



## Main Features

- Multitasking PC + NVR + tracker function
- Vehicle information stamp in video
- 8 x 10/100/1000 Mbps 802.3af PoE ports
- VMS software installed
- 5th generation Intel® Core™ dual core i7-5650U, 2.2GHz
- Dual removable SATA 3.0 SSD/HDD
- 7/24 GNSS tracker function support even PC is off
- Built-in CAN 2.0B. Optional OBDII function (SAE J1939)

## Product Overview

MVS 5210 performs 8-CH live view when keeping recording the video simultaneously without lags. It provides multitasking capability such as running video analytics software like people counting continuously while recording real-time videos.

MVS 5210 mobile network video recorder promotes increased safety and security for bus passenger transportation with high video frame rates 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. Vehicle information stamp such as location, speed or other critical data can be recorded and shown in video.

MVS 5210 leverages wireless networks to simplify fleet management with capabilities such as remote, real-time video monitoring. Vehicle data integration and diagnostics are also carried out via CAN Bus and OBDII. This remote capability keeps transit fleets in service around the clock. MIL-STD-810G for shock and vibration is designed to operate in harsh environments.

For added physical security, the pre-alarm function on MVS 5210 features 2 x DI, 2 x DO and GNSS that can operate in power-off state, ensuring vehicle location, alarm and emergency notifications are constantly available at times of intrusion or urgent conditions. Optional back-up battery guards against any unexpected vehicle power failure or unstable vehicle power.

## Specifications

### NVR System

VMS Software Installed

- H.264

Audio Codec

- G.726/G.711

Live View Resolutions

- QVGA/VGA/SXGA/Full HD/3M/5M

Recording Resolution

- QVGA~5M

Live Preview

- Support 1/4/9 division, full-screen, snapshot

Record

- Round the clock/motion record modes/event trigger

Record Device

- 2 x 2.5" SATA 2.0 removable HDD/SSD trays with lock

Playback

- 1/4/9 division, full-screen/snapshot/display original ratio or fit window
- Search mode: Play/reverse/pause/seek/pre frame/next frame
- Speeds: 1/4, 1/2, 1, 2, 4, 8, 16, 32

Video Stamp

- Capability to show and record vehicle information in video

\*AMTK camera is required

### Camera Setting

- Auto search, profile selectable, ONVIF support

### Disk Management

- Partition management, format partition, S.M.A.R.T status

### PC System

CPU

- 5th generation Intel® Core™ dual core i7-5650U, 2.2GHz

Memory

- 2-channel 204-pin DDR3L SO-DIMM socket support 1600MHz up to 16GB, default 2GB industrial grade memory

Storage

- 1 x CFast (externally accessible), 1 x mSATA

Expansion

- 1 x full size Mini-PCIe socket (USB 2.0), 1 x full size Mini-PCIe socket (USB 2.0 + PCIe), 1 x full size Mini-PCIe socket (mSATA)

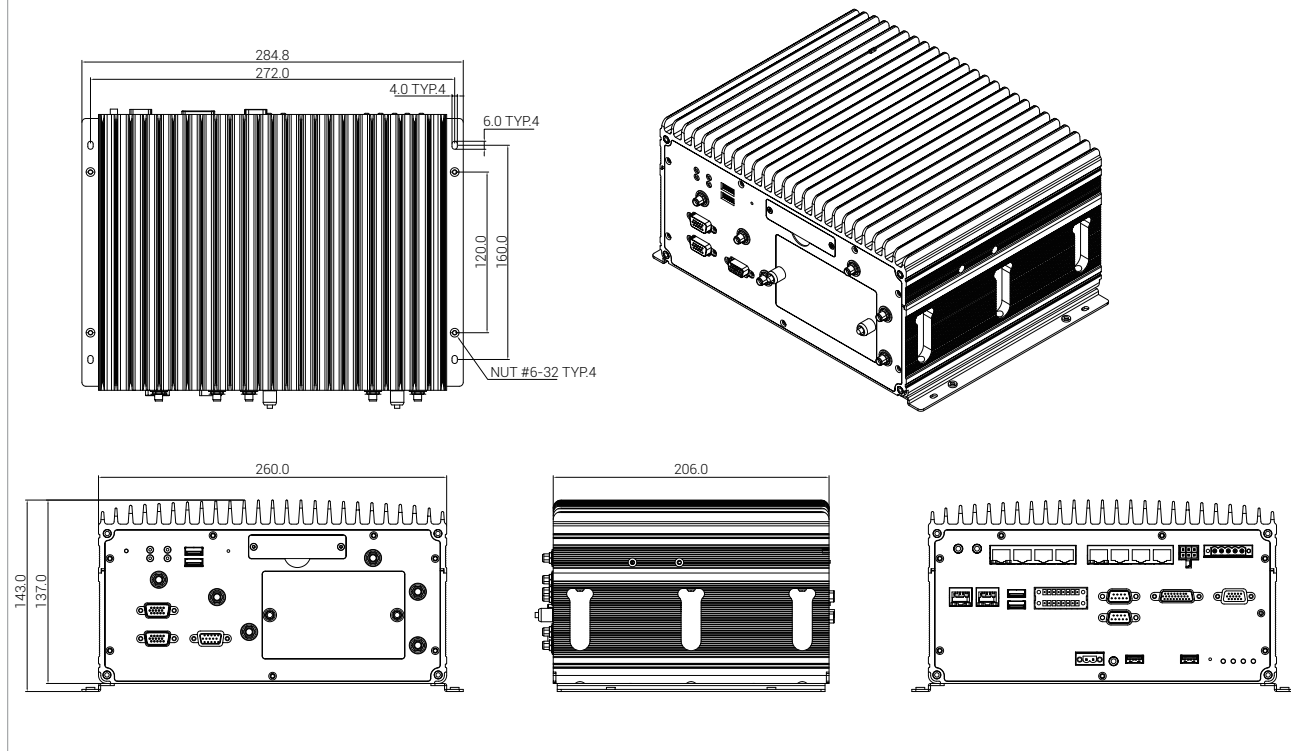
GPS and On Board Sensor

- 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

Power over Ethernet

- 8-port RJ45 for 10/100/1000 Mbps PoE IEEE 802.3af conformity, total 60W

## Dimension Drawing



### I/O Interface-Front

#### PC Function

- 4 x LED indicators for power/storage/WLAN/WWAN
- 1 x CFast socket with cover. 1 x Reset button
- 2 x dual USB type A connectors for 1 x USB 3.0 + 1 x USB 2.0 port
- 1 x DB15 connector
  - MCU DIO (2 x DI, 2 x DO), 1 x analog input, 1 x speed frequency input, 1 x iButton, 1 x RS232 (only for RFID reader w/ 12VDC output), 1 x direction signal for optional Dead Reckoning, module
- 2 x externally accessible SIM card sockets (selectable)
- 6 x antenna holes for WWAN/WLAN/BT/GPS

#### NVR Function

- 2 x removable 2.5" HDD/SSD trays with lock
- 1 x DB-15 VGA output for live view
- 1 x DB-15 VGA input for PC VGA switch

### I/O Interface-Rear

#### PC Function

- 8 x RJ45 10/100/1000 Mbps PoE ports
- 2 x RJ45 10/100/1000 Intel® Fast Ethernet with LED
- 1 x 9~36VDC input with ignition and 80W typical power consumption
- 1 x dual USB type A connector for USB 3.0 port + USB 2.0 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 DB26 LVDS interface with 12V and USB2.0
- 2 x DB-9 RS-232/422/485 (w/ optional 3KV isolation protection)
- 1 x 12VDC output (2A) + battery bypass DC output (2A) + 5M Bus
- 1 x 16-pin terminal block connector
  - 1 x CAN Bus 2.0B (on board)
  - 1 x OBDII from optional VIOB-OBD-03 module (SAE J1939)
  - 1 x CAN Bus 2.0B from optional VIOB-CAN-03 module
  - 8 x GPIO (4 x Digital inputs, w/ optional 3KV isolation protection)
    - Input voltage (internal type): 5VDC TTL (default)
    - Input voltage (source type): 3 ~ 12VDC
    - (4 x Digital outputs, w/ optional 3KV isolation protection)
      - Digital output (sink type): 5VDC TTL (default), max current: 20mA
      - Digital output (source type): 3 ~ 24VDC, max current: 150mA

#### NVR Function

- 2 x USB type A connectors, 1 x Reset button
- 1 x switch for VGA input selection (NVR or PC)

- 4 x LED indicators for power/storage/storage alarm/camera
- 1 x phone jack 3.5mm for 1 x Line-out

### 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
- Optional internal 1100mAh, Li-Polymer rechargeable battery

### Operating System

- Windows 7/WES7/Windows 8/WES8/Linux kernel 3.X

### Dimensions

- 260mm (W) x 206mm (D) x 130mm (H) (10.24" x 8.11" x 5.12")
- 3.3kg

### Environment

- Operating temperatures (without internal battery):
  - 30°C~50°C (w/ industrial SSD) with air flow
- Operating temperatures (with internal battery, discharging):
  - 20°C~45°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/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 52-10-BK (P/N: 10VS0521000X0)

5th generation Intel® Core™ dual core i7-5650U, 2.2GHz, 2GB DDR3L industrial grade SO-DIMM, 8 x 10/100/1000 PoE, 2 x 10/100/1000 Ethernet, VGA/LVDS output, 2 x RS-232/422/485, 3 x USB, 12VDC output, 1 x CAN, VMS software installed