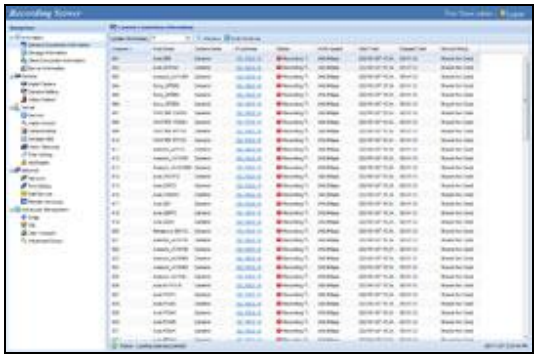
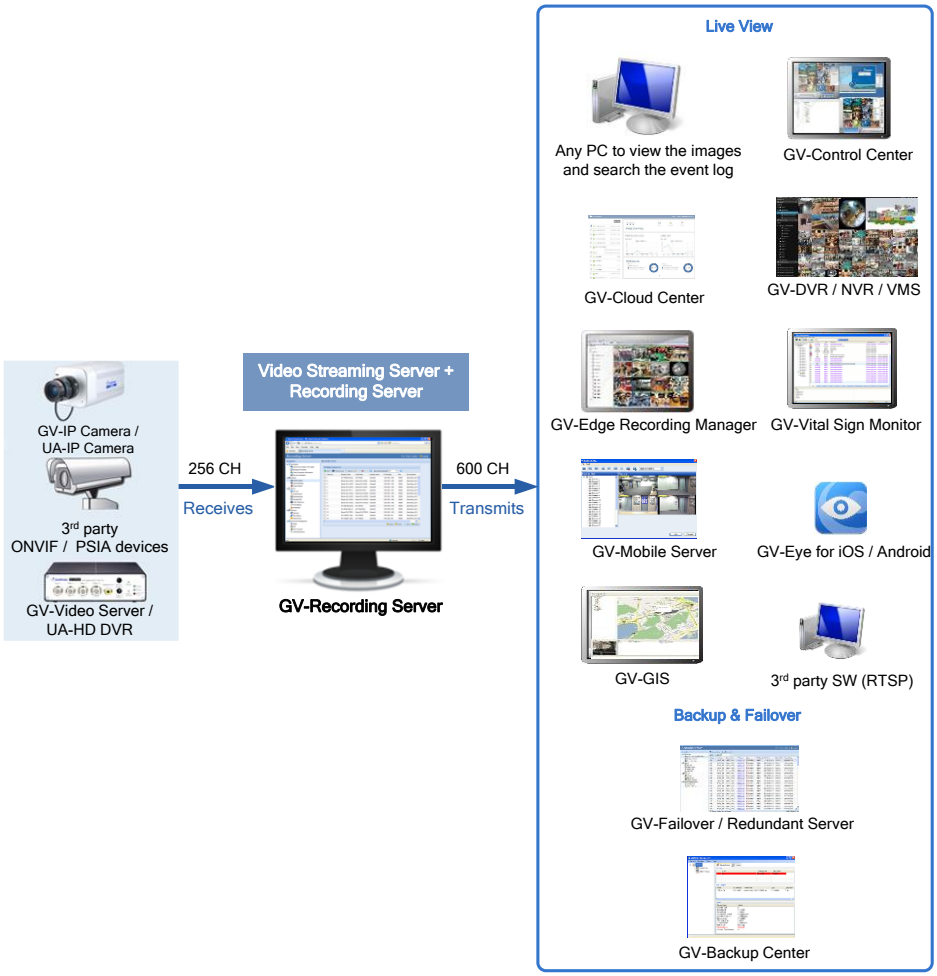
GV-Recording Server



INTRODUCTION

GV-Recording Server is a video streaming server for large-scale surveillance deployments. It has the ability to record up to 256 channels from various IP video sources. Each IP camera can be programmed to record video constantly, upon motion detection, upon I/O trigger or on a schedule, through its intuitive Web interfaces.

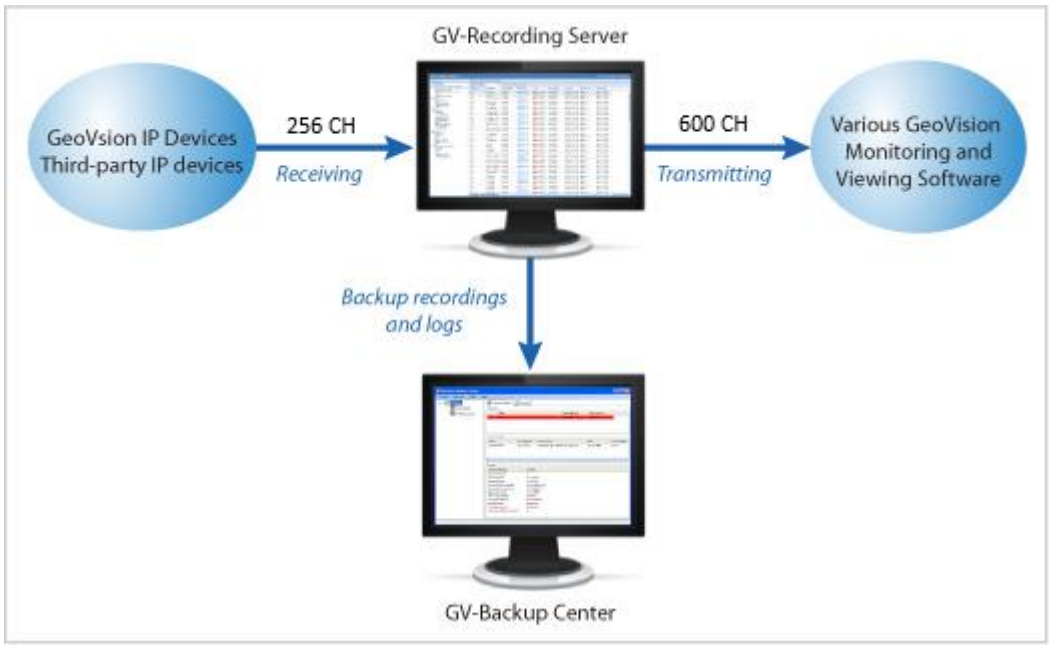
It can also simultaneously distribute up to 600 channels to a variety of GeoVision software, including GV-VMS, GV-NVR, GV-Control Center, GV-Edge Recording Manager and others. The desired frame rates can be achieved while the CPU load and the bandwidth usage of IP video devices are greatly reduced when using GV-Recording Server



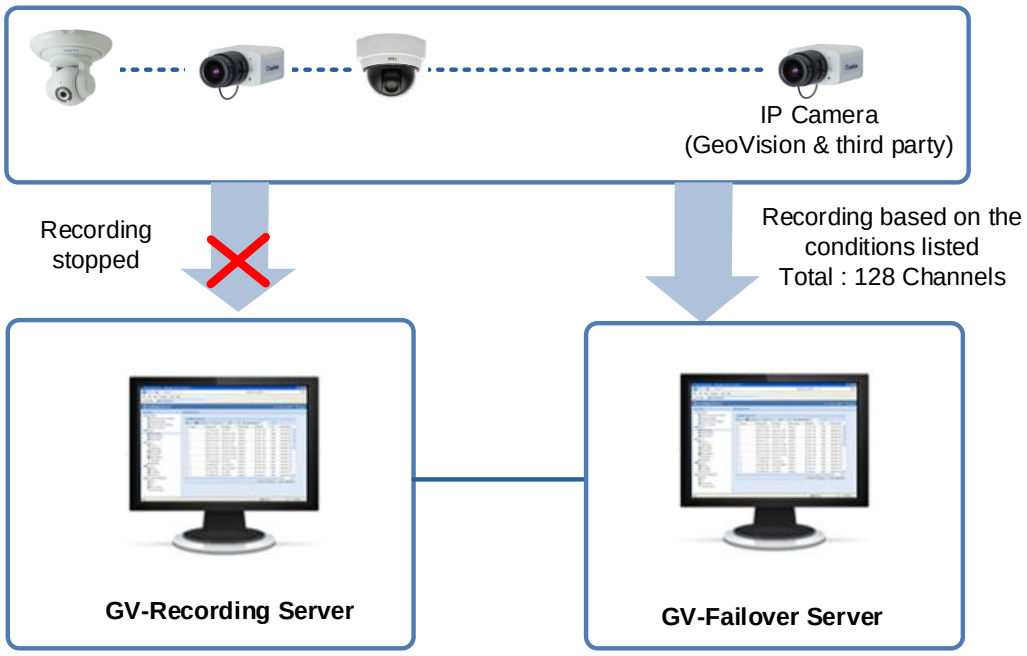
You may want to install a 3G wireless Internet module (e.g. GPRS/UMTS) on GV-Video Server or GV-Compact DVR in some places or countries, but you're experiencing trouble getting a public IP address from your ISP. The GV-Recording Server's Passive connection technique solves the public IP issue by accepting connection requests from these devices and then distributing video streaming to clients.

In addition, with GV-Backup Center, GV-Failover Server and GV-Redundant Server, GV-Recording Server offers a complete secure and affordable remote backup solution.

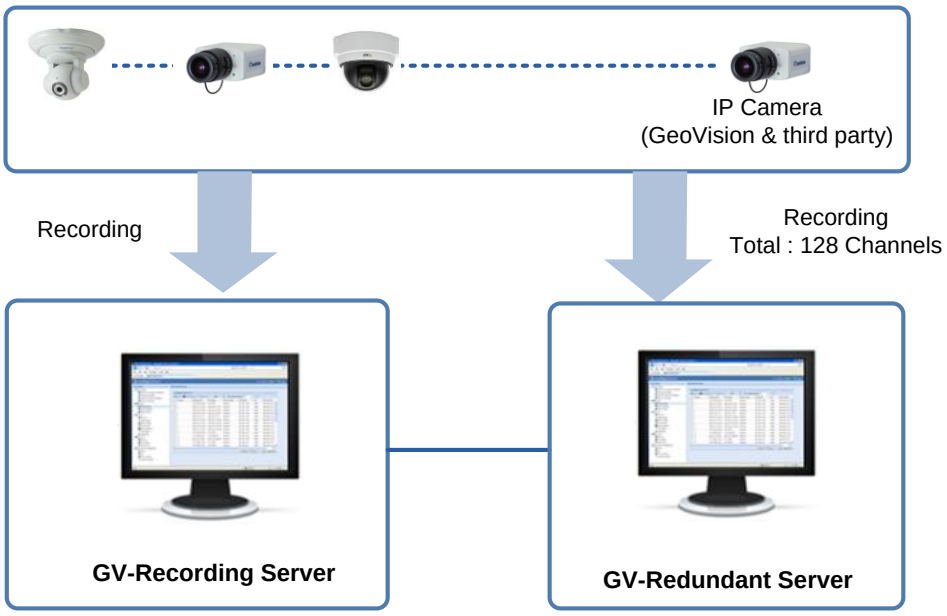
GV-Backup Center can save a copy of recordings to an offsite location automatically. If a disaster strikes the GV-Recording Server's location, the recording data is safely stored elsewhere.



GV-Failover Server is a video backup server that records up to 128 IP streams from GV-Recording Server when any of the following conditions occurs: (1) GV-Recording Server starts up without recording; (2) the file recycling fails; (3) the hard disk fails; (4) the connection between GV-Recording Server and IP cameras fails; (5) GV-Recording Server fails to function properly.



GV-Redundant Server, like GV-Failover Server, is a video backup server. The main distinction is that it keeps an additional copy of recordings from up to 128 IP channels connected to GV-Recording Server.



Note:

1. Passive connection only for up to 128 channels and is currently not supported for GV-IP devices to GV-Failover Server / Redundant Server.
2. GV-Failover Server and GV-Failover Serve currently do not support CH129~256 of GV-Recording Server.

Features

- Up to 256 IP channels recording and up to 600 IP channels distributing
- Video gateway between IP devices and receiving clients (GV-VMS, GV-NVR, GV-Control Center, GV-Edge Recording Manager, GV-Eye and others))
- Support for third-party IP video devices (Sony, Axis, VIVOTEK, Panasonic, HikVision, Arecont Vision), and 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 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 or GV-Redundant Server
- IP device monitoring, event search and remote playback through GV-Cloud Center
- Smart streaming
- Live streaming of GV-IP cameras on YouTube
- Support for 31 languages

Minimum System Requirements

OS	64-bit	Windows 7 / 8 / 8.1 / 10 / 11/ 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 or External 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. 3. **Third-party** or **HD DVR** license for UA-IP devices: In increments of 1 ch
Optional Combinations	N/A
Dongle Type	Internal or External

Note:

1. In order to receive 256 channels and transmit up to 600 channels, refer to *Recommended Network Requirements*.
2. The **HD DVR** license is only supported by GV-Recording Server V2.1.0 or later.
3. The **HD DVR** license is required for connecting UA-HD DVR (only **analog** channels supported).
4. The **third-party** license is required for connecting UA-IP cameras.

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)

Compatible USAVision Products

- **UA-HD DVR:** UA-XVL810, UA-XVL1610, UA-XVR810, UA-XVR1620
- **UA-IP Camera:** UA-B580F3, UA-R500F2, UA-R560F2, UA-R580F2, UA-R800F2

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.

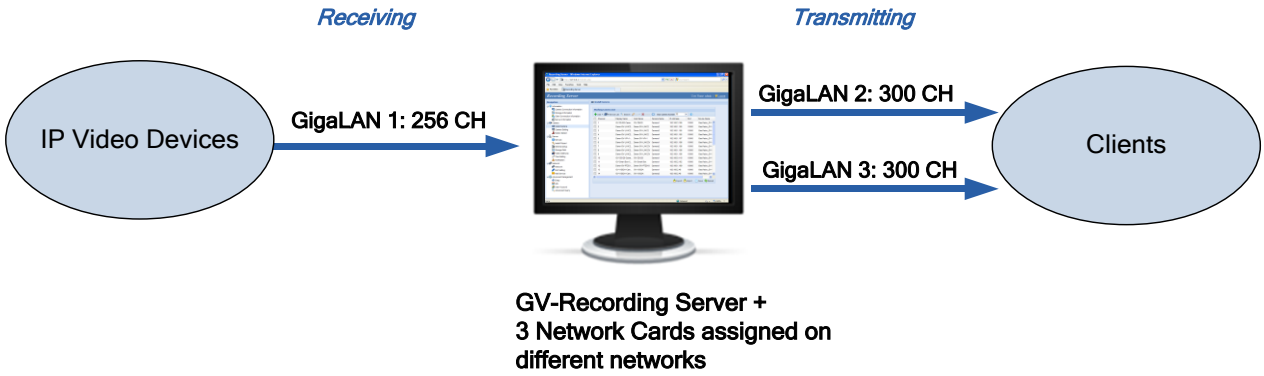
Recommended Network Requirements

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.

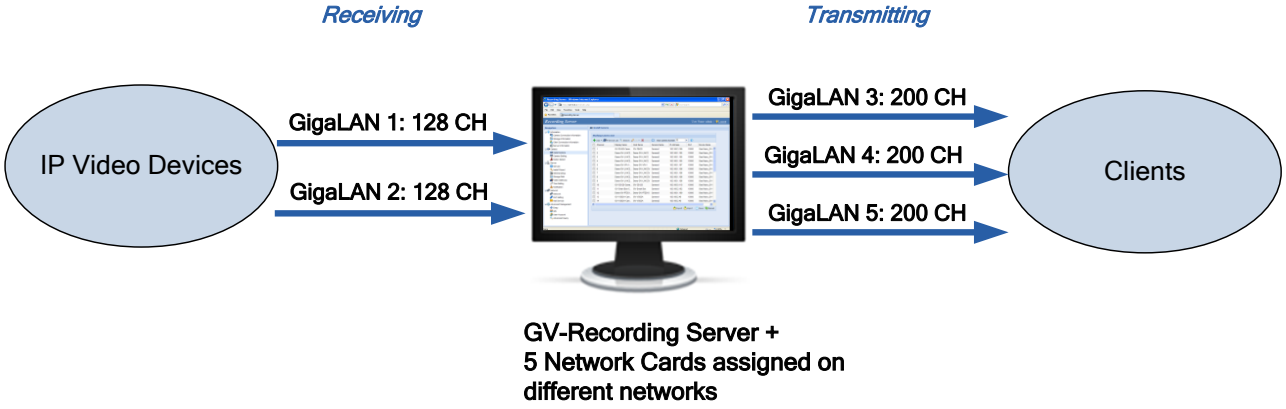
Resolution	Bitrate	Frame rate	Codec	Gigabit Network Cards Required	
				Receiving 256 CH	Transmitting 600 CH
1.3 MP	0.83 Mbps	30 fps	H.265	Gigabit network card x 1 (up to 256 CH per card)	Gigabit network card x 1 (up to 600 CH per card)
2 MP	1.6 Mbps				Gigabit network card x 2 (up to 300 CH per card)
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

Compatible Standard and Protocol

GV-Recording Server can also be used with any other IP video device that supports the ONVIF, PSIA, or RTSP protocols.

ONVIF	PSIA	RTSP	