B-GPS-02 module (u-blox NEO-M8N)	VI0B-GPS-02 module (u-blox NEO-M8N)	Onboard u-blox NEO-M8N
<b>Power</b>				
Power Input	DC 9V~36V	DC 9V~36V	DC 9V~36V	DC 9V~36V
Back Up Battery	N/A	N/A	N/A	Optional
<b>Environment</b>				
Ingress Protection	N/A	N/A	N/A	N/A
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class B, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	-40°C~70°C	-40°C~70°C	-30°C~70°C	-40°C~70°C
TPM	TPM 2.0	TPM 2.0	N/A	TPM 2.0
<b>Others</b>				
OS	Win 10/Linux (Kernel 4.x)	Win 10/Linux (Kernel 4.x)	WES 7/Win 10/Win 8/Win 7/Linux (Kernel 4.x)	Win 10/Linux (Kernel 4.x)
Dimensions (mm)	185.0 x 120.0 x 45.0	185.0 x 120.0 x 50.0	180.0 x 180.0 x 50.0	180.0 x 180.0 x 50.0




# Vehicle Telematics Computer

Model				
	VTC 1021-C2K	VTC 1030	VTC 1031	VTC 1031-C2
CPU	Intel Atom® x5-E3940, 4-core, 1.6GHz	Intel Atom® x6211E, 2-core, 1.3GHz	Intel Atom® x6413E, 4-core, 1.5GHz	Intel Atom® x6413E, 4-core, 1.5GHz
Chipset	N/A	N/A	N/A	N/A
Memory	1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB	1 x DDR4 2666 SO-DIMM, in-band ECC, default 4GB, up to 3200MHz 32GB	1 x DDR4 2666 SO-DIMM, in-band ECC, default 4GB, up to 3200MHz 32GB	1 x DDR4 2666 SO-DIMM, in-band ECC, default 4GB, up to 3200MHz 32GB
Storage	1 x 2.5" SATA 3.0 SSD (9.5mm)	1 x 2.5" SATA 3.0 SSD (9.5mm)	1 x 2.5" SATA 3.0 SSD (9.5mm)	1 x 2.5" SATA 3.0 SSD (9.5mm)
Second Storage	1 x mSATA (occupies a Mini PCIe slot)	1 x mSATA (occupies a Mini PCIe slot)	1 x M.2 Key M 2280 SSD (SATA 3.0)	1 x M.2 Key M 2280 SSD (SATA 3.0)
Video Out	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®
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 Mic in, 1 x Line out
Ethernet	2 x Intel® 1GbE	2 x Intel® 2.5GbE	- 1 x Intel® 2.5GbE - 1 x 1GbE	- 1 x Intel® 2.5GbE - 1 x 1GbE
PoE	2 x Intel® 1GbE (w/ 802.3af/at), total 60W	N/A	N/A	2 x independent Intel® 1GbE (w/ 802.3af/at), total 60W
USB	1 x USB 3.2 Gen 1, 2 x USB 2.0	1 x USB 3.2 Gen 2, 1 x USB 2.0	1 x USB 3.2 Gen 2, 3 x USB 2.0	1 x USB 3.2 Gen 2, 3 x USB 2.0
COM	1 x RS-232 Full, 1 x RS-232, 1 x RS422/485	2 x RS-232 full/422/485	1 x RS-232 Full/422/485, 1 x RS-232, 2 x RS-485	1 x RS-232 full/422/485, 1 x RS-232, 2 x RS-485
DIO	3 x DI, 3 x DO	5 x DI, 4 x DO	5 x DI, 4 x DO	5 x DI, 4 x DO
CAN bus	1 x CAN bus 2.0B	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)
DC Output	12V/2A	12V/2A	12V/2A	12V/2A
SIM Slot	2	2 (eSIM BOM option)	2 (eSIM BOM option)	2 (eSIM BOM option)
WWAN	1	1	1	1
Mini PCIe Slot	- 1 x (USB 2.0, PCIe 2.0/ SATA 3.0) - 1 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0) for LTE	1 x (USB 2.0, PCIe 3.0/SATA 3.0)	1 x (USB 2.0, PCIe 3.0), BOM option: 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	1 x (USB 2.0, PCIe 3.0), BOM option: 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 2) for LTE/5G
M.2 Slot	N/A	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x2), BOM option: 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0)	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x2), BOM option: 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0)	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x2), BOM option: 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0)
GNSS	Onboard u-blox NEO-M8N	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)
Power Input	DC 9V~36V	DC 9V~36V	DC 9V~36V	DC 9V~36V
Back Up Battery	N/A	N/A	N/A	N/A
Ingress Protection	N/A	N/A	N/A	N/A
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	-40°C~70°C	-40°C~70°C	-40°C~70°C	-40°C~70°C
TPM	TPM 2.0	TPM 2.0	TPM 2.0	TPM 2.0
OS	Win 10/Linux (Kernel 4.x)	Win 11/Win 10/ Linux (Kernel 4.x)	Win 11/Win 10/ Linux (Kernel 4.x)	Win 11/Win 10/ Linux (Kernel 4.x)
Dimensions (mm)	180.0 x 180.0 x 50.0	185.0 x 120.0 x 45.0	180.0 x 180.0 x 50.0	180.0 x 180.0 x 50.0





Model			
	VTC 1040	VTC 1040-C2	VTC 6210-BK
CPU	Intel Atom® x7213RE, 2-core, 2.0GHz	Intel Atom® x7213RE, 2-core, 2.0GHz	Intel Atom® E3845, 4-core, 1.91GHz
Chipset	N/A	N/A	N/A
Memory	1 x DDR5 4800 SO-DIMM, in-band ECC, default 8GB, up to 16GB	1 x DDR5 4800 SO-DIMM, in-band ECC, default 8GB, up to 16GB	1 x DDR3L 1333 SO-DIMM, default 4GB, up to 8GB
Storage	1 x 2.5" SATA 3.0 SSD (9.5mm)	1 x 2.5" SATA 3.0 SSD (9.5mm)	1 x 2.5" SATA 2.0 SSD (removable, 9.5mm)
Second Storage	1 x mSATA (occupies a Mini PCIe slot)	1 x mSATA (occupies a Mini PCIe slot)	1 x CFast slot (front)
Video Out	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®	1 x VGA, 1 x DP
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
Ethernet	3 x Intel® 2.5GbE	1 x Intel® 2.5GbE	2 x Intel® 1GbE
PoE	N/A	2 x Intel® 2.5GbE (w/ 802.3af/at), total 30W	N/A
USB	1 x USB 3.2 Gen 2, 1 x USB 2.0	1 x USB 3.2 Gen 2, 1 x USB 2.0	1 x USB 3.2 Gen 1, 2 x USB 2.0
COM	2 x RS-232 Full/422/485, 1 x RS-232	2 x RS-232 full/422/485, 1 x RS-232	2 x RS-232 full, 1 x RS-422/485
DIO	4 x DI, 4 x DO	4 x DI, 4 x DO	8 x Programmable PC GPIO, 2 x MCU-DI, 2 x MCU-DO
CAN bus	1 x CAN FD (w/ isolation)	1 x CAN FD (w/ isolation)	1 x CAN bus 2.0B
DC Output	12V/2A	12V/2A	12V/2A
SIM Slot	2 (eSIM BOM option)	2 (eSIM BOM option)	3
WWAN	1	1	2
Mini PCIe Slot	1 x (USB 2.0, PCIe 3.0/SATA 3.0)	1 x (USB 2.0, PCIe 3.0/SATA 3.0)	- 2 x (USB 2.0, PCIe 2.0) - 2 x (USB 2.0) for LTE
M.2 Slot	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x1)	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x1)	N/A
GNSS	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-02 module (u-blox NEO-M8N)
Power Input	DC 9V~36V	DC 9V~36V	DC 9V~36V
Back Up Battery	N/A	N/A	N/A
Ingress Protection	N/A	N/A	N/A
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class B, E13
Operating Temperature	-40°C~70°C	-40°C~70°C	-30°C~70°C
TPM	TPM 2.0	TPM 2.0	N/A
OS	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)	WES 7/Win 10/Win 8/Win 7/ Linux (Kernel 4.x)
Dimensions (mm)	185.0 x 120.0 x 45.0	185.0 x 120.0 x 45.0	260.0 x 176.0 x 50.0





# Vehicle Telematics Computer

Model				
	VTC 6220-BK	VTC 6221	VTC 6231	VTC 6231-IP
<b>System</b>				
CPU	Intel Atom® x7-E3950, 4-core, 1.6GHz	Intel Atom® x7-E3950, 4-core, 1.6GHz	Intel Atom® x7433RE, 4-core, 1.5GHz	Intel Atom® x7433RE, 4-core, 1.5GHz
Chipset	N/A	N/A	N/A	N/A
Memory	1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB	1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB	1 x DDR5 4800 SO-DIMM, in-band ECC, default 8GB, up to 16GB	1 x DDR5 4800 SO-DIMM, in-band ECC, default 8GB, up to 16GB
Storage	2 x 2.5" SATA 3.0 SSD (removable, 9.5mm)	1 x 2.5" SATA 3.0 SSD (removable, 9.5mm)	1 x 2.5" SATA 3.0 SSD (removable, 9.5mm)	1 x 2.5" SATA 3.0 SSD (removable, 9.5mm)
Second Storage	N/A	- 1 x CFast slot (front) - 1 x mSATA (occupies CFast, BOM option)	1 x mSATA (occupies a Mini PCIe slot)	1 x mSATA (occupies a Mini PCIe slot)
Video Out	- 1 x VGA, 1 x HDMI® - 1 x LVDS (option) - 1 x ultraONE+ (option)	2 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®, 1 x DP	1 x VGA, 1 x HDMI®
Audio	2 x Mic in, 2 x Line out	1 x Mic in, 2 x Line out	1 x Mic in, 1 x Line in, 1 x Line out	1 x Mic in, 1 x Line in, 1 x Line out
Ethernet	3 x Intel® 1GbE (2 x LAN exclusion with PoE)	2 x Intel® 1GbE, (3 BOM option)	2 x Intel® 2.5GbE	2 x Intel® 2.5GbE
PoE	2 x independent Intel® 1GbE (w/ 802.3af/at), total 30W (BOM option)	N/A	N/A	N/A
USB	2 x USB 3.2 Gen 1, 1 x USB 2.0	3 x USB 2.0, 1 x USB 3.2 Gen 1	2 x USB 2.0, 2 x USB 3.2 Gen 2	2 x USB 2.0, 2 x USB 3.2 Gen 2
COM	2 x RS-232 full, 1 x RS-422/485	1 x RS-232 full, 1 x RS-232, 1 x RS-485	2 x RS-232 full/422/485, 1 x RS-232 full	2 x RS-232 full/422/485, 1 x RS-232 full
DIO	4 x DI, 4 x DO	4 x DI, 4 x DO	4 x DI, 4 x DO	4 x DI, 4 x DO
CAN bus	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)	1 x CAN FD (w/ isolation)	1 x CAN FD (w/ isolation)
DC Output	12V/2A	12V/2A	12V/2A	12V/2A
SIM Slot	4	6 (up to 8 BOM option, eSIM BOM option)	8 (eSIM BOM option)	8 (eSIM BOM option)
WWAN	2	3 (up to 4 BOM option)	3 (up to 4 BOM option)	3 (up to 4 BOM option)
Mini PCIe Slot	- 2 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0) for LTE, BOM option: 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	- 1 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0, PCIe 2.0), BOM option: 1 x Mini PCIe (USB 2.0) for LTE - 1 x (USB 2.0) for LTE	- 1 x (USB 2.0, SATA 3.0/PCIe 3.0) default for mSATA, BIOS select (USB 2.0) for LTE, BOM option (USB 2.0, PCIe 3.0) for WLAN - 1 x (USB 2.0, PCIe 3.0), BOM option: 1 x M.2 Key B 3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	- 1 x (USB 2.0, SATA 3.0/PCIe 3.0) default for mSATA, BIOS select (USB 2.0) for LTE, BOM option (USB 2.0, PCIe 3.0) for WLAN - 1 x (USB 2.0, PCIe 3.0), BOM option: 1 x M.2 Key B 3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G
M.2 Slot	- 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	- 2 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 3.0 x1, USB 2.0), BOM option: Mini PCIe (PCIe 3.0 x1, USB 2.0) for Hailo module	- 2 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 3.0 x1, USB 2.0), BOM option: Mini PCIe (PCIe 3.0 x1, USB 2.0) for Hailo module
GNSS	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)
<b>Power</b>				
Power Input	DC 9V~36V	DC 9V~48V	DC 9V~36V	DC 9V~36V
Back Up Battery	Optional	N/A	N/A	N/A
<b>Environment</b>				
Ingress Protection	N/A	N/A	N/A	IP66
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, EN 50155, E13
Operating Temperature	-40°C~70°C	-40°C~70°C	-40°C~70°C	-40°C~70°C
<b>Others</b>				
TPM	TPM 2.0	TPM 2.0 (option)	TPM 2.0	TPM 2.0
OS	Win 10/Linux (Kernel 4.x)	Win 10/Linux (Kernel 4.x)	Win 11/Win 10, Linux (Kernel 4.x)	Win 11/Win 10, Linux (Kernel 4.x)
Dimensions (mm)	260.0 x 196.0 x 50.0	260.0 x 196.0 x 50.0	260.0 x 196.0 x 50.0	260.0 x 196.0 x 70.0




Model			
	VTC 6232-C4S	VTC 6232-C4SIP	VTC 6222-C4S
<b>System</b>			
CPU	Intel Atom® x7433RE, 4-core, 1.5GHz	Intel Atom® x7433RE, 4-core, 1.5GHz	Intel Atom® x7-E3950, 4-core, 1.6GHz
Chipset	N/A	N/A	N/A
Memory	1 x DDR5 4800 SO-DIMM, in-band ECC, default 8GB, up to 16GB	1 x DDR5 4800 SO-DIMM, in-band ECC, default 8GB, up to 16GB	1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB
Storage	eMMC 5.1, 64GB	eMMC 5.1, 64GB	2 x 2.5" SATA 3.0 SSD (removable, 15mm)
Second Storage	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	- 1 x SD card slot (front) - 1 x USB DOM (internal)
Video Out	1 x VGA, 1 x HDMI®	1 x VGA	1 x VGA, 2 x HDMI®
Audio	1 x Mic in, 1 x Line in, 1 x Line out	1 x Mic in, 1 x Line in, 1 x Line out	1 x Mic in, 2 x Line out
Ethernet	1 x Intel® 2.5GbE	1 x Intel® 2.5GbE	1 x Intel® 1GbE
PoE	4 x Intel® 2.5GbE (w/ 802.3af/at/bt), total 90W	4 x Intel® 2.5GbE (w/ 802.3af/at/bt), total 90W	4 x Intel® 1GbE (w/ 802.3af/at), total 60W
USB	2 x USB 2.0, 2 x USB 3.2 Gen 2	2 x USB 2.0, 1 x USB 3.2 Gen 2	1 x USB 3.2 Gen 1, 2 x USB 2.0
COM	2 x RS-232 full/422/485, 1 x RS-232, 1 x RS-422/485	2 x RS-232 full/422/485, 1 x RS-232, 1 x RS-422/485	1 x RS-232 full, 1 x RS-232, 1 x RS-422/485
DIO	4 x DI, 4 x DO	4 x DI, 4 x DO	4 x DI, 4 x DO (w/ isolation)
CAN bus	1 x CAN FD (w/ isolation)	1 x CAN FD (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)
DC Output	12V/2A	12V/2A	12V/2A
SIM Slot	4 (eSIM BOM option)	4 (eSIM BOM option)	2 (eSIM BOM option)
WWAN	2	2	1
Mini PCIe Slot	1 x (USB 2.0, PCIe 3.0), BOM option: 1 x M.2 Key B 3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	1 x (USB 2.0, PCIe 3.0), BOM option: 1 x M.2 Key B 3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	- 2 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0) for LTE, BOM option: 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 3.0 x1, USB 2.0), BOM option: Mini PCIe (PCIe 3.0 x1, USB 2.0) for Hailo module	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 3.0 x1, USB 2.0), BOM option: Mini PCIe (PCIe 3.0 x1, USB 2.0) for Hailo module	N/A
GNSS	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)	Onboard u-blox NEO-M8N
<b>Power</b>			
Power Input	DC 9V~48V	DC 9V~48V	DC 9V~48V
Back Up Battery	Optional	Optional	N/A
<b>Environment</b>			
Ingress Protection	N/A	IP66	N/A
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	-40°C~70°C	-40°C~70°C	-40°C~70°C
<b>Others</b>			
TPM	TPM 2.0	TPM 2.0	TPM 2.0 (option)
OS	Win 11/Win 10/Linux (Kernel 4.x)	Win 11/Win 10/Linux (Kernel 4.x)	Win 10/Linux (Kernel 4.x)
Dimensions (mm)	260.0 x 196.0 x 66.5	260.0 x 196.0 x 86.5	260.0 x 196.0 x 66.5




# Vehicle Telematics Computer

Model				
	<b>VTC 7250-7C8</b>	<b>VTC 7251</b>	<b>VTC 7251-7C4</b>	<b>VTC 7252-7C4IP</b>
<b>System</b>				
CPU	Intel® Core™ i7-8700T, 6-core, 2.4GHz	Intel® Core™ i7-8700T, 6-core, 2.4GHz	Intel® Core™ i7-8700T, 6-core, 2.4GHz	Intel® Core™ i7-9700TE, 8-core, 1.8GHz
Chipset	Intel® Q370	Intel® Q370	Intel® Q370	Intel® C246
Memory	2 x DDR4 2666 SO-DIMM, default 4GB + 4GB, up to 64GB, 32GB per DIMM	2 x DDR4 2666 SO-DIMM, default 4GB + 4GB, up to 64GB, 32GB per DIMM	2 x DDR4 2666 SO-DIMM, 4GB + 4GB (default) up to 64GB, 32GB per DIMM	2 x DDR4 2666 SO-DIMM, 4GB + 4GB (default) up to 64GB, 32GB per DIMM
Storage	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (15mm)
Second Storage	2 x mSATA 3.0 (BIOS selection)	2 x mSATA 3.0 (BIOS selection)	2 x mSATA 3.0 (BIOS selection)	- 2 x mSATA 3.0 (BIOS selection) - 1 x CFast slot (front)
Video Out	1 x VGA, 1 x HDMI®, 1 x ultraONE+	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI® (option)
Audio	1 x Mic in, 1 x Line out	1 x Mic in, 2 x Line out	1 x Mic in, 2 x Line out	1 x Mic in, 1 x Line out
Ethernet	1 x Intel® 1GbE	2 x Intel® 1GbE	1 x Intel® 1GbE	2 x Intel® 1GbE
<b>I/O Interface</b>				
PoE	8 x independent Intel® 1GbE (w/ 802.3af/at), total 60W	N/A	4 x independent Intel® 1GbE (w/ 802.3af/at), total 60W	4 x independent Intel® 1GbE (w/ 802.3af/at), total 60W
USB	6 x USB 3.2 Gen 2	6 x USB 3.2 Gen 2	6 x USB 3.2 Gen 2	2 x USB 3.2 Gen 2, 2 x USB 2.0
COM	2 x RS-232 full, 1 x RS-232 full/422/485	2 x RS-232 full, 1 x RS-232 full/422/485	2 x RS-232 full, 1 x RS-232 full/422/485	2 x RS-232 full, 1 x RS-232 full/422/485
DIO	4 x DI, 4 x DO	4 x DI, 4 x DO	4 x DI, 4 x DO	3 x DI, 3 x DO
CAN bus	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)	2 x CAN bus 2.0B (w/ isolation)
DC Output	12V/2A	12V/2A	12V/2A	12V/2A
SIM Slot	3 (eSIM BOM option)	6 (BOM option up to 8, eSIM BOM option)	6 (BOM option up to 8, eSIM BOM option)	2 (eSIM BOM option)
<b>Expansion</b>				
WWAN	2	3 (BOM optional up to 4)	3	1
Mini PCIe Slot	- 2 x (USB 2.0, PCIe 3.0/ SATA 3.0) - 1 x (USB 2.0) for LTE, BOM option: 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	- 2 x (USB 2.0, PCIe 3.0/ SATA 3.0) - 2 x (USB 2.0) for LTE, BOM option: 2 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	- 2 x (USB 2.0, PCIe 3.0/ SATA 3.0) - 2 x (USB 2.0) for LTE, BOM option: M.2 Key B 3042 (USB 2.0, USB 3.2 Gen1) for LTE/5G	2 x (USB 2.0, PCIe 3.0/SATA 3.0)
M.2 Slot	1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, 2 x PCIe 3.0), BOM option: 1 x Mini PCIe(USB 2.0, PCIe 3.0)
GNSS	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)
<b>Power</b>				
Power Input	DC 9V~36V	DC 9V~36V	DC 9V~36V	DC 9V~36V
Back Up Battery	N/A	N/A	N/A	N/A
<b>Environment</b>				
Ingress Protection	N/A	N/A	N/A	IP65
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	-30°C~60°C	-30°C~70°C	-30°C~60°C	-30°C~60°C
<b>Others</b>				
TPM	TPM 2.0	TPM 2.0	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/ Linux (Kernel 4.x)	Win 11/Win 10/ Linux (Kernel 4.x)	Win 11/Win 10/ Linux (Kernel 4.x)	Win 11/Win 10/ Linux (Kernel 4.x)
Dimensions (mm)	260.0 x 256.0 x 90.1	260.0 x 256.0 x 83.5	260.0 x 256.0 x 83.5	260.0 x 256.0 x 66.5

Model				
	<b>VTC 7260-5</b>	<b>VTC 7260-5C4</b>	<b>VTC 7260-7</b>	<b>VTC 7260-7C4</b>
<b>System</b>				
CPU	Intel® Core™ i5-1145GRE, 4-core, 1.5GHz	Intel® Core™ i5-1145GRE, 4-core, 1.5GHz	Intel® Core™ i7-1185GRE, 4-core, 1.8GHz	Intel® Core™ i7-1185GRE, 4-core, 1.8GHz
Chipset	N/A	N/A	N/A	N/A
Memory	2 x DDR4 3200 SO-DIMM, in-band ECC, default 4GB + 4GB, up to 64GB, 32GB per DIMM	2 x DDR4 3200 SO-DIMM, in-band ECC, default 4GB + 4GB, up to 64GB, 32GB per DIMM	2 x DDR4 3200 SO-DIMM, in-band ECC, default 4GB + 4GB, up to 64GB, 32GB per DIMM	2 x DDR4 3200 SO-DIMM, in-band ECC, default 4GB + 4GB, up to 64GB, 32GB per DIMM
Storage	1 x 2.5" SATA 3.0 SSD (15mm)	1 x 2.5" SATA 3.0 SSD (15mm)	1 x 2.5" SATA 3.0 SSD (15mm)	1 x 2.5" SATA 3.0 SSD (15mm)
Second Storage	- 1 x mSATA 3.0 - 1 x M.2 Key M 2280 NVMe SSD (PCIe4.0 x4)	- 1 x mSATA 3.0 - 1 x M.2 Key M 2280 NVMe SSD (PCIe4.0 x4)	- 1 x mSATA 3.0 - 1 x M.2 Key M 2280 NVMe SSD (PCIe4.0 x4)	- 1 x mSATA 3.0 - 1 x M.2 Key M 2280 NVMe SSD (PCIe4.0 x4)
Video Out	1 x VGA, 1 x HDMI®, 1 x DP	1 x VGA, 1 x HDMI®, 1 x DP	1 x VGA, 1 x HDMI®, 1 x DP	1 x VGA, 1 x HDMI®, 1 x DP
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 Mic in, 1 x Line out
Ethernet	- 1 x Intel® 1GbE (supports WoL, PXE, iAMT) - 2 x independent Intel® 2.5GbE	1 x Intel® 1GbE (supports WoL, PXE, iAMT)	1 x Intel® 1GbE (WoL, PXE, iAMT support), 2 x independent Intel® 2.5GbE	1 x Intel® 1GbE (WoL, PXE, iAMT support)
<b>I/O Interface</b>				
PoE	N/A	4 x independent Intel® 2.5GbE (w/ 802.3af/at), total 60W	N/A	4 x independent Intel® 2.5GbE (w/ 802.3af/at), total 60W
USB	3 x USB 3.2 Gen 1, 1 x USB 2.0	3 x USB 3.2 Gen 1, 1 x USB 2.0	3 x USB 3.2 Gen 1, 1 x USB 2.0	3 x USB 3.2 Gen 1, 1 x USB 2.0
COM	1 x RS-232 full, 2 x RS-232 full/422/485	2 x RS-232 full/422/485	1 x RS-232 full, 2 x RS-232 full/422/485	2 x RS-232 full/422/485
DIO	4 x DI, 4 x DO	4 x DI, 4 x DO	4 x DI, 4 x DO	4 x DI, 4 x DO
CAN bus	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)
DC Output	N/A	N/A	N/A	N/A
SIM Slot	4	4	4	4
<b>Expansion</b>				
WWAN	2	2	2	2
Mini PCIe Slot	1 x (PCIe 3.0/USB 3.2, USB 2.0) for LTE/5G	1 x (PCIe 3.0/USB 3.2, USB 2.0) for LTE/5G	1 x (PCIe 3.0/USB 3.2, USB 2.0) for LTE/5G	1 x (PCIe 3.0/USB 3.2, USB 2.0) for LTE/5G
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 3.0 x2, USB 2.0) for Wi-Fi/Hailo AI card	- 1 x M.2 Key B 3042/3052 (USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 3.0 x2, USB 2.0) for Wi-Fi/Hailo AI card	- 1 x M.2 Key B 3042/3052 (USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 3.0 x2, USB 2.0) for Wi-Fi/Hailo AI card	- 1 x M.2 Key B 3042/3052 (USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 3.0 x2, USB 2.0) for Wi-Fi/Hailo AI card
GNSS	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)
<b>Power</b>				
Power Input	DC 9V~36V	DC 9V~36V	DC 9V~36V	DC 9V~36V
Back Up Battery	N/A	N/A	N/A	N/A
<b>Environment</b>				
Ingress Protection	N/A	N/A	N/A	N/A
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	-30°C~65/70°C (15W/12W TDP)	-30°C~60°C (15W TDP & PoE)	-30°C~65/70°C (15W/12W TDP)	-30°C~60°C (15W TDP & PoE)
<b>Others</b>				
TPM	TPM 2.0	TPM 2.0	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/ Linux (Kernel 5.x)	Win 11/Win 10/ Linux (Kernel 5.x)	Win 11/Win 10/ Linux (Kernel 5.x)	Win 11/Win 10/ Linux (Kernel 5.x)
Dimensions (mm)	210.0 x 173.0 x 75.0	210.0 x 173.0 x 75.0	210.0 x 173.0 x 75.0	210.0 x 173.0 x 75.0

# Vehicle Telematics Computer

Model	 VTC 7270	 VTC 7270-C4/C8	 VTC 7280-7
<b>System</b>			
CPU	12/13/14th Gen Intel® Core™ i	12/13/14th Gen Intel® Core™ i	Intel® Core™ Ultra 7 155H, 16-core, 1.4GHz
Chipset	Intel® R680E	Intel® R680E	N/A
Memory	2 x DDR5 4800 SO-DIMM, ECC, up to 64GB, 32GB per DIMM	2 x DDR5 4800 SO-DIMM, ECC, up to 64GB, 32GB per DIMM	2 x DDR5 5600 SO-DIMM, default 8GB, up to 64GB, 32GB per DIMM
Storage	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)
Second Storage	1 x M.2 Key M 2280 NVMe SSD (PCIe4.0 x4)	1 x M.2 Key M 2280 NVMe SSD (PCIe4.0 x4)	1 x M.2 Key M 2280 NVMe SSD (PCIe4.0 x4)
Video Out	1 x VGA, 1 x HDMI®, 1 x DP	1 x VGA, 1 x HDMI®, 1 x DP	1 x VGA, 1 x HDMI®
Audio	1 x Mic in, 1 x Line in, 1 x Line out	1 x Mic in, 1 x Line in, 1 x Line out	1 x Mic in, 1 x Line out, 1 x Line in (reserved)
Ethernet	- 1 x Intel® 1GbE (supports WoL, PXE, iAMT) - 2 x independent Intel® 2.5GbE	1 x Intel® 1GbE (supports WoL, PXE, iAMT)	2 x independent Intel® 2.5GbE (supports WoL, PXE, iAMT)
<b>I/O Interface</b>			
PoE	N/A	4/8 x independent Intel® 2.5GbE (w/ 802.3af/at, total 60W/120W)	N/A
USB	6 x USB 3.2 Gen 2	6 x USB 3.2 Gen 2	1 x USB 3.2 Gen 2, 3 x USB 2.0, 1 x USB 2.0 (wafer reserved)
COM	2 x RS-232 full, 2 x RS-232 full/422/485	2 x RS-232 full, 2 x RS-232 full/422/485	2 x RS-232 full/422/485, 1 x RS-232 full, 1 x RS-232 full (pin-header reserved)
DIO	4 x DI, 4 x DO	4 x DI, 4 x DO	4 x DI, 4 x DO (w/ isolation)
CAN bus	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)
DC Output	12V/2A	12V/2A	12V/3A
SIM Slot	4	4	4
<b>Expansion</b>			
WWAN	2	2	1 (up to 2 BOM option)
Mini PCIe Slot	- 1 x (PCIe 3.0/SATA 3.0, USB 2.0) - 1 x (USB 3.2/PCIe 3.0/SATA 3.0, USB 2.0)	- 1 x (PCIe 3.0/SATA 3.0, USB 2.0) - 1 x (USB 3.2/PCIe 3.0/SATA 3.0, USB 2.0)	- 1 x (PCIe 4.0, USB 2.0) - 1 x (PCIe 4.0, USB 2.0), BOM option: M.2 Key B (USB 3.2, USB 2.0) for LTE/5G
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 3.0 x2, USB 2.0) for Wi-Fi/Hailo AI card	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 3.0 x2, USB 2.0) for Wi-Fi/Hailo AI card	- 1 x M.2 Key B 3042/3052 (USB 3.2 Gen 2, USB 2.0) - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)
GNSS	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)
<b>Power</b>			
Power Input	DC 9V~36V	DC 9V~36V	DC 9V~36V
Back Up Battery	N/A	N/A	N/A
Ingress Protection	N/A	N/A	N/A
<b>Environment</b>			
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	-35°C~70°C (35W CPU, fanless; 65W CPU, w/ fan)	-35°C~60/65°C (35W CPU, fanless, 120W/60W PoE; 65W CPU, w/ fan, 120W/60W PoE)	-40°C~60°C (45W CPU)
<b>Others</b>			
TPM	TPM 2.0	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)
Dimensions (mm)	260.0 x 210.0 x 81.0	260.0 x 210.0 x 81.0	260.0 x 180.0 x 66.5

Model	 VTC 7280-5	 VTC 7280-7C5	 VTC 7280-5C5
<b>System</b>			
CPU	Intel® Core™ Ultra 5 125H, 14-core, 1.2GHz	Intel® Core™ Ultra 7 155H, 16-core, 1.4GHz	Intel® Core™ Ultra 5 125H, 14-core, 1.2GHz
Chipset	N/A	N/A	N/A
Memory	2 x DDR5 5600 SO-DIMM, default 8GB, up to 64GB, 32GB per DIMM	2 x DDR5 5600 SO-DIMM, default 8GB, up to 64GB, 32GB per DIMM	2 x DDR5 5600 SO-DIMM, default 8GB, up to 64GB, 32GB per DIMM
Storage	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)
Second Storage	1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)	1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)	1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)
Video Out	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®
Audio	1 x Mic in, 1 x Line out, 1 x Line in (reserved)	1 x Mic in, 1 x Line out, 1 x Line in (reserved)	1 x Mic in, 1 x Line out, 1 x Line in (reserved)
Ethernet	2 x independent Intel® 2.5GbE (supports WoL, PXE, iAMT)	N/A	N/A
<b>I/O Interface</b>			
PoE	N/A	4 x independent Intel® 2.5GbE (IEEE 802.3at/af), 1 x Intel® 2.5GbE (IEEE 802.3at/af/bt), total 80W	4 x independent Intel® 2.5GbE (IEEE 802.3at/af), 1 x Intel® 2.5GbE (IEEE 802.3at/af/bt), total 80W
USB	1 x USB 3.2 Gen 2, 3 x USB 2.0, 1 x USB 2.0 (wafer reserved)	1 x USB 3.2 Gen 2, 3 x USB 2.0, 1 x USB 2.0 (wafer reserved)	1 x USB 3.2 Gen 2, 3 x USB 2.0, 1 x USB 2.0 (wafer reserved)
COM	2 x RS-232 full/422/485, 1 x RS-232 full, 1 x RS-232 full (pin-header reserved)	2 x RS-232 full/422/485, 1 x RS-232 full, 1 x RS-232 full (pin-header reserved)	2 x RS-232 full/422/485, 1 x RS-232 full, 1 x RS-232 full (pin-header reserved)
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN bus	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)
DC Output	12V/3A	12V/3A	12V/3A
SIM Slot	4	4	4
<b>Expansion</b>			
WWAN	1 (up to 2 BOM option)	1 (up to 2 BOM option)	1 (up to 2 BOM option)
Mini PCIe Slot	- 1 x (PCIe 4.0, USB 2.0) - 1 x (PCIe 4.0, USB 2.0), BOM option: M.2 Key B (USB 3.2, USB 2.0) for LTE/5G	- 1 x (PCIe 4.0, USB 2.0) - 1 x (PCIe 4.0, USB 2.0), BOM option: M.2 Key B (USB 3.2, USB 2.0) for LTE/5G	- 1 x (PCIe 4.0, USB 2.0) - 1 x (PCIe 4.0, USB 2.0), BOM option: M.2 Key B (USB 3.2, USB 2.0) for LTE/5G
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 3.2 Gen 2, USB 2.0) - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 3.2 Gen 2, USB 2.0) - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 3.2 Gen 2, USB 2.0) - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)
GNSS	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)
<b>Power</b>			
Power Input	DC 9V~36V	DC 9V~36V	DC 9V~36V
Back Up Battery	N/A	N/A	N/A
Ingress Protection	N/A	N/A	N/A
<b>Environment</b>			
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	-40°C~60°C (45W CPU)	-40°C~60°C (45W CPU & 80W PoE)	-40°C~60°C (45W CPU & 80W PoE)
<b>Others</b>			
TPM	TPM 2.0	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)
Dimensions (mm)	260.0 x 180.0 x 66.5	260.0 x 180.0 x 66.5	260.0 x 180.0 x 66.5


# Railway Computer - Box PC/Panel PC


## nROK/vROK Series Brief Product Introduction


### Product Description


nROK series, railway computer, in an extended operating temperature range of -40 to 70°C certified EN 50155 and IP65 protection depended on models. The SKU with PoE integrated all-in-one computer can also work as a PoE switch and power supply for PoE cameras. Wide-range power input SKU from 24 to 110VDC includes isolation and protection against power dips. Multiple Wi-Fi 6/6E

and 5G/LTE cellular networks handle the connectivity that provides uninterrupted internet access and more transmission bandwidth, vROK series, all in one railway open frame panel computer, is designed for human machine interface (HMI) and passenger information system aimed at railway onboard infotainment applications.

 5G/LTE, Wi-Fi 6/6E, BT, CAN/OBD, GNSS + DR, POE, and multi-SIM integration

 Front accessible SSD storage

 Optional isolated 24~110VDC power input

 Global navigation satellite system for precise and real-time location

### Application

**nROK:** Communications hub, passenger information system, onboard video surveillance, digital radio data/voice transmission system, freight management system, rail analytics system, rail maintenance applications.

**vROK:** Human machine interface (HMI), passenger information system, infotainment.

### Product Highlight



EN 50155 certified system



Protection for voltage dips






M12 X-coded/D-coded PoE port for IP cameras





Panel-mount design railway computer

# Railway Computer - Box PC



Model			
	VTC 1911-IPK	nROK 1020-A	nROK 1030-A
<b>System</b>			
CPU	Intel Atom® E3815, 1-core, 1.46GHz	Intel Atom® x5-E3930, 2-core, 1.3GHz	Intel Atom® x6211E, 2-core, 1.3GHz
Chipset	N/A	N/A	N/A
Memory	1 x DDR3L 1333 SO-DIMM, default 2GB, up to 8GB	1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB	1 x DDR4 2666 SO-DIMM, in-band ECC, default 4GB, up to 3200MHz 32GB
Storage	1 x mSATA	1 x 2.5" SATA 3.0 SSD (9.5mm)	1 x 2.5" SATA 3.0 SSD (9.5mm)
Second Storage	1 x 2.5" SATA 3.0 SSD (9.5mm) or 1 x SATA 3.0 SATA DOM	1 x mSATA (occupies a Mini PCIe slot)	1 x mSATA (occupies a Mini PCIe slot)
Video Out	1 x VGA, 1 x HDMI® (option)	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®
Audio	1 x Mic in, 1 x Line out (DB15)	1 x Mic in, 1 x Line out (M12)	1 x Mic in, 1 x Line out (DB9)
Ethernet	2 x Intel® 1GbE (M12 X-coded)	1 x Intel® 1GbE (M12 X-coded)	2 x Intel® 2.5GbE (M12 X-coded)
PoE	N/A	N/A	N/A
<b>I/O Interface</b>			
USB	1 x USB 2.0	2 x USB 3.2 Gen 1	1 x USB 3.2 Gen 2, 1 x USB 2.0
COM	2 x RS-232, 1 x RS-485	5 x RS-232, 2 x RS-485	2 x RS-232 Full/422/485
DIO	3 x DI, 3 x DO	5 x Programmable DIO	5 x DI, 4 x DO
CAN	1 x CAN bus 2.0B (w/o isolation)	1 x CAN bus 2.0B (w/o isolation)	1 x CAN bus 2.0B (w/ isolation)
DC Output	N/A	12V/2A	12V/2A
SMBus	N/A	1	N/A
SIM Slot	2	1	2 (eSIM BOM option)
<b>Expansion</b>			
WWAN	1	1	1
Mini PCIe Slot	- 1 x (USB 2.0, PCIe 2.0/SATA 2.0) - 1 x (USB 2.0) for LTE	- 1 x (USB 2.0, PCIe 2.0/SATA 3.0) - 1 x (USB 2.0) for LTE	1 x (USB 2.0, PCIe 3.0/SATA 3.0)
M.2 Slot	N/A	N/A	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x2), BOM option: 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0)
GNSS	Onboard u-blox NEO-M8N	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-06 module (u-blox NEO-M9N)
<b>Power</b>			
Power Input	DC 9V~36V	DC 24V (w/o isolation)	DC 24V (w/o isolation)
Backup Battery	N/A	N/A	N/A
<b>Environment</b>			
Ingress Protection	IP67	N/A	N/A
Certifications	CE, FCC Class A, UKCA, E13, EN 50155 (OT4)	CE, FCC Class A, UKCA, EN 50155 (OT4)	CE, FCC Class A, UKCA, EN 50155 (OT4), EN 45545-2
Operating Temperature	-40°C~70°C	-40°C~70°C	-40°C~70°C
<b>Others</b>			
TPM	TPM 2.0	TPM 2.0	TPM 2.0
OS	WES 7/Win 7/Win 8/Win 10/ Linux (Kernel 4.x)	Win 10/Linux (Kernel 4.x)	Win 11/Win 10/Linux (Kernel 5.x)
Dimensions (mm)	185.0 x 167.0 x 56.5	185.0 x 120.0 x 45.0	185.0 x 120.0 x 50.0



## Railway Computer - Box PC

Model		
	<b>nROK 1031-A</b>	<b>nROK 1031-AC2</b>
CPU	Intel Atom® x6413E, 4-core, 1.5GHz	Intel Atom® x6413E, 4-core, 1.5GHz
Chipset	N/A	N/A
Memory	1 x DDR4 2666 SO-DIMM, in-band ECC, default 4GB, up to 3200MHz 32GB	1 x DDR4 2666 SO-DIMM, in-band ECC, default 4GB, up to 3200MHz 32GB
Storage	1 x 2.5" SATA 3.0 SSD (9.5mm)	1 x 2.5" SATA 3.0 SSD (9.5mm)
Second Storage	1 x M.2 Key M 2280 SSD (SATA 3.0)	1 x M.2 Key M 2280 SSD (SATA 3.0)
Video Out	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®
Audio	1 x Mic in, 1 x Line out (DB9)	1 x Mic in, 1 x Line out (DB9)
Ethernet	- 1 x Intel® 2.5GbE - 1 x 1GbE - M12 X-coded	- 1 x Intel® 2.5GbE - 1 x 1GbE - M12 X-coded
PoE	N/A	2 x independent Intel® 2.5GbE (M12, w/ 802.3af/at), total 60W
USB	- 1 x M12 w/ 2 x USB 2.0 signal - 1 x USB 2.0 - 1 x USB 3.2 (Gen 2)	- 1 x M12 w/ 2 x USB 2.0 signal - 1 x USB 2.0 - 1 x USB 3.2 Gen 2
COM	1 x RS-232 full/422/485, 1 x RS-232, 2 x RS-485	1 x RS-232 full/422/485, 1 x RS-232, 2 x RS-485
DIO	5 x DI, 4 x DO	5 x DI, 4 x DO
CAN	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)
DC Output	12V/2A	12V/2A
SMBus	N/A	N/A
SIM Slot	2 (eSIM BOM option)	2 (eSIM BOM option)
WWAN	1	1
Mini PCIe Slot	1 x (USB 2.0, PCIe 3.0), BOM option: 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 2) for LTE/5G NR	1 x (USB 2.0, PCIe 3.0), BOM option: 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 2) for LTE/5G NR
M.2 Slot	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x2) BOM option: 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0)	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x2) BOM option: 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0)
GNSS	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)
Power Input	DC 24V (w/o isolation)	DC 24V (w/o isolation)
Backup Battery	N/A	N/A
Ingress Protection	N/A	N/A
Certifications	CE, FCC Class A, UKCA, EN 50155 (OT4)	CE, FCC Class A, UKCA, EN 50155 (OT4)
Operating Temperature	-40°C~70°C	-40°C~70°C
TPM	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)
Dimensions (mm)	180.0 x 180.0 x 60.0	180.0 x 180.0 x 60.0



Model		
	<b>nROK 1040-A</b>	<b>nROK 1040-AC2</b>
CPU	Intel Atom® x7213RE, 2-core, 2.0GHz	Intel Atom® x7213RE, 2-core, 2.0GHz
Chipset	N/A	N/A
Memory	1 x DDR5 4800 SO-DIMM, in-band ECC, default 8GB, up to 16GB	1 x DDR5 4800 SO-DIMM, in-band ECC, default 8GB, up to 16GB
Storage	1 x 2.5" SATA 3.0 SSD (9.5mm)	1 x 2.5" SATA 3.0 SSD (9.5mm)
Second Storage	1 x mSATA (occupies a Mini PCIe slot)	1 x mSATA (occupies a Mini PCIe slot)
Video Out	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®
Audio	1 x Mic in, 1 x Line out (DB9)	1 x Mic in, 1 x Line out (DB9)
Ethernet	3 x Intel® 2.5GbE (M12 X-coded)	1 x Intel® 2.5GbE (M12 X-coded)
PoE	N/A	2 x independent Intel® 2.5GbE (M12, w/ 802.3af/at), total 30W
USB	1 x USB 3.2 Gen 2, 1 x USB 2.0	1 x USB 3.2 Gen 2, 1 x USB 2.0
COM	2 x RS-232 full/422/485, 1 x RS-232	2 x RS-232 full/422/485, 1 x RS-232
DIO	4 x DI, 4 x DO	4 x DI, 4 x DO
CAN	1 x CAN FD (w/ isolation)	1 x CAN FD (w/ isolation)
DC Output	12V/2A	12V/2A
SMBus	N/A	N/A
SIM Slot	2 (eSIM BOM option)	2 (eSIM BOM option)
WWAN	1	1
Mini PCIe Slot	1 x (USB 2.0, PCIe 3.0/SATA 3.0)	1 x (USB 2.0, PCIe 3.0/SATA 3.0)
M.2 Slot	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x1)	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x1)
GNSS	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)
Power Input	DC 24V (w/ isolation)	DC 24V (w/ isolation)
Backup Battery	N/A	N/A
Ingress Protection	N/A	N/A
Certifications	CE, FCC Class A, UKCA, EN 50155 (OT4), EN 45545-2	CE, FCC Class A, UKCA, EN 50155 (OT4), EN 45545-2
Operating Temperature	-40°C~70°C	-40°C~70°C
TPM	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)
Dimensions (mm)	185.0 x 120.0 x 50.0	185.0 x 120.0 x 50.0




# Railway Computer - Box PC

Model		
	<b>nROK 6221-A</b>	<b>nROK 6221-IPAI</b>
<b>System</b>		
CPU	Intel Atom® x7-E3950, 4-core, 1.6GHz	Intel Atom® x7-E3950, 4-core, 1.6GHz
Chipset	N/A	N/A
Memory	1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB	1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB
Storage	1 x 2.5" SATA 3.0 SSD (removable, 15mm)	1 x 2.5" SATA 3.0 SSD (removable, 15mm)
Second Storage	1 x CFast slot (front, default) or 1 x mSATA (occupies CFast, BOM option)	1 x CFast slot (front, default) or 1 x mSATA (occupies CFast, BOM option)
Video Out	2 x VGA, 1 x HDMI®	2 x VGA
Audio	1 x Mic in, 2 x Line out (DB9)	1 x Mic in, 1 x Line out (M8)
Ethernet	2 x Intel® 1GbE (M12 X-coded), BOM option: additional 1 x Intel® 1GbE (M12 X-coded)	2 x Intel® 1GbE (M12 X-coded), BOM option: additional 1 x Intel® 1GbE (M12 X-coded)
PoE	N/A	N/A
<b>I/O Interface</b>		
USB	- 1 x M12 w/ 2 x USB 2.0 signal - 1 x USB 2.0 - 1 x USB 3.2 Gen 1	- 1 x M12 w/ 2 x USB 2.0 signal - 1 x USB 2.0 - 1 x USB 3.2 Gen 1
COM	1 x RS-232 full, 1 x RS-232, 1 x RS485 (w/ isolation)	1 x RS-232 full, 1 x RS-232, 1 x RS-485 (w/ isolation)
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 3 x DO (w/ isolation)
CAN	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)
DC Output	N/A	N/A
SMBus	N/A	N/A
SIM Slot	6 (up to 8 BOM option, eSIM BOM option)	6 (up to 8 BOM option, eSIM BOM option)
<b>Expansion</b>		
WWAN	3 (up to 4 BOM option)	3 (up to 4 BOM option)
Mini PCIe Slot	- 1 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0, PCIe 2.0), BOM option: 1 x Mini PCIe (USB 2.0) for LTE - 1 x (USB 2.0) for LTE	- 1 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0, PCIe 2.0), BOM option: 1 x Mini PCIe (USB 2.0) for LTE - 1 x (USB 2.0) for LTE
M.2 Slot	- 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G	- 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G
GNSS	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)
<b>Power</b>		
Power Input	- DC 24V/36V (w/o isolation) - DC 24/110V (w/ isolation, option)	- DC 24V (w/ isolation) - DC 24V/36V (w/o isolation, option) - DC 110V (w/ isolation, option)
Backup Battery	N/A	N/A
<b>Environment</b>		
Ingress Protection	N/A	IP65
Certifications	CE, FCC Class A, UKCA, EN 50155 (OT4)	CE, FCC Class A, UKCA, EN 50155 (OT4)
Operating Temperature	-40°C~70°C	-40°C~70°C
<b>Others</b>		
TPM	TPM 2.0 (option)	TPM 2.0 (option)
OS	Win 10/Linux (Kernel 4.x)	Win 10/Linux (Kernel 4.x)
Dimensions (mm)	260.0 x 196.0 x 70.0	260.0 x 198.0 x 70.0




Model		
	<b>nROK 6231-A</b>	<b>nROK 6232-AC4S</b>
<b>System</b>		
CPU	Intel Atom® x7433RE, 4-core, 1.5GHz	Intel Atom® x7433RE, 4-core, 1.5GHz
Chipset	N/A	N/A
Memory	1 x DDR5 4800 SO-DIMM, in-band ECC, default 8GB, up to 16GB	1 x DDR5 4800 SO-DIMM, in-band ECC, default 8GB, up to 16GB
Storage	1 x 2.5" SATA 3.0 SSD (removable, 9.5mm)	eMMC 5.1, 64GB
Second Storage	1 x mSATA (occupies a Mini PCIe slot)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)
Video Out	1 x VGA, 1 x HDMI®, 1 x DP	1 x VGA, 1 x HDMI®, 1 x DP
Audio	1 x Mic in, 1 x Line in, 1 x Line out	1 x Mic in, 1 x Line in, 1 x Line out
Ethernet	2 x Intel® 2.5GbE (M12 X-coded)	1 x Intel® 2.5GbE (M12 X-coded)
PoE	N/A	4 x Intel® 2.5GbE (M12, w/ 802.3af/at/bt), total 90W
<b>I/O Interface</b>		
USB	2 x USB 2.0, 2 x USB 3.2 Gen 2	2 x USB 2.0, 2 x USB 3.2 Gen 2
COM	2 x RS-232 full/422/485, 1 x RS-232 full (w/ isolation)	2 x RS-232 full/422/485, 1 x RS-232, 1 x RS-422/485 (w/ isolation)
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN	1 x CAN FD (w/ isolation)	1 x CAN FD (w/ isolation)
DC Output	12V/2A	12V/2A
SMBus	N/A	N/A
SIM Slot	8 (eSIM BOM option)	4 (eSIM BOM option)
<b>Expansion</b>		
WWAN	3 (up to 4 BOM option)	2
Mini PCIe Slot	- 1 x (USB 2.0, SATA 3.0/PCIe 3.0, default mSATA), BIOS select (USB 2.0) for LTE, BOM option (USB 2.0, PCIe 3.0) for Wi-Fi - 1 x (USB 2.0, PCIe 3.0) for Wi-Fi, BOM option: 1 x M.2 Key B 3052 (USB 2.0, USB 3.2 Gen 2x1) for LTE/5G	1 x (USB 2.0, PCIe 3.0), BOM option: 1 x M.2 Key B 3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G
M.2 Slot	- 2 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 3.0 x 1, USB 2.0) for Wi-Fi, BOM option: Mini PCIe (PCIe 3.0 x 1, USB 2.0) for a Hailo module	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 3.0 x 1, USB 2.0), BOM option: Mini PCIe (PCIe 3.0 x 1, USB 2.0) for a Hailo module
GNSS	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)
<b>Power</b>		
Power Input	- DC 24V (w/o isolation) - DC 24/110V (w/ isolation, option)	DC 24V (w/o isolation)
Backup Battery	N/A	Option
<b>Environment</b>		
Ingress Protection	N/A	N/A
Certifications	CE, FCC Class A, UKCA, EN 50155 (OT4), EN 45545-2	CE, FCC Class A, UKCA, EN 50155 (OT4), EN 45545-2
Operating Temperature	-40°C~70°C	-40°C~70°C
<b>Others</b>		
TPM	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 4.x)	Win 11/Win 10/Linux (Kernel 4.x)
Dimensions (mm)	260.0 x 196.0 x 66.5	260.0 x 196.0 x 66.5




# Railway Computer - Box PC

Model		
	<b>nROK 6232-WIC4S</b>	<b>nROK 6222-AC4S</b>
CPU	Intel Atom® x7433RE, 4-core, 1.5GHz	Intel Atom® x7-E3950, 4-core, 1.6GHz
Chipset	N/A	N/A
Memory	1 x DDR5 4800 SO-DIMM, in-band ECC, default 8GB, up to 16GB	1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB
Storage	eMMC 5.1, 64GB	2 x 2.5" SATA 3.0 SSD (removable, 15mm)
Second Storage	- 1 x 2.5" SATA 3.0 SSD (removable, 15mm) - 1 x M.2 Key B 2242 (SATA)	- 1 x SD card slot (front) - 1 x USB DOM (internal)
Video Out	1 x VGA, 1 x HDMI®, 1 x DP	1 x VGA, 2 x HDMI®
Audio	1 x Mic in, 1 x Line in, 1 x Line out	1 x Mic in, 1 x Line out (M8)
Ethernet	1 x Intel® 2.5GbE (M12 X-coded)	1 x Intel® 1GbE (M12 X-coded)
PoE	4 x Intel® 2.5GbE (M12, w/ 802.3af/at/bt), total 90W	4 x Intel® 1GbE (M12, w/ 802.3af/at), total 60W
USB	- 2 x USB 2.0 - 2 x USB 3.2 Gen 2	- 1 x M12 w/ 2 x USB 2.0 signal - 1 x USB 3.2 Gen 1
COM	2 x RS-232 full/422/485, 1 x RS-232, 1 x RS422/485 (w/ isolation)	1 x RS-232 full, 1 x RS-232, 1 x RS-422/485 (w/ isolation)
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN	1 x CAN FD (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)
DC Output	12V/2A	N/A
SMBus	N/A	N/A
SIM Slot	4 (eSIM BOM option)	2 (eSIM BOM option)
WWAN	2	1
Mini PCIe Slot	1 x (USB 2.0, PCIe 3.0), BOM option: 1 x M.2 Key B 3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	- 2 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0) for LTE, BOM option: 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) LTE/5G
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (PCIe 3.0 x1, USB 2.0), BOM option: Mini PCIe (PCIe 3.0 x1, USB 2.0) for a Hailo module	1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G (BOM option)
GNSS	VIOB-GPS-07 module (u-blox NEO-M9N)	u-blox NEO-M8N on board
Power Input	DC 24V~110V (w/ isolation)	- DC 24V/36V (w/o isolation) - DC 24V/110V (w/ isolation, external power kit, option)
Backup Battery	N/A	N/A
Ingress Protection	N/A	N/A
Certifications	CE, FCC Class A, UKCA, EN 50155 (OT4), EN 45545-2	CE, FCC Class A, UKCA, EN 50155 (OT4)
Operating Temperature	-40°C~70°C	-40°C~70°C
TPM	TPM 2.0	TPM 2.0 (option)
OS	Win 11/Win 10/Linux (Kernel 4.x)	Win 10/Linux (Kernel 4.x)
Dimensions (mm)	260.0 x 196.0 x 66.5	260.0 x 196.0 x 66.5




Model			
	<b>nROK7251-7A</b>	<b>nROK7251-7C4</b>	<b>nROK7251-WI-7C4IP</b>
CPU	Intel® Core™ i7-9700TE, 8-core, 1.8GHz	Intel® Core™ i7-9700TE, 8-core, 1.8GHz	Intel® Core™ i7-9700TE, 8-core, 1.8GHz
Chipset	Intel® Q370	Intel® Q370	Intel® Q370
Memory	2 x DDR4 2666 SO-DIMM, default 8GB, up to 64GB	2 x DDR4 2666 SO-DIMM, default 8GB, up to 64GB	2 x DDR4 2666 SO-DIMM, default 8GB, up to 64GB
Storage	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)
Second Storage	2 x mSATA (occupies Mini PCIe slot)	2 x mSATA (occupies Mini PCIe slot)	2 x mSATA (occupies Mini PCIe slot)
Video Out	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®	1 x VGA
Audio	1 x Mic in, 1 x Line out (M8)	1 x Mic in, 1 x Line out (M8)	1 x Mic in, 1 x Line out (M8)
Ethernet	2 x Intel® 1GbE (M12 X-coded)	1 x Intel® 1GbE (M12 X-coded)	1 x Intel® 1GbE (M12 X-coded)
PoE	N/A	4 x Independent Intel® 1GbE (M12, w/ 802.3af/at), total 60W	4 x Independent Intel® 1GbE (M12, w/ 802.3af/at), total 60W
USB	- 1 x M12 w/ 2 x USB 2.0 signal - 4 x USB 3.2 Gen 2	- 1 x M12 w/ 2 x USB 2.0 signal - 4 x USB 3.2 Gen 2	- 1 x M12 w/ 2 x USB 2.0 signal - 4 x USB 3.2 Gen 2
COM	2 x RS-232 full, 1 x RS-232 full/422/485 (w/ isolation)	2 x RS-232 full, 1 x RS-232 full/422/485 (w/ isolation)	2 x RS-232 full, 1 x RS-232 full/422/485 (w/ isolation)
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN	N/A	N/A	N/A
DC Output	N/A	N/A	N/A
SMBus	N/A	N/A	N/A
SIM Slot	6 (up to 8 BOM option, eSIM BOM option)	6 (up to 8 BOM option, eSIM BOM option)	6 (up to 8 BOM option, eSIM BOM option)
WWAN	3 (up to 4 BOM option)	3 (up to 4 BOM option)	3 (up to 4 BOM option)
Mini PCIe Slot	- 1 x (USB 2.0, PCIe 3.0/SATA 3.0) - 1 x (USB 2.0, PCIe 3.0/SATA 3.0), BOM option: 1 x Mini PCIe (USB 2.0) for LTE - 1 x (USB 2.0) for LTE, BOM option: 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	- 1 x (USB 2.0, PCIe 3.0/SATA 3.0) - 1 x (USB 2.0, PCIe 3.0/SATA 3.0), BOM option: 1 x Mini PCIe (USB 2.0) for LTE - 1 x (USB 2.0) for LTE, BOM option: 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	- 1 x (USB 2.0, PCIe 3.0/SATA 3.0) - 1 x (USB 2.0, PCIe 3.0/SATA 3.0), BOM option: 1 x Mini PCIe (USB 2.0) for LTE - 1 x (USB 2.0) for LTE, BOM option: 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 2) for LTE/5G
M.2 Slot	2 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	2 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	2 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G
GNSS	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)
Power Input	DC 24V (w/ isolation)	DC 24V (w/ isolation)	DC 24V~110V (w/ isolation)
Backup Battery	N/A	N/A	N/A
Ingress Protection	N/A	N/A	IP65
Certifications	CE, FCC Class A, UKCA, EN 50155 (OT4)	CE, FCC Class A, UKCA, EN 50155 (OT4)	CE, FCC Class A, UKCA, EN 50155 (OT4)
Operating Temperature	-40°C~70°C	-40°C~70°C	-40°C~70°C
TPM	TPM 2.0	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 4.x)	Win 11/Win 10/Linux (Kernel 4.x)	Win 11/Win 10/Linux (Kernel 4.x)
Dimensions (mm)	260.0 x 256.0 x 84.0	260.0 x 256.0 x 84.0	260.0 x 256.0 x 110.0

# Railway Computer - Box PC



Model			
	<b>nROK 7252-AC8S</b>	<b>nROK 7252-WI2-C8S</b>	<b>nROK 7270-A</b>
<b>System</b>			
CPU	9/8th Gen Intel® Core™ i/Xeon® (optional AI Hailo-8™ onboard)	9/8th Gen Intel® Core™ i/Xeon® (optional AI Hailo-8™ onboard)	14/13/12th Gen Intel® Core™ i
Chipset	Intel® C246	Intel® C246	Intel® R680E
Memory	2 x DDR4 2666 SO-DIMM, up to 64GB	2 x DDR4 2666 SO-DIMM, up to 64GB	2 x DDR5 4800 SO-DIMM, up to 64GB, ECC support
Storage	4 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)
Second Storage	- 2 x mSATA (occupies Mini PCIe slot) - 1 x SD card slot (SD 3.0, front)	- 2 x mSATA (occupies Mini PCIe slot) - 1 x SD card slot (SD 3.0, front)	- 1 x mSATA (occupies a Mini PCIe slot) - 2 x M.2 Key B 2242 (SATA 3.0, occupies M.2 slot) - 1 x microSD card slot (SDXC 3.01, front)
Video Out	1 x VGA, 2 x HDMI®	1 x VGA, 2 x HDMI®	1 x VGA, 1 x HDMI®
Audio	1 x Mic in, 2 x Line out (DB9)	1 x Mic in, 2 x Line out (DB9)	1 x Mic in, 1 x Line out (M8)
Ethernet	2 x Intel® 1GbE (M12)	2 x Intel® 1GbE (M12)	2 x Intel® 2.5GbE (M12, supports WoL)
PoE	8 x Intel® 1GbE (M12, w/ 802.3af/at), total 60W	8 x Intel® 1GbE (M12, w/ 802.3af/at), total 60W	N/A
USB	- 1 x M12 w/ 2 x USB 2.0 signal - 4 x USB 3.2 Gen 2	- 1 x M12 w/ 2 x USB 2.0 signal - 4 x USB 3.2 Gen 2	- 1 x M12 w/ 2 x USB 2.0 signal, - 2 x USB 3.2 Gen 2
COM	2 x RS-232 full, 1 x RS-232 Full/422/485 (w/ isolation)	2 x RS-232 full, 1 x RS-232 Full/422/485 (w/ isolation)	2 x RS-232 Full/422/485 (w/ isolation)
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN	1 x CAN bus 2.0B (w/ isolation)	1 x CAN bus 2.0B (w/ isolation)	2 x CAN FD (w/ isolation)
DC Output	N/A	N/A	N/A
SMBus	N/A	N/A	N/A
SIM Slot	6 (up to 8 BOM option, eSIM BOM option)	6 (up to 8 BOM option, eSIM BOM option)	4 (eSIM BOM option)
WWAN	3 (up to 4 BOM option)	3 (up to 4 BOM option)	2
Mini PCIe Slot	- 1 x (USB 2.0, PCIe 3.0/SATA 3.0) - 1 x (USB 2.0, PCIe 3.0/SATA 3.0), BOM option: 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x (USB 2.0) for LTE, BOM option: 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	- 1 x (USB 2.0, PCIe 3.0/SATA 3.0) - 1 x (USB 2.0, PCIe 3.0/SATA 3.0), BOM option: 1 x M.2 Key B 3042 (USB 2.0, USB 3.2 Gen 1) for LTE/5G - 1 x (USB 2.0) for LTE, BOM option: 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	1 x (USB 2.0, PCIe 3.0/SATA 3.0)
M.2 Slot	2 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	2 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G	- 2 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2, SATA 3.0) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x2), BOM option: 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0)
GNSS	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-06 module (u-blox NEO-M9N)
<b>Power</b>			
Power Input	DC 24V/36V (w/o isolation)	DC 24V~110V (w/ isolation, 3-second protection against temporary voltage dips)	DC 24V/36V (w/o isolation)
Backup Battery	N/A	N/A	N/A
<b>Environment</b>			
Ingress Protection	N/A	N/A	N/A
Certifications	CE, FCC Class A, UKCA, EN 50155 (OT4)	CE, FCC Class A, UKCA, EN 50155 (OT4)	CE, FCC Class A, UKCA, EN 50155 (OT3), EN 45545-2
Operating Temperature	-40°C~70°C	-40°C~70°C	-35°C~70°C
<b>Others</b>			
TPM	TPM 2.0	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 4.x)	Win 11/Win 10/Linux (Kernel 4.x)	Win 11/Win 10/Linux (Kernel 4.x)
Dimensions (mm)	260.0 x 266.0 x 110.0	260.0 x 266.0 x 110.0	260.0 x 210.0 x 80.0

Model			
	<b>nROK 7270-AC4</b>	<b>nROK 7271-WI</b>	<b>nROK 7271-WIC4</b>
<b>System</b>			
CPU	14/13/12th Gen Intel® Core™ i	14/13/12th Gen Intel® Core™ i	14/13/12th Gen Intel® Core™ i
Chipset	Intel® R680E	Intel® R680E	Intel® R680E
Memory	2 x DDR5 4800 SO-DIMM, ECC, up to 64GB	2 x DDR5 4800 SO-DIMM, ECC, up to 64GB	2 x DDR5 4800 SO-DIMM, ECC, up to 64GB
Storage	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)
Second Storage	- 1 x mSATA (occupies a Mini PCIe slot) - 2 x M.2 Key B 2242 (SATA 3.0, occupies M.2 slot) - 1 x microSD card slot (SDXC 3.01, front)	- 1 x mSATA (occupies a Mini PCIe slot) - 2 x M.2 Key B 2242 (SATA 3.0, occupies M.2 slot) - 1 x microSD card slot (SDXC 3.01, front)	- 1 x mSATA (occupies a Mini PCIe slot) - x M.2 Key B 2242 (SATA 3.0, occupies M.2 slot) - 1 x microSD card slot (SDXC 3.01, front)
Video Out	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®	1 x VGA, 1 x HDMI®
Audio	1 x Mic in, 1 x Line out (M8)	1 x Mic in, 1 x Line out (M8)	1 x Mic in, 1 x Line out (M8)
Ethernet	1 x Intel® 2.5GbE (M12, supports WoL)	2 x Intel® 2.5GbE (M12, supports WoL)	1 x Intel® 2.5GbE (M12, supports WoL)
PoE	4 x independent Intel® 2.5GbE (M12, w/ 802.3at/af), total 60W	N/A	4 x independent Intel® 2.5GbE (M12, w/ 802.3at/af), total 30/60W
USB	- 1 x M12 w/ 2 x USB 2.0 signal - 2 x USB 3.2 Gen 2	- 1 x M12 w/ 2 x USB 2.0 signal - 2 x USB 3.2 Gen 2	- 1 x M12 w/ 2 x USB 2.0 signal - 2 x USB 3.2 Gen 2
COM	2 x RS-232 Full/422/485 (w/ isolation)	2 x RS-232 Full/422/485 (w/ isolation)	2 x RS-232 Full/422/485 (w/ isolation)
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)
DC Output	N/A	N/A	N/A
SMBus	N/A	N/A	N/A
SIM Slot	4 (eSIM BOM option)	4 (eSIM BOM option)	4 (eSIM BOM option)
WWAN	2	2	2
Mini PCIe Slot	1 x (USB 2.0, PCIe 3.0/SATA 3.0)	1 x (USB 2.0, PCIe 3.0/SATA 3.0)	1 x (USB 2.0, PCIe 3.0/SATA 3.0)
M.2 Slot	- 2 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2, SATA 3.0) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x2), BOM option: 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0)	- 2 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2, SATA 3.0) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x2), BOM option: 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0)	- 2 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2, SATA 3.0) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x2), BOM option: 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0)
GNSS	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-06 module (u-blox NEO-M9N)
<b>Power</b>			
Power Input	DC 24V/36V (w/o isolation)	DC 24V~110V (w/ isolation, optional 3-second protection against temporary voltage dips)	DC 24V~110V (w/ isolation, optional 3-second protection against temporary voltage dips)
Backup Battery	N/A	N/A	N/A
<b>Environment</b>			
Ingress Protection	N/A	N/A	N/A
Certifications	CE, FCC Class A, UKCA, EN 50155 (OT3), EN 45545-2	CE, FCC Class A, UKCA, EN 50155 (OT3), EN 45545-2	CE, FCC Class A, UKCA, EN 50155 (OT3), EN 45545-2
Operating Temperature	-35°C~70°C	-35°C~70°C	-35°C~70°C
<b>Others</b>			
TPM	TPM 2.0	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 4.x)	Win 11/Win 10/Linux (Kernel 4.x)	Win 11/Win 10/Linux (Kernel 4.x)
Dimensions (mm)	260.0 x 210.0 x 80.0	260.0 x 210.0 x 110.0	260.0 x 210.0 x 110.0


## Railway Computer - Box PC

Model	 <b>NEW</b>	 <b>NEW</b>	 <b>NEW</b>
	<b>nROK 7280-7AC5IP</b>	<b>nROK 7280-5AC5IP</b>	<b>nROK 7280-7WIC5IP</b>
CPU	Intel® Core™ Ultra 7 125H, 16-core, 1.4GHz	Intel® Core™ Ultra 5 125H, 14-core, 1.2GHz	Intel® Core™ Ultra 7 125H, 16-core, 1.4GHz
Chipset	N/A	N/A	N/A
Memory	2 x DDR5 5600 SO-DIMM, default 8GB, up to 64GB, 32GB per DIMM	2 x DDR5 5600 SO-DIMM, default 8GB, up to 64GB, 32GB per DIMM	2 x DDR5 5600 SO-DIMM, default 8GB, up to 64GB, 32GB per DIMM
Storage	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	2 x 2.5" SATA 3.0 SSD (removable, 15mm)
Second Storage	1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)	1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4)	- 1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4) - 1x M.2 2242 Key M (SATA 3.0)
Video Out	1 x VGA (wafer reserved), 1 x HDMI®	1 x VGA (wafer reserved), 1 x HDMI®	1 x VGA (wafer reserved), 1 x HDMI®
Audio	1 x Mic in, 1 x Line out, 1 x Line in (reserved)	1 x Mic in, 1 x Line out, 1 x Line in (reserved)	1 x Mic in, 1 x Line out, 1 x Line in (reserved)
Ethernet	N/A	N/A	N/A
PoE	- 4 x independent Intel® 2.5GbE (w/ 802.3at/af) - 1 x Intel® 2.5GbE (w/ 802.3at/af/bt) - M12 X-coded, total 80W	- 4 x independent Intel® 2.5GbE (w/ 802.3at/af) - 1 x Intel® 2.5GbE (w/ 802.3at/af/bt) - M12 X-coded, total 80W	- 4 x independent Intel® 2.5GbE (w/ 802.3at/af) - 1 x Intel® 2.5GbE (w/ 802.3at/af/bt) - M12 X-coded, total 80W
USB	- 1 x USB 3.2 Gen 1 (M12 X-coded) - 4 x USB 2.0 (2 x M12 A-coded)	- 1 x USB 3.2 Gen 1 (M12 X-coded) - 4 x USB 2.0 (2 x M12 A-coded)	- 1 x USB 3.2 Gen 1 (M12 X-coded) - 4 x USB 2.0 (2 x M12 A-coded)
COM	2 x RS-232/422/485, 2 x RS-232 (Tx/Rx)	2 x RS-232/422/485, 2 x RS-232 (Tx/Rx)	2 x RS-232/422/485, 2 x RS-232 (Tx/Rx)
DIO	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)	4 x DI, 4 x DO (w/ isolation)
CAN	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)	2 x CAN FD (w/ isolation)
DC Output	12V/3A	12V/3A	12V/3A
SMBus	N/A	N/A	N/A
SIM Slot	4	4	4
WWAN	1 (up to 2 BOM option)	1 (up to 2 BOM option)	1 (up to 2 BOM option)
Mini PCIe Slot	- 1 x (PCIe 4.0, USB 2.0) - 1 x (PCIe 4.0, USB 2.0), BOM option: M.2 Key B (USB 3.2, USB 2.0) for LTE/5G	- 1 x (PCIe 4.0, USB 2.0) - 1 x (PCIe 4.0, USB 2.0), BOM option: M.2 Key B (USB 3.2, USB 2.0) for LTE/5G	- 1 x (PCIe 4.0, USB 2.0) - 1 x (PCIe 4.0, USB 2.0), BOM option: M.2 Key B (USB 3.2, USB 2.0) for LTE/5G
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 3.2 Gen 2) - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 3.2 Gen 2) - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)	- 1 x M.2 Key B 3042/3052 (USB 3.2 Gen 2) - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)
GNSS	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)	VIOB-GPS-07 module (u-blox NEO-M9N)
Power Input	DC 9V~36V/24V rail, K-coded	DC 9V~36V/24V rail, K-coded	DC 9V~36V/24V rail, K-coded
Backup Battery	N/A	N/A	N/A
Ingress Protection	IP67	IP67	IP67
Certifications	CE, FCC Class A, UKCA, E13, EN 50155 (OT2), EN 45545-2	CE, FCC Class A, UKCA, E13, EN 50155 (OT2), EN 45545-2	CE, FCC Class A, UKCA, EN 50155 (OT2), EN 45545-2, LVD
Operating Temperature	-40°C~60°C (28W CPU & 80W PoE)	-40°C~60°C (28W CPU & 80W PoE)	-40°C~60°C (28W CPU & 80W PoE)
TPM	TPM 2.0	TPM 2.0	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)	Win 11/Win 10/Linux (Kernel 5.x)
Dimensions (mm)	260.0 x 182.0 x 87.8	260.0 x 182.0 x 87.8	260.0 x 182.0 x 87.8

## Railway Computer - Panel PC

Model	 <b>NEW</b>	
	<b>nROK 7280-5WIC5IP</b>	<b>vROK 3030-A-B</b>
CPU	Intel® Core™ Ultra 5 125H, 14-core, 1.2GHz	
Chipset	N/A	
Memory	2 x DDR5 5600 SO-DIMM, default 8GB, up to 64GB, 32GB per DIMM	
Storage	2 x 2.5" SATA 3.0 SSD (removable, 15mm)	
Second Storage	- 1 x M.2 Key M 2280 NVMe SSD (PCIe 4.0 x4) - 1x M.2 2242 Key M (SATA 3.0)	
Video Out	1 x VGA (wafer reserved), 1 x HDMI®	
Audio	1 x Mic in, 1 x Line out, 1 x Line in (reserved)	
Ethernet	N/A	
PoE	- 4 x independent Intel® 2.5GbE (w/ 802.3at/af) - 1 x Intel® 2.5GbE (w/ 802.3at/af/bt) - M12 X-coded, total 80W	
USB	- 1 x USB 3.2 Gen 1 (M12 X-coded) - 4 x USB 2.0 (2 x M12 A-coded)	
COM	2 x RS-232/422/485, 2 x RS-232 (Tx/Rx)	
DIO	4 x DI, 4 x DO (w/ isolation)	
CAN	2 x CAN FD (w/ isolation)	
DC Output	12V/3A	
SMBus	N/A	
SIM Slot	4	
WWAN	1 (up to 2 BOM option)	
Mini PCIe Slot	- 1 x (PCIe 4.0, USB 2.0) - 1 x (PCIe 4.0, USB 2.0), BOM option: M.2 Key B (USB 3.2, USB 2.0) for LTE/5G	
M.2 Slot	- 1 x M.2 Key B 3042/3052 (USB 3.2 Gen 2) - 1 x M.2 Key E 2230 (PCIe 4.0 x2, USB 2.0)	
GNSS	VIOB-GPS-07 module (u-blox NEO-M9N)	
Power Input	DC 9V~36V/24V rail, K-coded	
Backup Battery	N/A	
Ingress Protection	IP67	
Certifications	CE, FCC Class A, UKCA, EN 50155 (OT2), EN 45545-2, LVD	
Operating Temperature	-40°C~60°C (28W CPU & 80W PoE)	
TPM	TPM 2.0	
OS	Win 11/Win 10/Linux (Kernel 5.x)	
Dimensions (mm)	260.0 x 182.0 x 87.8	

Model	
	<b>vROK 3030-A-B</b>
LCD Size	10.4" TFT LCD
Resolution	1024x768
Brightness (Typ.)	1200cd/m²
Contrast Ratio	900:1
View Angle	V: 85/85, H: 85/85
Brightness Adjustment	Auto via light sensor
Touch Screen	Projected capacitive, anti-glare
CPU	Intel Atom® x6414RE, 4-core, 1.50GHz
Chipset	N/A
Memory	1 x DDR4 2666 SO-DIMM, default 4GB, up to 32GB
Storage	- 1 x mSATA (occupies a Mini PCIe slot) - 1 x M.2 Key M 2280 NVMe SSD (PCIe 3.0 x1, SATA 3.0)
Speaker	N/A
Control Button	N/A
Video Out	1 x HDMI®, 1 x DP
Video Input	4 x CVBS
Audio	1 x Line in, 2 x Line out (DB9)
Ethernet	2 x Intel® 2.5GbE (M12)
PoE	Option
USB	- 1 x M12 w/ 2 x USB 2.0 signal - 1 x USB 3.2 Gen 2
COM	2 x RS-232 full/422/485)
DIO	4 x DI, 2 x DO (w/ isolation)
CAN	1 x CAN bus 2.0B (w/ isolation)
SIM Slot	2
WWAN	1
Mini PCIe Slot	1 x (USB 2.0, PCIe 3.0/SATA 3.0)
M.2 Slot	- 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0) - 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G
GNSS	VIOB-GPS-06 module (u-blox NEO-M9N)
Power Input	DC 24V/36V (w/o isolation) DC 24V/110V (w/ isolation, option)
Internal Back Up Battery	N/A
Ingress Protection	Front panel IP65
Certifications	CE, FCC Class A, UKCA, EN 50155 (OT3)
Operating Temperature	-30°C~70°C
TPM	TPM 2.0
OS	Win 11/Win 10/Linux (Kernel 4.x)
Mounting	VESA 75
Dimensions (mm)	336.0 x 257.6 x 72.7


# Vehicle Network Switch


## VES Series Brief Product Introduction


### Product Description


VES Series is the unmanaged mobile vehicle and railway PoE switch that ensures stable network service for telematics applications. Enclosed in a fanless rugged chassis, they support a wide voltage input range, fully

operable under shock, vibration, and a harsh temperature range. The reliable mobile vehicle and railway PoE switch is certified with E-Mark and EN 50155.

 EN 50155 and E-Mark certification

 M12 X-coded LAN connector

 -40~70°C operating temperature

 Compact and ruggedized enclosure design

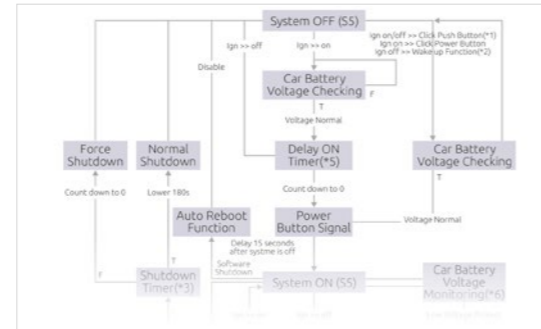
### Application

- Video surveillance
- Wireless gateway
- Passenger infotainment system

### Product Highlight



Dedicated for onboard vehicle/train systems







Ignition power management: power on/off delay, wide voltage input 9~36VDC, low voltage protection



Ultra-rugged enclosure, comply with MIL-STD-810H against vibration and shock impact



Rich 4/8-port IEEE 802.3af/at compliant PoE, up to 30W/port

Model				
	VES31-4S	VES31-8S	VES31-4SR	VES31-8SR
Architecture	Unmanaged GbE switch	Unmanaged GbE switch	Unmanaged GbE switch	Unmanaged GbE switch
PoE	4 x 1GbE (w/ 802.3af/at), total 120W	8 x 1GbE (w/ 802.3af/at), total 120W	4 x 1GbE (M12, w/ 802.3af/at), total 120W	8 x 1GbE (M12, w/ 802.3af/at), total 120W
Ethernet	2 x 1GbE	2 x 1GbE	2 x 1GbE (M12)	2 x 1GbE (M12)
LED	- 1 x Power indicator - 4 x PoE indicator - 1 x Low voltage protection indicator - 8 x Active/link indicator	- 1 x Power indicator - 8 x PoE indicator - 1 x Low voltage protection indicator - 12 x Active/link indicator	- 1 x Power indicator - 4 x PoE indicator - 1 x Low voltage protection indicator - 6 x Active/link indicator	- 1 x Power indicator - 8 x PoE indicator - 1 x Low voltage protection indicator - 10 x Active/link indicator
Ignition Control	Yes	Yes	Yes	Yes
Power Management	Low voltage protection & power on/off delay time	Low voltage protection & power on/off delay time	Low voltage protection & power on/off delay time	Low voltage protection & power on/off delay time
Power Input	DC 9V~36V	DC 9V~36V	DC 9V~36V	DC 9V~36V
Certification	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, EN50155	CE, FCC Class A, UKCA, EN50155
Operating Temperature	-40°C~75°C	-40°C~75°C	-40°C~70°C (OT4)	-40°C~70°C (OT4)
Dimensions (mm)	167.0 x 140.0 x 52.0	167.0 x 140.0 x 52.0	167.0 x 140.0 x 85.0	167.0 x 140.0 x 85.0


# Vehicle Mount Computer and Display


## VMC and VMD Series Brief Product Introduction


### Product Description

The VMC series is a durable vehicle mount computer suitable for warehouse, ports, logistics, and material handling markets. Its IP65 rating protects against water/dust damage and its sunlight readability ensures display visibility. Optional back-up battery preserves data when car power battery fails, while wide-range power input (9~60VDC) allows for use in various facilities, forklifts, and

vehicles. The VMD series is a tough TFT LCD monitor with a resistant or projected capacitive touchscreen, ideal for in-vehicle use. Its high-brightness display and automatic brightness control make it suitable for use in various lighting conditions. With an IP65 rating it is protected against water/dust damage, and its over 1000 nits display ensures excellent visibility.

 Full IP65 compliance

 Vibration and shock resistant

 5G/LTE, Wi-Fi 6/6E, BT, CAN/OBD, GNSS + DR, and multi-SIM integration

 E-Mark certification

### Application

- Fleet management
- Warehouse management
- Port management applications

### Product Highlight



Wide range power input 9~60VDC



Back-up battery provides uninterrupted power






Sunlight readability & high brightness









Impact protection IK08

# Vehicle Mount Computer




Model				
	<b>VMC 110/111</b>	<b>VMC 1100-PRO</b>	<b>VMC 1110-PRO1</b>	
Display	LCD Size	7" TFT LCD	7" TFT LCD	7" TFT LCD
	Resolution	1024x600	800x480	1024x600
	Brightness (Typ.)	500cd/m <sup>2</sup>	400cd/m <sup>2</sup>	1000cd/m <sup>2</sup>
	Contrast Ratio	800:1	600:1	1000:1
	View Angle	V: 70/75, H: 75/75	V: 50/70, H: 70/70	V: 85/85, H: 85/85
	Brightness Adjustment	Auto via light sensor	Auto via light sensor	Auto via light sensor
System	Touchscreen	4-wire resistive, anti-glare	4-wire resistive, anti-glare	4-wire resistive, anti-glare
	CPU	NXP i.MX6 Dual Lite, 2-core, 800 MHz	Intel Atom® E3825, 2-core, 1.33GHz	Intel Atom® x7211RE, 2-core, 1.0GHz
	Chipset	N/A	N/A	N/A
	Memory	Onboard DDR3L, 2GB	1 x DDR3L 1600 SO-DIMM, default 4GB, up to 8GB	1 x DDR5 4800 SO-DIMM, default 8GB, up to 16GB
I/O Interface	Storage	- eMMC 5.1, 8GB - 1 x microSD card slot	1 x SATA 3.0 SATA DOM	- eMMC 5.1, 128GB - 1 x microSDXC card slot - 2 x M.2 Key B 2242 (SATA 3.0, occupies M.2 slot)
	Speaker	2 x Built-in speaker	2 x Built-in speaker	2 x Built-in speaker
	Control Button	- F1~F5 function key - 1 x Power button - 2 x Brightness/volume control - 1 x System reset button	- F1~F5 function key - 1 x Power button - 2 x Brightness/volume control - 1 x System reset button	- F1~F5 function key - 1 x Power button - 2 x Brightness/volume control - 1 x System reset button
	Video Output	N/A	N/A	1 x HDMI®
	Video Input	N/A	N/A	N/A
	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
	Ethernet	1 x Intel® 1GbE	1 x Intel® 1GbE	1 x Intel® 2.5GbE
	PoE	N/A	N/A	N/A
	USB	3 x USB 2.0	1 x USB 3.2 Gen 1	1 x USB 3.2 Gen 2
	COM	1 x RS-232 Full, 1 x RS-232/485	1 x RS-232 full, 1 x RS-232 (Tx, Rx) or 1 x RS-485	1 x RS-232 full/RS-422/485, 1 x RS-232, 1 x RS-485
	DIO	3 x DI, 3 x DO	2 x PWM, 2 x AI, 2 x DI, 2 x DO	3 x DI, 2 x DO
	CAN	2 x CAN bus 2.0B (w/o isolation)	2 x CAN bus 2.0B (w/o isolation)	1 x CAN FD (w/ isolation)
	SIM Slot	1	1	2
	WWAN	1	1	1
Expansion	Mini PCIe Slot	- 1 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0) for LTE	- 1 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0) for LTE	N/A
	M.2 Slot	N/A	N/A	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2, SATA 3.0) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x2), BOM option: 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0) - 1 x M.2 Key B 2242 (USB 2.0, PCIe 3.0/ SATA 3.0 (auto detect))
Power	GNSS	Onboard u-blox NEO-M8N	Onboard u-blox NEO-M8N	VI0B-GPS-07 module (u-blox NEO-M9N)
	Power Input	DC 9V~36V	DC 9V~36V	DC 9V~36V
Environment	Internal Back Up Battery	N/A	N/A	N/A
	Ingress Protection	Front panel IP54	Front panel IP54	Front panel IP54
	Certifications	CE, FCC Class B, UKCA, E13	CE, FCC Class B, UKCA, E13, SAE J1113, SAE J1455, ISO7637-2, EN 60950-1, LVD	CE, FCC Class B, UKCA, E13
Others	Operating Temperature	-20°C~70°C	-20°C~60°C	-30°C~60°C
	TPM	N/A	N/A	TPM 2.0
	OS	Android™ 5.1	WES 8/WES 7/Win 10/Win 8/Win 7/ Linux (Kernel 4.x)	Win 11/Win 10/Linux (Kernel 4.x)
	Mounting	VESA 75	VESA 75	VESA 75
Dimensions (mm)	213.0 x 145.0 x 40.0	213.0 x 145.0 x 50.0	213.0 x 145.0 x 50.0	

# Vehicle Mount Computer



Model	 VMC 220-PC1	 VMC 2020-PC1	 VMC 2030-PC1 <span style="color:red">NEW</span>
<b>Display</b>	LCD Size: 8" TFT LCD Resolution: 1280x720 Brightness (Typ.): 1000cd/m <sup>2</sup> Contrast Ratio: 1000:1 View Angle: V: 85/85, H: 85/85 Brightness Adjustment: Auto via light sensor Touchscreen: Projected capacitive, anti-glare	LCD Size: 8" TFT LCD Resolution: 1280x720 Brightness (Typ.): 1000cd/m <sup>2</sup> Contrast Ratio: 1000:1 View Angle: V: 85/85, H: 85/85 Brightness Adjustment: Auto via light sensor Touchscreen: Projected capacitive, anti-glare	LCD Size: 8" TFT LCD Resolution: 1280x720 Brightness (Typ.): 1000cd/m <sup>2</sup> Contrast Ratio: 1000:1 View Angle: V: 85/85, H: 85/85 Brightness Adjustment: Auto via light sensor Touchscreen: Projected capacitive, anti-glare
<b>System</b>	CPU: NXP i.MX 8M Quad, 4-core, 1.3GHz Chipset: N/A Memory: Onboard LPDDR4 2133 SDRAM, 4GB Storage: - eMMC 5.1, 32GB - 1 x microSD	CPU: Intel Atom® x7-E3950, 4-core, 1.6GHz Chipset: N/A Memory: 1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB Storage: - eMMC 5.1, 64GB - 1 x mSATA (occupies a Mini PCIe slot)	CPU: Intel Atom® x7-E3950, 4-core, 1.5GHz Chipset: N/A Memory: 1 x DDR5 4800 SO-DIMM, in-band ECC, default 8GB, up to 16GB Storage: - 1 x M.2 Key M 2242 (SATA 3.0, PCIe 3.0 x1) - 1 x mSATA (occupies a Mini PCIe slot)
<b>I/O Interface</b>	Speaker: 2 x Built-in speaker Control Button: - F1~F4 programmable function keys - 2 x Brightness up/down key - 2 x Volume up/down key - 1 x Shift key - 1 x Power button - 1 x System reset button Video Output: N/A Video Input: 4 x CVBS Audio: 1 x Mic in, 1 x Line out Ethernet: 1 x Intel® 1GbE (M12) PoE: N/A USB: 3 x USB 2.0 COM: 1 x RS-232 full, 1 x RS-232, 1 x RS-232/422/485 DIO: 1 x PWM, 1 x Direction, 2 x DI, 2 x DO CAN: 1 x CAN bus 2.0B (w/ isolation) SIM Slot: 2 WWAN: 1 Mini PCIe Slot: N/A	Speaker: 2 x Built-in speaker Control Button: - F1~F4 programmable function keys - 2 x Brightness up/down key - 2 x Volume up/down key - 1 x Shift key - 1 x Power button - 1 x System reset button Video Output: N/A Video Input: 4 x CVBS (option) Audio: 1 x Mic in, 1 x Line out Ethernet: 1 x Intel® 1GbE (M12) PoE: N/A USB: - 1 x USB 3.2 Gen 1 - 2 x USB 2.0 COM: 1 x RS-232 full, 1 x RS-232, 1 x RS-232/422/485 DIO: 1 x PWM, 1 x Direction, 2 x DI, 2 x DO CAN: 1 x CAN bus 2.0B (w/ isolation) SIM Slot: 2 WWAN: 1 Mini PCIe Slot: - 1 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0, PCIe 2.0/SATA 3.0)	Speaker: 2 x Built-in speaker Control Button: - F1~F5 function key or 2 x Brightness control, 2 x Volume control, 1 x Mute - 1 x Power button - 1 x System reset button Video Output: 1 x HDMI® Video Input: 4 x CVBS (option) Audio: 1 x Mic in, 1 x Line out Ethernet: 1 x Intel® 2.5GbE (M12) PoE: N/A USB: - 1 x USB 3.2 Gen 2 - 2 x USB 2.0 COM: 1 x RS-232 full, 1 x RS-232, 1 x RS-232/422/485 DIO: 1 x PWM, 1 x Direction, 2 x DI, 2 x DO CAN: 1 x CAN FD (w/ isolation) SIM Slot: 2 WWAN: 1 Mini PCIe Slot: 1 x (USB 2.0, PCIe 3.0/SATA 3.0)
<b>Expansion</b>	M.2 Slot: - 1 x M.2 Key E 2230 (PCIe 2.0, SDIO 3.0, UART) - 1 x M.2 Key B 3042/3050/3052 (USB 3.2 Gen 1) for LTE/5G GNSS: VIOB-GPS-02 module (u-blox NEO-M8N)	M.2 Slot: 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G GNSS: VIOB-GPS-02 module (u-blox NEO-M8N)	M.2 Slot: - 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x2), BOM option: 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0) GNSS: VIOB-GPS-07 module (u-blox NEO-M9N)
<b>Power</b>	Power Input: DC 9V~60V Internal Back Up Battery: N/A	Power Input: DC 9V~60V Internal Back Up Battery: N/A	Power Input: DC 9V~60V Internal Back Up Battery: N/A
<b>Environment</b>	Ingress Protection: IP65 Certifications: CE, FCC Class B, UKCA, E13, IK08 Operating Temperature: -40°C~70°C	Ingress Protection: IP65 Certifications: CE, FCC Class B, UKCA, E13, IK08 Operating Temperature: -30°C~60°C	Ingress Protection: IP65 Certifications: CE, FCC Class B, UKCA, E13, IK08 Operating Temperature: -30°C~60°C
<b>Others</b>	TPM: TPM 2.0 (option) OS: Linux (Kernel 5.4.47) Mounting: VESA 75 Dimensions (mm): 250.0 x 179.0 x 68.0	TPM: TPM 2.0 (option) OS: Win 10/Linux (Kernel 4.x) Mounting: VESA 75 Dimensions (mm): 250.0 x 179.0 x 68.0	TPM: TPM 2.0 OS: Win 11/Win 10/Linux (Kernel 4.x) Mounting: VESA 75 Dimensions (mm): 250.0 x 179.0 x 68.0

Model	 VMC 320-AC0/VMC 320-AC0A	 VMC 3020	 VMC 3021
<b>Display</b>	LCD Size: 10.1" TFT LCD Resolution: 1280x800 Brightness (Typ.): 1000cd/m <sup>2</sup> Contrast Ratio: 800:1 View Angle: V: 85/85, H: 85/85 Brightness Adjustment: Auto via light sensor Touchscreen: Projected capacitive, anti-glare	LCD Size: 10.4" TFT LCD Resolution: 1024x768 Brightness (Typ.): 1200cd/m <sup>2</sup> Contrast Ratio: 900:1 View Angle: V: 85/85, H: 85/85 Brightness Adjustment: Auto via light sensor Touchscreen: 5-wire resistive, anti-glare	LCD Size: 10.4" TFT LCD Resolution: 1024x768 Brightness (Typ.): 1200cd/m <sup>2</sup> Contrast Ratio: 900:1 View Angle: V: 85/85, H: 85/85 Brightness Adjustment: Auto via light sensor Touchscreen: 5-wire resistive, anti-glare
<b>System</b>	CPU: NXP i.MX 8M Plus, 4-core, 1.6GHz Chipset: N/A Memory: Onboard LPDDR4 2133 SDRAM, 4GB Storage: - eMMC 5.1, 32 GB - 1 x microSDXC	CPU: Intel Atom® x5-E3930, 2-core, 1.3GHz Chipset: N/A Memory: 1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB Storage: - 1 x CFast slot - 1 x 2.5" SATA 3.0 SSD bay (9.5mm)	CPU: Intel Atom® x7-E3950, 4-core, 1.6GHz Chipset: N/A Memory: 1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB Storage: - 1 x CFast slot - 1 x 2.5" SATA 3.0 SSD bay (9.5mm)
<b>I/O Interface</b>	Speaker: 2 x Built-in speaker Control Button: - F1~F5 function key or 2 x Brightness control, 2 x Volume control, 1 x Mute - 1 x Power button - 1 x System reset button Video Output: 1 x HDMI® Video Input: N/A Audio: 1 x Mic in, 1 x Line out Ethernet: 1 x Intel® 1GbE (M12) PoE: N/A USB: - 2 x USB 2.0 - 1 x USB 3.2 Gen 1 COM: 2 x RS-232 full/422/485 DIO: 2 x DI, 2 x DO CAN: 1 x CAN FD (w/ isolation) SIM Slot: 2 WWAN: 1 Mini PCIe Slot: N/A	Speaker: 2 x Built-in speaker Control Button: - 5 x Function key (w/ F1~F10 programmable function) - 2 x Brightness control - 2 x Volume control - 1 x Shift key - 1 x Power button Video Output: N/A Video Input: N/A Audio: 1 x Mic in, 1 x Line out Ethernet: 1 x Intel® 1GbE PoE: N/A USB: - 2 x USB 2.0 (5V/0.5A) - 1 x Power USB (5V/1.5A, 12V/1.5A) COM: 2 x Powered RS-232 (5V/1.5A, 12V/1.5A) DIO: 2 x DI, 2 x DO CAN: 1 x CAN bus 2.0B (w/ isolation) SIM Slot: 1 WWAN: 1 Mini PCIe Slot: - 1 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0) for LTE	Speaker: 2 x Built-in speaker Control Button: - 5 x Function key (w/ F1~F10 programmable function) - 2 x Brightness control - 2 x Volume control - 1 x Shift key - 1 x Power button Video Output: N/A Video Input: 3 x CVBS Audio: 1 x Mic in, 1 x Line out Ethernet: 1 x Intel® 1GbE (M12) PoE: 1 x (802.3af/at), total 30W (option) USB: 2 x USB 2.0 COM: 1 x RS-232 full/422/485, 1 x RS-232/422/485 DIO: 2 x DI, 2 x DO CAN: 2 x CAN bus 2.0B (w/ isolation) SIM Slot: 1 WWAN: 1 Mini PCIe Slot: - 3 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0) for LTE
<b>Expansion</b>	M.2 Slot: - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0) - 1 x M.2 Key B 3042/3050/3052 (USB 3.2 Gen 1) for LTE/5G GNSS: VIOB-GPS-06 module (u-blox NEO-M9N)	M.2 Slot: 1 x M.2 Key E 2230 (USB 2.0, PCIe 2.0, SDIO 3.0, UART) GNSS: Option	M.2 Slot: N/A GNSS: VIOB-GPS-02 module (u-blox NEO-M8N)
<b>Power</b>	Power Input: DC 9V~60V Internal Back Up Battery: Option	Power Input: DC 9V~60V Internal Back Up Battery: Option	Power Input: DC 9V~60V Internal Back Up Battery: Option
<b>Environment</b>	Ingress Protection: Front panel IP65 Certifications: CE, FCC Class B, UKCA, E13 Operating Temperature: -30°C~70°C	Ingress Protection: Front panel IP65 Certifications: CE, FCC Class B, UKCA, E13 Operating Temperature: -30°C~60°C	Ingress Protection: IP65 Certifications: CE, FCC Class B, UKCA, E13 Operating Temperature: -30°C~60°C
<b>Others</b>	TPM: TPM 2.0 OS: Linux (Kernel 5.15.71)/Android™ 13 Mounting: VESA 75/100 Dimensions (mm): 294.0 x 227.5 x 37.2	TPM: N/A OS: Win 10/Linux (Kernel 4.x) Mounting: VESA 75/100 Dimensions (mm): 290.0 x 230.0 x 68.0	TPM: N/A OS: Win 10/Linux (Kernel 4.x) Mounting: VESA 75/100 Dimensions (mm): 290.0 x 230.0 x 68.0




## Vehicle Mount Computer

Model				
	<b>VMC 3030-AC0</b>	<b>VMC 4020-4A0</b>	<b>VMC 4020-4A1</b>	
Display	LCD Size	10.1" TFT LCD	12.1" TFT LCD	12.1" TFT LCD
	Resolution	1280x800	1024x768	1024x768
	Brightness (Typ.)	1000cd/m <sup>2</sup>	1200cd/m <sup>2</sup>	1200cd/m <sup>2</sup>
	Contrast Ratio	800:1	750:1	750:1
	View Angle	V: 85/85, H: 85/85	V: 85/85, H: 85/85	V: 85/85, H: 85/85
	Brightness Adjustment	Auto via light sensor	Auto via light sensor	Auto via light sensor
System	Touchscreen	Projected capacitive, anti-glare	5-wire resistive, anti-glare	5-wire resistive, anti-glare
	CPU	Intel Atom® x7433RE, 4-core, 1.5GHz	Intel Atom® x7-E3950, 4-core, 1.6GHz	Intel Atom® x7-E3950, 4-core, 1.6GHz
	Chipset	N/A	N/A	N/A
	Memory	1 x DDR5 4800 SO-DIMM, default 8GB, up to 16GB	1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB	1 x DDR3L 1866 SO-DIMM, default 4GB, up to 8GB
I/O Interface	Storage	- 1 x M.2 Key M 2280 (SATA 3.0) - 1 x microSDXC (BOM option)	- 1 x CFAST slot - 1 x 2.5" SATA 3.0 SSD bay (9.5mm)	- 1 x CFAST slot - 1 x 2.5" SATA 3.0 SSD bay (9.5mm)
	Speaker	2 x Built-in speaker	2 x Built-in speaker	2 x Built-in speaker
Expansion	Control Button	- F1~F5 function key or 2 x Brightness control, 2 x Volume control, 1 x Mute - 1 x Power button - 1 x System reset button	- 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
	Video Output	1 x HDMI®	N/A	N/A
	Video Input	N/A	3 x CVBS	3 x CVBS
	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
	Ethernet	1 x Intel® 2.5GbE (M12)	2 x Intel® 1GbE	2 x Intel® 1GbE (M12)
	PoE	N/A	1 x (802.3af/at), total 30W (option)	1 x (802.3af/at), total 30W (option)
	USB	- 1 x USB 2.0 - 2 x USB 3.2 Gen 2	2 x USB 2.0	3 x USB 2.0
	COM	2 x RS-232 full/422/485	2 x RS-232 full/422/485	1 x RS-232 full/422/485, 1 x RS-232/422/485
	DIO	2 x DI, 2 x DO	1 x DI, 2 x DO	2 x DI, 2 x DO
	CAN	1 x CAN FD (w/ isolation)	2 x CAN bus 2.0B (w/ isolation)	2 x CAN bus 2.0B (w/ isolation)
	SIM Slot	2	2	2
	WWAN	1	1	1
	Mini PCIe Slot	1 x (USB 2.0, PCIe 3.0/SATA 3.0)	- 3 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0) for LTE	- 3 x (USB 2.0, PCIe 2.0) - 1 x (USB 2.0) for LTE
	Power	M.2 Slot	- 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 2) for LTE/5G - 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0 x2) BOM option: 1 x M.2 Key E 2230 (USB 2.0, PCIe 3.0, PCIe 3.0)	N/A
GNSS		VIOB-GPS-06 module (u-blox NEO-M9N)	VIOB-GPS-02 module (u-blox NEO-M8N)	VIOB-GPS-02 module (u-blox NEO-M8N)
Power/Environment	Power Input	DC 9V~60V	DC 9V~60V	DC 9V~60V
	Internal Back Up Battery	Option	Option	Option
	Ingress Protection	Front panel IP65	Front panel IP65	IP65
Others	Certifications	CE, FCC Class B, UKCA, E13	CE, FCC Class B, UKCA, E13	CE, FCC Class B, UKCA, E13
	Operating Temperature	-30°C~60°C	-30°C~60°C	-30°C~60°C
Others	TPM	TPM 2.0	N/A	N/A
	OS	Win 11/Win 10/Linux (Kernel 4.x)	Win 10/Linux (Kernel 4.x)	Win 10/Linux (Kernel 4.x)
	Mounting	VESA 75/100	VESA 75/100	VESA 75/100
	Dimensions (mm)	294.0 x 227.5 x 54.0	340.0 x 262.0 x 75.0	340.0 x 262.0 x 75.0



## Vehicle Mount Display





Model				
	<b>VMD 2000</b>	<b>VMD 2002</b>		
Display	LCD Size	8" TFT LCD	8" TFT LCD	
	Resolution	800x600	800x600	
	Brightness (Typ.)	500cd/m <sup>2</sup>	500cd/m <sup>2</sup>	
	Contrast Ratio	500:1	500:1	
	View Angle	V: 50/70, H: 70/70	V: 50/70, H: 70/70	
	Brightness Adjustment	Auto via light sensor	Auto via light sensor	
I/O Interface	Touch Screen	4-wire resistive, anti-glare	4-wire resistive, anti-glare	
	Speaker	2 x Built-in speaker	2 x Built-in speaker	
	Camera	N/A	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	
	Video Input	Integrated LVDS CONN (LVDS, USB, 12V)	Integrated DVI CONN (VGA, USB, 12V)	
	Audio	- 1 x Line out (side) - 1 x Mic in (side) - 1 x Line in (bottom) - 1 x Mic out (bottom)	- 1 x Line out (side) - 1 x Mic in (side) - 1 x Line in (bottom) - 1 x Mic out (bottom)	
	USB	1 x USB 2.0	1 x USB 2.0	
	Remote Power Button	Remotely power on/off VTC, MVS & ATC	N/A	
	Power Input	DC 12V (via LVDS)	DC 9V~36V	
	Ingress Protection	Front panel IP54	Front panel IP54	
	Certifications	CE, FCC Class B, UKCA	CE, FCC Class B, UKCA	
	Operating Temperature	-20°C~60°C	-20°C~60°C	
	Others	Mounting	VESA 75	VESA 75
		Dimensions (mm)	207.0 x 173.0 x 36.7	207.0 x 173.0 x 36.7

## Vehicle Mount Display




Model			
	VMD 3002-BS2	VMD 3110-4PH	VMD 3111-5PH
LCD Size	10.4" TFT LCD	10.4" TFT LCD	10.4" TFT LCD
Resolution	1024x768	1024x768	1024x768
Brightness (Typ.)	1200cd/m <sup>2</sup>	1200cd/m <sup>2</sup>	1200cd/m <sup>2</sup>
Contrast Ratio	900:1	900:1	1000:1
View Angle	V: 85/85, H: 85/85	V: 85/85, H: 85/85	V: 85/85, H: 85/85
Brightness Adjustment	Auto via light sensor	Auto via light sensor	Auto via light sensor
Touch Screen	Projected capacitive	Projected capacitive	Projected capacitive
Speaker	2 x Built-in speaker	2 x Built-in speaker	2 x Built-in speaker
Camera	N/A	N/A	N/A
Control Button	<ul style="list-style-type: none"> <li>- 1 x Monitor power button</li> <li>- 1 x OSD menu</li> <li>- 2 x Brightness control</li> <li>- 2 x Volume control</li> <li>- 1 x Auto config</li> </ul>	<ul style="list-style-type: none"> <li>- 1 x Monitor power button</li> <li>- 1 x OSD menu</li> <li>- 2 x Brightness control</li> <li>- 2 x Volume control</li> <li>- 1 x Auto config</li> </ul>	<ul style="list-style-type: none"> <li>- 1 x Monitor power button</li> <li>- 1 x OSD menu</li> <li>- 2 x Brightness control</li> <li>- 2 x Volume control</li> <li>- Auto config (reserved)</li> </ul>
Video Input	VGA, 4 x CVBS	ultraONE+, 4 x CVBS	HDMI®
Audio	1 x Line in	1 x Line in	Via HDMI®
USB	1 x USB 2.0	1 x USB 2.0	1 x USB 2.0
Remote Power Button	N/A	Remotely power off VTC, MVS & ATC	N/A
Power Input	DC 9V~36V	DC 24V (via ultraONE+)	DC 9V~36V
Ingress Protection	IP65	IP65	IP65
Certifications	CE, FCC Class B, UKCA	CE, FCC Class B, UKCA	CE, FCC Class B, UKCA
Operating Temperature	-20°C~60°C	-20°C~60°C	-30°C~60°C
Mounting	VESA 75/100	VESA 75/100	VESA 75/100
Dimensions (mm)	256.5 x 202.1 x 31.5	256.5 x 202.1 x 31.5	256.5 x 202.1 x 31.5




## Add-on Modules and Devices

Model				
	VIOB-CAN-03	VIOB-CAN-04-RAG	VIOB-CAN-06	VIOB-CAN-08
Description	CAN bus 2.0B or OBD SAE J1939 module	Dual CAN bus 2.0B module	OBD SAE J1939 module	Dual CAN Bus FD SIC module
Input I/F	UART	USB 2.0	USB 2.0	PCIe
Input Connector	2 x 5-pin wafer	Mini PCIe slot	Mini PCIe slot or USB wafer	Mini PCIe slot
Output I/F	CAN bus 2.0B or OBD SAE J1939	2 x CAN bus 2.0B	OBD SAE J1939	2 x CAN FD SIC (w/ isolation)
Output Connector	2 x 5-pin wafer	6-pin wafer to DB9	3-pin wafer to DB9	6-pin wafer to DB9
Operating Temperature	-40°C~85°C	-40°C~85°C	-40°C~85°C	-40°C~85°C
Form Factor	Proprietary	Full-size Mini PCIe	Full-size Mini PCIe	Full-size Mini PCIe
Dimensions (mm)	50.0 x 28.0	51.0 x 30.0	51.0 x 30.0	51.0 x 30.0
Remark	CAN bus 2.0B & SAE J1939 selection by switch	-	-	CAN FD with SIC (Signal Improvement Capability)



Model				
	VIOB-AE10M	VIOB-GPS-02	VIOB-GPS-06	VIOB-GPS-06U
Description	1-port 100/1000Mbps automotive Ethernet module	u-blox M8N module	u-blox M9N module	u-blox M9N module
Input I/F	PCIe	UART	UART	UART/USB 2.0
Input Connector	Mini PCIe	6-pin wafer	6-pin wafer	6-pin wafer
Output I/F	1-pair UTP	UART	UART	UART/USB 2.0
Output Connector	4-pin wafer	6-pin wafer	6-pin wafer	6-pin + 6-pin wafer
Operating Temperature	-40°C~85°C	-40°C~85°C	-40°C~85°C	-40°C~85°C
Form Factor	Full-size Mini PCIe	Proprietary	Proprietary	Proprietary
Dimensions (mm)	51.0 x 30.0	25.4 x 25.4	25.4 x 25.4	25.4 x 25.4
Remark	Linux supported	<ul style="list-style-type: none"> <li>- Baud Rate: 9600</li> <li>- u-blox NEO-M8N GNSS supports GPS + QZSS, GLONASS, Galileo and BeiDou; up to 3 concurrent GNSS systems</li> </ul>	<ul style="list-style-type: none"> <li>- Baud Rate: 38400</li> <li>- u-blox NEO-M9N GNSS supports GPS + QZSS/SBAS, GLONASS, Galileo, and BeiDou; up to 4 concurrent GNSS systems</li> </ul>	<ul style="list-style-type: none"> <li>- Baud Rate: 38400</li> <li>- u-blox NEO-M9N GNSS supports GPS + QZSS/SBAS, GLONASS, Galileo, and BeiDou; up to 4 concurrent GNSS systems</li> </ul>

## Add-on Modules and Devices



Model			
<b>Description</b>	u-blox M9N module	u-blox M8L module	u-blox M9V module
<b>Input I/F</b>	UART/USB 2.0	UART	UART
<b>Input Connector</b>	8-pin wafer	6-pin wafer	6-pin wafer
<b>Output I/F</b>	UART/USB 2.0	UART	UART
<b>Output Connector</b>	8-pin wafer	6-pin wafer	6-pin wafer
<b>Operating Temperature</b>	-40°C~85°C	-40°C~85°C	-40°C~85°C
<b>Form Factor</b>	Proprietary	Proprietary	Proprietary
<b>Dimensions (mm)</b>	25.4 x 25.4	25.4 x 25.4	25.4 x 25.4
<b>Remark</b>	<ul style="list-style-type: none"> <li>- Baud Rate: 38400</li> <li>- u-blox NEO-M9N GNSS supports GPS + QZSS/SBAS, GLONASS, Galileo, and BeiDou; up to 4 concurrent GNSS systems</li> </ul>	<ul style="list-style-type: none"> <li>- Baud Rate: 9600</li> <li>- u-blox NEO-M8L-06B GNSS supports GPS, GLONASS, Galileo, BeiDou, and QZSS</li> <li>- Automotive Dead Reckoning (ADR)</li> <li>- With battery</li> </ul>	<ul style="list-style-type: none"> <li>- Baud Rate: 38400</li> <li>- u-blox NEO-M9V-20B GNSS supports GPS, GLONASS, Galileo, BeiDou, and QZSS</li> <li>- Support ADR and UDR</li> <li>- With battery</li> </ul>

Model			
<b>Description</b>	u-blox M9V module	u-blox ZED-F9P module	u-blox ZED-F9R module
<b>Input I/F</b>	UART/USB 2.0	UART/USB 2.0	UART/USB 2.0
<b>Input Connector</b>	8-pin wafer	8-pin wafer	8-pin wafer
<b>Output I/F</b>	UART/USB 2.0	UART/USB 2.0	UART/USB 2.0
<b>Output Connector</b>	8-pin wafer	8-pin wafer	8-pin wafer
<b>Operating Temperature</b>	-40°C~85°C	-40°C~85°C	-40°C~85°C
<b>Form Factor</b>	Proprietary	Proprietary	Proprietary
<b>Dimensions (mm)</b>	25.4 x 25.4	25.4 x 25.4	25.4 x 25.4
<b>Remark</b>	<ul style="list-style-type: none"> <li>- Baud Rate: 38400</li> <li>- u-blox NEO-M9V-20B GNSS supports GPS, GLONASS, Galileo, BeiDou, and QZSS</li> <li>- Support ADR and UDR</li> <li>- With battery</li> </ul>	<ul style="list-style-type: none"> <li>- Baud Rate: 38400</li> <li>- u-blox ZED-F9P-04B GNSS supports with GPS, GLONASS, Galileo, BeiDou, and QZSS</li> <li>- Support multi-band RTK</li> <li>- With battery</li> </ul>	<ul style="list-style-type: none"> <li>- Baud Rate: 38400</li> <li>- u-blox ZED-F9R-04B GNSS supports with GPS, GLONASS, Galileo, BeiDou, and QZSS</li> <li>- Support ADR, UDR and multi-band RTK</li> <li>- With battery</li> </ul>

Model			
<b>Description</b>	M.2 to Mini PCIe converter module	Mini PCIe to M.2 converter module	Mini PCIe to M.2 converter module
<b>Input I/F</b>	USB 2.0, USB 3.2 Gen 1	USB 2.0, USB 3.2 Gen 1	USB 2.0, PCIe 3.0
<b>Input Connector</b>	M.2 Key B + M	Mini PCIe	Mini PCIe
<b>Output I/F</b>	Mini PCIe	M.2 Key B	M.2 Key E
<b>Output Connector</b>	Mini PCIe slot	M.2 slot	M.2 slot
<b>Operating Temperature</b>	-40°C~85°C	-40°C~85°C	-40°C~85°C
<b>Form Factor</b>	M.2 Key B 3042/3052 + Key M	Full-size Mini PCIe	Full-size Mini PCIe
<b>Dimensions (mm)</b>	62.0 x 31.0	65.0 x 30.0	51.0 x 30.0
<b>Remark</b>	Only for LTE module	USB 3.2 Gen 1 support provided by mainboard	-





Model		
<b>Description</b>	2 x Mic in & 2 x Line out module	5G/Wi-Fi expansion board
<b>Input I/F</b>	USB 2.0	1 x PCIe 3.0 x4, 2 x PCIe 3.0 x2, 2 x USB 3.2 Gen 1, 2 x USB 2.0
<b>Input Connector</b>	Mini PCIe or USB wafer	Board to board connector
<b>Output I/F</b>	2 x Line out & 2 x Mic in	N/A
<b>Output Connector</b>	1 x 10-pin wafer to DB15	<ul style="list-style-type: none"> <li>- 1 x Full-size Mini PCIe slot (USB 2.0, PCIe 3.0), BOM option: M.2 Key E 2230 slot (USB 2.0, PCIe 3.0)</li> <li>- 2 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G NR module w/ 1 x external dual nano-SIMs</li> </ul>
<b>Operating Temperature</b>	-40°C~85°C	-40°C~70°C
<b>Form Factor</b>	Full-Size Mini PCIe	Proprietary
<b>Dimensions (mm)</b>	51.0 x 30.0	234.0 x 72.0
<b>Remark</b>	-	- Only for nROK 7270/nROK 7271

## Add-on Modules and Devices

Model		
Description	PoE expansion board	10GbE expansion board
Input I/F	1 x PCIe 3.0 x4, 2 x PCIe 3.0 x2, 2 x USB 3.2 Gen 1, 2 x USB 2.0	1 x PCIe 3.0 x4, 2 x PCIe 3.0 x2, 2 x USB 3.2 Gen 1, 2 x USB 2.0
Input Connector	Board to board connector	Board to board connector
Output I/F	N/A	N/A
Output Connector	8-port 1GbE M12 X-coded, PoE 802.3af/at	- 2-port 10GbE M12 X-coded - 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G NR module with 2 x external dual nano-SIMs - 1 x Full-size Mini PCIe slot (USB 2.0, PCIe 3.0), BOM option: 1 x M.2 Key B 3042/3050/3052 (USB 2.0, USB 3.2 Gen 1) for LTE/5G NR module with 2 x external dual nano-SIMs
Operating Temperature	-40°C~70°C	-40°C~70°C
Form Factor	Proprietary	Proprietary
Dimensions (mm)	234.0 x 72.0	234.0 x 72.0
Remark	- Only for nROK 7270/nROK 7271	- Only for nROK 7270/nROK 7271

Model			
Description	External attachable power isolation kit	External attachable power isolation kit	Vehicle relay module
Input I/F	- VTK 6222-APK: DC 24V - VTK 6222-FPK: DC 110V	DC 24V	USB 2.0 or RS-232 (Tx/Rx)
Input Connector	5-pin, M12	- VTK PWA20-01: K-coded - VTK PWA10-01: 5-pin, M12 A-coded	USB type A or DB9
Output I/F	DC 24V	DC 24V	4 x Relay, 4 x DI, 4 x DO, 1 x Analog input, 1 x Frequency input
Output Connector	5-pin, M12	5-pin, M12 A-coded	Terminal block
Operating Temperature	-40°C~70°C	-40°C~70°C	-40°C~85°C
Form Factor	Proprietary	Proprietary	Proprietary
Dimensions (mm)	120.0 (W) x 198.0 (D) x 50.0 (H)	- VTK PWA20-01: 234.1 (W) x 172.8 (D) x 40.0 (H) - VTK PWA10-01: 213 (W) x 167.0 (D) x 40.0 (H)	126.0 (W) x 124.0 (D) x 24.0 (H)
Remark	Only for nROK 6222	- VTK PWA20-01 for ATC 3750-C6 - VTK PWA10-01 for ATC 3530-IP7-C4	It is remotely controlled through USB or RS-232 communication.

Model		
Description	Smart backup battery kit	Smart BBU with SuperCap
Input I/F	DC 9V~36V	DC 9V~60V
Input Connector	3-pin terminal block	5-pin terminal block
Output I/F	- DC 10V~12V (from backup battery) - DC 9V~36V (from vehicle battery) - Communication: RS-232/SMBus	- DC 24V (from backup SuperCap) - DC 9V~60V (from vehicle battery) - Communication: RS-232
Output Connector	- Power: 3-pin terminal block - Communication: 2 x 5-pin	- Power: 6-pin terminal block - Communication: DB9
Operating Temperature	- Charging: 0°C~45°C - Discharging: 0°C~55°C	- Charging: -35°C~80°C - Discharging: -35~80°C (up to 60W), -35~70°C (up to 200W)
Form Factor	Proprietary	Proprietary
Dimensions (mm)	- 280.0 (W) x 150.0 (D) x 42.2 (H) (w/ VTK-62B1-BK) - 297.3 (W) x 175.0 (D) x 39.0 (H) (w/ VTK-62B2-BK)	235.0 (W) x 134.5 (D) x 50.0 (H)
Remark	- Capacity: 9000 mAh (Li-Ion) - Support up to 80W system	- Maximum output power of 200W - For in-vehicle: VTK-SCAP-M (master), VTK-SCAP-S (slave) - For railway: VTK-SCAP-AR-M (master), VTK-SCAP-S (slave)

Model				
Description	4-Port PoE+ GbE/ GigE frame grabber	4-Port PoE+ GbE/ GigE frame grabber	Dual Port 10GbE Module with SFP+	4-Port PoE+ 1GbE
Input I/F	PCIe 2.0 x4	PCIe 2.0 x4	PCIe 3.0 x8	PCIe 3.0 x8
Input Connector	PCIe G.F.	PCIe G.F.	PCIe 3.0	PCIe 3.0
Output I/F	1GbE PoE, w/ 802.3af/at	1GbE PoE, w/ 802.3af/at	SFP+, 10/1GbE	1GbE PoE, w/ 802.3af/at
Output Connector	4 x RJ45 port	4 x M12 X-coded connector	2 x SFP+	4-port M12 X-coded
Operating Temperature	-20°C~60°C	-20°C~60°C	-40°C~70°C	-40°C~70°C
Form Factor	PCIe card	PCIe card	Proprietary	Proprietary
Dimensions (mm)	168.0 x 111.0, 1-slot width	168.0 x 111.0, 1-slot width	96.7 x 181.5 x 37.4	96.7 x 181.5 x 37.4
Remark	PoE power budget: up to 60W	PoE power budget: up to 60W	Only for aROK 5510	- Only for aROK 5510 - PoE power budget: up to 60W


# HDMI® over IP Extender


## VIP Series Brief Product Introduction


### Product Description


VIP Series is a new E-Mark certified in-vehicle HDMI® extender over IP solution designed with 9~36Vdc wide voltage input range, specifically for railway and bus public transport Passenger infotainment System.

VIP Series works over standard networking devices with wide operating temperature support, and outputs to multiple Full HD HDMI displays up to 100m.

 Wide-range 9-36Vdc input voltage

 Unicast and daisy chain support

 E-Mark for in-vehicle application

 Dual Full HD HDMI® output

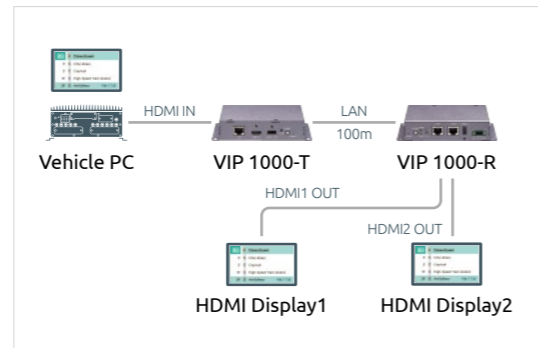
### Application

- Video on demand
- Passenger infotainment system

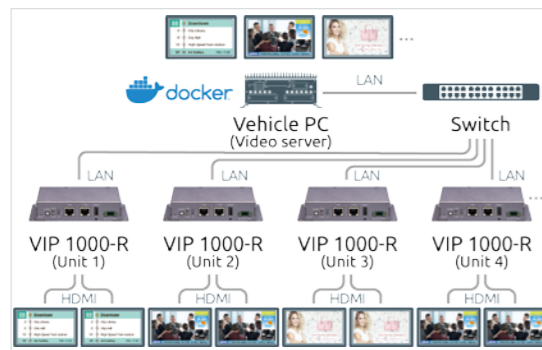
### Product Highlight



Dedicated for in-vehicle & railway PIS application





Support dual Full HD HDMI® output + Up to 100 meter distance



RTSP video on demand with Docker platform



Easy to use. Plug and play!

	 VIP 1000-T	 VIP 1000-R
Model	Transmitter	Receiver
Function	Transmitter	Receiver
Video In	1 x HDMI®	1 x 1GbE
Video Out	1 x 1GbE	2 x HDMI®
Protocol	TCP/IP	TCP/IP
Model	Unicast, Daisy Chain and Multicast mode	Unicast, Daisy Chain and Multicast mode
USB	1 x USB 2.0 OTG	1 x USB 2.0
Ethernet	1 x 1GbE	2 x 1GbE
Power Input	DC 9V~36V	DC 9V~36V
Ignition Control	Yes	Yes
Certifications	CE, FCC Class A, UKCA, E13	CE, FCC Class A, UKCA, E13
Operating Temperature	-20°C~70°C	-20°C~70°C
Dimensions (mm)	130.0 x 100.0 x 31.0	130.0 x 100.0 x 31.0

# About NEXCOM

## Reliable Partner for the AIoT Digital Transformation Solutions

### Committed to Customer Success

Founded in 1992 and headquartered in Taipei, Taiwan, NEXCOM is committed to being a trustworthy partner in building the AIoT digital transformation solutions. To surpass customers' expectations, NEXCOM sets itself apart by leveraging its decades of experience in industrial computing, a highly talented R&D team, and exceptional 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: IoT Automation Solutions (IAS), Intelligent Video Surveillance (IDS), Intelligent Platform @ Smart City (IPS), Mobile Computing Solutions

(MCS), Medical & Healthcare Informatics (MHI), Network and Communication Solutions (NCS), this strategic deployment enables NEXCOM to offer time-to-market, time-to-solution products and services without compromising on cost.

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

Partners can also be assured that NEXCOM's Taiwan-based Headquarters and subsidiary offices in China and the USA have obtained ISO 9001:2015 Certification.



<b>IAS</b>	<b>IoT Automation Solutions:</b> Industrial Automation & I4.0 Execution, Intelligent Edge, Gateway & EWR, Industrial Robot Control, EtherCAT Motion Solutions, Wireless & Embedded Solutions for Industrial IoT
<b>IDS</b>	<b>Intelligent Video Surveillance:</b> IP Video Surveillance Cameras, Mobile Cameras, ANPR/LPR Network Cameras, Panoramic Cameras, NVR Server Platform
<b>IPS</b>	<b>Intelligent Platform @ Smart City:</b> Smart City, Smart Retail, Digital Signage, Interactive Kiosks, Hospitality, Gateway, Edge AI, and ODM Customization Services
<b>MCS</b>	<b>Mobile Computing Solutions:</b> Edge AI Telematics Computer, Vehicle Telematics Computer, Railway Computer, Vehicle Mount Computer, Vehicle Mount Display, In-Vehicle Networking, In-Vehicle HDMI Extender over IP, Fitness Console
<b>MHI</b>	<b>Medical and Healthcare Informatics:</b> Total Solutions with a Variety of Medical IT Systems
<b>NCS</b>	<b>Network and Communication Solutions:</b> Cyber Security, HPC, Telecommunications, Storage, SDN/NFV, 5G, uCPE, ICS Security

### Corporate Vision

To become the industrial leader in providing AIoT digital transformation 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 AIoT digital transformation supplier in vertical application markets
- A quality partner in engineering, manufacturing and services

### Business Strategy

Aiming 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 enables each business unit to focus on strategic channel accounts and repeat order business. Moreover, NEXCOM will provide customers with co-marketing strategies, technical support, ODM services, and project support, which are frequently required everywhere.

NEXCOM has already become a business group focused on innovating comprehensive solutions for Industry 4.0. We help our customers deliver vertical solutions optimized for 5G, AI, AIoT, and Industry 4.0 solutions.

## Global Fulfillment Service

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

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

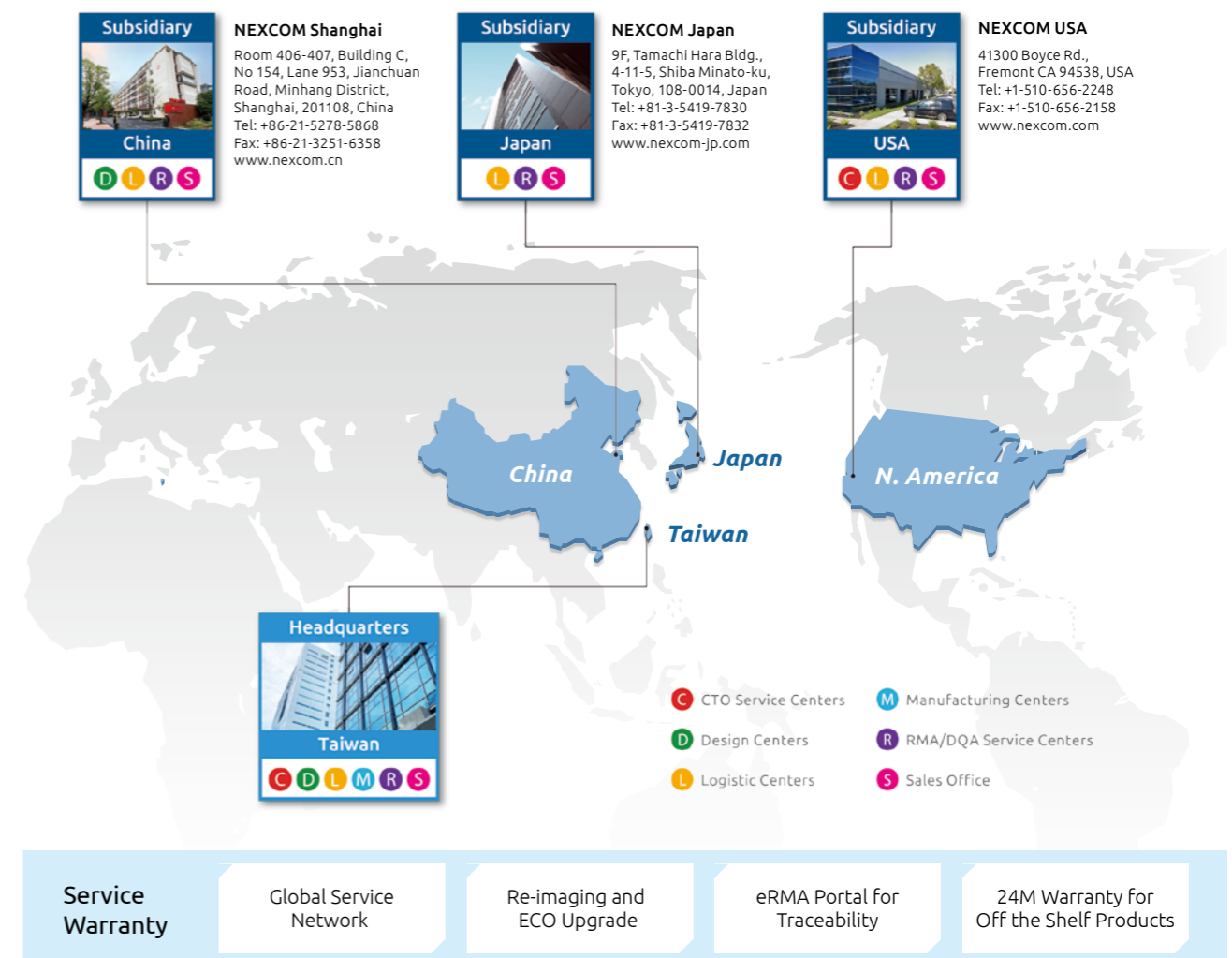
## Quality Assurance

Under a strict Quality Assurance System, product design and reliability are controlled to support all critical solutions, and ensure Total Quality Assurance (TQA) implementation for all NEXCOM

products and services. Additionally, NEXCOM's technical support team is aligned with ISO 27001 requirements, as they aim to provide timely feedback within 24 hours to resolve technical issues efficiently. This ensures that any potential information security incidents are addressed promptly, minimizing the impact and downtime for customers.

## Green Policy

As a global citizen, NEXCOM places great importance on environmental issues. We are committed to ensuring that our products and services comply with environmental standards and regulations. NEXCOM actively responds to energy-saving and carbon reduction initiatives, prioritizes environmental protection in our operational activities, and holds certificate such as ISO 14064-1 greenhouse gas inventory and ISO 14001 environmental management system. We implement voluntary greenhouse gas inventory, reduce resource and energy consumption, and mitigate environmental risks. We also measure NEXCOM's sustainability and corporate responsibility as an Earth-friendly enterprise through ESG evaluation. NEXCOM will continue to collaborate with peers and suppliers to strive for purification standards, compatibility of technologies, and operational processes to help reduce the potential hazardous substances in our products and manufacturing processes.



Service details may vary by country. Please contact us for more details.

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