

## GV-Hot Swap NVR System V5 (Rev. C) – 3U, 16 / 8-Bay



### INTRODUCTION

The GV-Hot Swap NVR System V5 features a powerful data storage capacity. It comes with a selection of 4U (20-bay) or 3U (16 / 8-bay) and hot-swappable SATA mobile racks. Depending on HDD size, the GV-Hot Swap NVR System V5 can store up to 120 terabytes of recorded data. Support for hot-swapping makes data storage and management more convenient.

GeoVision Surveillance System empowers the GV-Hot Swap NVR System V5 with a maximum of 32 audio and video channels. Its networking capability makes remote access and control of the system possible. Additionally, its compatibility with other GeoVision accessories can cater to any kind of needs or budgets. By extending the compatibility to the third-party IP devices (license required), GV-NVR provides a pure IP solution to GV-Hot Swap NVR System V5.

### KEY FEATURES

- ▶ Powered by Intel Core i7 Processor
- ▶ 64-bit Windows Embedded Standard 7
- ▶ Support H.265 CPU and GPU decoding
- ▶ Support 32-channel GV-NVR (pure IP surveillance)
- ▶ Three-monitor display
- ▶ Maximum storage capacity up to 120 TB (4U 20-Bay) / 96 TB (3U 16-Bay) / 48 TB (3U 8-Bay)
- ▶ Hot-swap status LED panel
- ▶ Dual Gigabit LAN ports
- ▶ 4U (20-bay) or 3U (16 / 8-bay) hot-swap SATA HDDs for data storage
- ▶ Built-in 4 inputs and 4 outputs
- ▶ Extreme performance for GV-NVR operation
- ▶ Pre-installed SSD for recovery
- ▶ RAID 0 / 1 / 5 / 6 / 00 / 10 / 50 / 60 data protection (optional)
- ▶ Compatible with full selections of GeoVision accessories



### AVAILABLE MODELS

- ▶ GV-NVRH V5

## SPECIFICATIONS

System		
CPU		Intel Core i7 Processor
RAM		8 GB Dual Channels
OS		64-bit Windows Embedded Standard 7
DirectX		11
No. of HDD	16-bay	16 (3.5" HDD)
	8-bay	8 (3.5" HDD)
Internal Storage		64 GB SSD
Connector	Ethernet	RJ-45, 10 / 100 / 1000 Mbps x 2
	Video Output	3 displays: VGA, DVI-D, and HDMI
	USB 2.0	Rear: 2 ports
	USB 3.0	Front: 2 ports, Rear: 2 ports
Fan	12 cm (4 3/4")	-
	8 cm (3 1/8")	4 units
Power	16-bay	Output: 550 W Input: 100-240 V, 47-63 Hz
	8-bay	Output: 400 W Input: 100-240 V, 47-63 Hz

Model	GV-NVR (GV)	GV-NVR (3rd Party)
<b>Video and Audio</b>		
Video Input	32 channels	1, 2, 4, 6, 8, 10, 12, 16, 18, 20, 22, 24, 26, 28, 30, 32 channels
Audio Input	32 channels	1, 2, 4, 6, 8, 10, 12, 16, 18, 20, 22, 24, 26, 28, 30, 32 channels
Video Compression	Geo MPEG4, Geo H.264 / H.265	

### Note

- The number of supported channels may vary depending on the resolution and codec of connected IP videos. If you want to know the number of supported channels according to your requirements, please write us at [support@geovision.com.tw](mailto:support@geovision.com.tw) or click ([here](#)) for more information.
- The H.265 CPU and GPU decoding are only supported by GV-NVR V8.7.0.0. or later versions.

Live View 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 Marking	Supported	
Searching and Backup		
Search Method	Date / Time / Camera / Event Type	
Backup Type <sup>2</sup>	DVD+R (DL) / DVD-R (DL) / DVD+R / DVD+RW / DVD-R / DVD-RW / CD-R / CD-RW	
Remote Monitoring		
Network Type	LAN, WAN, Internet	
Monitoring Environment	Web browser (IE, Chrome, Firefox and Safari) Mobile device (iOS and Android)	
WebCam Live View	Max. 32-channel Multi Views (Max. 200 channels connecting to GV-Hot Swap DVR/NVR V5)	
System Monitoring and Recovery		
Power Restoration	Automatic restart after power outage	
Monitoring	Two independent Watchdogs (Hardware Watchdog + Software Watchdog)	
Recovery	Automatic system rebuild from internal hard disk	
Alarm		
Sensor Input	Standard	4 inputs
	GV-IO 12-In Card (Optional)	12 inputs
	GV-IO Box Ports (Optional)	4 / 8 / 16 inputs
Alarm Output	Standard	4 outputs
	GV-IO 12-Out Card (Optional)	12 outputs
	GV-IO Box Ports (Optional)	4 / 8 / 16 outputs

Peripheral Devices		
Audio Microphone In	Mini stereo jack	
Audio Output	Mini stereo jack	
Environment		
Operating Temp.	0 ~ 45 °C / 32 ~ 113 °F	
Humidity	0 ~ 80% RH (non-condensing)	
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	
Physical		
Color	Black	
Dimensions (W x H x D)	16-bay	483 x 132.5 x 650 mm / 17 x 5.2 x 25.5 in
	8-bay	483 x 132.5 x 580 mm / 17 x 5.2 x 22.8 in
Net Weight	16-bay	19 kg / 41.8 lb (± 1 kg / 2.2 lb)
	8-bay	18 kg / 39.6 lb (± 1 kg / 2.2 lb)
Software License		
Free License	32 channels from GV-IP Cameras	
Maximum License	32 channels from third-party IP Cameras	
Increment for Each License	1 to 32 third-party IP Cameras at an increment of 2	
Optional Combinations	N/A	
Dongle Type	Internal	

**Note:**

1. The Maximum License is a paid service.
2. For backup function, you need to connect an external USB DVD/CD burner.
3. All specifications are subject to change without notice.

## Total Frame Rate and Max. No. of Channels Supported

### For GV-IP Camera (Dual Streams)

Video Resolution	Dual-stream Resolution		Max. Frame Rate / Camera	Channel	Total Frame Rate / System
	Stream 1 (H.264)	Stream 2 (H.264)			
1.3 MP	1280 x 1024	320 x 256	30 fps	32	960 fps
2 MP	1920 x 1080	448 x 252	30 fps	32	960 fps
3 MP	2048 x 1536	320 x 240	20 fps	32	640 fps
5 MP	2560 x 1920	320 x 240	10 fps	32	320 fps
8 MP	3840 x 2160	1280 x 720	25 fps	32	800 fps
12 MP	4000 x 3000	1024 x 768	15 fps	32	480 fps

Video Resolution	Dual-stream Resolution		Max. Frame Rate / Camera	Channel	Total Frame Rate / System
	Stream 1 (H.265)	Stream 2 (H.264)			
1 MP	1280 x 720	640 x 360	30 fps	32	960 fps
2 MP	1920 x 1080	640 x 360	30 fps	32	960 fps
3 MP	2048 x 1536	640 x 480	30 fps	32	960 fps
4 MP	2560 x 1440	640 x 360	25 fps	32	800 fps
5 MP	2592 x 1944	640 x 480	30 fps	32	960 fps

### For GV-Fisheye Camera (Single Stream De-warping)

Video Resolution	Single-stream Resolution (H.264)	Max. Frame Rate / Camera	Channel	Total Frame Rate / System
1.3 MP	1280 x 1200 (4:3)	15 fps	32	480 fps
2 MP	1440 x 1376 (4:3)	15 fps	32	480 fps
3 MP	2048 x 1536 (4:3)	15 fps	27	405 fps
4 MP	2048 x 1944 (4:3)	15 fps	22	330 fps
5 MP	2560 x 1920 (4:3)	10 fps	19	190 fps
8 MP	2896 x 2768 (16:9)	25 fps	9	225 fps
12 MP	4000 x 3000 (4:3)	15 fps	10	150 fps

### For Third-Party IP Camera (Single Stream GPU Decode)

Video Resolution	Single-stream Resolution (H.264)	Max. Frame Rate / Camera	Channel	Total Frame Rate / System
1.3 MP	1280 x 1024	30 fps	32	960 fps
2 MP	1920 x 1080	30 fps	32	960 fps
3 MP	2048 x 1536	20 fps	32	640 fps
4 MP	2048 x 1944	15 fps	32	480 fps
5 MP	2560 x 1920	10 fps	32	320 fps
8 MP	3840 x 2160	30 fps	8	240 fps
12 MP	4000 x 3000	15 fps	11	165 fps

## Overview

Front View – 16-Bay Model



Front View – 8-Bay Model



Rear View– 16 / 8-Bay Model



## Options

GV-IO 12-In Card	With 12-point digital inputs, this card can expand the GV-Hot Swap NVR V5 up to 16 sensor inputs.
GV-IO 12-Out Card	With 12-point relay outputs, this card can expand the GV-Hot Swap NVR V5 up to 16 alarm outputs.
GV-Data Capture V3 Box	GV-Data Capture V3 Box can integrate the GV-Hot Swap NVR V5 to an electronic POS system, while GV-Data Capture V3E Box can establish such integration through LAN or Internet.
GV-Hub V2	An easy way for serial port extension. This hub can add 4 RS-232/RS-485 serial ports through the GV-Hot Swap NVR V5's USB port.
GV-COM V3	This unit can add 1 RS-485 port to your computer through a USB connector.
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 facilitates the PTZ camera control. It can be either plugged into the GV-Hot Swap NVR V5 for independent use or connected to GV-Keyboard to empower the operation. However, this device can only work on GV-System version 8.2 or later.
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	The GV-IR Remote Control provides easy control of the GV-Hot Swap DVR / NVR / VMS System.
Gigabit Network Card	The Gigabit Network Card can support a single gigabit port. The number of gigabit ports supported varies based on models and combination of optional cards. Up to 3 gigabit ports can be supported.
RAID Card	The RAID Card supports a maximum of 20 SATA hard drives and enhances data protection. The supported RAID types include RAID 0, RAID 1, RAID 5, RAID 6, RAID 00, RAID 10, RAID 50 and RAID 60.
Redundant Power Supply	The Redundant Power Supply comes with 2 hot-swap modules for 3U models and 3 hot-swap modules for 4U models. When 1 module is down, the remaining module(s) can still supply full power to the system. - 3U models: 600 W 1+1 mode; 100 ~ 240 V, 47-63 Hz - 4U models: 1000 W N+1 mode; 100 ~ 240 V, 47-63 Hz

### Note:

1. The optional accessories will be built in the GV-Hot Swap Surveillance System V5 (Rev. C) and tested before shipment. Opening the case and installing the accessories yourself will void the warranty.
2. The optional accessories are only supported in GV-Hot Swap Surveillance System V5 (Rev. C) or later.
3. Please contact our sales representatives for more information when combining optional cards for your system.

## Packing List

- GV-Hot Swap NVR System V5
- AC Power Cord
- Self-Stick Rubber Pad x 4
- Documents Download Guide
- Warranty Card