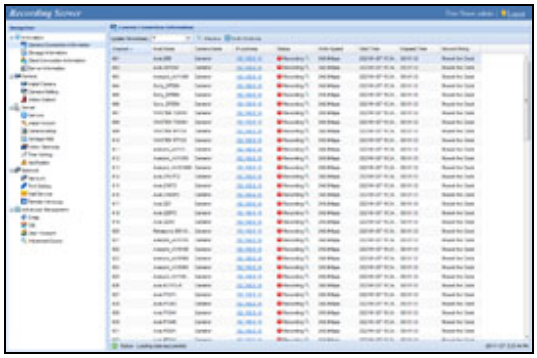
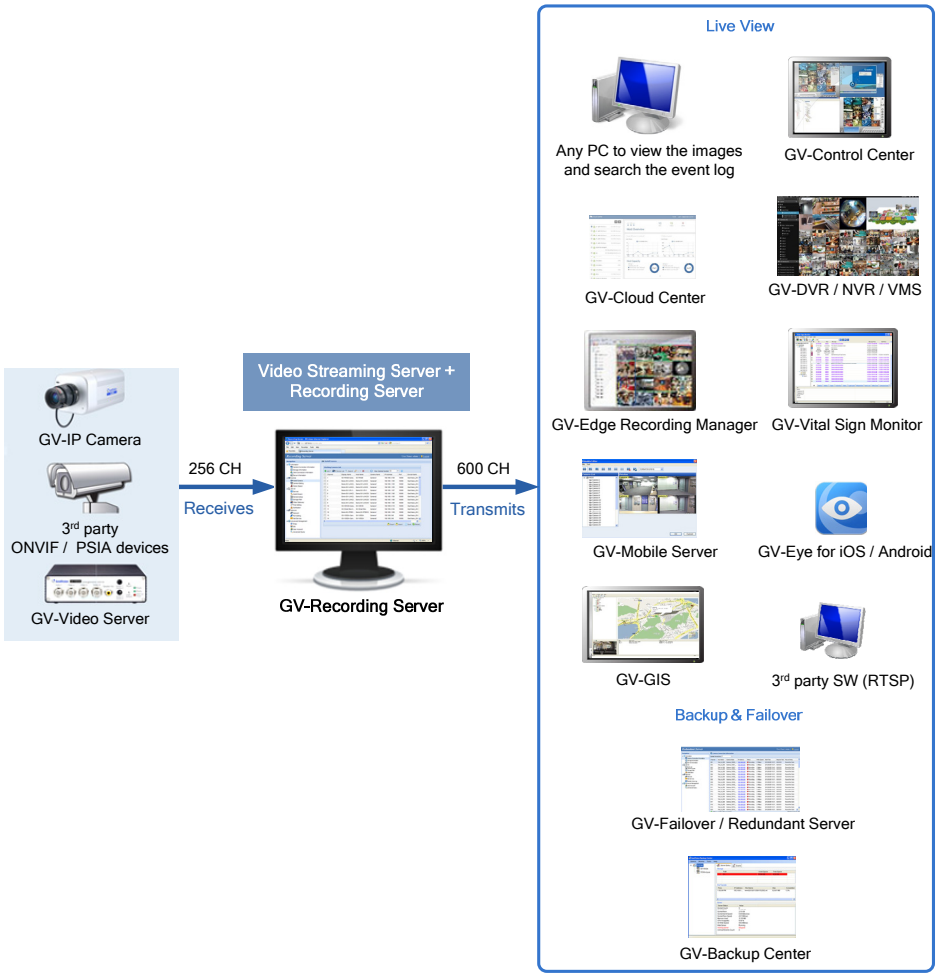
GV-Recording Server



INTRODUCTION

GV-Recording Server is a video streaming server designed for large-scale video surveillance deployments. It can receive and record up to 256 channels from various IP video devices. Through an intuitive Web interface, each IP camera can be configured to record video continuously, upon motion detection, upon I/O trigger or according to a schedule.

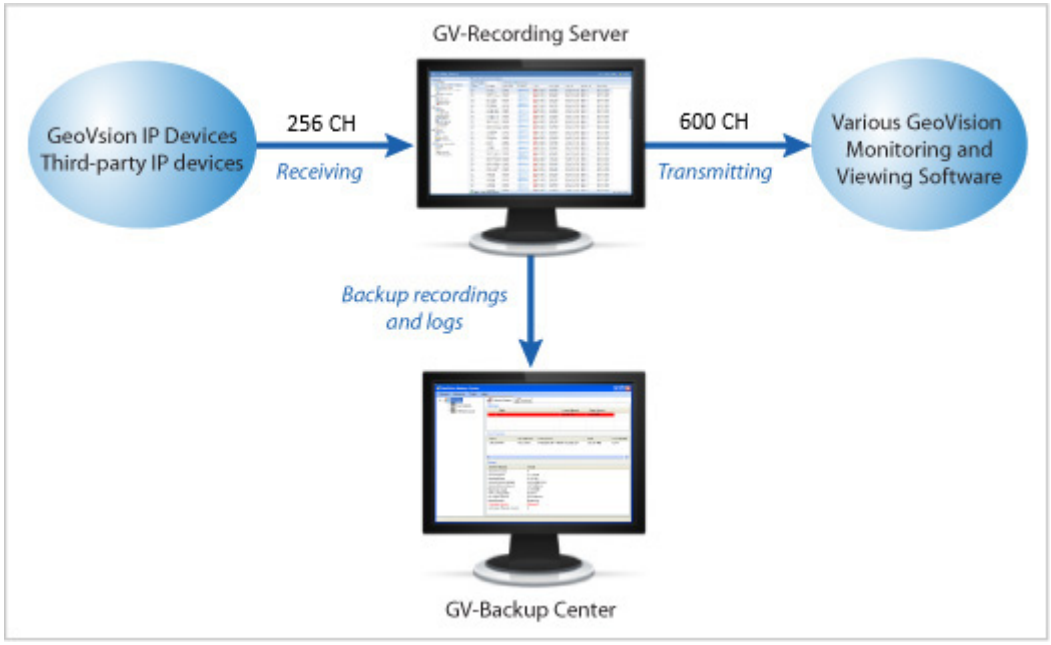
In addition, it can simultaneously distribute up to 600 channels to its clients, which include GV-DVR / NVR / VMS, GV-GIS (geographic information system), GV-Mobile Server, GV-Control Center (central monitoring system), GV-Edge Recording Manager (viewing software) and GV-Eye (mobile app), etc. GV-Recording Server can also send text notifications to one GV-VSM (Vital Sign Monitor) when alert conditions occur. GV-Recording Server empowers users to reach the desired frame rates while reducing the CPU loading and the bandwidth usage of IP video devices significantly.



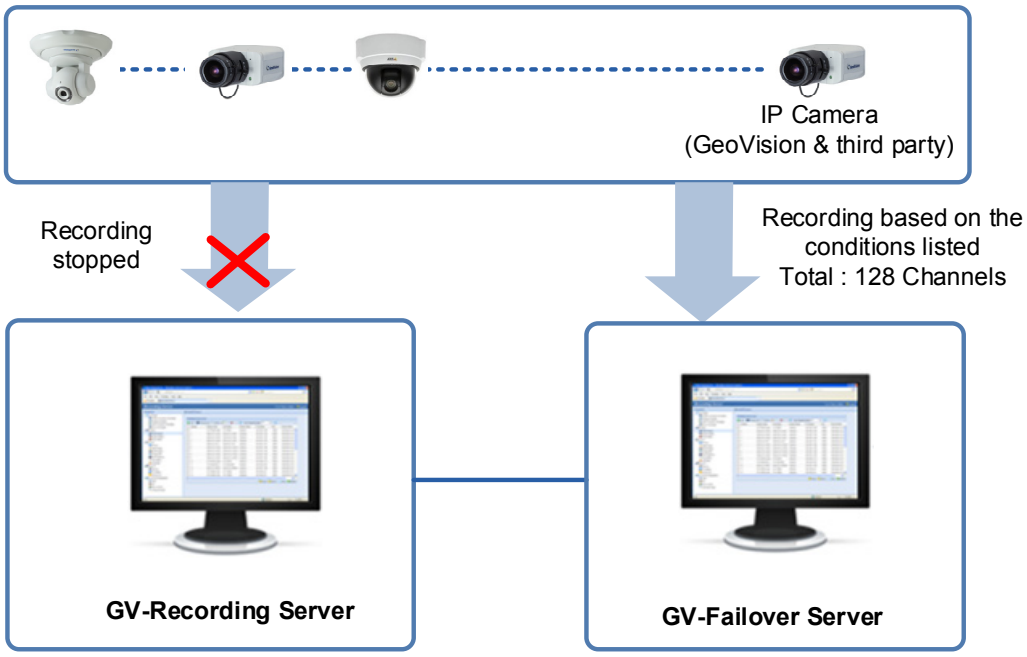
In some areas or countries, you may like to install 3G wireless Internet module (e.g. GPRS/UMTS) on the GV-Video Server or GV-Compact DVR but have a problem in obtaining a public IP address from the ISP. The Passive connection method of GV-Recording Server can solve the public IP issue by accepting the connection request from the GV-Video Server or GV-Compact DVR, and then distribute the video streaming to clients.

GV-Recording Server provides users with a secure and affordable remote backup solution with its support for GV-Backup Center, GV-Failover Server and GV-Redundant Server.

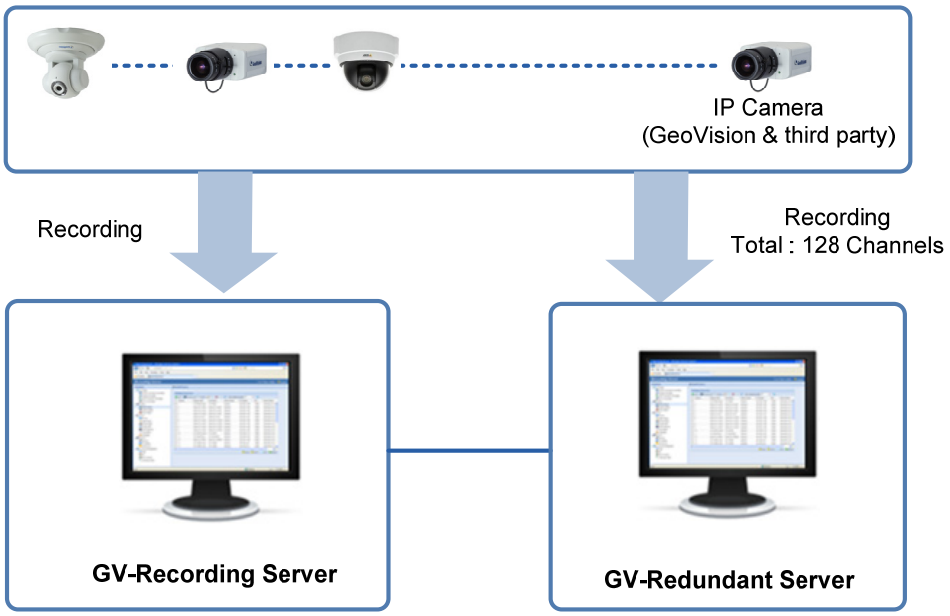
GV-Backup Center can automatically store another copy of recordings and logs to an offsite location. If data are lost at where the GV-Recording Server is located, the recording data remain safe in a different location. A GV-Backup Center can only connect to one GV-Recording Server at a time.



GV-Failover Server is a video backup server that records up to 128 IP streams from the GV-Recording Server when any of the following conditions occurs: (1) the GV-Recording Server starts up without recording; (2) the file recycling fails; (3) there is an error in the hard drive; (4) the connection between the GV-Recording Server and IP cameras fails; (5) the GV-Recording Server fails to operate properly.
GV-Failover Server currently does not support CH129~256 of GV-Recording Server.



Similar to GV-Failover Server, GV-Redundant Server is also a video backup server. The main difference is that it keeps an extra copy of recordings from up to 128 IP channels connected to the GV-Recording Server. GV-Redundant Server currently does not support CH129~256 of GV-Recording Server.



Note: Passive connection only for up to 128 channels and is currently not supported for GV-IP devices to GV-Failover Server / Redundant Server.

Features

- Simultaneous receiving and recording of up to 256 IP channels
- Distributing of up to 600 IP channels of video to clients
- Video gateway between IP devices and receiving clients (GV-DVR / NVR / VMS, GV-Control Center, GV-GIS, GV-Mobile Server, Multi View, GV-Edge Recording Manager and GV-Eye)
- Support for third-party IP video devices (such as Sony, Axis, VIVOTEK, Panasonic, HikVision, Arecont Vision)
- Support for ONVIF, PSIA and RTSP protocols
- Different recording policies for each channel to record continuously, upon motion detection, upon I/O trigger or by schedule (recording upon I/O trigger is only for GV-IP devices)
- Video playback using Remote ViewLog
- Web interface to remotely configure and monitor GV-Recording Server using Internet Explorer, Firefox, Google Chrome and Safari
- Passive and active connection methods with IP video devices (Passive connection only for up to 128 channels and is only supported by GV-IP devices)
- Solution for Mobile DVR (GV-Video Server, GV-Compact DVR) to obtain a public IP address
- Bandwidth monitoring
- Two-way audio communication (only for GV-IP devices through active connection)
- Remote event monitoring through GV-Vital Sign Monitor
- Remote backup through GV-Backup Center, GV-Failover Server and/or GV-Redundant Server
- IP device monitoring, event search and remote playback through GV-Cloud Center
- Smart streaming
- Support for live streaming of GV-IP cameras on YouTube
- Support for 31 languages

Minimum System Requirements

OS	64-bit	Windows 7 / 8 / 8.1 / 10 / Server 2008 R2 / Sever 2012 R2
CPU		Core i7 8700, 3.2 GHz
Memory		16 GB Dual Channels
Hard Disk	Installation	1 GB
	OS	32 GB
Browser		• Internet Explorer 8 to 11 • Firefox 26.0 • Google Chrome 31.0.1650.63 • Safari 5.1.7
LAN		Gigabit Ethernet X 1~6
Software		.Net Framework 3.5
Hardware		Internal GV-USB Dongle

Software License

Free License	N/A
Maximum License	256 channels
Increment for Each License	1. GV-IP video devices only: 8, 16, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, 88, 92, 96, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144, 148, 152, 156, 160, 164, 168, 172, 176, 180, 184, 188, 192, 196, 200, 204, 208, 212, 216, 220, 224, 228, 232, 236, 240, 244, 248, 252, 256 IP channels. 2. Third-party IP devices (Includes GV-IP video devices): 8, 16, 32, 36, 40, 44, 48, 52, 56, 60, 64, 68, 72, 76, 80, 84, 88, 92, 96, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144, 148, 152, 156, 160, 164, 168, 172, 176, 180, 184, 188, 192, 196, 200, 204, 208, 212, 216, 220, 224, 228, 232, 236, 240, 244, 248, 252, 256 IP channels.
Optional Combinations	N/A
Dongle Type	Internal

Note: In order to receive 256 channels and transmit up to 600 channels, refer to *Recommended Network Requirements*.

Compatible GV-Software

- **GV-Backup Center:** version 1.1.2 or later
- **GV-Cloud Center:** version 1.0 or later
- **GV-Control Center:** version 3.7.0 or later (V3.6.0 or earlier only support 128 CH)
- **GV-DVR / NVR, Multi View, Multicast:** version 8.5.6 or later (for 64 CH)
- **GV-Edge Recording Manager for Windows:** version 2.0 (V1.0.0 or earlier only support 128 CH)
- **GV-Edge Recording Manager for Mac:** version 1.2.0 (V1.0.0 or earlier only support 128 CH)
- **GV-Eye:** version 2.7.4 or later (V2.7.3 or earlier only support 128 CH)
- **GV-GIS:** version 3.1.1 or later
- **GV-Mobile Server:** version 1.3 or later (for 64 CH)
- **GV-Redundant Server & Failover Server:** version 2.0 [*coming soon*] (V1.1.0.0 or earlier only support 128 CH)
- **GV-Vital Sign Monitor:** version 8.5.9 or later (for 128 CH)
- **GV-VMS:** version 14.10 or later (for 64 CH)

Recommended Hard Disk Requirements

The recommended hard disk requirements for 24 hours of recording are listed as below.

Resolution	Bitrate	Frame rate	Codec	Max. channel per HDD and required HDD size	Required HDD size (recording 256 CH, 24 hrs)	Recommended HDD Requirements
1.3 MP	0.83 Mbps	30 fps	H.265	32 CH / 280 GB	2.3 TB	1 TB 7200 RPM HDD x 8
2 MP	1.6 Mbps			32 CH / 540 GB	4.4 TB	
3 MP	2 Mbps			32 CH / 693 GB	5.6 TB	
4 MP	2.21 Mbps			22 CH / 747 GB	9 TB	1 TB 7200 RPM HDD x 12
5 MP	2.41 Mbps			22 CH / 814 GB	9.8 TB	
8 MP	3.5 Mbps	20 fps		22 CH / 1190 GB	14.3 TB	

Note:

1. The number of hard drives required varies depending on the write speed of the hard drive and the hard disk size required varies depending on the recorded file size. The recommended hard disk requirement is just for your reference.
2. For system efficiency, we recommend the **enterprise-level** hard disk drives with **7200 RPM** at least and average R/W speed above **110 MB/s**. Avoid using desktop-level hard disks which may affect system efficiency.
3. The hard disk requirements above are applicable to GV-DVR / NVR / VMS and GV-IP Devices only.

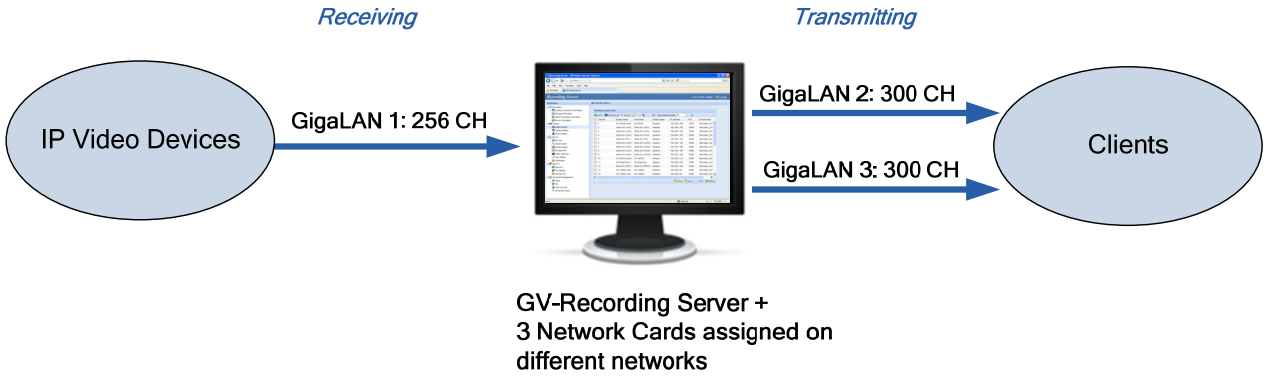
Recommended Network Requirements

The server's transmitting capacity varies depending on the number of Gigabit connections. The number of Gigabit network cards required to receive 256 channels and transmit 600 channels are listed below according to the resolution of the source video.

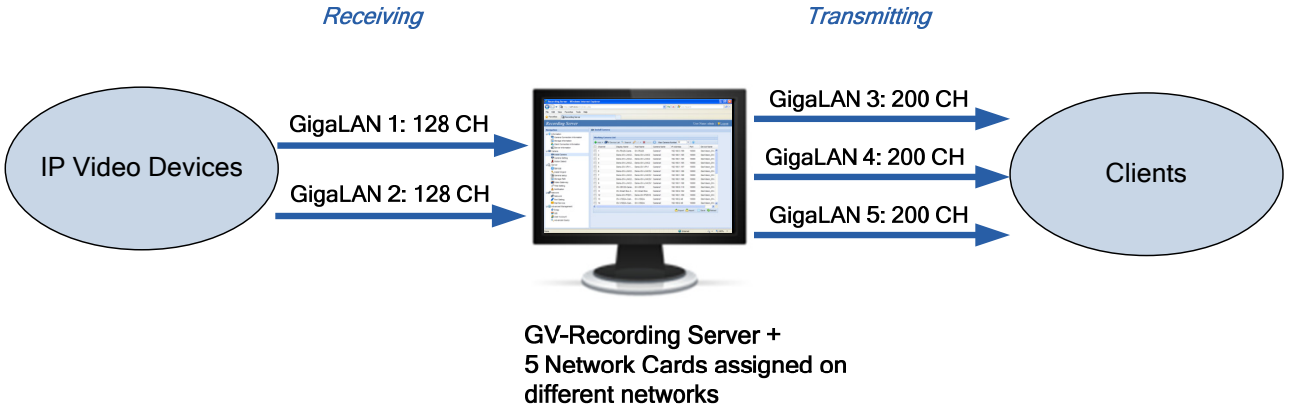
Resolution	Bitrate	Frame rate	Codec	Gigabit Network Cards Required	
				Receiving 256 CH	Transmitting 600 CH
1.3 MP	0.83 Mbps	30 fps	H.265	Gigabit network card x 1 (up to 256 CH per card)	Gigabit network card x 1 (up to 600 CH per card)
2 MP	1.6 Mbps				Gigabit network card x 2 (up to 300 CH per card)
3 MP	2 Mbps				
4 MP	2.21 Mbps				
5 MP	2.41 Mbps			Gigabit network card x 2 (up to 128 CH per card)	Gigabit network card x 3 (up to 200 CH per card)
8 MP	3.5 Mbps	20 fps			

The deployment of Gigabit connections for transmitting and receiving is suggested as illustrated below. Ensure to run every Gigabit connection on a different network in order to reduce the lag on any network connection.

2 / 3 / 4 MP Source Video



5 / 8 MP Source Video



Specifications

Feature	Device
Number of IP Video Device Connections	256 channels
Number of Remote Client Connections	600 channels
Active Connections	Up to 256 channels
Passive Connections	Up to 128 channels (only for GV-IP devices)
3rd Party IP Cameras Support	Yes
Live Viewing	Single live view, multi-channel live view
Recording	Yes (up to 256 channels)
Live Streaming on YouTube	Yes (up to 16 channels using H.264 codec)
Remote Backup	Yes (with GV-Backup Center, GV-Failover Server and GV-Redundant Server)
Protocol	DynDNS, HTTP, HTTPS, ONVIF, PSIA, RTSP, SMTP, SNMP, TCP, UDP, UPnP
E-Mail Notification	Yes (for Active connection lost, passive connection lost, USB protection key removed and inserted, recycling of recorded video, start keep days operation, motion detection, disk full, disk error, I/O trigger, disk removed, recording failure)
SMS Notification	No
2-Way Audio	Yes (only for GV-IP devices through active connection)
GPS support	Yes (only for GV-IP cameras)
Number of Accounts	Up to 1000 accounts
Mobile Phone Support	Yes (With GV-Eye)
Bandwidth Control	No
IE Live View	Yes (up to 16 channels per page)
IE Event Query	Yes
IE I/O Control	No
Language	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

IP Camera Support List

The following camera brands and models have been tested for compatibility with GV-Recording Server.

Arecont Vision	AXIS	GeoVision	HikVision
Panasonic	Sony	VIVOTEK	Panasonic

Compatible Standard and Protocol

GV-Recording Server also allows for integration with all other IP video devices compatible with ONVIF, PSIA standards, or RTSP protocol.

ONVIF	PSIA	RTSP	