MVS 2623-GCIoT

Google Cloud AI Edge Telematics Solution

Google Cloud

With Coral intelligence





Main Features

- Built-in Google Edge TPU ML accelerator coprocessor
- Modular design for flexible I/O expansion
- Three SIM cards + dual WWAN modules support
- 8 x 10/100/1000 Mbps 802.3af PoE ports
- Built-in u-blox NEO-M8N module, optional dead reckoning support
- Intel Atom® x7, 4c, 2.0GHz E3950
- Dual removable SATA 3.0 2.5" SSD/HDD
- iButton for driver ID identification
- Built-in CAN 2.0B optional OBDII function (SAE J1939/J1708)
- Pattern number M531607 registered, an easy way to expand diverse I/O cards

Product Overview

MVS 2623-GCIoT 8-CH PoE Mobile NVR increases safety and security for bus passenger transportation with high video resolution and 2 removable extensive storage HDD/SSD capacity. It connects up to 8 IP cameras + PoE function providing reliable and high quality video coverage around the bus.

MVS 2623-GCIoT is a modular design, it is flexible to use other kinds of expansion boards to extend different I/O functions for different applications.

MVS 2623-GCIoT leverages wireless networks to simplify fleet management with capabilities such as remote, real-time video monitoring. This remote capability keeps transit fleets in service around the clock.

Vehicle data integration and diagnostics are also carried out via CAN Bus and OBDII. MIL-STD-810G for shock and vibration is designed to operate in harsh environments. Optional internal back-up battery guards against any unexpected vehicle power failure or unstable vehicle power.

Specifications

CPU
- Intel Atom® x7, 4C, 2.0GHz E3950 (Apollo Lake)

Memory
- 204-Pin DDR3L SO-DMIM socket support 1600MHz up to 8GB, default 4GB industrial grade memory

Google Edge TPU (Coral ML Accelerator Card)
- Hardware interface: mini-PCIe (half size)
- Serial interface: PCIe Gen2 x1
- Performance: 4TOPS @2Watt
- Operating voltage: 3.3V +/- 10 %
- Dimensions: 30mm x 26.8mm x 2.5 mm

Storage
- 2 x 2.5" SATA 3.0 SSD/HDD, removable & hot swappable (optional lockable storage available)

Expansion
- 1 x Full size mini-PCIe socket (USB 2.0)
- 1 x Full size mini-PCIe socket (USB 2.0 + PCIe)
- 1 x Half size mini-PCIe socket (USB 2.0 + PCIe)

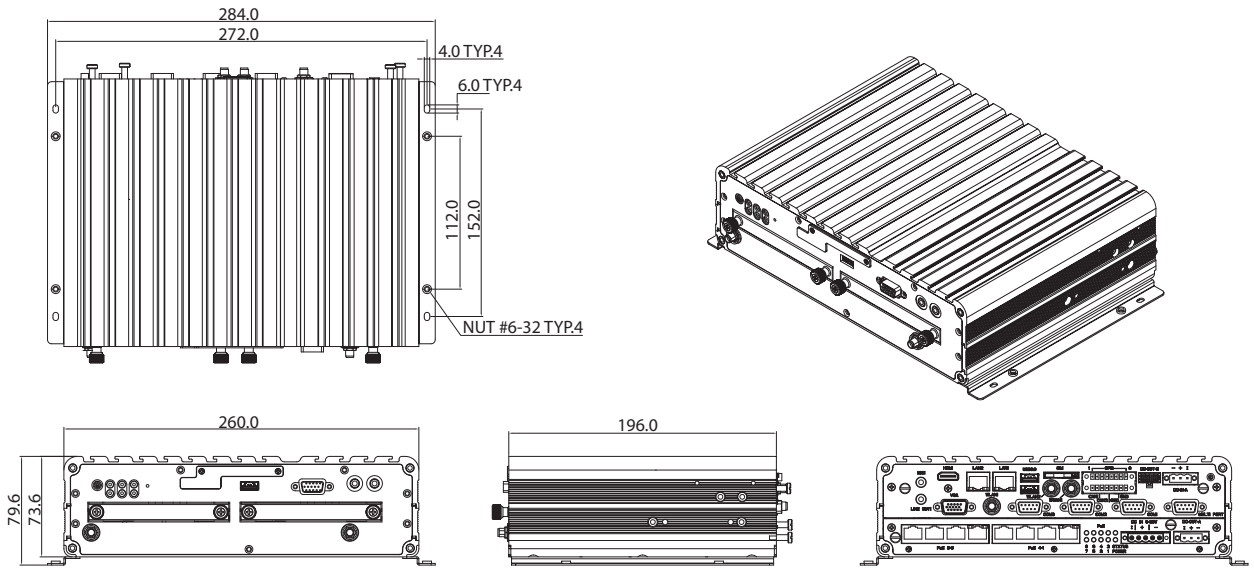
GNSS and On Board Sensor
- 1 x Default U-blox NEO-M8N GNSS module for GPS/Gloness/QZSS/Galileo/Beidou
- Optional modules with Dead Reckoning available
- Built-in G-sensor

Power over Ethernet
- 8-Port RJ45 for 10/100/1000 Mbps PoE IEEE 802.3af conformity, total 60W

Security
- TPM 2.0

I/O Interface-Front
- 6 x LED indicators for power/storage/WLAN/WWAN/status/health
- 1 x Reset button
- 1 x USB type A USB 2.0 port
- 2 x Phone jacks 3.5mm for 1 x Mic-in and 1 x Line-out
- 1 x Externally accessible SIM card sockets
- 2 x Antenna holes for WWAN/WLAN/BT/GPS

Dimension Drawing



I/O Interface-Rear

- 8 x RJ45 10/100/1000 Mbps PoE ports with LED
- 2 x RJ45 10/100/1000 Intel® Fast Ethernet with LED
- 1x 5-pin terminal block 9~36VDC-IN & 1x 3-pin terminal block for power cascade
- 2 x USB type A USB 3.0 port
- 2 x Phone jacks 3.5mm for 1 x Mic-in and 1 x Line-out
- 1 x DB-15 VGA, resolution up to 2560 x 1600 @60Hz
- 1 x HDMI port, resolution up to 2560 x 1600 @60Hz
- 2 x DB-9 RS-232
- 1 x DB-9 RS-232/422/485 (RI/5V/12V selectable)
- 1 x 12VDC output (2A) + SM Bus + 2 x MDI + power button
- 1 x DB9 connector for optional DR signal input, 2 x MDO and iButton
- 1 x 16-Pin terminal block connector
  - 1 x CAN Bus 2.0B (on board)
  - 1 x OBDII from optional VIOB-CAN-03 module (SAE J1939)
  - 1 x CAN Bus 2.0B from optional VIOB-CAN-03 module
  - 8 x Programmable GPIO
    (4 x Digital inputs in default)
    Input voltage (source type): 5VDC TTL (default)
    Input voltage (external type): 3~12VDC
    (4 x Digital outputs in default)
    Digital output (source type): 5VDC TTL (default), max current: 20mA
    Digital output (external type): 3~24VDC, max current: 150mA
- 1 x Externally acessible SIM card socket and 1x internal SIM card socket selectable

Power Management

- 9~36VDC-IN with ignition control (100W in max.)
- Selectable boot-up & shut-down voltage for low power protection by software. Setting 8-level power on/ off delay time by software. Support S3/S4 suspend mode

Rechargeable Battery (option)

- Lithium-ion polymer
- Nominal capacity 1100mAh
- Maximum charge current 1.0CmA

Operating System

- Debian Linux and other variants

Dimensions

- 260mm (W) x 196mm (D) x 79.6mm (H) (10.24" x 7.72" x 3.13")
- 4kg

Environment

- Operating temperatures
  - -20°C~60°C (w/ Google Edge TPU & industrial SSD) with air flow
- Storage temperatures: -40°C~80°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random)
  - 1.2g@5~500 Hz (in operation, HDD), 2.5g@5~500 Hz (in operation, SSD)
- Vibration (SSD/HDD)
  - Operating: MIL-STD-810G, Method 514.6, Category 4, common carrier US highway truck vibration exposure
  - Storage: MIL-STD-810G, Method 514.6, Category 24, minimum integrity test
- Shock (SSD/HDD)
  - Operating: MIL-STD-810G, Method 516.6, Procedure I, functional shock=20g
  - Non-operating: MIL-STD-810G, Method 516.6, Procedure V, crash hazard shock test=75g

Certifications

- CE approval, FCC Class A, E13 mark

Ordering Information

- **MVS 2623-GCIoT (P/N: 10VS0262303X2)**
  Intel Atom® quad core E3950 (Apollo-lake) 2.0GHz, 4GB DDR3L industrial grade SO-DIMM, Google Edge TPU, 8 x GbE PoE, 2 x GbE, VGA/HDMI output, 2 x RS232, 1 x RS-232/422/485, 2 x USB 3.0, 1 x USB 2.0, 12VDC output, 1 x CAN

- **Battery Kit (P/N: 88VS0560303X0)**
  Rechargeable battery, Lithium-ion, capacity 1100mAh

We reserve the right to change specifications and product descriptions at any time without prior notice.