

GV-Hot Swap DVR System V5 - 3U, 16 / 8-Bay



INTRODUCTION

The GV-Hot Swap DVR 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 DVR System V5 can store more than 40 terabytes of recorded data. Support for hot-swapping makes data storage and management more convenient.

GeoVision Surveillance System empowers the GV-Hot Swap DVR System V5 with a maximum of 32 audio and video channels, and a recording rate of up to 960 FPS (NTSC) / 800 FPS (PAL). 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.

KEY FEATURES

- ▶ Powered by Intel Core i7 processor or AMD 6-Core processor (only for GV-3008H V5)
- ▶ 64-bit Windows Embedded Standard 7
- ▶ Support GPU Decoding (except for models of GV-3008H V5)
- ▶ Support 32-channel GV-DVR
- ▶ Dual-monitor display (additional displays supported with optional graphic cards)
- ▶ Maximum storage capacity of more than 32 terabytes
- ▶ Hot-swap status LED panel
- ▶ Hot-swap SATA HDDs for data storage
- ▶ Built-in 4 inputs and 4 outputs
- ▶ Extreme performance for GV-DVR operation
- ▶ Recovery DVD in case of failure
- ▶ RAID 0 / 1 / 5 / 6 data protection (optional)*
- ▶ Compatible with full selections of GeoVision accessories



* Only for 3U (8-bay) models

AVAILABLE MODELS

- ▶ GV-SDI-204H V5
- ▶ GV-5016H V5
- ▶ GV-3008H V5
- ▶ GV-1480H V5
- ▶ GV-1240H V5
- ▶ GV-1120H V5
- ▶ GV-900H V5
- ▶ GV-800H V5
- ▶ Integrated Model (GV-SDI-204 Card + GV-5016/ GV-1480A / GV-1240A / GV-1120A / GV-900A / GV-800B Card)

SPECIFICATIONS

System (all models except GV-3008H V5)		
	16-bay	8-bay
CPU	Intel Core i7 Processor	
RAM	4 GB Dual Channels	
OS	64-bit Windows Embedded Standard 7	
DirectX	9.0c	
No. of HDD	16 (3.5" HDD)	8 (3.5" HDD)
Internal Storage	500 GB (2.5" HDD)	500 GB (3.5" HDD)
Connector	Ethernet	RJ-45, 10 / 100 / 1000 Mbps x 1
	VGA Output	DB-15 VGA Monitor Output, DVI-D Output (DVI-D signal Only), or HDMI Output
	USB 2.0	Front: 2 ports, Rear: 4 ports
	USB 3.0	Rear: 2 ports
DVD (±) RW	5.25"	-
	Slim	8X
Fan	12 cm (4 3/4")	-
	8 cm (3 1/8")	4 units
Power	Output: 550W Input: 100-240 V, 60-50 Hz	Output: 400W Input: 100-240 V, 60-50 Hz
	System (GV -3008H V5)	
	16-bay	8-bay
CPU	AMD 6-Core Processor	
RAM	4 GB Dual Channels	
OS	64-bit Windows Embedded Standard 7	
DirectX	9.0c	
No. of HDD	16 (3.5" HDD)	8 (3.5" HDD)
Internal Storage	500 GB (2.5" HDD)	500 GB (3.5" HDD)
Connector	Ethernet	RJ-45, 10 / 100 / 1000 Mbps x 2
	VGA Output	DB-15 VGA Monitor Output, DVI-D Output (DVI-D signal Only), or HDMI Output
	USB 2.0	Front: 2 ports, Rear: 4 ports
	USB 3.0	Rear: 2 ports
DVD (±) RW	5.25"	-
	Slim	8X
Fan	12 cm (4 3/4")	-
	8 cm (3 1/8")	4 units
Power	Output: 550W Input: 100-240 V, 60-50 Hz	Output: 400W Input: 100-240 V, 60-50 Hz

Model	GV-SDI-204H V5	GV-5016H V5	GV-1480H V5	GV-1240H V5	GV-1120H V5	GV-900H V5	GV-800H V5	GV-3008H V5
Video and Audio	GV-SDI-204H V5							
Video Standard	NTSC, PAL							
Video Input	4 / 8 / 12 channels (note3)							
Video Input Level	0.5 ~ 1.5 Vp-p (± 10 %) composite, 75 Ω							
TV Output	N/A							
Video Loop Output (Optional)	N/A							
Video Compression Format	H/W	H.264						
	S/W	Geo MPEG4, Geo H.264						
Recording Rate and Display Rate (Max)	1080p	NTSC	120 / 240 / 360 fps					
		PAL	100 / 200 / 300 fps					
	720p	NTSC	240 / 480 / 720 fps					
		PAL	200 / 400 / 600 fps					
	1080i	NTSC	120 / 240 / 360 fps					
		PAL	100 / 200 / 300 fps					
Video Resolution	H/W	1080p	1920 x 1080					
		720P	1280 x 720					
		1080i	1920 x 1080					
	S/W	1080p	960 x 540, 480 x 270					
		720P	640 x 360					
		1080i	960 x 540, 480 x 270					

Camera Name			Max. 12 characters
Video and Audio			GV-5016H V5
Video Standard			NTSC, PAL
Video Input			16 / 32 channels
Video Input Level			0.5 ~ 1.5 Vp-p (± 10 %) composite, 75 Ω
Audio Input			16 / 32 channels
Audio Input Level			0.5 ~ 1.5 Vp-p (± 10 %) composite
TV Output			N/A
Video Loop Output (Optional)			N/A
Video Compression Format			Geo MPEG4, Geo H.264
Audio Compression Format			16 kHz / 16 bit
Display Rate (Max)	NTSC		480 / 960 FPS
	PAL		400 / 800 FPS
Recording Rate (Max)	NTSC		H/W: 480 / 960 (D1)
	PAL		H/W: 400 / 800 (D1)
Video Resolution	NTSC	HW	704 x 480
		SW	352 x 240
Video Resolution	PAL	HW	704 x 576
		SW	352 x 288
Camera Name			Max. 32 characters
Video and Audio			GV-1480H V5
Video Standard			16 / 32 channels
Video Input			0.5 ~ 1.5 Vp-p (± 10 %) composite, 75 Ω
Video Input Level			16 / 32 channels
Audio Input			0.5 ~ 1.5 Vp-p (± 10 %) composite
Audio Input Level			1.0 Vp-p composite
TV Output			16 / 32 channels
Video Loop Output (Optional)			Geo MPEG4, Geo H.264
Video Compression Format			16 kHz / 16 bit
Audio Compression Format			16 / 32 channels
Display Rate (Max)	NTSC		480 / 960 FPS
	PAL		400 / 800 FPS
Recording Rate (Max)	NTSC		SW: 480 / 960 (CIF)
	PAL		SW: 400 / 800 (CIF)
Video Resolution	NTSC	HW	320 x 240 / 352 x 240
		SW	640 x 480 / 640 x 480 De-interlace
Video Resolution	PAL	HW	704 x 480 / 704 x 480 De-interlace
		SW	320 x 240 / 352 x 288
Video Resolution	PAL	HW	640 x 480 / 640 x 480 De-interlace
		SW	704 x 576 / 704 x 576 De-interlace
Camera Name			Max. 32 characters
Video and Audio			GV-1240H V5
Video Standard			16 / 32 channels
Video Input			0.5 ~ 1.5 Vp-p (± 10 %) composite, 75 Ω
Video Input Level			16 / 32 channels
Audio Input			0.5 ~ 1.5 Vp-p (± 10 %) composite
Audio Input Level			1.0 Vp-p composite
TV Output			16 / 32 channels
Video Loop Output (Optional)			Geo MPEG4, Geo H.264
Video Compression Format			16 kHz / 16 bit
Audio Compression Format			16 / 32 channels
Display Rate (Max)	NTSC		480 / 960 FPS
	PAL		400 / 800 FPS
Recording Rate (Max)	NTSC		SW: 240 / 480 (CIF)
	PAL		SW: 200 / 400 (CIF)
Video Resolution	NTSC	HW	320 x 240 / 352 x 240
		SW	640 x 480 / 640 x 480 De-interlace
Video Resolution	PAL	HW	704 x 480 / 704 x 480 De-interlace
		SW	320 x 240 / 352 x 288
Video Resolution	PAL	HW	640 x 480 / 640 x 480 De-interlace
		SW	704 x 576 / 704 x 576 De-interlace
Camera Name			Max. 32 characters
Video and Audio			GV-1120H V5

Video Standard	16 / 32 channels	
Video Input	0.5 ~ 1.5 Vp-p (± 10 %) composite, 75 Ω	
Video Input Level	16 / 32 channels	
Audio Input	0.5 ~ 1.5 Vp-p (± 10 %) composite	
Audio Input Level	1.0 Vp-p composite	
TV Output	16 / 32 channels	
Video Loop Output (Optional)	Geo MPEG4, Geo H.264	
Video Compression Format	16 kHz / 16 bit	
Audio Compression Format	16 / 32 channels	
Display Rate (Max)	NTSC	480 / 960 FPS
Recording Rate (Max)	PAL	400 / 800 FPS
Video Resolution	NTSC	HW
		SW
	PAL	HW
		SW
Camera Name	Max. 32 characters	
Video and Audio		
Video Standard	NTSC, PAL	
Video Input	16 / 32 channels	
Video Input Level	0.5 ~ 1.5 Vp-p (± 10 %) composite, 75 Ω	
Audio Input	8 / 16 channels	
Audio Input Level	0.5 ~ 1.5 Vp-p (± 10 %) composite	
TV Output	1.0 Vp-p composite	
Video Loop Output (Optional)	N/A	
Video Compression Format	N/A	
Audio Compression Format	16 kHz / 16 bit	
Display Rate (Max)	NTSC	240 / 480 FPS
Recording Rate (Max)	PAL	200 / 400 FPS
Video Resolution	NTSC	HW
		SW
	PAL	HW
		SW
Camera Name	Max. 32 characters	
Video and Audio		
Video Standard	16 / 32 channels	
Video Input	0.5 ~ 1.5 Vp-p (± 10 %) composite, 75 Ω	
Video Input Level	4 / 8 channels	
Audio Input	0.5 ~ 1.5 Vp-p (± 10 %) composite	
Audio Input Level	N/A	
TV Output	N/A	
Video Loop Output (Optional)	N/A	
Video Compression Format	16 kHz / 16 bit	
Audio Compression Format	16 / 32 channels	
Display Rate (Max)	NTSC	120 / 240 FPS
Recording Rate (Max)	PAL	100 / 200 FPS
Video Resolution	NTSC	HW
		SW
	PAL	HW
		SW
Camera Name	Max. 32 characters	
Video and Audio		
Video Standard	16 / 32 channels	
Video Input	0.5 ~ 1.5 Vp-p (± 10 %) composite, 75 Ω	
Video Input Level	4 / 8 channels	
Audio Input	0.5 ~ 1.5 Vp-p (± 10 %) composite	
Audio Input Level	N/A	
TV Output	N/A	
Video Loop Output (Optional)	N/A	
Video Compression Format	16 kHz / 16 bit	
Audio Compression Format	16 / 32 channels	
Display Rate (Max)	NTSC	120 / 240 FPS
Recording Rate (Max)	PAL	100 / 200 FPS
Video Resolution	NTSC	HW
		SW
	PAL	HW
		SW
Camera Name	Max. 32 characters	
Video and Audio		
Video Standard	16 / 32 channels	
Video Input	0.5 ~ 1.5 Vp-p (± 10 %) composite, 75 Ω	
Video Input Level	4 / 8 channels	
Audio Input	0.5 ~ 1.5 Vp-p (± 10 %) composite	
Audio Input Level	N/A	
TV Output	N/A	
Video Loop Output (Optional)	N/A	
Video Compression Format	16 kHz / 16 bit	
Audio Compression Format	16 / 32 channels	
Display Rate (Max)	NTSC	120 / 240 FPS
Recording Rate (Max)	PAL	100 / 200 FPS
Video Resolution	NTSC	HW
		SW
	PAL	HW
		SW
Camera Name	Max. 32 characters	

Video Standard	NTSC, PAL		
Video Input	8 / 16 channels		
Video Input Level	1.0 Vp-p (10%) composite, 75 Ω		
Audio Input	8 / 16 channels		
Audio Input Level	0.5 ~ 1 Vp-p (10%) composite		
TV Output	N/A		
Video Loop Output (Optional)	8 / 16 channels		
Video Compression Format	HW: H.264		
	SW: Geo MPEG4, Geo H.264		
Audio Compression Format	16 kHz / 16 bit		
Display Rate	NTSC	240 / 480 FPS	
(Max)	PAL	200 / 480 FPS	
Recording Rate (Max)	NTSC	H/W: 240 / 480 (D1)	
	PAL	H/W: 200 / 480 (D1)	
Video Resolution	NTSC	HW	704 x 480
		SW	352 x 240
	PAL	HW	704 x 576
		SW	352 x 288
Camera Name	Max. 32 characters		
Live View Playback			
Image Control	Contrast / Brightness / Saturation / Hue		
Recording Mode	Round the Clock / Motion Detection / Sensor Detection / Pre & Post Recording / Schedule Recording		
Instant Playback	10 sec. / 30 sec. / 1 min. / 5 min.		
Screen Split Control	1x1 / 2x2 / 1+5 / 1+7 / 3x3 / 2+8 / 1+12 / 1+16 / 4x4 / 5x5 / 6x6		
Screen Rotate Control	1 ~ 10 sec.		
Searching and Backup			
Search Method	Date / Time / Camera / Event Type		
Backup Type	DVD+R (DL) / DVD-R (DL) / DVD+R / DVD+RW / DVD-R / DVD-RW / CD-R / CD-RW		
Remote Client Software			
Network Type	LAN, WAN, Internet		
Monitoring Environment	Web browser (IE, Chrome, Firefox and Safari) Mobile device (Android Smartphone and tablet; iPad, iPhone and iPod Touch)		
WebCam Live View	Max. 32-channel multi views (Max. 200 channels connection 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 DVD	Automatic system rebuild from DVD		
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	
		GV-3008H	
Peripheral Devices			
Audio Input	RCA 8 / 16 / 32 ports	RCA 8 / 16	
Audio Microphone In	Mini stereo jack		
Audio Output	Mini stereo jack		
RS±485 for PTZ Control	2-pin terminal (Note 1)	2-pin terminal	
Environment			
Operating Temp.	0 ~ 45 °C / 32 ~ 113 °F		
Humidity	0 ~ 80% RH (non-condensing)		
Language			
Type	Arabic / Bulgarian / Czech / Danish / Dutch / English / Finnish / French / German / Greek / Hebrew / Hungarian / Italian / Japanese / Lithuanian / Norwegian / Polish / Portuguese / Romanian / Russian / Serbian / Simplified Chinese / Slovakian / Slovenian / Spanish / Swedish / Thai / Traditional Chinese / Turkish		

Physical		
LED Indicator		Yes (Fan, Power, HDD)
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 470 mm / 17 x 5.2 x 18.5 in
Net Weight	16-bay	19 Kg / 41.8 lb (± 1 kg / 2.20 lb)
	8-bay	18Kg / 39.6 lb (± 1 kg / 2.20 lb)

Note:

1. The built-in RS±485 for PTZ Control is not available for GV-5016H V5 and GV-NVRH V5.
2. GV-SDI-204 V5 model does not support the peripheral devices.
3. Only 3U (8-bay) model supports 12-channel GV-SDI-204H V5.
4. All specifications are subject to change without notice.

Hard Disk Requirements

The total of recording frame rates that you can assign to a single hard disk is listed as below:

Analog Cameras / SW Compression

Video resolution	MPEG4	
	NTSC	PAL
CIF	480 fps	400 fps
VGA / D1	240 fps	200 fps
Turbo VGA	416 fps	400 fps
Turbo D1	352 fps	320 fps

Analog Cameras / HW Compression

Video resolution	H.264	
	NTSC	PAL
D1	240 fps	200 fps

IP Cameras

Video resolution	MJPEG		H.264		MPEG4	
	Frame Rate	Bit Rate	Frame Rate	Bit Rate	Frame Rate	Bit Rate
2560x1920 (5M)	30 fps	102.26 Mbit/s	240 fps	21.24 Mbit/s	-	-
2560x1600 (4M)	60 fps	73.49 Mbit/s	240 fps	15.28 Mbit/s	-	-
2048x1536 (3M)	60 fps	64.73 Mbit/s	480 fps	10.52 Mbit/s	-	-
1600x1200 (2M)	120 fps	41.16 Mbit/s	480 fps	9.16 Mbit/s	-	-
1280x960 (1.3M)	200 fps	30.04 Mbit/s	480 fps	5.77 Mbit/s	480 fps	6.30 Mbit/s
640x480 (VGA)	480 fps	11.42 Mbit/s	640 fps	2.54 Mbit/s	640 fps	3.27 Mbit/s
320x240 (CIF)	480 fps	5.16 Mbit/s	640 fps	0.75 Mbit/s	640 fps	1.03 Mbit/s

Note: The above data was determined using the bit rate listed above and hard disks with average R/W above 80 MB/s.

Overview

Front View - 16-Bay Model



Front View - 8-Bay Model



Rear View - GV-SDI-204H V5 (12 CH)



Note: Only 3U (8-bay) model supports 12-channel GV-SDI-204H V5.

Rear View - GV-5016H V5 (32 CH)



Rear View - GV-5016H V5 (16 CH)



Rear View - GV-3008H V5 (16-Ch)



Rear View - GV-3008H V5 (8-Ch)



Rear View - GV-1480H / GV-1240H / GV-1120H V5 (32 CH)



Rear View - GV-1480H / GV-1240H / GV-1120H / 900H V5 (16 CH)



Rear View - GV-900H V5 - 32CH



Rear View - GV-800H V5 - 32CH

Rear View - GV-800H V5 - 16CH


Options

GV-Video Loop Through Card	This card can take the video signal from the GV-Hot Swap DVR V5 and then split it into 16 signals while maintaining video quality. It can meet the need for multiple spot monitors. ** This device is not available for GV-SDI-204H V5, GV-5016H V5, GV-900H V5 and GV-800H V5 models.
GV-IO 12-In Card	With 12-point digital inputs, this card can expand the GV-Hot Swap DVR V5 up to 16 sensor inputs.
GV-IO 12-Out Card	With 12-point relay outputs, this card can expand the GV-Hot Swap DVR V5 up to 16 alarm outputs.
GV-Data Capture V3 Box	GV-Data Capture V3 Box can integrate the GV-Hot Swap DVR 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 DVR V5's USB port.
GV-COM V2	This unit can add 1 RS-232/RS-485 serial port through the GV-Hot Swap DVR V5's USB port.
GV-IO Box (4 Ports)	GV-IO Box 4 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 (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	GV-Joystick facilitates the PTZ camera control. It can be either plugged into the GV-Hot Swap DVR 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. ** This device is a standard package item, except 3U (16 / 8-bay) models of GV-3008H V5.
Graphic Card	The Graphic Card comes with HDMI, DVI-D, and VGA ports to support additional displays. ** Currently, these models do not support optional Graphic Cards: - GV-3008H V5 - 4U (20-bay) and 3U (16-bay) models with 2 built-in GV-Capture Cards - 3U (8-bay) models with 2 built-in GV-1480 / 1240 / 1120 Cards or 3 built-in GV-SDI-204 Cards
RAID Controller (0 / 1 / 5 / 6)	The RAID Controller supports a maximum of 8 SATA hard drives and enhances data protection. The supported RAID types include RAID 0, RAID 1, RAID 5 and RAID 6. ** This device is only available for all 3U (8-bay) models.

Packing List

- GV-Hot Swap DVR System V5 x 1
- Video and Audio Cable
 - GV-5016H V5 (32-Ch)
LFH-Type Audio and Video Cable x 2
 - GV-5016H V5 (16-Ch)
LFH-Type Audio and Video Cable x 1
 - GV-3008H V5 (16-Ch)
D-Type Audio and Video Cable x 4
 - GV-3008H V5 (8-Ch)
D-Type Audio and Video Cable x 2
 - GV-1480H / 1240H / 1120H V5 (32-Ch)
DVI Video Cable with TV Out x 2,
DVI Audio Cable x 2
 - GV-1480H / 1240H / 1120H V5 (16-Ch)
DVI Video Cable with TV Out x 1,
DVI Audio Cable x 1
 - GV-900H V5 (32-Ch)
DVI Video and Audio Cable x 4
 - GV-900H V5 (16-Ch)
DVI Video and Audio Cable x 2
 - GV-800H V5 (32-Ch)
DVI Video and Audio Cable x 2
 - GV-800H V5 (16-Ch)
DVI Video and Audio Cable x 1
- AC Power Cord x 1
- GV-Keyboard Package x1 (Except for 3U(16/8-bay) models of GV-3008H V5)
- GV-IR Remote Control x 1
- Self-Stick Rubber Pad x 4
- Recovery DVD x 1
- Surveillance System Software DVD x 1
- GV-Hot Swap DVR System V5 User's Manual x 1
- GV-Hot Swap DVR System V5 Quick Start Guide x 1