

# RBOX-1001-M12X Series



**Intel Atom® x7835RE with 24-110VDC**  
**Galvanic Isolation Power Input Railway Computer**

- Intel Atom® x7000RE Amston Lake Processor
- 24-110VDC Galvanic Isolation Power Input for Railway Application
- Compliant with Railway Regulation EN 50155
- Removable Cover for Easy Expansion and Maintenance
- 2 x 2.5GbE Supports Industrial Temperature Environment

## Specifications

### System

#### Processor

- Intel Atom® x7835RE 8-core processor up to 3.6 GHz
- Intel Atom® x7433RE 4-core processor up to 3.4 GHz

#### Graphics

- Processor-integrated GPU - Intel® UHD Graphics

#### Memory

- 1 x DDR5-4800 SO-DIMM up to 16 GB

#### Security

- TPM 2.0

#### Watchdog

- Auto reset for unresponsive system  
(custom 1-255 sec/min settings in BIOS)

### Interface

#### Video

- 1 x HDMI® up to 3840 x 2160 @ 60Hz as specified in HDMI 2.1

#### Audio

- 1 x Line-out

#### Ethernet

- 2 x 2.5GbE (Intel® I226-IT) via M12 X-code

#### USB

- 2 x USB 3.2
- 2 x USB 2.0

#### DIO

- 8 x DI (DC 5-48V), 4 x DO (DC 12V/100mA)

#### COM

- 2 x RS-232/422/485

### Internal Expansion

#### M.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

### Storage

#### Type

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

### Certification / Compliance

- CE, FCC Class A, UKCA, EN 50155, EN 45545-2 (R25)

### Power

#### Power Input

- DC 24-110V (Galvanic Isolation) via M12 K-code

#### Power Protection

- OCP, OVP, surge protection, reversed polarity protection

#### Power Management

- Ignition detection, Smart Power Management

#### RTC Battery

- Removable top cover for RTC coin cell battery

### Software

#### Operating System

- Windows 11 IoT Enterprise LTSC
- Ubuntu 24.04 LTS

### Environmental

#### Operating Temp.

- -40°C ~ 75°C (-40°F ~ 167°F) with 0.6 m/s airflow
- \*Operating temperature varies by 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

#### Antenna

- 7 x SMA connector mounting hole

#### Mounting

- Rack/Wall mounting

#### Net Weight

- TBD

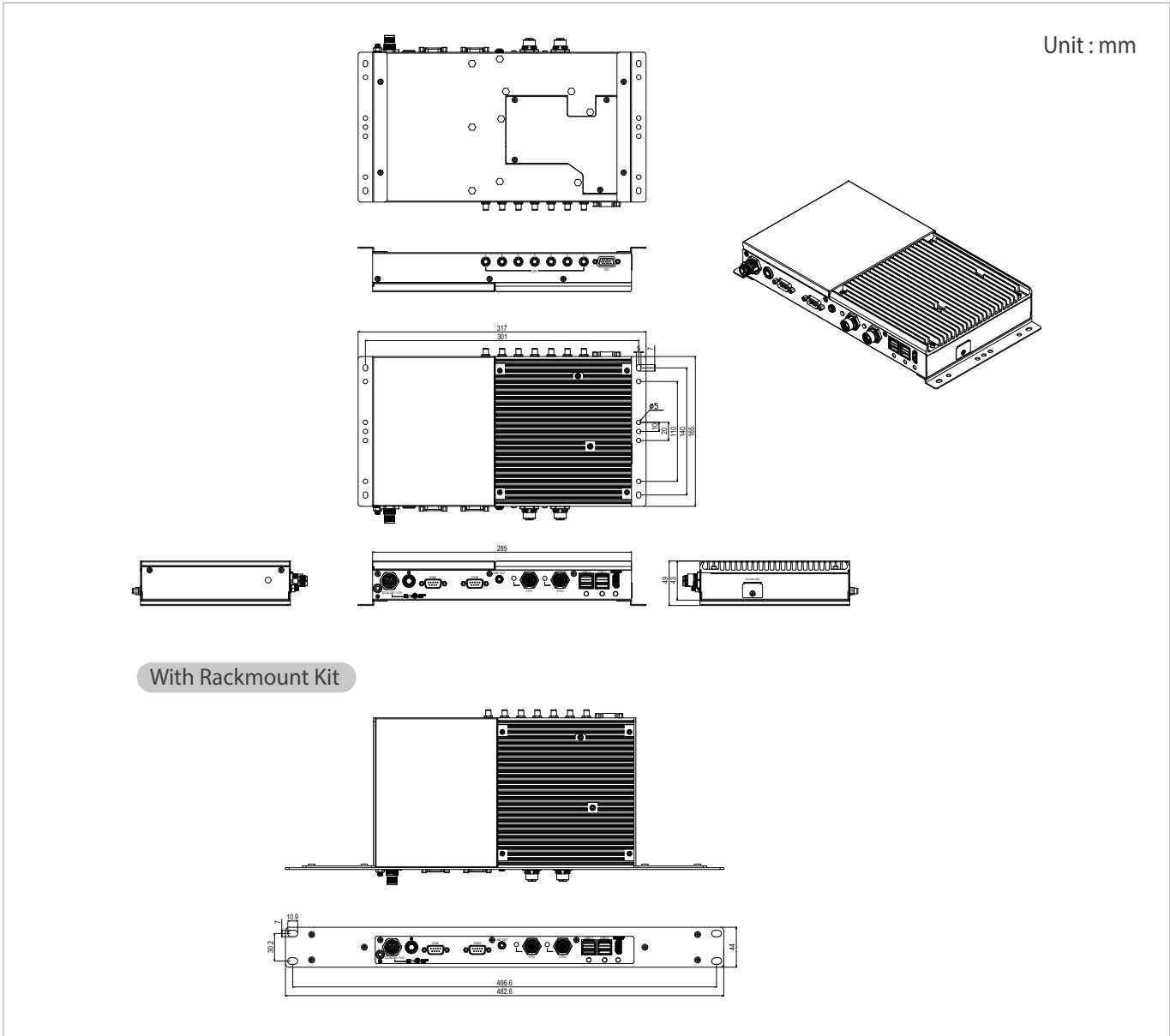
#### Dimensions (L x W x H)

- 285 x 165 x 43 mm (11.22 x 6.50 x 1.70 in.)

#### Ingress Protection

- IP40

Dimensions



Ordering Information

|                 |                                                                                    |
|-----------------|------------------------------------------------------------------------------------|
| Model Number    | RBOX-1001-M12X-zz (zz=A8=Atom® x7835RE, zz=A4=Atom® x7433RE)                       |
| Description     | Intel Atom® x7835RE with 24-110VDC Galvanic Isolation Power Input Railway Computer |
| State of Origin | Made in Taiwan                                                                     |

Optional Accessories

|               |                                                                                  |
|---------------|----------------------------------------------------------------------------------|
| Memory        | DDR5-5600 SO-DIMM, 8 GB to 16 GB, -40°C ~ 85°C                                   |
| Storage       | M.2 2280 Key M NVMe SSD, -40°C ~ 85°C<br>M.2 2280 Key B-M SATA SSD, -40°C ~ 85°C |
| Wi-Fi         | M.2 2230 Key A-E Wi-Fi module, -40°C ~ 85°C                                      |
| WWAN          | M.2 3042/3052 Key B WWAN module, -40°C ~ 85°C                                    |
| GNSS          | M.2 2242 Key B GNSS module, -40°C ~ 85°C                                         |
| Power Adapter | AC/DC 100-240V/12V 60W C14 DC plug power adapter                                 |
| Mounting      | 1U rackmount kit                                                                 |

All specifications are subject to change without notice.