VBOX-3132 Series

Intel Atom® x7000RE DIN-rail PoE Fanless Rugged Edge Computer

- Industrial Grade Amston Lake Processor and Ethernet Controller
- Intel® Twin Lake Processor SKU Available
- 1 x 2.5GbE, 4 x PoE Ports for IoT Devices Connectivity
- 1 x Built-in CAN FD for Vehicle Device Communication
- Dual NVMe SSD Support for NVR Applications
- Built-in Watchdog and Smart Power Management for System Health Monitoring
- Supports DIN-rail and Wall-mount Installation

Traffic and Transportation Surveillance

Dual Nano SIM for Telecom Provider Selection
The system can select a different telecom provider depending on signal quality or other areas.

1 x 2.5GbE for Data Uplink Transmission
High-speed Ethernet for data backup or uplink network expansion

1 x CAN FD for Vehicle Connection
For the data communication of vehicle equipment

4 x PoE for IP Camera and ADAS
For high-resolution image capture or LiDAR connections

9 - 60VDC for 12/24/48V Power System
A wide input range with smart power management for EV or any readily 12V/24V/48V DC power system

UPS : The optional backup battery for emergency power loss situations
Watchdog : Monitoring the system status

Specifications

System

Processor
- Intel Atom® x7835RE Octa-core Processor up to 3.6 GHz
- Intel Atom® x7433RE Quad-core Processor up to 3.4 GHz
- Intel® Twin Lake N355 Core™ 3 Octa-core Processor up to 3.9 GHz*
- Intel® Twin Lake N150 Quad-core Processor up to 3.2GHz
- *Project-based SKU

Graphics
- Intel® UHD Graphics

Memory
- 1 x SO-DIMM DDR5 up to 16 GB

Security
- 1 x TPM 2.0

Watchdog
- Auto reset for unresponsive system

Interface

Video
- 1 x HDMI® with support for 4K@60Hz as specified in HDMI 2.0b

Audio
- 1 x Line-out, 1 x Mic-in (Optional)

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 (PSE Class 3: 15W) via RJ-45 or M12 X-code
  - * Share with 1GbE bandwidth; Power budget: 60W
  - **Non-PoE model: 2 x 2.5GbE
  - ***M12 X-code cable is not included in the package

CAN
- 1 x CAN FD

USB
- 2 x USB 3.2, 2 x USB 2.0

DIO
- 8 x DI (5-48VDC), 4 x DO (12VDC/100mA)

Serial Port
- 2 × RS-232/422/485 ports, expandable with 4 optional COM ports

Internal Expansion

M.2
- 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

Storage

Type
- 1 x M.2 2280 Key M for NVMe SSD
- 1 x M.2 2280 Key M for NVMe/SATA SSD

Power

Power Input
- DC 9-60V
- *Power input for PoE models is recommended to be 24V or above.

Power Protection
- OCP, OVP, surge protection, reversed polarity protection

Power Management
- Ignition detection, Smart Power Management

Battey Backup Unit (BBU)
- Backup battery for system power backup
- * Non-PoE model only

Software

Operating System
- Windows 11 IoT Enterprise LTSC, Ubuntu 24.04 LTS

Certification / Compliance

- CE, FCC Class A, UKCA, E-Mark, EN 62368-1, EN 50155, EN 45545-2 (R25)

Environmental

Operating Temp.
• x7000RE Processor: -40°C ~ 70°C (-40°F ~ 158°F) with 0.6 m/s airflow
• N-series Processor: -30°C ~70°C (-22°F~158°F) with 0.6m/s airflow
*The x7000RE processor for non-PoE models can operate up to 75°C (167°F), the processor performance may be limited.
** Operating temp. varies by the accessories installed.

Storage Temp.
• -40°C ~ 80°C (-40°F ~ 176°F)

Relative Humidity
• 10% RH – 90% RH (non-condensing)

Vibration
• IEC 60068-2-64, random, 2.5G@5~500Hz, 1hr/axis
• MIL-STD-810H, Method 514.8, Procedure I, Category 4

Shock
• MIL-STD-810H, Method 516.8, Procedure I, trucks and semi-trailers=15G (11ms)

Mechanical

Construction
• Aluminum Alloy with Fanless Design
Antenna
• 6 x SMA connector panel mount hole
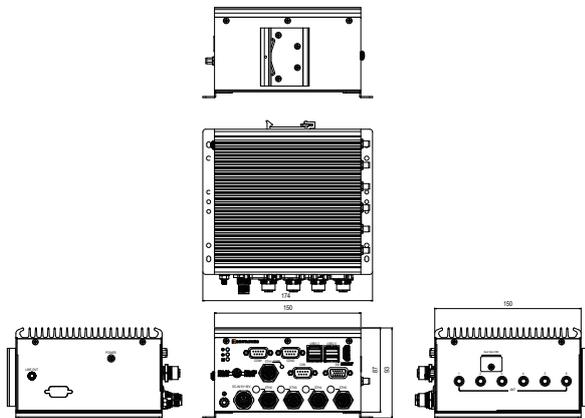**Mounting**
• DIN rail, Wall
Net Weight
• RJ-45 PoE model: 1.5 kg (3.31 lb)
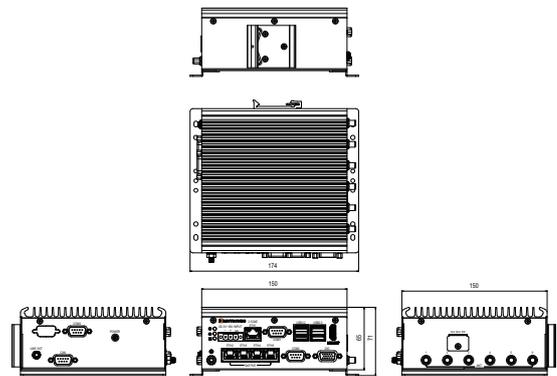• M12 PoE model: 1.79 kg (3.95 lb)
Dimensions (L x W x H)
• RJ-45 model: 150 x 150 x 65 mm (5.91 x 5.91 x 2.56 in.)
• M12 PoE model: 150 x 150 x 87 mm (5.91 x 5.91 x 3.43 in.)
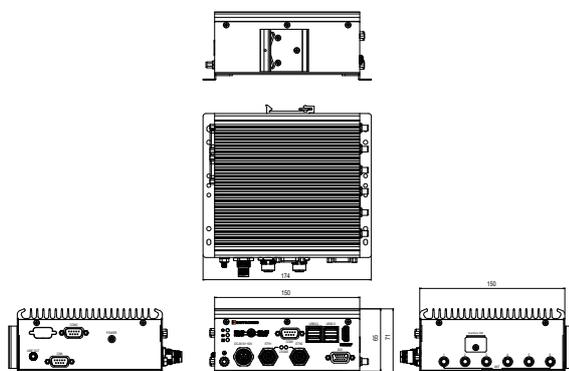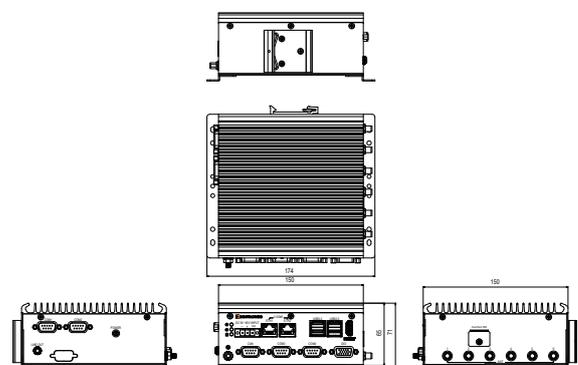
Dimensions

VBOX-3132P-M12X

VBOX-3132P

VBOX-3132-D25-M12X

VBOX-3132-D25

Model Name	RJ-45 Model	M12 Model	2.5GbE	GbE	PoE	BBU	Dimension (L x W x H)
VBOX-3132P-M12X-x7835	-	V	1	4	V	-	150 x 150 x 87 mm (6 x 6 x 3.43 in)
VBOX-3132P-M12X-x7433	-	V	1	4	V	-	150 x 150 x 87 mm (6 x 6 x 3.43 in)
VBOX-3132P-x7835	V	-	1	4	V	-	150 x 150 x 65 mm (6 x 6 x 2.56 in)
VBOX-3132P-x7433	V	-	1	4	V	-	150 x 150 x 65 mm (6 x 6 x 2.56 in)
VBOX-3132-D25-M12X-x7835	-	V	2	-	-	V	150 x 150 x 65 mm (6 x 6 x 2.56 in)
VBOX-3132-D25-M12X-N355*	-	V	2	-	-	V	150 x 150 x 65 mm (6 x 6 x 2.56 in)
VBOX-3132-D25-M12X-N150	-	V	2	-	-	V	150 x 150 x 65 mm (6 x 6 x 2.56 in)
VBOX-3132-D25-N355*	V	-	2	-	-	V	150 x 150 x 65 mm (6 x 6 x 2.56 in)
VBOX-3132-D25-N150	V	-	2	-	-	V	150 x 150 x 65 mm (6 x 6 x 2.56 in)

*Project-based SKU

Ordering Information

Model Number	VBOX-3132P	VBOX-3132P-yyyy-zzzzz (yyyy=M12X;zzzzz=x7835=Intel Atom® x7835RE, zzzzz=x7433=Intel Atom® x7433RE)
	VBOX-3132-D25-M12X	VBOX-3132-D25-M12X-zzzzz (zzzzz=x7835=Intel Atom® x7835RE, zzzzz=N355☒=Intel® Core™ 3 Processor N355, zzzzz=N150☒=Intel® Processor N150)
	VBOX-3132-D25	VBOX-3132-D25-zzzz (zzzz=N355=Intel® Core™ 3 Processor N355, zzzz=N150=Intel® Processor N150)
Description	VBOX-3132P	Intel Atom® x7000RE 4-Port PoE M12/RJ-45 DIN rail Rugged Edge Computer
	VBOX-3132-D25-M12X	Intel Atom® x7000RE/Twin Lake Dual 2.5GbE M12 DIN rail Rugged Edge Computer (BBU for Option)
	VBOX-3132-D25	Intel® Twin Lake Processor Dual 2.5GbE RJ-45 Fanless Edge Computer (BBU for Option)
State of Origin	Made in Taiwan	

Optional Accessories

Memory	DDR5 SO-DIMM 16GB
Storage	M.2 2280 NVMe SSD 256GB~2TB
Wi-Fi	M.2 2230 Wi-Fi Module
WWAN	M.2 3042/3052 WWAN Modem
GNSS	M.2 2242 GNSS Module
Battery (BBU)	BAT-2300v2 (Operating Temp. : -20°C ~ 60°C (-4°F ~ 140°F) (only for non PoE model)
Power Adapter	Non-PoE model: DC 12V, 60W PoE model: DC 24V, 160W
Ethernet Cable	M12 X-code to RJ-45 (1M)

All specifications are subject to change without notice.

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