

MVS 5600-IP

In-Vehicle IP65-Rated Box Computer





Main Features

- IP65-rated rugged design
- Intel® Core™ dual core i7-6600U/i3-6100U (Skylake)
- 9~36VDC with ignition control
- Built-in GPS with optional dead reckoning.
- Up to 2WLAN or two 3G/LTE via 3 mini-PCIe slots
- Electrical isolation for CAN 2.0B & GPI/O
- Optional OBD function (SAE J1939/J1708)
- Rich and various GbE, USB 2.0/3.0, serial I/O and storages
- Compliant to E-mark and ISO 7637-2
- Compliant to MIL-STD-810G in vibration/shock

Product Overview

 $MVS\,5600\text{-IP}, an\,IP65\text{-} rated\,rugged\,enclosure,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,acquisition\,in\,extreme\,environments\,throughout\,a\,number\,accessories,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,acquisition\,in\,extreme\,environments\,throughout\,a\,number\,accessories,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,acquisition\,in\,extreme\,environments\,throughout\,a\,number\,accessories,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,acquisition\,in\,extreme\,environments\,throughout\,a\,number\,accessories,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,acquisition\,in\,extreme\,environments\,throughout\,a\,number\,accessories,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,acquisition\,in\,extreme\,environments\,throughout\,a\,number\,accessories,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,acquisition\,in\,extreme environments\,throughout\,a\,number\,accessories,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,acquisition\,in\,extreme environments\,accessories,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,accessories,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,accessories,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,accessories,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,accessories,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,accessories,\,maintenance-free\,box\,computer,\,maintenance-free\,box\,computer,\,is\,ideal\,for\,data\,accessories,\,maintenance-free\,box\,computer,\,maintenance-fr$ of in-vehicle applications, like transportation, heavy duty and waste management, etc. All external interfaces, including Gigabit Ethernet, isolated CAN Bus $and\ digit\ I/O, USB, and\ RS232/485\ serial\ ports, are\ implemented\ on\ IP67-proof\ connectors\ for\ reliable\ data\ transmission\ in\ harsh\ and\ rugged\ environments.$

 $MVS\,5600 - IP \, is \, a \, modular \, design, it \, is \, flexible \, to \, use \, other \, kinds \, of \, expansion \, boards \, to \, extend \, different \, I/O \, functions \, for \, quickly \, tailored \, to \, a \, vast \, number \, to \, for \, the \, contract of the extend \, to \, for \, the \, contract of the \, contract$ of applications. Inside the system, there're four mini-PCle slots with three SIM card slots offering WLAN, 3G/LTE cat.12, CAN OBD (SAE J1708/J1939) or CVBS functionality. Besides, it can operate at temperatures from -30°C \sim 60°C under fanless.

 $MVS\,5600\text{-}IP\,supports\,9\sim\!36VDC\,power\,input\,with\,ignition\,managemnt\,and\,12VDC\,at\,2A\,maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximun\,power\,output.\,It\,is\,compliant\,to\,E-mark\,and\,ISO\,7637-2\,Maximu$ in vehicle certificate and meet US military MIL-STD-810G, category 4, composite wheeled vehicle, for vibration and shock criteria.

Specifications

CPU

• 6th generation Intel® Core™ dual core i7-6600U, 3.4GHz/i3-6100U, 2.3GHz

Memory

- 204-Pin DDR3L SO-DMIM socket support 1600MHz up to 16GB
- 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

- 2-Port 10/100/1000Mbps
- 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 3.0 port (w/lid)
- 1 x SIM slot (w/lid)
- 1 x Mic-in, 1 x Line-out, power & reset buttons for M12 connector
- 3 x Antenna holes for WWAN/GPS
- 1 x Expansion port (M12-type) reserved

I/O Interface-Rear

- Circular 22-pin
 - 3 x RS-232 (two for full, RI/5V/12V selectable)
- M12 8-pin
- 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

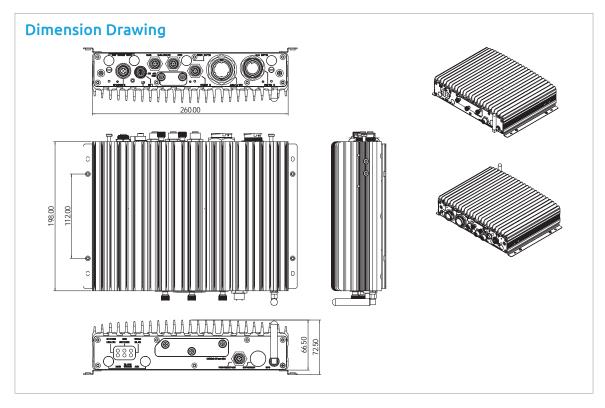
Modular Vehicle Computer System

NE(COM



www.nexcom.com





- DC12V-out, 2A max.
- OBD from optional VIOB-CAN-05/06 module (SAE J1708/J1939)
- 2 x CAN Bus 2.0B from optional VIOB-CAN-04 module
- Circular 3-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
- M12 S-code
 - DC $9\sim36V$ input with ignition and 40W typical power consumption
- 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 35mA@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 7/WES7/Windows 8/WES8/Windows 10/Linux kernel 3.X

Dimensions

- 260 x 198 x 66.5 (W x D x H) (mm) (10.24" x 7.80" x 2.62")
- 3.3kg

Environment

- · Operating temperatures -30°C~60°C (w/industrial SSD) with air flow
- Storage temperatures: -40°C~80°C
- Relative humidity: 10%~90% (non-condensing)
- Vibration (random)
 1.5g@5~500Hz (in operation, HDD), 2g@5~500Hz (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 5600-3IPK (P/N: 10VS0560005X0) Intel® Core™ 2c i3-6100U (Skylake) 2.3GHz, 2GB DDR3L industrial grade, 2 x GbE, VGA output, 3 x RS-232, 2 x RS-485, 2 x USB 2.0, 1 x USB 3.0, 12VDC output, 1 x CAN 2.0B
- MVS 5600-7IPK (P/N: 10VS0560004X0) Intel® Core™ 2c i7-6600U (Skylake) 3.4GHz, 2GB DDR3L industrial grade, 2 x GbE, VGA output, 3 x RS-232, 2 x RS-485, 2 x USB 2.0, $1 \times USB 3.0$, 12VDC output, $1 \times CAN 2.0B$
- Cable Kit (P/N: 10VS0262001X0) External cables for all the communication ports

NE(COM

Modular Vehicle Computer System —

Last update: 03/31/2018



Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

US

sales@assured-systems.com

Sales: +1 347 719 4508 Support: +1 347 719 4508

1309 Coffeen Ave Ste 1200 Sheridan WY 82801 USA

EMEA

sales@assured-systems.com

Sales: +44 (0)1785 879 050 Support: +44 (0)1785 879 050

Unit A5 Douglas Park Stone Business Park Stone ST15 0YJ United Kingdom

VAT Number: 120 9546 28

Business Registration Number: 07699660