GV-Hot Swap NVR System V5 (Rev.E) – 4U, 20-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 200 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 10 IoT Enterprise
- Support H.265 CPU and GPU decoding
- Support 32-channel GV-NVR (pure IP surveillance)
- Three-monitor display
- Maximum storage capacity up to 200 TB (4U 20-Bay) / 160 TB (3U 16-Bay) / 80 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
- Supported RAID type: 0, 1, 3, 5, 6, 10, 00, 30, 50, 60, 100 Single Disk or JBOD (optional)
- Redundant Power Supply (optional)
- Compatible with full selections of GeoVision accessories
- Anti-vibration feature to provide the disk throughput of 95% or higher
- CE, FCC, LVD compliant

AVAILABLE MODELS

- GV-NVRH V5

SPECIFICATIONS

System		
CPU		Intel Core i7 Processor
RAM		8 GB Dual Channels
OS		64-bit Windows 10 IoT Enterprise
DirectX		11
No. of HDD		20 (2.5" / 3.5" HDD)
Internal Storage		64 GB SSD
Connector	Ethernet	RJ-45, 10 / 100 / 1000 Mbps x 2
	Video Output	3 displays: VGA, HDMI, DisplayPort
	USB 2.0	Rear: 2 Ports
	USB 3.1 Gen 1	Front: 2 Ports, Rear: 2 Ports
	USB 3.1 Gen 2	Rear: 2 Ports
Fan	12 cm (4 3/4")	3 units
	8 cm (3 1/8")	2 units
Power		Output: 1000 W
		Input: 100-240 V AC, 47-63 Hz, 12-6 A

Model	GV-NVR (GV)	GV-NVR (3rd Party)
Video and Audio		
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

1. 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 for more information.
2. 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[2]		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 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 SSD
Alarm		
Sensor Input	Standard	4 inputs
	GV-IO 12-In Card (Optional)	12 inputs
	GV-IO Box (Optional)	4 / 8 / 16 inputs
Alarm Output	Standard	4 outputs
	GV-IO 12-Out Card (Optional)	12 outputs
	GV-IO Box (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	
LED Indicator	Yes (Fan, Power, HDD)
Color	Black
Dimensions (W x H x D)	483 x 178 x 660.4 mm / 19 x 7 x 26 in
Net Weight	24 kg / 52.8 lb (± 1 kg / 2.2 lb)
Software License	
Free License	32 channels from GV-IP Cameras
Optional Paid License	2 ~ 32 channels from third-party IP Cameras (at increments of 2)
Optional Combinations	N/A
Dongle Type	Internal
Regulatory	
Type	CE, FCC, LVD compliant

Note:

1. For backup function, you need to connect an external USB DVD/CD burner.

2. All specifications are subject to change without notice.

3. The disk throughput test was conducted by a 3rd-party HDD manufacturer. The level of vibration produced by the system's hard drive operation and fan energy is minimized to have an effect of less than 5% on the disk throughput when using 8 TB hard drives.

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	15 fps	32	480 fps
2 MP	1440 x 1376	15 fps	32	480 fps
3 MP	2048 x 1536	15 fps	32	480 fps
4 MP	2048 x 1944	15 fps	27	405 fps
5 MP	2560 x 1920	10 fps	32	320 fps
8 MP	2896 x 2768	25 fps	12	300 fps
12 MP	4000 x 3000	15 fps	13	195 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	10	300 fps
12 MP	4000 x 3000	15 fps	14	210 fps

Note: The total frame rate and channels supported are determined in round-the-clock recording settings with live view only, while remote connections and video analysis features being disabled.

PACKING LIST

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

OVERVIEW

Front View

Rear View

GV-Hot Swap NVR System V5 (Rev.E) – 4U, 20-Bay   *December 11, 2020*

OPTIONS

GV-COM V3	This unit adds 1 RS-485 port to your computer through a USB connector.
GV-Data Capture V3 Box	GV-Data Capture V3 Box integrates 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-IO Box Series	GV-IO Box series (4E / 4 Ports / 8 Ports / 16 Ports) provide 4 / 8 / 16 inputs and relay outputs, and supports both DC and AC output voltages, with optional support for Ethernet module and 4E additionally supporting PoE, TCP/IP and RS-485 connection.
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-IR Remote Control	GV-IR Remote Control provides easy control of the GV-Hot Swap NVR / VMS System.
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.
GV-Keyboard V3	GV-Keyboard V3 is designed to program and operate the system, and it can also be connected with PTZ cameras directly for PTZ control.
Gigabit Network Card	Gigabit Network Card is provided with the two options of 1-Gb single port card and 2-port 10-Gb (20 Gb) card. The supported number of network cards varies based on models and combination of RAID card. Contact our sales representatives for more information.
RAID Card	The supported RAID types include 0, 1, 3, 5, 6, 10, 00, 30, 50, 60, 100 Single Disk or JBOD.
Redundant Power Supply	Redundant Power Supply comes with 2 hot-swap modules for 3U models and for 4U models. When 1 module is down, the other module can still supply full power to the system. - 3U 8-Bay models: 460 W 1+1 mode; 100 ~ 240 V, 47 ~ 63 Hz - 3U 16-Bay models: 550 W 1+1 mode; 100 ~ 240 V, 47 ~ 63 Hz - 4U 20-Bay models: 800 W 1+1 mode; 90 ~ 264 V, 47 ~ 63 Hz

Note:

1. The optional accessories will be built in the GV-Hot Swap Surveillance System V5 (Rev.E) 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.E) or later.
3. Please contact our sales representatives for more information when combining optional cards for your system.