

## GV- MNVR2100 System



### INTRODUCTION

Designed to withstand rugged environment, GV-Mobile NVR System operates at a wide range of temperature and comes with anti-vibration protection, making it ideal for railways, public transits and industrial environment.

For storage, it offers up to 2 hot swappable bays of HDD or SSD choice. With built-in GV-NVR, this fanless Mobile NVR system supports up to 32 channels of GV-IP megapixel cameras to provide an all-in-one solution (Live View, Playback, Recording, Backup, CMS) for rough conditions.

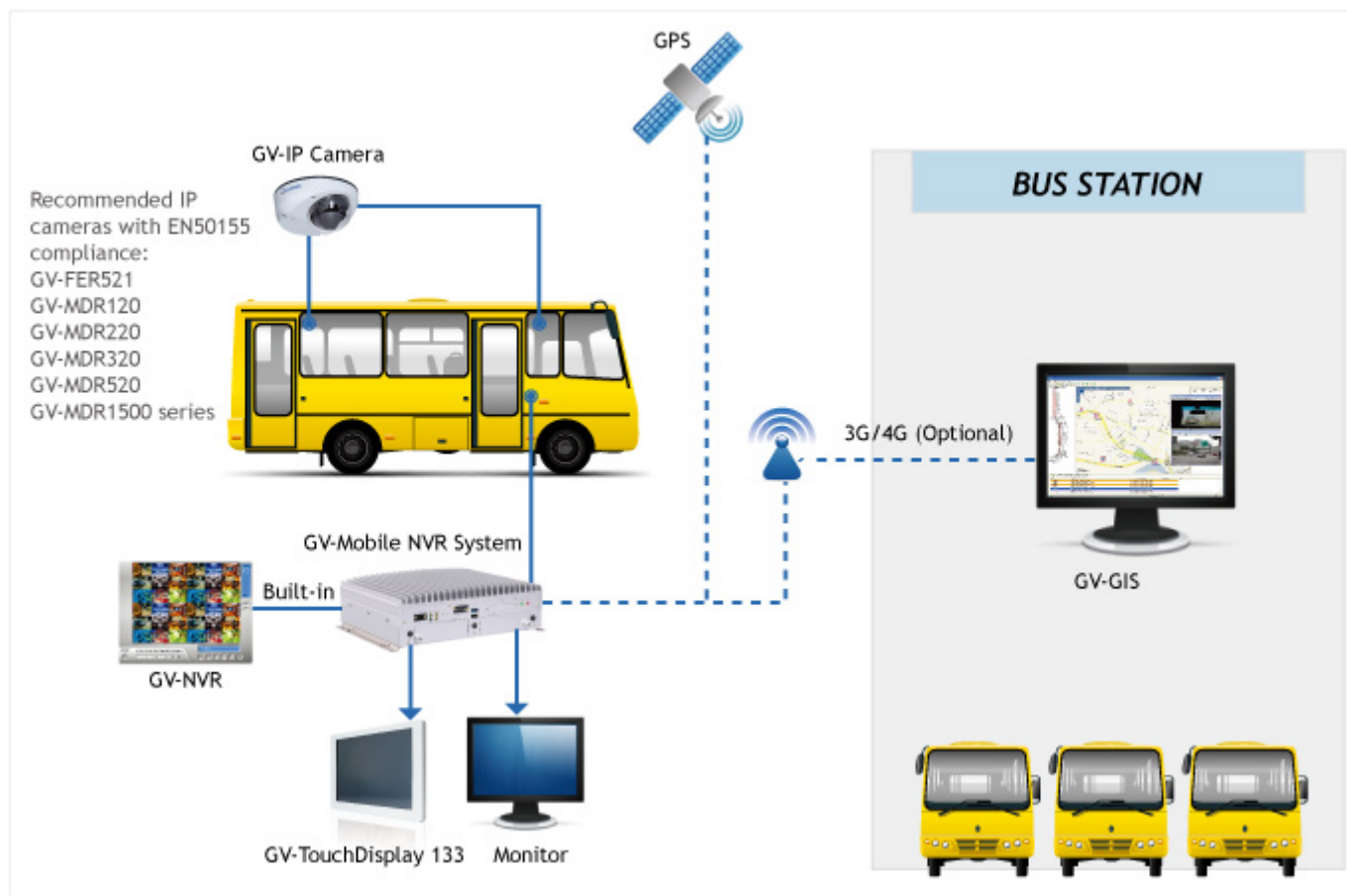
Recording solution for harsh environment:



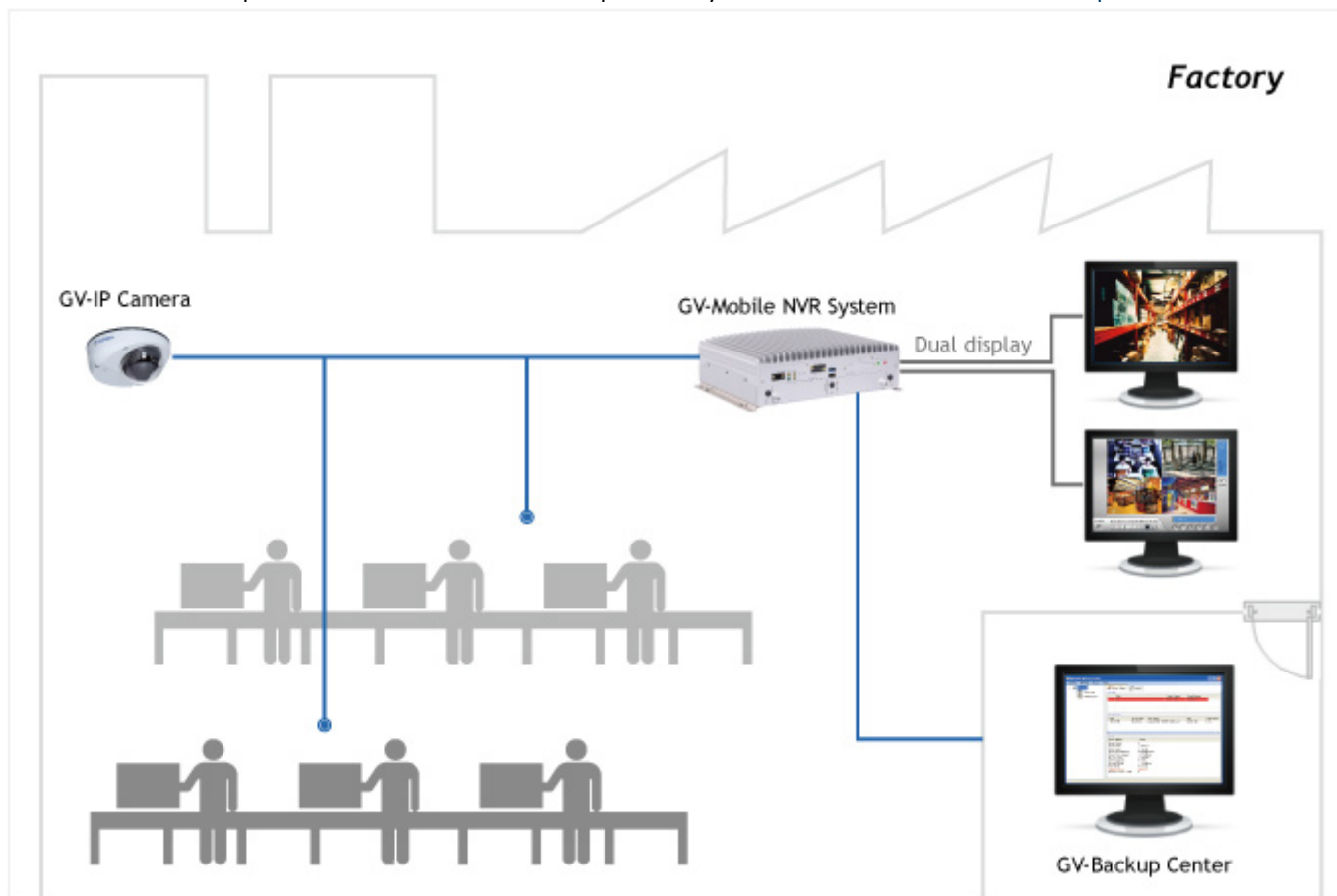
### APPLICATION

The GV-Mobile NVR System is designed for digital surveillance of transportation. It can be set up in a public transit to record images from the GV-IP cameras installed in the vehicle and connected to dual monitors with one monitor displaying live view and the other displaying alarm-triggering events. The hot-swap storage drives also provide convenient access to recordings and allow data backup in minutes.

With the GPS receiver, the GV-Mobile NVR System is able to transmit the GPS data collected from the satellite to the GV-GIS (Geographic Information System) through mobile network connection for vehicle tracking.



Other than being applied in a public transit, the GV-Mobile NVR can be installed in a fixed and harsh place, such as a factory. In addition, the automatic video backup for the GV-Mobile NVR is made possible by the LAN connection with [GV-Backup Center](#).



The [GV-FER521](#) and [GV-MDR120 / 220 / 320 / 520 / 1500 Series](#) are complied with EN50155 and suitable for the installation with GV-Mobile NVR System. With a mobile device or an Internet browser, you can access the live view and recorded events anywhere.



## Models

- GV-MNVR2100 System
- GV-MNVR2100 System with 3G module
- GV-MNVR2100 System with 4G module
- GV-MNVR2100 System with M12 Connector
- GV-MNVR2100 System with M12 Connector and 3G module
- GV-MNVR2100 System with M12 Connector and 4G module
- GV-MNVR2100 System with EN50155 Certified (Coming)
- GV-MNVR2100 System with M12 Connector and EN50155 Certified (Coming)
- GV-MNVR2100 System with WiFi module

## KEY FEATURES

- Powered by Intel Core i3 Processor
- 64-bit Windows Embedded Standard 7 SP1
- GPU Decoding
- 2 Hot Swappable HDD / SSD bays for up to 2 Terabytes
- Fanless System
- Vibration and Mechanical Shock Protection (2G at 5 ~ 500 Hz for SSD)
- Power Ignition Management (ACC)
- Wide Operating Temperature (-30°C ~ 60°C / -22°F ~ 140°F for SSD)
- 2 Gigabit LAN Ports
- Dual-monitor Display (VGA and DisplayPort)
- Optional Wireless Communication (WiFi / 3G / 4G)
- GPS Support for Vehicle Tracking
- Built-in GV-NVR
- Up to 32 Channels
- 3rd Party IP Cameras with H.264 Compatible (License Required)
- Automatic Connection to GV-IP Cameras
- Video Analysis
- Dual Video Streams
- Fisheye Dewarping Function
- Smart Device Access (iOS and Android)
- E-Mark, EN50155 Certified
- 31 Languages

## SPECIFICATIONS

### Hardware

System			
CPU		Intel i3 Processor	
RAM		4 GB Dual Channels	
OS		64-bit Windows Embedded Standard 7 SP1	
No. of Drive Bay		2 (2.5" HDD / SSD)	
Internal Storage		32 GB (CFast)	
Connector	Ethernet		RJ-45, 10 / 100 / 1000 Mbps x 2
	Video Output		VGA and DisplayPort
	USB 2.0		Front: 1 port; Rear: 1 port
	USB 3.0		Front: 1 port; Rear: 1 port
	Power		DC 10 ~ 35V power port
	Antenna	3G / 4G / WiFi	Front: 3 ports; Rear: 3 ports
GPS		Rear: 1 port	
Power Adapter (Optional)		Input: AC 100 ~ 240V, 50 - 60 Hz Output: DC 24V, 5A	
Fan		N/A	
Environment			
Operating Temp.	HDD		0°C ~ 60°C (32°F ~ 140°F)
	SSD		-30°C ~ 60°C (-22°F ~ 140°F)
Humidity		10 ~ 90% RH (non-condensing)	
Physical			
Color		Silver	
LED Indicator		4 (HDD, WWAN, Power and WLAN)	
Dimensions (W x H x D)		260 x 79.5 x 206 mm (10.24 x 3.13 x 8.11")	
Net Weight		2.5 kg / 5.51 lb (± 1 kg / 2.2 lb)	
Operating Shock		20 G	
Operating Vibration		1.5 G @ 5 ~ 500 Hz (HDD) 2 G @ 5 ~ 500 Hz (SSD)	

Sensor and Alarm	
Inputs	4 / 8 / 16 ports (optional GV-I/O Box required)
Outputs	4 / 8 / 16 ports (optional GV-I/O Box required)

## Software

Video and Audio			
Video Standard		NTSC, PAL	
Video Codec		MJPEG / MPEG4 / H.264	
Audio Codec		32 kHz / 16 bit	
Video Stream		Dual Streams from GeoVision IP Cameras	Dual Streams from 3rd-party IP Cameras
Video Input	1 MP	31 channels	31 channels
	2 MP	25 channels	25 channels
	3 MP	32 channels	32 channels
	5 MP	32 channels	32 channels
Audio Input		Up to 32 channels	Up to 32 channels

**Note:** It is required to enable the dual-stream function on GeoVision and third-party IP cameras to have the maximum number of channels supported. For single streaming third-party IP cameras, please see "Maximum Channels and Frame Rate Supported" below.

Live View and Playback	
Image Control	Contrast / Brightness / Saturation / Hue
Recording Mode	Round the Clock / Motion Detection / Sensor Detection / Pre & Post Recording / Schedule Recording
Pre Recording	1 ~ 45 min.
Instant Playback	10 sec. / 30 sec. / 1 min. / 5 min.
Watermark	Supported

Searching and Playback	
Search Method	Date / Time / Camera / Event type
Backup Type	DVD+R (DL) / DVD-R (DL) / DVD+R / DVD+RW / DVD-R / DVD-RW <b>Note:</b> For backup function, you need to connect an external USB DVD/CD burner.

Remote Monitoring	
Monitoring Environment	Web browser (IE, Chrome, Firefox and Safari) Mobile device (iOS and Android)
Live View	Max. 32-channel multi views
Network Type	LAN, WAN, Internet

System Monitoring and Recovery	
Power Restoration	Automatic restart after power outage
Monitoring	Software watchdog
Recovery	Automatic system rebuild from internal hard disk

Certification	
Type	CE, FCC, E-Mark (E13), EN50155 (coming)

Language	
Type	Arabic / Bulgarian / Czech / Danish / Dutch / English / Finland / French / German / Greek / Hebrew / Hungarian / Indonesian / Italian / Japanese / Lithuanian / Norwegian / Persian / Polish / Portuguese / Romanian / Russian / Serbian / Simplified Chinese / Slovakian / Slovenian / Spanish / Sweden / Thai / Traditional Chinese / Turkish

Software License	
Free License	32 channels from GV-IP Cameras (dual streams)
Maximum License	32 channels from third-party IP Cameras (dual streams)
Increment for Each License	1 to 32 third-party IP Cameras at an increment of 2
Optional Combinations	N/A
Dongle Type	External

Mobile Network Connection (Optional)	
3G Module	WCDMA: 800 / 850 / 1900 / 2100 MHz GSM/GPRS/EDGE: 850 / 900 / 1800 / 1900 MHz
4G Module	<b>For EU area</b> LTE: 2100 (B1) / 1800 (B3) / 2600(B7) / 900 (B8) / 800 (B20) MHz WCDMA: 2100 (B1) / 1900 (B2) / 850 (B5) / 900(B8) MHz GSM/GPRS/EDGE: 850 / 900 / 1800 / 1900 MHz
	<b>For US area</b> LTE: 1900(B2) / AWS(B4) / 850(B5) / 700 (B13) / 700(B17) / 1900 (B25) MHz WCDMA: 2100 (B1) / 1900 (B2) / AWS (B4) / 850 (B5) / 900 (B8) MHz GSM/GPRS/EDGE: 850 / 900 / 1800 / 1900 MHz
WiFi Module	IEEE 802.11b/g/n, 2T2R

**Note:**

1. The Maximum License is a paid service.
2. All specifications are subject to change without notice.

## Maximum Channels and Frame Rate Supported

### Dual Streams from GeoVision and third-party IP Cameras

Video resolution	Dual Streams		Supported Channel	Total Frame Rate
	Stream 1 (H.264)	Stream 2 (H.264)		
1 MP	1280 x 1024	320 x 256	31 Ch	930 fps
2 MP	1920 x 1080	448 x 252	25 Ch	750 fps
3 MP	2048 x 1536	320 x 240	32 Ch	640 fps
5 MP	2560 x 1920	320 x 240	32 Ch	320 fps

### Single Stream from GeoVision and third-party IP Cameras

Video resolution	Single Stream (H.264)	Supported Channel	Total Frame Rate
1 MP	1280 x 1024	25 Ch	750 fps
2 MP	1920 x 1080	19 Ch	570 fps
3 MP	2048 x 1536	15 Ch	300 fps
4 MP	2048 x 1944	13 Ch	195 fps
5 MP	2560 x 1920	11 Ch	110 fps

### GV-Fisheye Cameras

Video resolution	Single Stream (H.264)	Supported Channel	Total Frame Rate
1 MP	1280 x 1200	10 Ch	150 fps
2 MP	1440 x 1376	8 Ch	120 fps
4 MP	2048 x 1944	4 Ch	60 fps
5 MP	2560 x 1920	5 Ch	50 fps

## Options

GV-IO Box (4 Ports V1.0/V1.1)	GV-IO Box 4 Ports V1.0/V1.1 provides 4 inputs and 4 relay outputs, and supports both DC and AC output voltages. A USB port is also provided for PC connection.
GV-IO Box (4 Ports V1.2)	GV-IO Box 4 Ports V1.2 provides 4 inputs and 4 relay outputs. It supports both DC and AC output voltages, and provides a USB port for PC connection.
GV-IO Box (8 Ports)	GV-IO Box 8 provides 8 inputs and 8 relay outputs, and supports both DC and AC output voltages. A USB port is also provided for PC connection.
GV-IO Box (16 Ports)	GV-IO Box 16 provides 16 inputs and 16 relay outputs, and supports both DC and AC output voltages. A USB port is also provided for PC connection.
GV-Joystick V2	GV-Joystick V2 facilitates the PTZ camera control. It can be either plugged into the GV-Mobile NVR System for independent use or connected to GV-Keyboard V3 to empower the operation.
GV-Keyboard V3	The GV-Keyboard V3 is designed to program and operate the system, and it can also be connected with PTZ cameras directly for PTZ control.
GV-IR Remote Control	Controls GV-Mobile NVR System with the Remote Control.
GV-TouchDisplay133	The GV-TouchDisplay133 is a 13.3-inch touch panel designed for GV-Mobile NVR System. With the touch panel, you can monitor live images and operate NVR surveillance software by simply touching the screen.
Power Adapter	Power adapters are available in 4 regions: U.S.A., Australia, U.K and Europe.
3G / 4G Module	The 3G or 4G module allows data exchange for the GV-Mobile NVR through the network connection covering wide area. It also empowers the application of GPS for the data transmission to the GV-GIS for real-time vehicle tracking.
WiFi Module	The WiFi module allows data exchange for the GV-Mobile NVR through wireless network connection within local area.

**Note:** The WiFi / 3G / 4G module will be built in the GV-Mobile NVR System and tested before shipment. Opening the case and installing the accessories yourself will void the warranty.

## Overview

Front View



Rear View



Wireless Antenna



### Note:

1. You can freely arrange and switch WiFi and 3G / 4G antennas in ports.
2. GPS module is already built in the GV-Mobile NVR System. WiFi / 3G / 4G modules are optional.

## Packing List

- GV-MNVR2100 System
- 3-pin Terminal Block (for ACC Connection and DC In)
- HDD screw x 8
- GPS Antenna
- GV-NVR Dongle for third-party IP Camera Connection (Optional)
- DVD (User's Manual and Quick Start Guide included)