

## GV- NVR System Lite V2 (Rev. D)



### Introduction

The GV-NVR System Lite V2 is an ultimate upgraded mini NVR system, which you can record video files directly to the internal hard drive. The GV-NVR System Lite V2 supports up to 16 GV IP cameras or 10 third-party IP cameras (license required) for networking surveillance, with the plug-and-play function for GV IP cameras to connect to the unit automatically. Plus, with supported HDMI output, you could connect the unit to HDTV for better video quality. The GV-NVR System Lite V2 is a perfect NVR system for small business, retail stores, and home security.

Its four USB ports enable to connect with multiple peripheral devices, such as USB HDD, USB DVD player and etc. Its Gigabit Ethernet function enables high-speed Internet access for seamless Web browsing. Moreover, our VESA mounting solution allows you to mount the ultra-slim unit on the back of a computer monitor.

### The Supported IP Camera Combinations for GV-NVR System Lite V2 (Rev. D):

The GV-NVR System Lite V2 (Rev. D) supports connections to GV IP cameras and third-party IP cameras. You can adopt one of the following combinations:

#### IP cameras excluding GV Fisheye cameras

- Connect up to 16 GV-IP cameras (H.264). See **Section A**.
- Connect up to 16 GV-IP cameras (H.265). See **Section D**.
  
- Connect up to 10 third-party cameras (of 1280 x 1024 resolution, H.264). See **Section C**.
- Connect up to 8 third-party cameras (of 1920 x 1080 resolution, H.264). See **Section C**.
- Connect up to 8 third-party cameras (of 2048 x 1536 resolution, H.264). See **Section C**.
- Connect up to 8 third-party cameras (of 2048 x 1944 resolution, H.264). See **Section C**.
- Connect up to 7 third-party cameras (of 2560 x 1920 resolution, H.264). See **Section C**.
- Connect 2 third-party cameras (of 3840 x 2160 resolution, H.264). See **Section C**.
- Connect 2 third-party cameras (of 4000 x 3000 resolution, H.264). See **Section C**.
  
- Connect up to 10 cameras from GV-IP cameras and third-party IP cameras (of 1280 x 1024 resolution, H.264). See **Section A** and **C**.
- Connect up to 8 cameras from GV-IP cameras and third-party IP cameras (of 1920 x 1080 resolution, H.264). See **Section A** and **C**.
- Connect up to 8 cameras from GV-IP cameras and third-party IP cameras (of 2048 x 1536 resolution, H.264). See **Section A** and **C**.
- Connect up to 8 cameras from GV-IP cameras and third-party IP cameras (of 2048 x 1944 resolution, H.264). See **Section A** and **C**.
- Connect up to 7 cameras from GV-IP cameras and third-party IP cameras (of 2560 x 1920 resolution, H.264). See **Section A** and **C**.
- Connect 2 cameras from GV-IP cameras and third-party IP cameras (of 3840 x 2160 resolution, H.264). See **Section A** and **C**.
- Connect 2 cameras from GV-IP cameras and third-party IP cameras (of 4000 x 3000 resolution, H.264). See **Section A** and **C**.

- Connect 3 third-party cameras (of 1920 x 1080 resolution, [H.265](#)). See **Section F**.
- Connect 2 third-party cameras (of 2048 x 1520 resolution, [H.265](#)). See **Section F**.
- Connect 2 third-party cameras (of 2560 x 1440 resolution, [H.265](#)). See **Section F**.
- Connect 1 third-party camera (of 2592 x 1944 resolution, [H.265](#)). See **Section F**.
  
- Connect 3 cameras from GV-IP cameras and third-party IP cameras (of 1920 x 1080 resolution, [H.265](#)). See **Section D** and **F**.
- Connect 2 cameras from GV-IP cameras and third-party IP cameras (of 2048 x 1520 resolution, [H.265](#)). See **Section D** and **F**.
- Connect 2 cameras from GV-IP cameras and third-party IP cameras (of 2560 x 1440 resolution, [H.265](#)). See **Section D** and **F**.
- Connect 1 camera from GV-IP cameras and third-party IP cameras (of 2592 x 1944 resolution, [H.265](#)). See **Section D** and **F**.

#### IP cameras including GV Fisheye cameras (H.264)

- **GV-Fisheye Camera 1.3 MP** + one of the following options:
  - GV-IP Camera x 15
  - Third-party Camera (1.3 MP) x 9
  - Third-party Camera (2 MP) x 8
  - Third-party Camera (3 MP) x 4
  - Third-party Camera (4 / 5 MP) x 3
- **GV-Fisheye Camera 2 MP** + one of the following options:
  - GV-IP Camera x 15
  - Third-party Camera (2 MP) x 6
  - Third-party Camera (3 MP) x 4
  - Third-party Camera (4 / 5 MP) x 3
- **GV-Fisheye Camera 4 MP** + one of the following options:
  - GV-IP Camera x 14
  - Third-party Camera (1.3 MP) x 5
  - Third-party Camera (2 MP) x 4
  - Third-party Camera (3 MP) x 3
  - Third-party Camera (4 / 5 MP) x 2
- **GV-Fisheye Camera 5 MP** + one of the following options:
  - GV-IP Camera (1.3 MP) x 14
  - GV-IP Camera (2 / 3 / 4 / 5 MP) x 13
  - Third-party Camera (1.3 MP) x 5
  - Third-party Camera (2 MP) x 4
  - Third-party Camera (3 MP) x 3
  - Third-party Camera (4 / 5 MP) x 2

#### GV-Fisheye cameras (H.264)

- Connect up to 9 GV-Fisheye cameras (of 1280 x 1024 resolution, H.264). See **Section B**.
- Connect up to 4 GV-Fisheye cameras (of 1440 x 1376 resolution, H.264). See **Section B**.
- Connect up to 3 GV-Fisheye cameras (of 2048 x 1944 resolution, H.264). See **Section B**.
- Connect up to 2 GV-Fisheye cameras (of 2560 x 1920 resolution, H.264). See **Section B**.
- Connect 1 GV-Fisheye camera (of 2896 x 2768 resolution, H.264). See **Section B**.
- Connect 1 GV-Fisheye camera (of 4000 x 3000 resolution, H.264). See **Section B**.

#### GV-Fisheye cameras (H.265)

- Connect 1 GV-Fisheye camera (of 2560 x 2480 resolution, [H.265](#)). See **Section E**.

#### Analog cameras through GV-Compact DVRs and GV-Video Servers

- Connect up to 16 analog cameras through GV-Video Servers (of 704 x 480 resolution, H.264). See **Section G**.
- Connect up to 16 analog cameras through GV-Video Servers (of 352 x 240 resolution, H.264). See **Section G**.
- Connect up to 12 analog cameras through GV-Compact DVR V3 Series (of 704 x 480 resolution, de-interlace). See **Section G**.

The number of supported channels is based on the following resolution:

Section A		Dual-stream Resolution		Max. Frame Rate / Camera	Total Frame Rate / System
		Stream 1 (H.264)	Stream 2 (H.264)		
GV-IP Camera	1.3 MP	1280 x 1024	320 x 256	30 fps	480 fps
	2 MP	1920 x 1080	448 x 252	30 fps	480 fps
	3 MP	2048 x 1536	320 x 240	13 fps	220 fps
	4 MP	2048 x 1944	320 x 240	10 fps	165 fps
	5 MP	2560 x 1920	320 x 240	10 fps	160 fps
	8 MP	3840 x 2160	1280 x 720	25 fps	50 fps
	12 MP	4000 x 3000	1024 x 768	15 fps	45 fps
Section B		Single Stream Resolution (H.264)		Max. Frame Rate / Camera	Total Frame Rate / System
GV-Fisheye	1.3 MP	1280 x 1024 (4:3)		7 fps	63 fps
	2 MP	1440 x 1376 (4:3)		10 fps	45 fps
	4 MP	2048 x 1944 (4:3)		10 fps	30 fps
	5 MP	2560 x 1920 (4:3)		10 fps	20 fps
	8 MP	2896 x 2768 (4:3)		7 fps	7 fps
	12 MP	4000 x 3000 (4:3)		5 fps	5 fps
	Section C		Single Stream Resolution (H.264)		Max. Frame Rate / Camera
Third-Party Camera	1.3 MP	1280 X 1024		30 fps	300 fps
	2 MP	1920 X 1080		30 fps	240 fps
	3 MP	2048 x 1536		20 fps	160 fps
	4 MP	2048 X 1944		15 fps	120 fps
	5 MP	2560 X 1920		10 fps	70 fps
	8 MP	3840 x 2160		20 fps	40 fps
	12 MP	4000 x 3000		15 fps	30 fps
Section D		Dual-stream Resolution		Max. Frame Rate / Camera	Total Frame Rate / System
		Stream1 (H.265)	Stream 2 (H.264)		
GV-IP Cameras	1 MP	1280 x 720	640 x 360	30 fps	180 fps
	2 MP	1920 x 1080	640 x 360	15 fps	165 fps
	3 MP	2048 x 1520	640 x 480	15 fps	120 fps
	4 MP	2560 x 1440	640 x 360	10 fps	160 fps
	5 MP	2592 x 1944	640 x 480	10 fps	120 fps
Section E		Single Stream Resolution (H.265)		Max. Frame Rate / Camera	Total Frame Rate / System
GV-Fisheye	5 MP	2560 x 2480 (4:3)		8 fps	8 fps
Section F		Single Stream Resolution (H.265)		Max. Frame Rate / Camera	Total Frame Rate / System
Third-Party Camera	2 MP	1920 x 1080		15 fps	45 fps
	3 MP	2048 x 1520		15 fps	30 fps
	4 MP	2560 x 1440		10 fps	20 fps
	5 MP	2592 x 1944		10 fps	10 fps
Section G		Dual-stream Resolution		Max. Frame Rate / Camera	Total Frame Rate / System
		Stream1 (H.264)	Stream 2 (H.264)		
GV-Video Server V2	GV-VS11 / GV-VS14	704 x 480 / 704 x 576	352 x 240 / 352 x 288	30 fps	480 / 400 fps
	GV-VS12 / GV-VS04H	352 x 240 / 352 x 288	N/A	30 fps	480 / 400 fps
GV-Compact DVR V3		704 x 480 De-interlace / 704 x 576 De-interlace	N/A	30 fps	360 fps

**Note:****GV IP cameras**

1. For GV IP cameras (excluding GV Fisheye), stream 1 is used for recording and single view, and stream 2 for live viewing in multi divisions.
2. The default resolution for stream 1 is set at its maximum. Several resolution, aspect ratio and codec options are available for each IP camera, except GV-Fisheye cameras.
3. It is highly recommended to set the panel resolution to 1280 x 1024 (default) when connecting to GV Fisheye to get better CPU performance.

**Third-party cameras**

1. For third-party cameras, be sure the resolution and codec are configured as specified above to achieve the best performance and maximum frame rate. To find the supported third-party cameras, go to [http://www.geovision.com.tw/\\_upload/files/support\\_list.pdf](http://www.geovision.com.tw/_upload/files/support_list.pdf).

**Frame Rate**

1. To calculate the number of channels supported by the system, find the total frame rate supported by the system and divide it by max. frame rate per camera.
2. If you record the images, access live view and see the playback simultaneously, the CPU loading will increase massively. Therefore, the frame rates may drop.

**Main Features**

- Compact and sleek
- Up to 16 channels
- Automatic connection to GV IP cameras
- Support for 3rd party IP cameras (license required)
- All-in-one solution (Live View, Playback, Recording, Backup, CMS)
- GPU decoding and dewarping
- H.265 / H.264 / MJPEG / MPEG4
- Dual video streams
- VGA and HDMI outputs
- 1 TB hard drive
- Video analysis (Advanced Motion Detection, Privacy Mask, Scene Change Detection and Counter only)
- Standing mount and VESA mount options
- Direct recording to the internal hard drive
- Low power consumption
- Smart phones access
- Fisheye camera dewarping function
- Multiple (31) languages

**AVAILABLE MODELS**

- GV-NVR Lite V2 (Rev. D) 1 TB

**Applications**

**One Shop, One Fisheye Camera, One GV-NVR System Lite V2**

The easiest and most cost-efficient solution for video surveillance



**One Fisheye Camera**

- Megapixel resolution up to 5 MP
- Wide angle view to cover all angles of a location

The wide-angle fisheye camera eliminates the need to install multiple conventional cameras, saving both costs and the trouble of maintenance. The circular source image can be dewarped into rectangular view and adjust into different modes and positions according to your preference.



Source Image



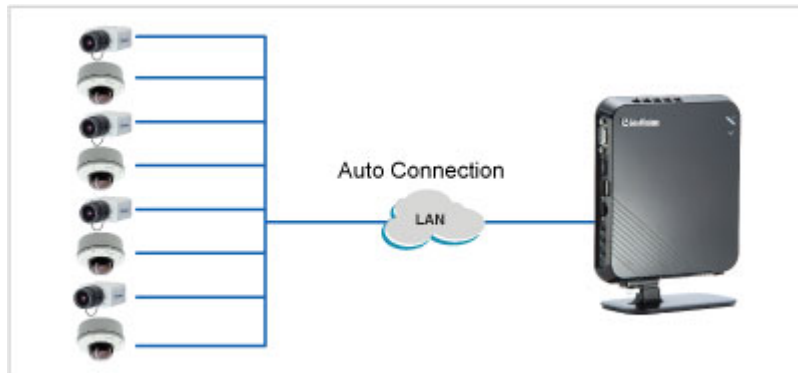
Dewarped Image: 2 PTZ views & 1 360 degree view

- GV-FE110/111
- GV-FE420/421
- GV-FE520/521
- GV-FER521

**One GV-NVR System Lite V2**

- Automatic connection with GV-IP devices without configuration
- Easy to install and use

Using GV-NVR System Lite V2, video files are recorded directly to the internal hard drive without setting up a separate computer. The user interface is intuitive and the plug and play function allows GV-IP devices to automatically connect to the unit without further configurations.



### Remote and Wireless Access

- Remote access through IE browser
- Mobile applications to receive live view and play back recorded videos  
Mobile Application Download



### Centralized Monitoring for Multiple Locations

- GV-Control Center
- GV-Center V2
- GV-Dispatch Server
- GV-Vital Sign Monitor

The Central Monitoring Station programs provide a centralized management solution by allowing you to monitor live view, receive alarm notification and play back recordings from numerous cameras or GV-NVR System Lite V2.

## Specifications

### Hardware

System			
CPU		Intel Processor	
RAM		4 GB	
Storage		1 TB	
OS		Microsoft Windows 7 Embedded 64-Bit SP1	
DirectX		11	
Power		Output: 65W, 19V, 3.42A; Input: 100~240V, 50~60Hz	
Connector	Ethernet		RJ-45, 10 / 100 / 1000 Mbps
	Video Output		VGA and HDMI
	USB 2.0	Right Side	1 port
		Left Side	2 ports
USB 3.0	Right Side	1 ports	
Environment			
Operating Temp		0 °C ~ 35 °C / 32 °F ~ 95 °F	
Humidity		0% ~ 80% RH (non-condensing)	
Physical			
Color		Black	
Dimensions (W x H x D)		153.6 x 25.2 x 172.6 mm / 6.04 x 0.99 x 6.8 in	
Weight		800 g / 1.77 lbs	
Sensor and Alarm (Optional)			
GV-IO Box 4 Ports		4 inputs, 4 outputs	
GV-IO Box 8 Ports		8 inputs, 8 outputs	
GV-IO Box 16 Ports		16 inputs, 16 outputs	

## Software

<b>Video and Audio</b>	
Video Input	16 channels
Audio Input	16 channels
Compression	MJPEG / MPEG4 / H.264
Live Resolution	CIF for 16 screen divisions
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 Playback

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

Note: 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 (Android Smartphone and tablet; iPad, iPhone and iPod Touch)
Live View	Max. 16-channel multi views (Up to 200 channels connection to GV-NVR System Lite V2)
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.

### Language

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

Free License	16 channels from GV-IP Cameras
Maximum License	10 channels from third-party IP Cameras (*)
Increment for Each License	1 to 10 third-party IP cameras at an increment of 2
Optional Combinations	N/A
Dongle Type	External

\* The Maximum License is a paid service.

Note: Product design and specifications are subject to change without notice.

## Packing List

- GV-NVR System Lite V2 x 1
- AC Power Cord x 1
- Power Adapter x 1
- Standing Mount Kit (1 Base Stand and 1 Base Stand Screw included) x 1
- VESA Monitor Mount Kit (1 Stand Screw and 4 Fix Screws included) x 1
- GV-NVR System Lite V2 Quick Start Guide x 1