GV-Hot Swap DVR System V4

4 / 8 Bay Model

20 Bay Model

INTRODUCTION

The GV-Hot Swap DVR System V4 features a powerful data storage capacity. It comes with a selection of 4, 8, or 20 bays via hot-swappable SATA mobile racks. Depending on HDD size, the GV-Hot Swap DVR System V4 can reach the maximum storage capacity of 30 terabytes. Support for hot-swapping makes data storage and management more convenient.

GeoVision Surveillance System empowers the GV-Hot Swap DVR System V4 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 the 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, both GeoVision Surveillance System and GV-NVR provide a pure IP solution to GV-Hot Swap DVR System V4.

KEY FEATURES

- Powered by Intel® Core™2 Quad
- Support 32-channel GV-DVR & GV-NVR (Pure IP surveillance)
- Dual / triple-monitor display
- Maximum storage capacity of more than 30 terabytes
- Hot-swap status LED panel
- Dual Gigabit LAN ports
- 4 / 8 / 20 hot-swap SATA HDDs for data storage
- Built-in 4 inputs and 4 outputs **
- Extreme performance for GV-DVR and GV-NVR operation
- Recovery DVD in case of failure
- RAID 0 / 1 / 5 / 6 data protection (optional)*
- Compatible with full selections of GeoVision accessories

  * Only for 8-bay models

AVAILABLE MODELS

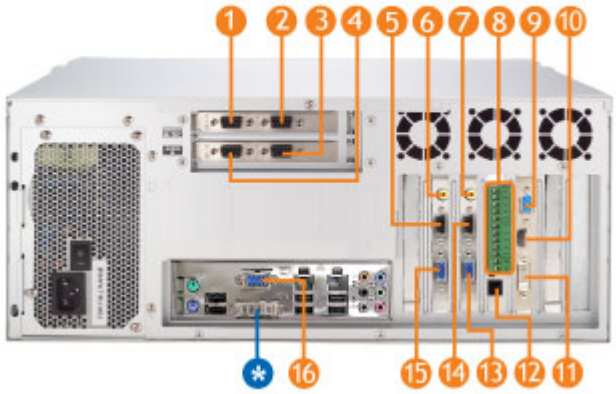
- GV-1480H V4
- GV-1248H V4
- GV-1240H V4
- GV-1120H V4
- GV-NVRH V4

Windows® Embedded Partner

4 / 8 -Bay Models

GV-1480H V4 / 1240H V4 / 1120H V4 (32 Channels)

Rear View -- 32 Channels



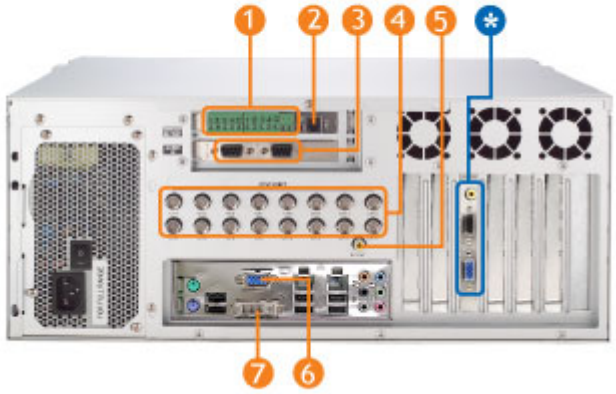
1. D-Type Audio 1-8
2. D-Type Audio 9-16
3. D-Type Audio 25-32
4. D-Type Audio 17-24
5. D-Type Video 1-8
6. RCA TV Output 1-16
7. RCA TV Output 17-32
8. I/O and RS-485±Terminal Block
9. VGA Monitor Output
10. HDMI Output
11. DVI-I Output
12. RJ-11 Port
13. D-Type Video 25-32
14. D-Type Video 17-24
15. D-Type Video 9-16
16. VGA Monitor Output

* Not Functional

Note: Specifications are subject to change without notice.

GV-1480H V4 / 1240H V4 / 1120H V4 (16 Channels)

Rear View -- 16 Channels

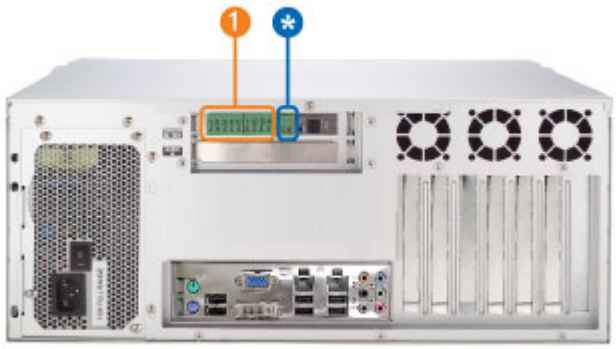


1. I/O and RS-485±Terminal Block
2. RJ-11 Port
3. D-Type Audio 1-16
4. BNC Video Connector x 16
5. RCA TV Output
6. VGA Monitor Output
7. DVI-D Output

* Not recommended for use

GV-NVRH V4

Rear View



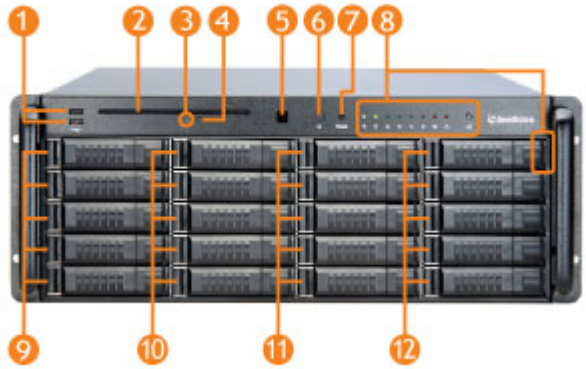
1. I/O Terminal Block

* RS-485± Terminal Block (Not Functional)

20 -Bay Models

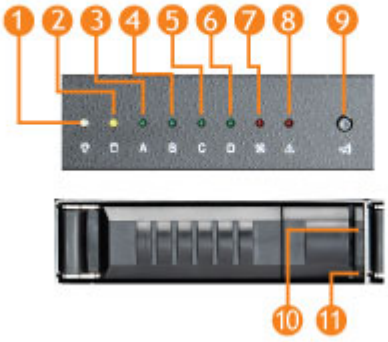
GV-1480H V4/1240H V4/1120H V4/NVR V4

Front View



1. USB Port x 2
2. DVD(±) RW Drive
3. DVD(±) RW Drive Activity LED
4 DVD-eject button
5. Built-in GV-IR Remote Control Receiver
6 Power Button 12 HDD Group D
7. Reset Button
8. LED Panel (See LED Panel for details.）
9. HDD Group A
10. HDD Group B
11. HDD Group C

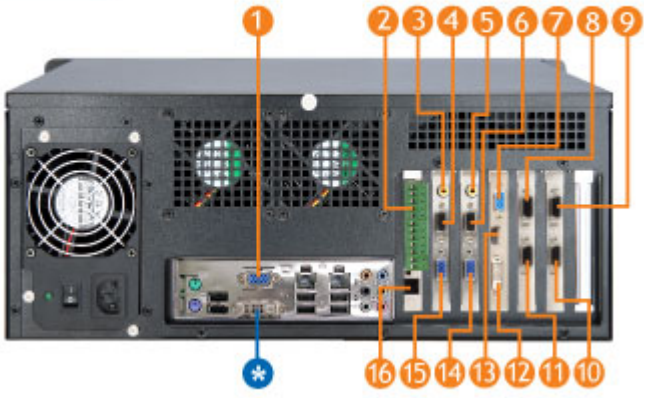
Front View -- LED Panel



	LED	Description
1	Power LED	The LED shines when the power is on.
2	HDD Activity LED	The LED shines when the HDDs are writing or reading data.
3	HDD Group A LED	The LEDs of HDD Group A to D shine when the power is on.
4	HDD Group B LED	
5	HDD Group C LED	
6	HDD Group D LED	
7	System Alert LED	The LED shines and the system sounds on if one fan stops or the GV-Hot Swap DVR V3 is overheated.
8	Alert LED	(reserved)
9	Alarm Mute Button	Press this button to silence the alarm when the System Alert LED shines and the system sounds.
10	HDD Power LED (White)	The LED shines white after the HDD is installed.
11	HDD Activity LED (Blue)	The LED shines blue if the HDD is reading or writing data.

GV-1480H V4 / 1240H V4 / 1120H V4 (32 Channels)

Rear View



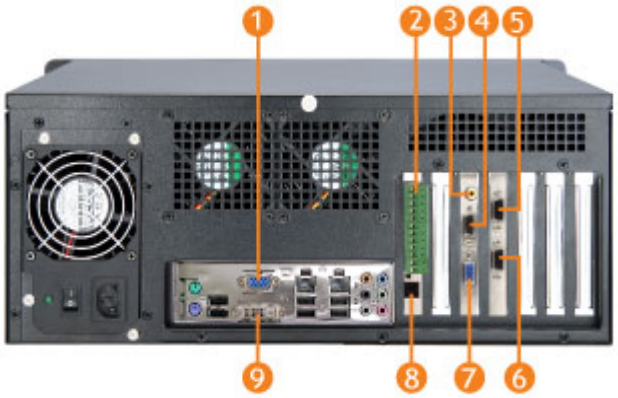
1. VGA Monitor Output
2. I/O and RS-485± Terminal Block
3. RCA TV Output 1-16
4. D-Type Video 1-8
5. RCA TV Output 17-32
6. D-Type Video 17-24
7. VGA Monitor Output
8. D-Type Audio 1-8
9. D-Type Audio 17-24
10. D-Type Audio 25-32
11. D-Type Audio 9-16
12. DVI-D Output
13. HDMI Output
14. D-Type Video 25-32
15. D-Type Video 9-16
16. RJ-11 Port

* Not functional

Note: Specifications are subject to change without notice.

GV-1480H V4 / 1240H V4 / 1120H V4 (16 Channels)

Rear View



1. VGA Monitor Output
2. I/O and RS-485± Terminal Block
3. RCA TV Output 1-16
4. D-Type Video 1-8
5. D-Type Audio 1-8
6. D-Type Audio 9-16
7. D-Type Video 9-16
8. RJ-11 Port
9. DVI-D Output

GV-NVRH V4

Rear View

1. I/O Terminal Block

* RS-485± Terminal Block (Not Functional)

SPECIFICATIONS

		GV-1480H V4	GV-1240H V4	GV-1120H V4	GV-NVRH V4
Drive Bay		4 / 8 / 20 bays			
CPU		Intel® Core 2 Quad ™ Processor			
RAM		2GB Dual Channels			
Video	Codec	Geo MPEG4 / Geo MPEG4 (ASP) / Geo H264 / Geo H264 V2			MJPEG / MPEG4 / H.264
	Input	16/32 channels	8/16/32 channels	16/32 channels	NVR (GV): 4~32 channels NVR: 1~32 channels
	Note for GV-NVRH V4: 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 or click **(here)** for more information.				
Video Loop Output (Optional)		16 / 32 channels			
Audio	Compression	ADPCM / G.723			
	Input	16/32 channels	8/16/32 channels	16/32 channels	NVR (GV): 4~32 channels NVR: 1~32 channels
	Note for GV-NVRH V4: 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 or click **(here)** for more information.				
Display Frames (max)	NTSC	960 FPS			
	PAL	800 FPS			
Recording Frames	NTSC	S/W: 960 (CIF)	S/W: 480 (CIF)	S/W: 240 (CIF)	
	PAL	S/W: 800 (CIF)	S/W: 400 (CIF)	S/W: 200 (CIF)	
Video Resolution	NTSC	320x240 / 360x240 640x480 / 640x480 De-interlace / 720x480 / 720x480 De-interlace			
	PAL	320x240 / 360x288 640x480 / 640x480 De-interlace / 720x576 / 720x576 De-interlace			
Backup Type		DVD+R (DL) / DVD-R (DL) / DVD+R / DVD+RW / DVD-R / DVD-RW / CD-R / CD-RW			
Recovery DVD		Automatic system rebuild			
Alarm	Sensor Input	4 *			
	Alarm Output	4 *			
Connector	Ethernet	RJ-45, 10 / 100 / 1000 Mbps x 2			
	VGA Output	2 Monitors : DB-15 VGA Monitor Output + DVI-D Output (DVI-D signal Only)			
		3 Monitors : DB-15 VGA Monitor Output x 2 + DVI-I Output			
	USB 2.0	Front : 2 ports, Rear : 6 ports			
Remote Access		TCP/ IP, LAN, WAN, Internet, Modem Dial-up, Modem-to-Modem, ISDN			
Operating Temp.		0 ~ 45 °C (32 ~113 °F)			
Humidity		0~80% RH (non-condensing)			
Dimensions (W x H x D)	20 bays	483 x 178 x 660.4 (mm) / 19 x 7 x 26 (inch)			
	4/8 bays	483 x 178 x 528 (mm) / 19 x 7 x 21 (inch)			
Hardware Accessory		GV-Keyboard, GV-IR Remote Control			
RAID (Option for 8 & 10-bay models only)		0 / 1 / 5 / 6			
Optional Products		GV-Video Loop Through Card / GV-IO 12-In Card / GV-IO 12-Out Card / GV-Multi Quad Card / GV-IO Box 4 / GV-IO Box 8 / GV-IO Box 16 / GV-Data Capture Box Series / GV-Hub Box / GV-COM Box/ GV-DOM / GV-Joystick			
Languages		English / Czech / Danish / French / German / Hebrew / Hungarian / Italian / Japanese / Polish / Portuguese (Brazil) / Russian / Serbian / Spanish / Simplified Chinese / Traditional Chinese			

Note:

- The 2-bay and 20-bay models are available upon special request. Please contact your sales representative for further information.
- Functions with * marks are not available for 2-bay models.
- GV-Video Loop Through Card, GV-IO 12-In Card, GV-IO 12-Out Card and GV-Multi Quad Card are not available to all 2-bay models.
- GV-Video Loop Through Card and GV-Multi Quad Card are not available to GV-NVRH V4.
- Product design and specifications are subject to change without notice.

Note for GV-NVRH V4:

The following table provides the total frame rate that the GV-NVRH V4 can support when connecting to the IP cameras set with different codecs and video resolutions. Using the information, you can calculate the approximate number of cameras that you can connect to the GV-NVRH V4 or the frame rate you should set for the cameras.

For example,
The specifications of an IP camera are 15 fps, 1.3M and H.264.
At the medium CPU usage: 120 fps/15 fps = 8 cameras
At the maximum CPU usage: 135 fps/15 fps = 9 cameras

	CPU Usage	2560x1920 (5M)	2560x1600 (4M)	2048x1536 (3M)	1920x1080 (2M)	1600x1200 (2M)	1280x1024 (1.3M)	640x480 (VGA)	320x240 (CIF)
H.264	Medium	35 FPS	40 FPS	45 FPS	50 FPS	75 FPS	120 FPS	180 FPS	960 FPS
	Maximum	45 FPS	60 FPS	75 FPS	75 FPS	100 FPS	135 FPS	240 FPS	960 FPS
MJPEG	Medium	60 FPS	80 FPS	100 FPS	120 FPS	160 FPS	240 FPS	480 FPS	960 FPS
	Maximum	110 FPS	130 FPS	160 FPS	200 FPS	240 FPS	480 FPS	630 FPS	960 FPS
MPEG4	Medium	-	-	-	-	-	120 FPS	480 FPS	960 FPS
	Maximum	-	-	-	-	-	175 FPS	600 FPS	960 FPS

Note:

1. The medium CPU usage is in the 50-60 % range and the maximum CPU usage is around 90 % in the given frame rates.
2. The test results may vary based on various factors, including actual environment and bitrates.

IMPORTANT: The total frame rate provided above is only for live viewing. Since the total frame rate varies based on codec and resolution, you can achieve the desired number of connected IP cameras by changing the video codec, using the Dual-Stream feature, or decreasing resolution and frame rates set on your IP camera.

Bitrates applied for the test of total frame rates

	H.264	MJPEG	MPEG4
2560x1920 (5M)	17.8 Mbit/s	138 Mbit/s	-
2560x1600 (4M)	15.3 Mbit/s	109 Mbit/s	-
2048x1536 (3M)	13.1 Mbit/s	89.2 Mbit/s	-
1920x1080 (2M)	5.9 Mbit/s	52.4 Mbit/s	-
1600x1200 (2M)	5.6 Mbit/s	51.2 Mbit/s	-
1280x1024 (1.3M)	4.7 Mbit/s	10.9 Mbit/s	5.1 Mbit/s
640x480 (VGA)	5.2 Mbit/s	6.7 Mbit/s	5.6 Mbit/s
320x240 (CIF)	800 Kbit/s	2.4 Mbit/s	1.1 Mbit/s