

VBOX-3123-R2312

AMD Ryzen™ Embedded R2312 w/ 1x DVI-D / 2x HDMI® /
2x GbE / 4x COM / DC 9~60V In-Vehicle Computer



Taiwan Patent
No. M447854

- AMD Ryzen™ Embedded R2312 2C/4T Processor
- Dual HDMI® supports resolution specified in HDMI® 2.0b
- 1 x M.2 2280 M Key supports NVMe or SATA SSD
- 1 x M.2 3042/52 B Key supports USB 3.2 for WWAN w/ Dual SIM
- 1 x M.2 2230 E Key supports PCIe and USB 2.0 for Wi-Fi/BT
- 9 – 60VDC Wide Power Input

Specifications

System

Processor

- AMD Ryzen™ Embedded R2312 2C/4T Processor

Graphics

- CPU Built-in Graphics AMD Radeon™ Graphics

Memory

- 1 x SO-DIMM DDR4-2400 up to 32GB (ECC Support with ECC DRAM)

Network

- 2 x I210-AT

Security

- TPM 2.0

Watchdog

- System power on/off 1 ~ 255 min setting by BIOS

Interface

Ethernet

- 2 x GbE RJ45 port

USB

- 2 x USB 3.2 Gen 2 (10Gbps) and 2 x USB 2.0

Video

- 1 x DVI-D *Only supports Single-Link DVI-D cables
- 2 x HDMI® supports 4K@60Hz as specified in HDMI 2.0b

Audio

- 1 x Line-out and 1 x Mic-in

DIO

- 4 x DI (9~60V) / 4 x DO (5V / 100mA)
- 2 x Analog Input (0~60V w/0.5V accuracy)

Serial Port

- 4 x RS-232/422/485 (COM4 is optional with CANBUS)

Internal Expansion

M.2

- 1 x M.2 3042/52 B Key supports USB 3.2 for WWAN w/ Dual SIM
- 1 x M.2 2230 E Key supports PCIe and USB 2.0 for Wi-Fi/BT

mPCIe

- 2 x mPCIe Full-size slot support USB 2.0

Storage

Type

- 1 x M.2 2280 M Key supports NVMe or SATA SSD
- 1 x 2.5" SATA SSD

Software

Operating System Support

- Windows 10 IoT Enterprise 64bit LTSC
- Windows 11 IoT Enterprise 64bit LTSC
- Ubuntu 20.04 LTS 64bit

Environmental

Operating Temp.

- -40°C ~ 60°C, with SSD, ambient w/ air flow 0.6m/s (for barebone system)

Storage Temp.

- -40°C ~ 80°C

Relative Humidity

- 10 ~ 90% @ 40°C (non-condensing)

Vibration (with SSD)

- MIL-STD-810G, Method 514.6, Procedure I, Category 4 with SSD

Shock (with SSD)

- MIL-STD-810G, Method 516.6, Procedure I, Trucks and semi-trailers=15G (11ms) with SSD

Certification / Standard

- CE, FCC Class A, UKCA, E-Mark

Power

Power Input

- DC 9 – 60V Input

Power Protection

- Over voltage and reverse polarity protection

Power Management

- Ignition Management for Variety Vehicle

Battery (UPS)

- Internal backup battery Kit for about 10 mins operating

* UPS backup time varies depending on actual overall system power consumption.

* Operating temperature will be 0°C~55°C with the battery kit.

Patent No. : M447854 – Build-in Battery

Mechanical

Construction

- Aluminum Alloy

Mounting

- Wall-mount

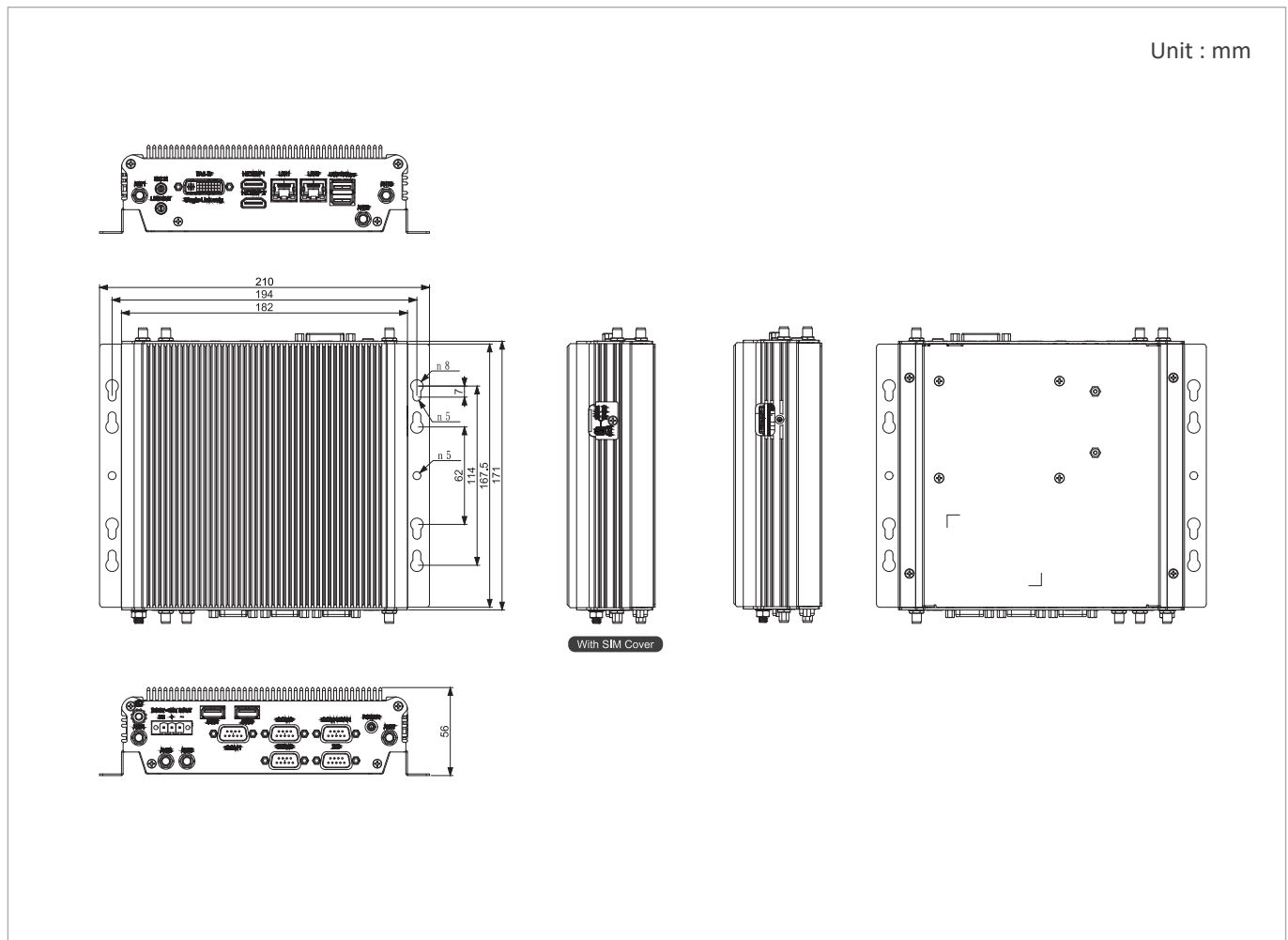
Weight

- 1.8 kg

Dimensions

- 210 (L) x 171 (W) x 56 (H) mm

Dimensions



Ordering Information

Model Number	VBOX-3123-R2312
Description	AMD Ryzen™ Embedded R2312 w/ 1x DVI-D / 2x HDMI® / 2x GbE / 4x COM / DC 9~60V In-Vehicle Computer
State of Origin	Made in Taiwan

Optional Accessories

Memory	DDR4-2400/2666/3200 SO-DIMM, 8GB~32GB, -40~85°C (ECC Option Available)
SSD	M.2 2280 M Key NVMe TLC -40~85°C 512GB~2TB M.2 2280 M Key SATA TLC -40~85°C 128GB~2TB 2.5 inch SATA TLC -40~85°C 128GB~2TB
Wi-Fi	M.2 2230 Key A+E Wi-Fi 6 + Bluetooth 5.2 module
WWAN	M.2 3042/52 5G/LTE modem with Thermal Kit
GPS	mPCIe GPS module
CAN Bus	mPCIe CAN Bus module
Battery (UPS)	2350mAh 3S1P Battery kit (0°C ~55°C for Discharge)

All specifications are subject to change without notice.