MVS 2620-IP

In-Vehicle IP65-rated Box Computer

Main Features

- IP65-rated Rugged Design
- Intel Atom® x7, 4c, 2.0GHz E3950 (Apollo-lake)
- 9~36VDC with Ignition Control
- Built-in GPS with optional Dead Reckoning
- Up to two WLAN & two 3G/LTE via 4 mini-PCIe slots
- Electrical Isolation for CAN2.0B & GPI/O
- Optional OBD function (SAE J1939/J1708)
- Rich and various GbE, USB2.0, Serial I/O and Storages
- Compliant to E-mark and ISO 7637-2
- Compliant to MIL-STD-810G in Vibration/Shock

Product Overview

MVS 2620-IP, an IP65-rated rugged enclosure, maintenance-free box computer, is ideal for data acquisition in extreme environments throughout a number of in-vehicle applications, like transportation, heavy duty and waste management, etc. All external interfaces, including Gigabit Ethernet, isolated CAN bus and digit I/O, USB, and RS232/485 serial ports, are implemented on IP67-proof connectors for reliable data transmission in harsh and rugged environments.

MVS 2620-IP is a modular design, it is flexible to use other kinds of expansion boards to extend different I/O functions for quickly tailored to a vast number of applications. Inside the system, there're four mini-PCIe slots with three SIM card slots offering WLAN, 3G/LTE, CAN OBD (SAE J1708/J1939) or CVBS functionality. Besides, it can operate at temperatures from -30°C to +70°C under fanless.

MVS 2620-IP supports 9~36VDC power input with ignition managemnt and 12V at 2A maximun power supply. It is compliant to E-mark and ISO 7637-2 in vehicle certificate and meet US military MIL-STD-810G, composite wheeled vehicle, for vibration and shock criteria.

Specifications

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

Memory
- 204-pin DDR3L SO-DMIM socket support 1600MHz up to 8GB
- 2GB industrial grade memory in default

Storage
- 1 x 2.5" SATA 3.0 SSD/HDD
- 1 x CFast (externally acessible)

Expansion
- 1 x full size mini-PCIe socket (USB 3.0/2.0)
- 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)

GPS 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

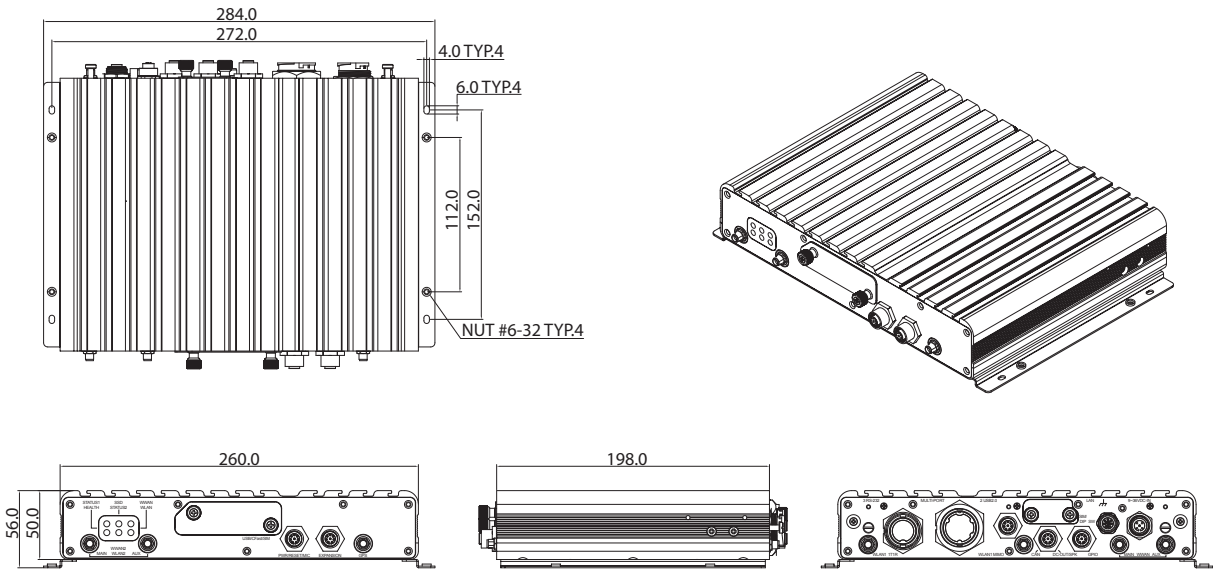
Ethernet
- 2-port 10/100/1000 Mbps
- Controller: Intel® 1210-T1

Security
- TPM in option

I/O Interface-Front
- 6 x LED indicators for power/storage/WLAN/WWAN/Status/Health
- 1 x USB type A USB 2.0 port (w/ lid)
- 1 x Mic-in, 1 x Line-out, power & reset buttons for M12 connector
- 3 x antenna holes for WWAN/GPS
- One expansion port reserved

I/O Interface-Rear
- Circular 22-pin:
  - 3x RS-232 (two for full, RI/5V/12V selectable)
- M12 8-pin:
  - 1 x GbE
- M12 8-pin:
  - 2 x USB 2.0
- M12 12-pin:
  - 3-bit GPO & 3-bit GPI
  - iButton
- M12 12-pin:
  - 1 x Line-out
  - DC12V-out, 2A max.

Dimension Drawing



- OBD from optional VIOB-CAN-05/06 module (SAE J1708/J1939)
- 2 x CAN Bus 2.0B from optional VIOB-CAN-04 module

- Circular 31-pin:
  - 1 x VGA, resolution up to 2560 x 1600 @60Hz
  - 1 x GbE
  - 2 x RS-485 (2-wire)
  - 1 x CAN 2.0B w/ isolation
- 6-bit DIP switch (w/ lid)
  3 x Digital inputs
  - Source-type: 9~36V-in (default)
  - Eexternal-type: 0~33VDC pull-high
  - Isolation

  3 x Digital outputs
  - Source-type: 9~36V-in (norminal 40mA@24V) (default)
  - External 5~27VDC pull-high, sink current: typical 220mA for each bit, 500mA max (@25°C)
  - Isolation

  Source or external selected by 6-bit DIP Switch
- 1 x SIM card socket (w/ lid) and 1x internal SIM card socket selectable
- 4 x antenna holes for WLAN/WWAN
- 1 x M12 S-code for 9~36VDC-IN

Power Management
- 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

Operating System
- Windows 10 64-bit only, Linux YOCTO

Dimensions
- 260mm (W) x 196mm (D) x 50mm (H) (10.24" x 7.72" x 1.97")
- 2.88kg

Environment
- Operating temperatures:
  -30°C~70°C (w/ industrial SSD) with air flow
- Storage temperatures: -40°C~80°C
- Relative humidity: 10% to 90% (non-condensing)
- Vibration (random):
  1.5g@5~500 Hz (in operation, HDD), 2g@5~500 Hz (in operation, SSD)
- Vibration (SSD):
  - Operating: MIL-STD-810G, 514.6C, Category 4
  - Storage: MIL-STD-810G, 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

Ordering Information

- **MVS 2620-IPK (P/N: 10VS0262000X0)**
  Intel Atom® 4c E3950 (Apollo-lake) 2.0GHz, 2GB DDR3L industrial grade, 2 x GbE, VGA output, 3 x RS-232, 2 x RS-485, 3 x USB2.0, 12VDC output, 1 x CAN 2.0B