Edge AI Applied Computing

SINTRONES

Edge AI Applied Computing

Built for Precision.
Engineered for the Intelligent Edge.

Designed & Manufactured in Taiwan

Discover more

AI Defense & Military

High-Performance Edge AI for Tactical Defense Operations

Modern military & defense edge AI systems demand high-performance computing in harsh, mission-critical environments while maintaining total reliability. Defense platforms such as unmanned ground vehicles (UGVs), autonomous drones, and surveillance systems require intensive GPU-accelerated computing for real-time sensor fusion and autonomous decision-making. By performing multi-sensor data fusion—integrating data from radar, lidar, and high-resolution imaging—SINTRONES solutions create comprehensive situational awareness and reduce response times to milliseconds. Our platforms enable autonomous maneuvers and immediate threat classification directly at the edge, eliminating the latency and security risks of sending raw data back to a command center.

Operational Capabilities

Mission-Critical Thermal Reliability

Patented ThermoSiphon™ cooling dissipates heat without fans, ensuring reliable, sustained AI performance.

Extreme Environment Resilience

MIL-STD-810H certified, operating from -40°C to 70°C for stable performance in harsh environments.

Engineered Environmental Protection

Fully sealed fanless IP66 design protects against dust, rain, and water, ensuring reliable field operation.

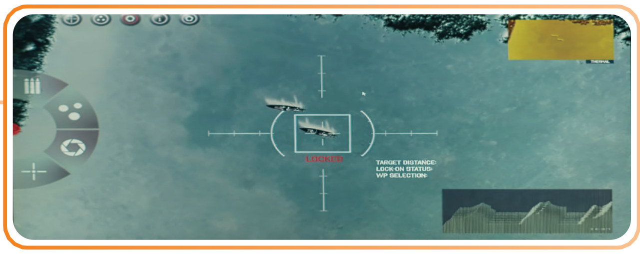
Powering Real-World Missions

Unmanned Systems & Autonomous Navigation

Delivering real-time object detection and evasive maneuver capabilities for UGVs and UAVs.

Tactical ISR & Threat Detection

Simultaneous processing of high-resolution camera feeds, SAR returns, and electronic signals intelligence (ELINT) for battlefield decision support.



Mobile Command Centers & Tactical Nodes

Centralizing data and streamlining workflows in a compact, rugged enclosure that prevents localized hot spots even at full AI load.

Mission-Ready Edge AI Platforms

Edge AI Rugged Computer

ABOX-5221(P)(G)

- **14th Gen Intel® Core™ Processor to Provide up to 24 Cores**
- **NVIDIA RTX™ Embedded and Intel® Arc™ GPU Options for Scalable AI Accelerating Solutions**
- 2 x Marvell 10GbE for High-Bandwidth Uplink and Aggregated Downlink Connection
- 4 x 2.5GbE with PoE+ Option Provides Simplied Connection to Edge Devices
- Front Removeable RTC Battery Design for Easy Maintenance

TAIWAN EXCELLENCE 2026

Edge AI Rugged Computer

IBOX-650P-IP66

- **NVIDIA® Jetson AGX Orin™ with 2048 CUDA Cores**
- IP66 Protection Against Water and Dust
- 1 x 10 GbE, 2 GbE with PoE via Phoenix Contact® M12 IP67 Connectors
- 2 x RS-232/422/485 (2S Model), 4 x DI/4 x DO (DIO Model)
- 4 x GMSL-2 FAKRA Camera Connectors
- 9-60VDC Input with Built-in Smart Ignition Power Management
- Fanless Operation from -25°C to 70°C
- Patented Backup Battery Unit for Uninterrupted Operation

Edge AI Rugged Computer

IBOX-604-G2

- **NVIDIA® Jetson Orin™ NX with 1024 CUDA Cores**
- 10-60VDC Input Supports 3S-14S Lithium Battery Input
- 2 x GMSL-2 Cameras Support
- Lightweight Compact Design
- Built-in 3-axis Accelerometer

Edge AI Rugged Computer

IBOX-600 Series

- **NVIDIA® Jetson Orin™ NX with 1024 CUDA Cores**
- 3 x M.2 Slots for Wi-Fi / WWAN / SSD Expansion
- 1 x CAN FD for Vehicle Connection
- Selectable for RJ-45 / M12X Ethernet Conetors
- JetPack™ SDK Includes Development Tools
- Power Input 9-60VDC with Smart Power Management
- Fanless Operation from -25°C to 70°C
- Patented Backup Battery Unit for Uninterrupted Operation


Learn more

AI Automation

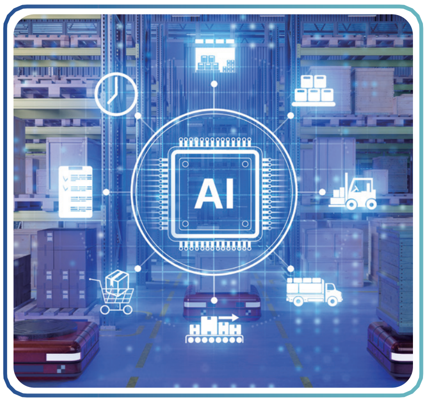
Turning Factory Data into Real-Time Decisions

Modern industrial environments demand high-performance computing that remains reliable in harsh, 24/7 operational conditions. SINTRONES Edge AI solutions act as the central hub for Industry 4.0, integrating data from LiDAR, industrial cameras, and sensors to enable real-time decision-making. By moving AI processing from the cloud to the factory floor, our platforms eliminate latency, ensuring maximum safety for robotic fleets and optimized throughput for unmanned production lines. Our rugged designs enable seamless coordination directly at the edge, reducing the complexity and security risks of smart factory deployments.

Enabling Real-Time, Reliable Edge AI

Advanced Sensor Fusion & Perception

Integrating LiDAR, Radar, and Vision for precise positioning and obstacle avoidance, ensuring safe and efficient AMR navigation.



Intelligent Power & Resource Management

Wide-range power and ignition control for battery-powered AGVs, ensuring stable operation and protecting critical data.

Industrial-Grade Stability & Connectivity

One-sided I/O and high-speed connectivity for easy maintenance and high-speed data transmission for seamless machine coordination.

Operational Scenarios

Autonomous Mobility & Material Handling

Optimizing goods movement with intelligent navigation and real-time sensing. From fixed-route AGVs to dynamic AMRs, our systems reduce labor demands and manual errors.

Machine Vision & Precision Inspection

Enabling real-time object detection and depth sensing. Our platforms support high-speed defect detection, ensuring 100% production consistency without interrupting active workflows.

Robotic Arm Control & IIoT Gateway

Linking machines and sensors for centralized monitoring. By coordinating robots locally with minimal human involvement, we ensure scalable, resilient manufacturing workflows.

Mission-Ready Edge AI Platforms

Edge AI Rugged Computer

IBOX-601-G2

- **NVIDIA® Jetson Orin™ NX with 1024 CUDA Cores**
- 4 x GMSL-2 Cameras Support
- 2 x Ethernet with M12 Connectors
- 1 x CAN FD for Vehicle Connection
- 9-60VDC Input with Built-in Smart Power Management
- Fanless Operation from -25°C to 70°C
- Watchdog for System Monitoring

Edge AI Rugged Computer

ABOX-5220(P)(G)

- **Discrete NVIDIA RTX™ Embedded GPU Options**
- **14th Gen Intel® Core™ Processor to Provide up to 24 Cores**
- 2 x TSN Ready 2.5GbE Controller for Time-Sensitive Network
- 8 x GbE with Optional PoE for IP Camera Connectivity
- 8 x DI (5-60VDC), 2 x ADC (0-60VDC), and 4 x DO (5V, 100mA)
- CE, FCC, and E-Mark Certified
- EN 50155 and EN 45545-2 R25 Compliant

Rugged Industrial Computer

SBOX-2624(P)-(IP66)

- **AMD Ryzen™ Embedded R2000 R2312 2C/4T Processor**
- 1 x 2.5GbE and 4 x GbE with Optional PoE
- Up to 6 x RS-232/422/485
- Wide Range DC Input from 9V-36V
- Optional IP66 Waterproof & Dustproof
- CE, FCC Class A, UKCA, and EN 50155 (EN 50121-3-2 EMC Only) Certified

Rugged Industrial Computer

SBOX-2625

- **Intel® Twin Lake N150 & Amston Lake x7433RE Quad-core Processors**
- DDR5 4800 Memory, up to 16 GB Capacity
- Dual Intel® 2.5GbE Ethernet Interfaces
- Up to 6 x USB Ports and 3 x COM Ports
- 9-36VDC Input with Full Power Protection
- Ultra-Compact, Space-Efficient Fanless Design

AI Transportation

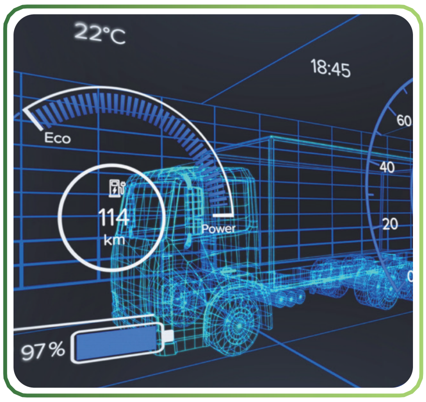
Edge AI Powers the Next Era of Intelligent Transportation

Edge AI computers enable intelligent transportation by delivering real-time data processing, ultra-low latency decisions, and reliable control at the edge. In autonomous vehicles, they power perception, object detection, sensor fusion, and navigation, supporting safe operation without constant cloud reliance. In railway rolling stock, rugged Edge AI systems maintain stability in harsh environments while enabling onboard monitoring, predictive maintenance, and safety assurance. For smart fleet management, they support real-time tracking, driver behavior analysis, route optimization, and remote diagnostics. By integrating AI with high-performance, durable platforms, Edge AI improves safety, efficiency, and reliability across connected mobility systems.

Fleet Management

Real-Time Fleet Visibility & Control

Edge AI enables real-time tracking of vehicle location, driver behavior, and system status for faster, data-driven decisions.



Predictive Maintenance & Safety Enhancement

AI-driven diagnostics detect issues early, reduce downtime, and enhance safety through continuous vehicle monitoring.

Operational Efficiency & Cost Optimization

Data analytics optimize routes, fuel use, and dispatch efficiency, reducing operational costs and improving productivity.

Autonomous Cars

Advanced Perception & Sensor Fusion

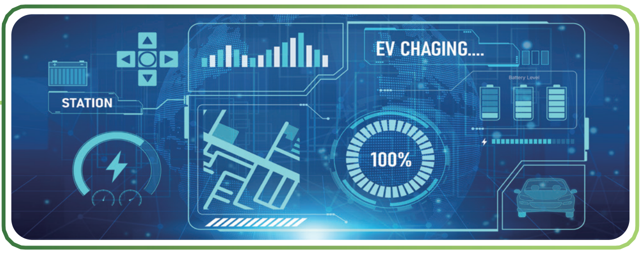
Edge AI integrates LiDAR, radar, and cameras to deliver precise object detection, enhanced environmental awareness, and real-time decision-making.

Precision Mapping for Autonomous Navigation

AI-driven mapping and positioning enable accurate route planning, obstacle avoidance, and stable autonomous driving across dynamic environments.

Real-Time Processing & Intelligent Control

High-performance Edge AI platforms process multi-sensor data instantly, enabling ultra-low latency responses and reliable autonomous system control.



Mission-Ready Edge AI Platforms

In-Vehicle Rugged Computer

VBOX-3650(P)-(M12X)

- **Intel® Core™ Ultra Series 3 with a Built-In NPU**
- 1 x 2.5GbE and 3 x GbE Network Ports
- Optional 4 x M12 Configuration
- Dual 2.5-inch SATA Storage with RAID 0,1 for NVR Use
- One-Cover Design for Simplified Module Installation
- Integrated Watchdog and Smart Power Management

In-Vehicle Rugged Computer

RBOX-1001-M12X

- **Intel Atom® x7000RE Amston Lake Processor**
- 24-110VDC Galvanically Isolated Power Input for Railway Systems
- Railway EN 50155 Compliant
- Removable Cover for Easy Expansion and Maintenance
- 2 x 2.5GbE for Industrial Temperature Environments
- Suitable for 1U Rack Installation
- Fanless Operation from -40°C to 75°C

In-Vehicle Rugged Computer

VBOX-3630

- **Intel® 11th Gen Core™ i7-1185G7E**
- Dual 5G / LTE, GPS, Wi-Fi / BT, and CAN Bus Modules
- Wide Range Input 9-60VDC with Ignition Control for EV Installations
- 1 x 2.5GbE + 3 x GbE LAN Port with M12X Connectors
- 4 Independent Display Outputs: 2 x HDMI®, 1 x DP, 1 x DVI-D
- Optional Battery Backup Kit
- E-Mark and EN 50155 Certified

In-Vehicle Rugged Computer

VBOX-3132 Series

- **Industrial-Grade Intel® Amston Lake / Twin Lake Processor**
- 2 x 2.5GbE or 1 x 2.5GbE + 4 x PoE Ports for IoT Connectivity
- 1 x Built-In CAN FD for Vehicle Communication
- Dual NVMe SSDs for NVR Applications
- Integrated Watchdog and Smart Power Management
- DIN-rail and Wall-mount Installation

Edge AI Rugged Computer

Model Name	ABOX-5222(P) Series	ABOX-5221(P)(G)	ABOX-5220(P)(G)	IBOX-650P-IP66-2S/DIO	IBOX-604-G2
Processor / Module	Intel® Core™ 7 251TE Intel® Core™ 5 211TE Intel® Core™ 3 201TE	Intel® Core™ (14th gen) i9-14900T Intel® Core™ (14th gen) i7-14700T Intel® Core™ (14th gen) i5-14500T	Intel® Core™ (14th gen) i9-14900T Intel® Core™ (14th gen) i7-14700T Intel® Core™ (14th gen) i5-14500T	NVIDIA® Jetson AGX Orin™ 64GB NVIDIA® Jetson AGX Orin™ 32GB	NVIDIA® Jetson Orin™ NX 16GB NVIDIA® Jetson Orin™ NX 8GB NVIDIA® Jetson Orin™ Nano 8GB
GPU	Processor-integrated GPU — Intel® UHD Graphics 770	Processor-integrated GPU – Intel® UHD Graphics 770 Optional discrete GPU – NVIDIA RTX™ Embedded 2000 Ada / 3500 Ada / 5000 Ada Intel® Arc™ A370E	Processor-integrated GPU - Intel® UHD Graphics 770 Optional discrete GPU - NVIDIA RTX™ Embedded 2000 Ada / 3500 Ada / 5000 Ada Intel® Arc™ A370E	Ampere Architecture GPU (SoM built-in)	–
Memory	2 x DDR5-5600 SO-DIMM up to 96 GB	2 x DDR5-5600 SO-DIMM up to 96GB (ECC support with ECC DRAM)	2 x DDR5-5600 SO-DIMM up to 96GB (ECC support with ECC DRAM)	64GB/32GB LPDDR5, depends on Jetson Module	–
Video	1 x HDMI® 1 x DP++	Without discrete GPU – 2 x HDMI® With discrete GPU – Additional 2 x DP++	Without discrete GPU - 2 x DP++, 2 x HDMI® With discrete GPU - Additional 2 x DP++, Additional 2 x HDMI®	1 x HDMI® via Type-A w/ IP67	1 x HDMI® Type-A output
Ethernet	6 x 2.5GbE (Intel I226-LM) via RJ-45 (optional PoE+)	2 x 10GbE (Marvell AQC113) via RJ-45 (optional M12 X-code) 4 x 2.5GbE (Intel I226) via RJ-45 (optional PoE+ and M12 X-code)	2 x 2.5GbE (Intel I226) via RJ-45 8 x GbE (Intel I210) via RJ-45 (optional PoE+ and M12 X-code)	1 x 10GbE, 2 x 2.5GbE w/ 2 x IEEE 802.3at PoE PSE Class 4 (PoE+ 30 watts) (3 x Phoenix Contact® M12 X-coded connectors)	1 x 2.5GbE (Intel® I226-IT) via RJ-45 1 x GbE (NVIDIA SoM) via RJ-45
DIO	8 x DI (DC 5-60V), 4 x DO (DC 5V/100mA)	8 x DI (DC 5-60V), 8 x DO (DC 5V/100mA)	8 x DI (DC 5-60V), 4 x DO (DC 5V/100mA)	4 x DI (DC 9-60V) and 4 x DO (12V, 100mA) *DIO model only*	1 x UART (3.3V) 1 x DI, 1 x DO (optional) I2C (customized SKU)
COM	2 × RS-232/422/485 (optional 6 x RS-232/422/485)	2 × RS-232/422/485	4 × RS-232/422/485	1 x M12 A-coded connector for RS-232/422/485	1 × RS-232/422/485
CAN	–	–	–	2 x CAN FD	1 x CAN FD
USB	4 x USB 3.2 Gen 2	8 x USB 3.2 Gen 2	8 x USB 3.2 Gen 2	2 x USB 3.2	2 x USB 3.2
Camera	–	–	–	4 x GMSL-2	2 x GMSL-2
Internal Expansion	• 1 x Mini PCIe (full-size w/ USB 2.0 only) • 1 x M.2 3042/3052 Key B for WWAN w/ dual SIM support • 1 x M.2 2242 Key B for GNSS or CAN FD • 1 x M.2 2230 Key E for Wi-Fi/BT	• 2 x Mini PCIe (full-size) • 1 x M.2 3042/3052 Key B for WWAN with dual SIM support • 1 x M.2 2230 Key E for Wi-Fi/BT	• 2 x Mini PCIe (full-size) • 2 x M.2 3042/3052 Key B for WWAN w/ dual SIM support • 1 x M.2 2230 Key E for Wi-Fi/BT	• 1 x M.2 3042/52 Key B slot (USB3.0) with a Nano SIM Card Slot • 1 x M.2 2230 Key E slot • 1 x mPCIe Full size slot (USB.2.0 supported)	• 1 x M.2 3042/3052 Key B for WWAN w/ dual SIM support • 1 x M.2 2230 Key E for Wi-Fi/BT
Storage	• 1 x M.2 2280 Key B for SATA SSD • 1 x Removable tray for 2 x 2.5" SATA SSD	• 1 x M.2 2280 Key M for NVMe/SATA SSD • 2 x M.2 2280 Key M for NVMe SSD • 2 x Removable tray for 2.5" SATA SSD	• 1 x M.2 2280 Key M for NVMe/SATA SSD • 2 x M.2 2280 Key M for NVMe SSD • 2 x Removable tray for 2.5" SATA SSD	• 1 x 64GB eMMC (Built-in within SoM) • 1 x M.2 2280 Key M slot supports NVMe SSD	• 1 x M.2 2242 Key M for NVMe SSD
Power Input	DC 9-60V	DC 9-60V	DC 9-60V	DC 9-60V	DC 10-60V
Power Management	Ignition detection, Smart Power Management	Ignition detection, Smart Power Management	Ignition detection, Smart Power Management	Ignition Detection with Smart Power Management	Ignition detection, Smart Power Management
Battey Backup Unit (BBU)	–	Optional Internal Backup Battery Kit	Optional Internal Backup Battery Kit	Optional Internal Backup Battery Kit	–
Operating Temp.	-40°C ~ 70°C with 0.6 m/s airflow	-40°C ~ 70°C with 0.6 m/s airow	-40°C ~ 70°C with 0.6 m/s airflow	-25°C ~ 70°C, ambient w/ 0.6m/s airflow	-25°C ~ 50°C with 0.6 m/s airflow
Dimensions (L x W x H)	242 x 240 x 70 mm w/ mounting brackets 210 x 240 x 65 mm w/o mounting brackets	290 x 250 x 98 mm with mounting brackets	290 x 250 x 98 mm with mounting brackets	300 x 190 x 77.5 mm	120 x 115 x 32 mm
Certification / Compliance	CE, FCC Class A, UKCA, E-Mark, IEC 62368-1	CE, FCC Class A, UKCA, E-Mark, EN 50155, EN 45545-2 (R25), IEC 62368-1	CE, FCC Class A, UKCA, E-Mark, EN 50155, EN 45545-2 (R25), IEC 62368-1	CE, FCC Class A, E-Mark, ECE R118, EN50155, EN45545-2 (R25)	CE, FCC Class A, UKCA

IBOX-602P-IP66	IBOX-601-G2	IBOX-601-M12X	IBOX-600-IP66	IBOX-600 Series
NVIDIA® Jetson Orin™ NX 16GB NVIDIA® Jetson Orin™ NX 8GB	NVIDIA® Jetson Orin™ NX 16GB NVIDIA® Jetson Orin™ NX 8GB	NVIDIA® Jetson Orin™ NX 16GB NVIDIA® Jetson Orin™ NX 8GB	NVIDIA® Jetson Orin™ NX 16GB NVIDIA® Jetson Orin™ NX 8GB NVIDIA® Jetson Orin™ Nano 8GB NVIDIA® Jetson Orin™ Nano 4GB	NVIDIA® Jetson Orin™ NX 16GB NVIDIA® Jetson Orin™ NX 8GB NVIDIA® Jetson Orin™ Nano 8GB NVIDIA® Jetson Orin™ Nano 4GB
Ampere Architecture GPU (SoM built-in)	Ampere Architecture GPU (SoM built-in)	Ampere Architecture GPU (SoM built-in)	Ampere Architecture GPU (SoM built-in)	Ampere Architecture GPU (SoM built-in)
16GB/8GB LPDDR5, depends on Jetson Module	16GB/8GB LPDDR5, depends on Jetson Module	16GB/8GB LPDDR5, Depends on Jetson Module	16GB/8GB/4GB LPDDR5, Depends on Jetson Module	16GB/8GB/4GB LPDDR5, Depends on Jetson Module
1 x HDMI® (with a cover)	1 x HDMI Type-A output	1 x HDMI Type-A output	1 x HDMI Type-A output	1 x HDMI Type-A output
1 x 2.5GbE (Intel® I226-IT) via M12 X-code 1 x GbE (SoM) via M12 x-code PoE supports 15.4W per port (PSE Class 3) with total power budget: 32W	2 x M12 X-coded connectors for 1 x 2.5GbE & 1 x GbE	2 x M12 X-coded connectors for 1 x 2.5GbE & 1 x GbE	2 x M12 X-coded connectors for 1 x 2.5GbE & 1 x GbE	2 x RJ-45 / M12 X-coded for 1 x 2.5GbE & 1 x GbE
3 x DI, 4 x DO (12VDC/100mA) via M8	—	1 x DB-9 for 4 x DI / 4 x DO	1 x M8 A-coded connector for 3 x DI / 4 x DO	1 x DB-9 for 4 x DI / 4 x DO
1 x RS-232/422/485 via M8	1 x DB-9 for RS-232/422/485	1 x DB-9 for RS-232/422/485	1 x M8 A-coded connector for RS-232/422/485	1 x DB-9 for RS-232/422/485
1 x CAN FD	1 x CAN FD	1 x CAN FD	1 x CAN FD	1 x CAN FD
1 x USB 3.2 (with a cover)	2 x USB 3.2 Type-A	2 x USB 3.2 Type-A	2 x USB 3.2 Type-A with Covers	2 x USB 3.2 Type-A
2 x GMSL-2	4 x GMSL-2	4 x GMSL-2	—	—
• 1 x M.2 3042/3052 Key B for WWAN w/ dual Nano SIM support • 1 x M.2 2230 Key E for Wi-Fi/BT	• 1 x mPCIc Full size slot (USB.2.0 supported) • 1 x M.2 3042/52 Key B slot (USB3.0) with a Nano SIM Card Slot • 1 x M.2 2230 Key E slot	• 1 x M.2 3042/52 Key B slot (USB3.0) with a Nano SIM Card Slot • 1 x M.2 2230 Key E slot • 1 x mPCIc Full size slot (USB.2.0 supported)	• 1 x M.2 3042/52 Key B slot (USB3.0) with a Nano SIM Card Slot • 1 x M.2 2230 Key E slot • 1 x mPCIc Full size slot (USB.2.0 supported)	• 1 x M.2 3042/52 Key B slot (USB3.0) with a Nano SIM Card Slot • 1 x M.2 2230 Key E slot • 1 x mPCIc Full size slot (USB.2.0 supported)
• 1 x M.2 2280 Key M for NVMe SSD (Pre-installed system BSP)	• 1 x M.2 2280 Key M slot supports NVMe SSD (Pre-installed system BSP)	• 1 x M.2 2280 Key M slot supports NVMe SSD (Pre-installed system BSP)	• 1 x M.2 2280 Key M slot supports NVMe SSD (Pre-installed system BSP)	• 1 x M.2 2280 Key M slot supports NVMe SSD (Pre-installed system BSP)
DC 9-60V	DC 9-60V	DC 9-60V	DC 9-60V	DC 9-60V
Supports Smart Power Management	Ignition Detection, and Power off Delay Time Setting by Software	Ignition Detection, and Power off Delay Time Setting by Software	Ignition Detection, and Power off Delay Time Setting by Software	Ignition Detection, and Power off Delay Time Setting by Software
Optional Internal Backup Battery Kit	—	Optional Internal Backup Battery Kit	Optional Internal Backup Battery Kit	Optional Internal Backup Battery Kit
• -40°C ~ 65°C (-40°F ~ 149°F) with 0.6m/s airflow for startup • -35°C ~ 65°C (-31°F ~ 149°F) with 0.6m/s airflow	-25°C ~ 70°C , ambient w/ 0.6m/s airflow	-25°C ~ 70°C , ambient w/ 0.6m/s airflow	-25°C ~ 70°C , ambient w/ 0.6m/s airflow	-25°C ~ 70°C , ambient w/ 0.6m/s airflow
150 x 138 x 66 mm	150 x 135 x 77 mm	270.2 x 270.2 x 69 mm	150 x 135 x 66 mm	150 x 135 x 69 mm
CE, FCC Class A, UKCA, E-mark, EN50155, EN45545-2 (R25)	CE, FCC Class A, UKCA, E-mark, EN50155, EN45545-2 (R25)	CE, FCC Part-15 Class A, E-mark, EN50155, EN45545-2 (R25)	CE, FCC Part-15 Class A, E-mark, EN 50155, EN 45545-2 (R25)	CE, FCC Part-15 Class A, E-mark, EN 50155, EN 45545-2 (R25)

In-Vehicle Rugged Computer & Rugged Industrial Computer




Model Name	VBOX-3132 Series	VBOX-3650(P)-(M12X)	VBOX-3630	VBOX-3630R-M12X
Processor / Module	Intel Atom® x7835RE Intel Atom® x7433RE Intel® Twin Lake N355 Intel® Twin Lake N150	Intel® Core™ Ultra X9 Processors 388H Intel® Core™ Ultra 7 Processors 366H Intel® Core™ Ultra 5 Processors 336H	Intel® Core™ i7-1185G7E Processor Intel® Core™ i5-1145G7E Processor Intel® Core™ i3-1115G4E Processor Intel® Celeron® 6305E Processor	Intel® Core™ i7-1185G7E Processor Intel® Core™ i5-1145G7E Processor Intel® Core™ i3-1115G4E Processor Intel® Celeron® 6305E Processor
GPU	Intel® UHD Graphics	Intel® Arc™ B390 GPU for Ultra X9 388H Intel® Graphics for Ultra 7 366H and Ultra 5 336H	Intel® Iris® Xe Graphics / Intel® UHD Graphics	Intel® Iris® Xe Graphics / Intel® UHD Graphics
Memory	1 x SO-DIMM DDR5 up to 16 GB	2 x DDR5-7200 SO-DIMM up to 128 GB (In Band ECC Support)	2 x DDR4-3200 SO-DIMM Up to 64GB	2x DDR4-3200 SO-DIMM Up to 64GB
Video	1 x HDMI®	1 x HDMI®	2 x HDMI®, 1 x DP 1.4	2 x HDMI® , 1 x DP 1.4
Ethernet	1 x 2.5GbE from I226-IT via RJ-45 or M12 X-code for PoE model 4 x GbE* from Marvell Ethernet Switch w/ PoE	1 x 2.5GbE from Intel I226-LM via RJ-45 or M12 X-code 3 x GbE from Intel I210-AT via RJ-45 or M12 X-code	1 x 2.5GbE 3 x GbE 4 x PoE for Option, 60W Power Budget	1 x 2.5GbE 3 x GbE 4 x PoE for Option,60W Power Budget
DIO	8 x DI (DC 5-48V), 4 x DO (12VDC/100mA)	6 x DI (DC 0-60V), 4 x DO (12VDC/100mA)	6 x DI (5-60V) and 4 x DO (5V/100mA) 2 x DC Output (12V/1A)	6 x DI (5-60V), 4 x DO (5V/100mA)
COM	2 × RS-232/422/485 ports, expandable with 4 optional COM ports	4 × COM support RS-232/422/485 ports (3 x COM for M12 model)	4 x RS-232/422/485	4 X RS-232/422/485 (Auto Direction Control)
CAN	1 x CAN FD	—	—	—
USB	2 x USB 3.2, 2 x USB 2.0	2 x USB 3.2, 2 x USB 2.0	2 x USB 3.2 Gen 2 (10 Gbps), 2 x USB 2.0	2 x USB 3.2 Gen 2 (Type A), 2 x USB 2.0 (Type A)
Internal Expansion	• 1 x M.2 3042/3052 Key B for WWAN with dual Nano SIM support • 1 x M.2 2230 Key E for Wi-Fi/BT	• 2 x Mini PCIe* (full-size w/ USB 2.0 only) • 2 x M.2 3042/3052* Key B for WWAN with dual Nano SIM support • 1 x M.2 2230 Key E for Wi-Fi/BT	• 2 x mPCIe • 1 x M.2 2230 Key E • 2 x M.2 3042/52 Key B	• 1 x Combo Port (1 x M.2 3042/52 Key B or 1 x mPCIe Full Card) • 1 x mPCIe Full Size (USB function only) • 1 x M.2 2230 Key A-E
Storage	• 1 x M.2 2280 Key M for NVMe SSD • 1 x M.2 2280 Key M for NVMe/SATA SSD	• 1 x M.2 2242/2260/2280 Key M for NVMe SSD • 1 x Removable tray for dual 2.5" SATA SSD	• 1 x M.2 2280 Key M for NVMe/ SATA SSD • 1 x removable tray for 2 x 2.5" SATA SSD	• 1 x M.2 2280 Key M for NVMe/ SATA SSD • 1 x removable tray for 2 x 2.5" SATA SSD
Power Input	DC 9-60V	DC 9-60V	DC 9-60V	DC 24-110V
Power Management	Ignition detection, Smart Power Management	Ignition detection, Smart Power Management	Ignition Detection, and Power off Delay Time Setting by Software	Ignition Detection, and Power off Delay Time Setting by Software
Battey Backup Unit (BBU)	Backup battery for system power backup	—	Optional Internal Backup Battery Kit	Optional Internal Backup Battery Kit
Operating Temp.	x7000RE Processor: -40°C ~ 70°C with 0.6 m/s airflow N-series Processor: -30°C ~70°C with 0.6m/s airflow	-40°C ~ 70°C with 0.6 m/s airflow	-40°~ 70°C, ambient w/ 0.6m/s airflow	-40°C ~ 70°C, ambient w/ 0.6m/s airflow
Dimensions (L x W x H)	RJ-45 model: 150 x 150 x 65 mm M12 PoE model: 150 x 150 x 87 mm	250 x 160 x x 55 mm	250 x 165 x 55 mm	365 x 165 x 55 mm
Certification / Compliance	CE, FCC Class A, UKCA, E-Mark, EN 62368-1, EN 50155, EN 45545-2 (R25)	CE, FCC Class A, UKCA, E -Mark, EN 45545-2 (R25)	CE, FCC Class A, E-Mark, EN50155, EN45545-2 (R25)	CE, FCC Class A, EN50155, EN45545-2 (R25)




Model Name	RBOX-1001-M12X Series	SBOX-2625	SBOX-2624(P)-(IP66)	SBOX-2321
Processor / Module	Intel Atom® x7835RE 8-core processor Intel Atom® x7433RE 4-core processor	Intel® Twin Lake N150 4-core processor Intel Atom® x7433RE 4-core processor Intel® Twin Lake Core™ 3 N355 8-core processor	AMD Ryzen™ Embedded R2312 2C/4T Processor	Intel Atom® x6416RE Processor Intel Atom® x6214RE Processor
GPU	Processor-integrated GPU – Intel® UHD Graphics	Intel® Graphics	AMD Radeon™ Graphics	Intel® UHD Graphics
Memory	1 x DDR5-4800 SO-DIMM up to 16 GB	1 x DDR5-4800 SO-DIMM up to 16GB	1 x SO-DIMM DDR4-2400 up to 32GB (ECC Support with ECC DRAM)	1 x SO-DIMM-260 Socket supports DDR4-3200 up to 32 GB
Video	1 x HDMI®	2 x HDMI®	2 x HDMI®	1 x DP / 1 x DVI-D (*Single-link cable only)
Ethernet	2 x 2.5GbE (Intel® I226-IT) via M12 X-code	2 x 2.5GbE (Intel I226-LM) via RJ-45	1 x 2.5GbE, 1 x GbE (SBOX-2624) 1 x 2.5GbE, 4 x GbE w/ PoE (SBOX-2624P) 2 x GbE w/ PoE (SBOX-2624P-IP66)	2 x RJ-45 for 2.5GbE
DIO / GPIO	8 x DI (DC 5-48V), 4 x DO (DC 12V/100mA)	• 4 x DI (DC 5-36V), 4 x DO (DC 5V/100mA)	4 x DI (9-36VDC), 4 x DO (5V, 100mA) 3 x DI (9-36VDC), 4 x DO (5V, 100mA) (SBOX-2624P-IP66)	1 x DB-9 for 4 x DI / 4 x DO (5V / 100mA)
COM	2 × RS-232/422/485	2 × RS-232/422/485 2 × RS-232/422/485 + 1 × RS-232 (Optional)	2 x RS-232/422/485, 4 x RS-232 (SBOX-2624) 2 x RS-232/422/485, 2 x RS-232 (SBOX-2624P)	2 x RS-232/422/485 (the 3rd for optional)
USB	2 x USB 3.2, 2 x USB 2.0	2 x USB 3.2 Gen 1, 4 x USB 2.0	2 x USB 3.2 Gen 2 (10Gbps), 2 x USB 2.0	2 x USB 3.2, 2 x USB 2.0
Internal Expansion	• 1 x M.2 3042/3052 Key B for WWAN w/ dual Nano SIM support • 1 x M.2 2230 Key E for Wi-Fi/BT	• 1 x M.2 3042/3052 Key B supports PCIe and USB interface for WWAN w/ single Nano SIM • 1 x M.2 2230 Key E for Wi-Fi/BT	• 1 x M.2 3042/52 Key B supports USB 3.2 WWAN w/ Dual SIM • 1 x M.2 2230 Key E supports PCIe and USB2.0 Wi-Fi/BT	• 1 x M.2 2230 Key E Slot • 1 x M.2 3042/52 Key B Slot • 1 x mPCIe Slot
Storage	• 1 x M.2 2280 Key M for NVMe SSD • 1 x M.2 2280 Key M for NVMe/SATA SSD	• 1 x 2.5" SATA SSD • 1 x M.2 2242 Key B for SATA SSD	• 1 x M.2 2280 Key M supports NVMe or SATA SSD • 1 x 2.5" SATA SSD (SBOX-2624)	• 1 x SATA 6Gb/s for 2.5" SATA storage • 1 x M.2 2280 Key M slot for NVMe/SATA SSD
Power Input	DC 24-110V (Galvanic Isolation) via M12 K-code	DC 9-36V	DC 9V-36V	DC 9V-36V
Operating Temp.	-40°C ~ 75°C with 0.6 m/s airflow	-40°C ~ 70°C with 0.6 m/s airflow	-30 ~ 60°C, with SSD, ambient w/ air flow 0.6m/s (for barebone system)	-40°C ~ 70°C, ambient w/ 0.6m/s airflow
Dimensions (L x W x H)	285 x 165 x 43 mm	150 x 106 x 55 mm	150 x 150 x 65 mm	182 x 171 x 54 mm
Certification / Compliance	CE, FCC Class A, UKCA, EN 50155, EN 45545-2 (R25)	CE, FCC Class A, UKCA, IEC/EN 62368-1	CE, FCC Class A, UKCA, EN 50155	CE, FCC Part-15 Class A

Display Computer

Model Name	**VPC-101RA1S / VPC-156RA1S**	**VPC-101RB2S / VPC-156RB2S**	**SPC-101MA1 / SPC-156MA1**
Processor / Module	NXP i.MX 8QuadXPlus Automotive SoC Integrated 4 x Arm Cortex-A35 Cores 1 x Arm Cortex-M4F Core	NVIDIA® Jetson Orin™ NX 16GB NVIDIA® Jetson Orin™ NX 8GB NVIDIA® Jetson Orin™ Nano 8GB	Intel® Twin Lake N150 Intel Atom® x7433RE
GPU	GC7000Lite	Depends on Jetson module	Intel® UHD Graphics
Size / Ratio	10.1" / 15.6"	10.1" / 15.6"	10.1" / 15.6"
Resolution	1280 x 800 / 1920 x 1080	1280 x 800 / 1920 x 1080	1280 x 800 / 1920 x 1080
Brightness	1000 nits / 1200 nits	1000 nits / 1200 nits	400 nits / 350 nits
Contrast Ratio	800 : 1 / 800 : 1	800 : 1 / 800 : 1	800 : 1 / 1000 : 1
Touch	Projected capacitive	Projected capacitive	Projected capacitive
Memory	1x On-board LPDDR4 4 GB	16GB/8GB LPDDR5, Depends on Jetson Module	1 x SO-DIMM Support DDR5-4800 MHz up to 32GB
Video	—	—	2 x HDMI 2.0
Ethernet	2 x GbE	1 x 2.5 GbE (Optional 4 x PoE+ for PoE model) 1 x GbE via M12 X-code	2 x 2.5GbE
COM	1 x RS-232/422/485 1 x RS-232	1 x RS-232/422/485 via M8 1 x RS-232 via M8	1 x RS-232/422/485
CAN	3 x CAN-FD (optional)	1 x CAN FD via M8	—
USB	2 x USB 3.2 Gen 2	2 x USB 2.0 via M8	2 x USB 3.2, 4 x USB 2.0
Camera	—	4 x GMSL-2 via FAKRA (for GMSL Model)	—
Internal Expansion	• 1 x M.2 3042/3052 Key B for WWAN w/ Nano SIM Suppot • 1 x M.2 2242 Key B for GPS • 1 x M.2 2230 Key E for Wi-Fi	• 1 x M.2 3042/3052 Key B for WWAN w/ Nano SIM support • 1 x M.2 2230 Key E for Wi-Fi/BT	• 1 x M.2 3042/52 Key B for WWAN (USB 3.2) with SIM • 1 x M.2 2230 Key E for Wi-Fi
Storage	• Onboard eMMC 5.1 32 GB • 1 x Micro SD Slot	• 1 x M.2 2242 Key M for NVMe SSD (Pre-installed system BSP)	• 1 x M.2 2280 Key M for NVMe SSD
Power Input	DC 9-60V	DC 9-60V	DC 12-36V
Power Management	Ignition detection, Smart Power Management	Ignition detection	—
Battey Backup Unit (BBU)	—	Optional Internal Backup Battery Kit	—
Operating Temp.	-30 ~ 70°C, with 0.6 m/s airflow	-25°C ~ 60°C with 0.6 m/s airflow	0 ~ 50°C
Dimensions (L x W x H)	262 x 180 x 52mm (VPC-101RA1S) 407 x 257 x 68.2 mm (VPC-156RA1S)	260 x 179 x 75 mm (VPC-101RB2S) 407 × 257 × 72 mm (VPC-156RB2S)	276 x 198 x 75 mm (SPC-101MA1) 407 x 257 x 72 mm (SPC-156MA1)
Certification / Compliance	CE, FCC Class A, UKCA	CE, FCC Class A, UKCA, E-Mark	CE, FCC Class A, UKCA

Model Name	**VDM-101HD**	**VDM-700HD**
Size	10.1"	7"
Ratio	16 : 10	16 : 9
Maximum Resolution	1280 x 800	1280 x 720
Active Area (H x V)	1280 x 800 / 1920 x 1080	1280 x 800 / 1920 x 1080
Brightness (Typical)	1000 nits	560 nits
Contrast Ratio (Typical)	1300 : 1	1000 : 1
Viewing Angle	89/89/89/89 degree	89/89/89/89 degree
Touch Type	Projected capacitive	Projected capacitive
Video	1x HDMI input 1x DVI-D input (SINTRONES pin define)	1 x DVI-D input (SINTRONES pin define)
Audio	Stereo speaker and built-in Mic	Stereo speaker and built-in Mic
Others	1 x external DC power input	—
Power Input	DC 9-48V	DC 9-48V
Operating Temp.	-20 ~ 60°C	-20 ~ 60°C
Storage Temp.	-40 ~ 80°C	-40 ~ 80°C
Relative Humidity	10% RH – 90% RH (non-condensing)	10% RH – 90% RH (non-condensing)
Construction	Plastic	Plastic
Mounting	VESA MIS-D 75 mm	VESA MIS-D 75 mm
Weight	900 g	500 g
Dimensions (L x W x H)	247.84 x 178.59 x 36.36 mm	188.5 x 124.2 x 31.4mm
Certification / Compliance	CE, FCC Class A, E-Mark	CE, FCC Class A, E-Mark

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