



## Main Features

- Multitasking PC+NVR
- Train information stamp in video
- 8 x M12 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
- EN50155 Class TX conformity
- 24VDC and 110VDC power input

## Product Overview

MVS 5210-R 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-R mobile network video recorder promotes increased safety and security for railway 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 train. Railway information stamp such as location, speed or other critical data can be recorded and shown in video.

MVS 5200-R leverages wireless networks to simplify railway management with capabilities such as remote, real-time video monitoring. This remote capability keeps transit fleets in service around the clock. EMC and environment test in EN50155 secure MVS 5210-R can operate in daily railway environments.

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

## Specifications

### NVR System

#### Video Codec

- 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 railway 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 i3-5010U, 2.1GHz

#### Memory

- 2-channel 204-pin DDR3L SO-DMIM 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)

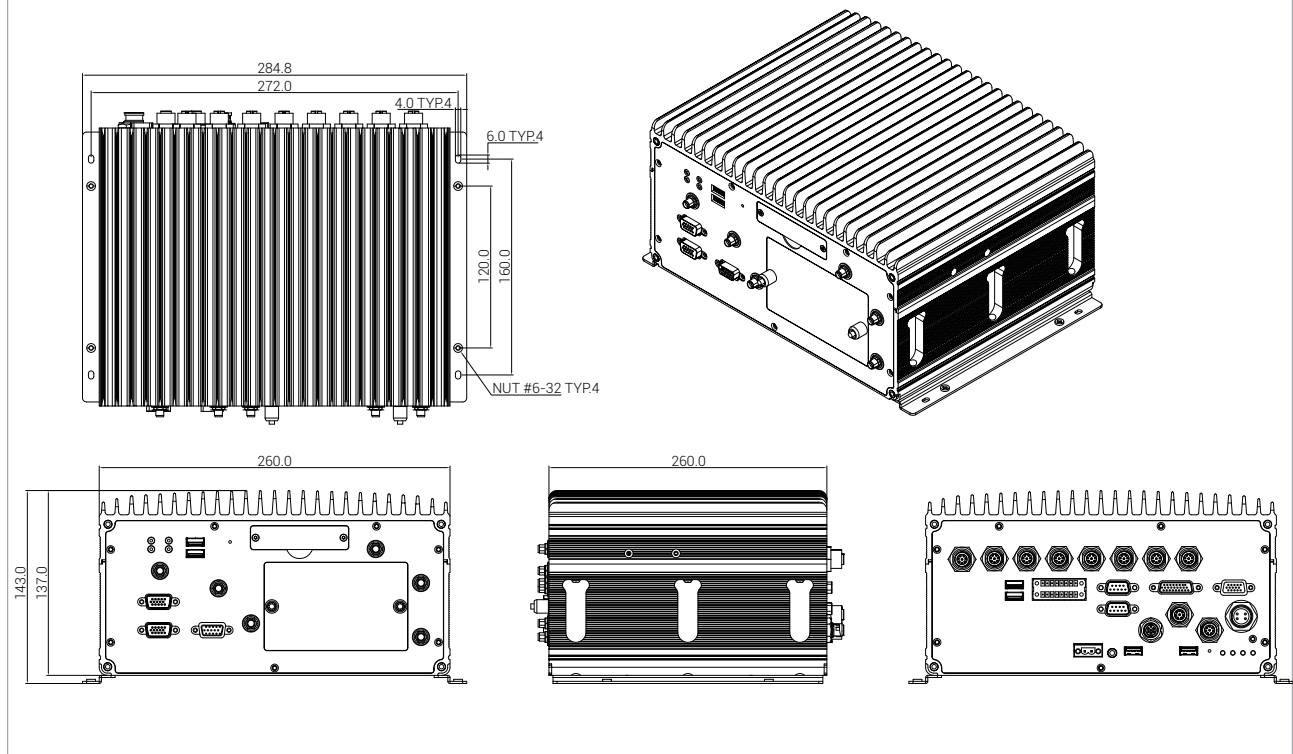
### GPS and On Board Sensor

- 1 x default U-blox NEO-M8N GNSS module for GPS/Glonass/QZSS/Galileo/Beidou
- Optional modules with Dead Reckoning available
- Built-in G-sensor

### Power over Ethernet

- 8-port M12 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 (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 M12 10/100/1000 Mbps PoE ports
- 2 x M12 10/100/1000 Intel® Fast Ethernet with LED
- 1 x 24VDC/110VDC input in circular connector with ignition and 80W typical power consumption
- 1 x dual USB type A connector for USB 3.0 port + USB 2.0 port
- 1 x M12 connector 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 16-pin terminal block connector
  - 1 x CAN Bus 2.0B (on board)
  - 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: EN50155 Class TX (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, EN50155 Class TX

## Ordering Information

#### ♦ MVS 5210-RA (P/N: 10VS0521001X0)

DC Input 24VDC, Dual-core Intel® Core™ i7-5650U, 2.2GHz, 2GB DDR3 industrial grade SO-DIMM, 8x 10/100/1000 PoE (M12 connector), 2 x 10/100/1000 Ethernet (M12 connector), VGA/LVDS output, 2 x RS-232/422/485, 3 x USB, 12VDC output, VMS software installed.

#### ♦ MVS 5210-RF (P/N: 10VS0521002X0)

DC Input isolated 110VDC, Dual-core Intel® Core™ i7-5650U, 2.2GHz, 2GB DDR3L industrial grade SO-DIMM, 8 x 10/100/1000 PoE (M12 connector), 2 x 10/100/1000 Ethernet (M12 connector), VGA/LVDS output, 2x RS-232/422/485, 3 x USB, 12VDC output, VMS software installed.