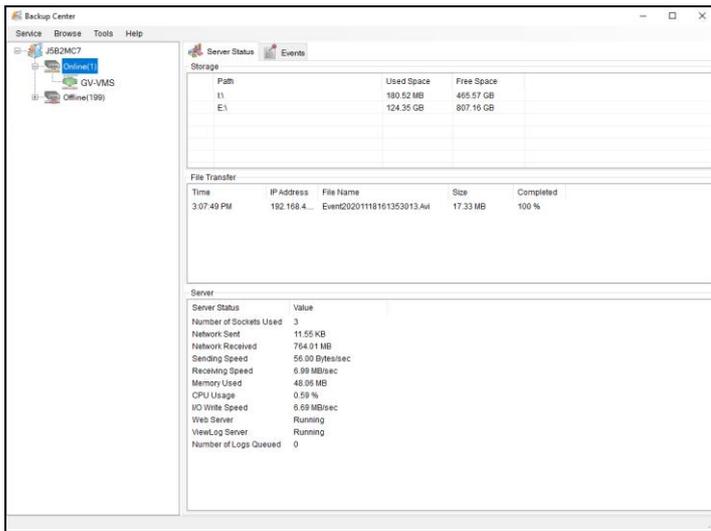
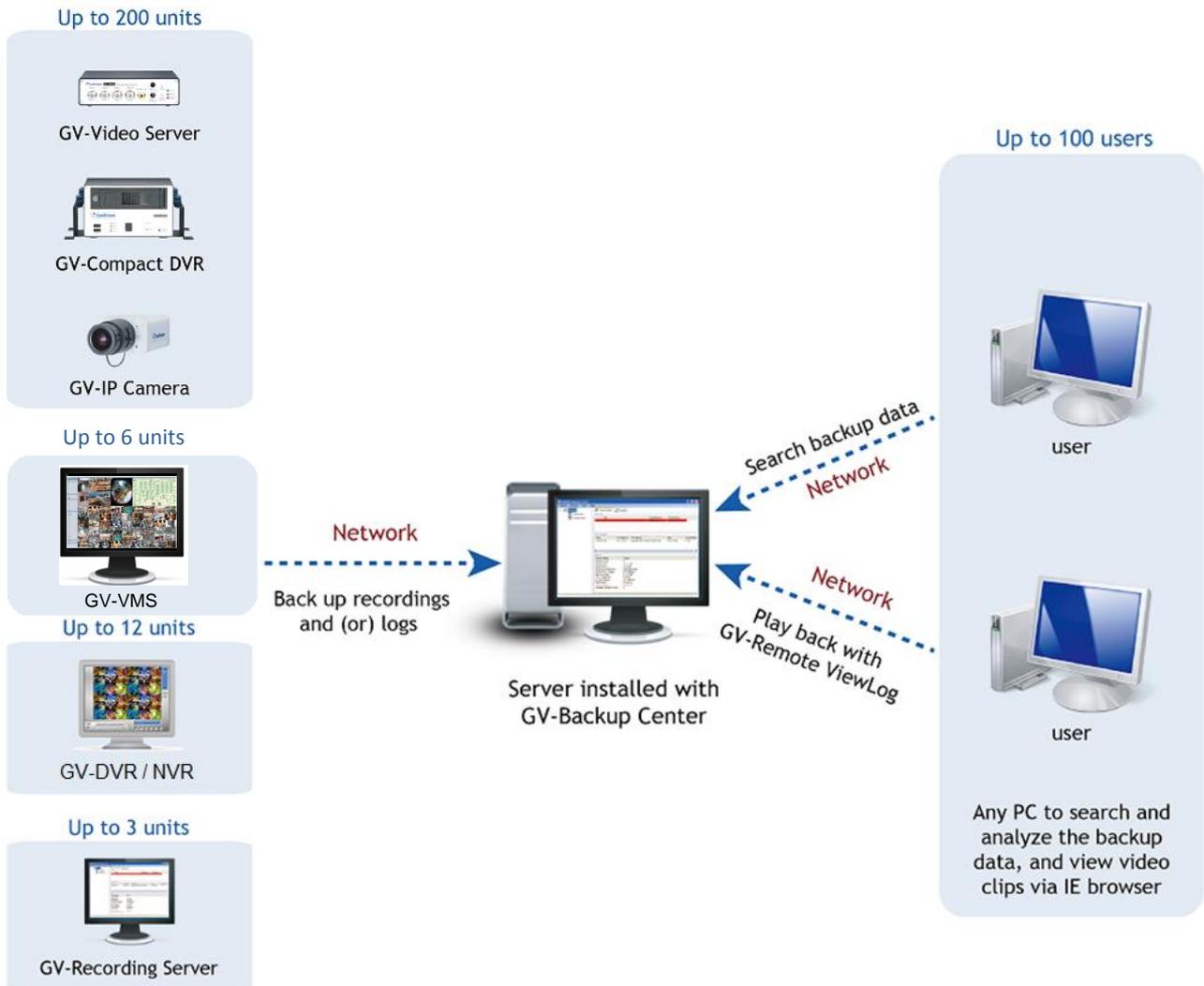


# GV-Backup Center



## INTRODUCTION

GV-Backup Center provides you with a secure and affordable remote backup solution for GV-DVR / NVR, GV-VMS, GV-Recording Server, and GV-IP Devices. GV-Backup Center automatically stores a copy of recordings and logs to an offsite location. If data are lost at the servers and devices, the recording data remain safe in a different location.



## Features

- Remote backup
- Up to 200 units of GV-IP Devices supported
- Up to 12 units of GV-DVR / NVR supported (32 ch per unit)
- Up to 6 units of GV-VMS supported (64 ch per unit)
- Up to 3 units of GV-Recording Server supported (128 ch per unit)
- Up to 10 backup rules for working and non-working days independently for GV-DVR / NVR, GV-VMS and GV-IP Devices
- E-Mail alerts for low disk space, disconnection and file transfer failure
- Online data analysis by Event Count, File Size and Time
- Failover support

## Minimum System Requirements

The following is minimum system requirements for the server to run the GV-Backup Center.

OS	64-bit Windows 10 / Server 2016
CPU	Core 2 Duo, E6600, 2.4 GHz
Memory	2 X 2 GB Dual Channels
Hard Disk	1 GB
Directx	9.0c
Software	.Net Framework 3.5
Browser	Internet Explorer 7.X Mozilla Firefox 4.0 or above Google Chrome 4.0 or above
Hardware	Internal or External GV-USB Dongle

## Software License

Free License	N/A
Maximum License	200 hosts
Increment for Each License	N/A
Optional Combinations	N/A
Dongle Type	Internal or external

**Note:** GV-USB dongle comes in internal and external forms. Internal dongle is recommended for the Hardware Watchdog function, which restarts the PC when Windows crashes or freezes.

## Specifications

Feature	Device
Number of hosts	200 units of GV-IP Devices; OR 12 units of GV-DVR / NVR (32 ch per unit); OR 6 units of GV-VMS (64 ch per unit); OR 3 units of GV-Recording Server (128 ch per unit)
Number of user accounts	100 in total including Supervisors and Users
Backup schedule	Yes for GV-DVR / NVR, GV-VMS, and GV-IP Devices
Backup rules	10 rules for working and non-working days independently for GV-DVR / NVR, GV-VMS and GV-IP Devices
E-mail alert	Low disk space, disconnection, file transfer failure
Disk space recycle	Yes
Keep Day	Definable and unlimited in number
System Log query	Web-based query pages
Video playback	Available through web-based query pages, or Remote ViewLog Playback program
Language	Danish, English, French, German, Hebrew, Hungarian, Italian, Japanese, Polish, Portuguese, Russian, Serbian, Simplified Chinese, Spanish, Traditional Chinese, Turkish

**Note:** All specifications are subject to change without notice.

## Options

Optional Devices	Description
Internal USB Dongle	The USB dongle can provide the Hardware Watchdog function to the GV-Backup Center by restarting the computer when Windows crashes. You need to connect the dongle internally on the motherboard.

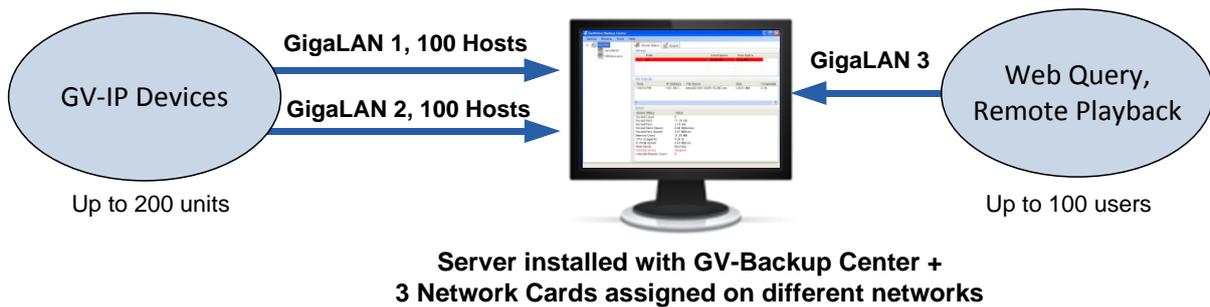
### Network and Hard Disk Requirements for-GV-IP Devices

The server's backup speed and transmitting capacity vary depending on the number of Gigabit connections. The number of Gigabit network cards required to receive 200 GV-IP Devices and to support remote access of backed up data are listed below according to the resolution of the source video.

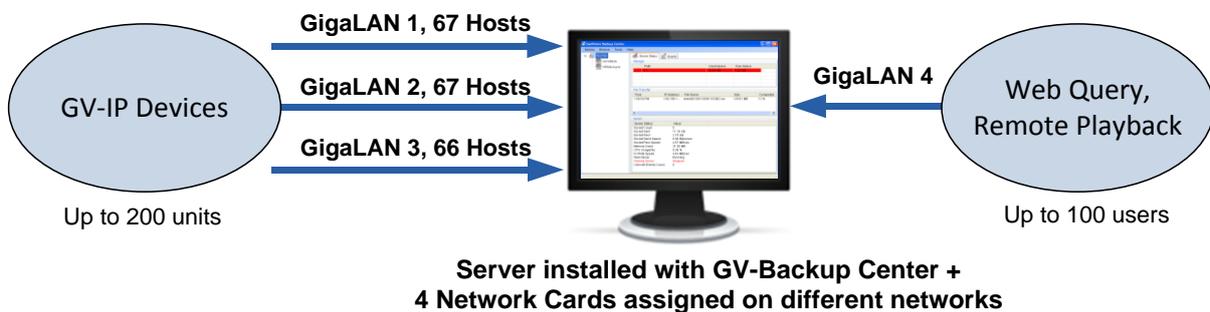
Also note the maximum number of hosts supported by a single hard disk to calculate the number of hard disks required.

Resolution	FPS	Codec	Gigabit Network Cards Required		Max. hosts per HDD
			Receiving 200 GV-IP Devices	For Playback / Web Query access	
1.3 MP	30 fps	H.264	Gigabit network card x 2 (up to 100 hosts per card)	Gigabit Network Card x 1	32 hosts
2.0 MP	30 fps	H.264	Gigabit Network Card x 3 (up to 67 hosts per card)	Gigabit Network Card x 1	21 hosts
3.0 MP	20 fps	H.264	Gigabit network card x 2 (up to 100 hosts per card)	Gigabit Network Card x 1	32 hosts
4.0 MP	15 fps	H.264	Gigabit Network Card x 3 (up to 67 hosts per card)	Gigabit Network Card x 1	24 hosts
5.0 MP	10 fps	H.264	Gigabit Network Card x 3 (up to 67 hosts per card)	Gigabit Network Card x 1	24 hosts

#### 1 MP / 3 MP Source Video



#### 2 MP / 4 MP / 5MP Source Video



## Recommended Network and Hard Disk Requirements for Connecting to GV-Recording Server

When GV-Backup Center connects with GV-Recording Server, it will back up the recordings of all the channels connected to the GV-Recording Server. Each GV-Backup Center supports up to 3 units of GV-Recording Server, with each GV-Recording Server being connected under an independent LAN.

### Hard Disk Requirements for Receiving Data from GV-Recording Server

To back up all 128 channels of recordings from GV-Recording Server, it is recommended to install the following number of hard disks in the GV-Backup Center, in addition to the 1 hard disk used for installing GV-Backup Center.

Number of GV-Recording Server	Data Size / Ch	Total Size	Recommended HDD requirements in GV-Backup Center	Time required to transfer all files
1 unit (128 ch)	162 MB	20736 MB	1 TB 7200RPM HDD x 2 (SATA3)	03:10 min
2 units (256 ch)	162 MB	41472 MB	1 TB 7200RPM HDD x 3 (SATA3)	03:37 min
3 units (384 ch)	162 MB	62208 MB	1 TB 7200RPM HDD x 5 (SATA3)	04:18 min

#### Note:

- The results were obtained using SATA3 hard disks with an average write speed of 100 MB/s.
- The results were obtained with video clip time set to 5 minutes. If the time required to transfer all files exceeds the clip time, file transferring to GV-Backup Center may not be able to keep up with recording.

### Maximum Bit Rate Supported by GV-Recording Server (based on 128 Ch)

To back up the recordings of 128 channels, it is required to meet the maximum bit rate supported by the GV-Recording Server and the maximum number of channels assigned to a single hard disk in the GV-Recording Server.

Res.	Codec	Clip Time	Bit Rate / Ch	Round-the-Clock and Motion Detection	
				Max. Ch per HDD in GV-Recording Server	Recommended HDD requirements
1.3 MP	H.264	1 min	5.39 Mbps	7 Ch	1 TB 7200RPM HDD x 19 (SATA3)
		5 min	5.82 Mbps	7 Ch	1 TB 7200RPM HDD x 19 (SATA3)
2.0 MP	H.264	1 min	5.33 Mbps	7 Ch	1 TB 7200RPM HDD x 19 (SATA3)
		5 min	5.96 Mbps	7 Ch	1 TB 7200RPM HDD x 19 (SATA3)
3.0 MP	H.264	1 min	5.4 Mbps	7 Ch	1 TB 7200RPM HDD x 19 (SATA3)
		5 min	5.9 Mbps	7 Ch	1 TB 7200RPM HDD x 19 (SATA3)

### Maximum Channels Supported by GV-Recording Server (based on 30 fps)

To back up the recordings with full 30 fps, it is required to meet the maximum number of channels supported by the GV-Recording Server and the maximum number of channels assigned to a single hard disk in GV-Recording Server.

Res.	Codec	Clip Time	FPS	Total Ch	Round-the-Clock and Motion Detection	
					Max. Ch per HDD in GV-Recording Server	Recommended HDD requirements
1.3 MP	H.264	1 min	30	108	6 Ch	1 TB 7200RPM HDD x 18 (SATA3)
		5 min	30	113	6 Ch	1 TB 7200RPM HDD x 19 (SATA3)
2.0 MP	H.264	1 min	30	56	3 Ch	1 TB 7200RPM HDD x 19 (SATA3)
		5 min	30	59	3 Ch	1 TB 7200RPM HDD x 20 (SATA3)
3.0 MP	H.264	1 min	30	78	4 Ch	1 TB 7200RPM HDD x 20 (SATA3)
		5 min	30	80	4 Ch	1 TB 7200RPM HDD x 20 (SATA3)

## Recommended Network and Hard Disk Requirements for Connecting to GV-VMS

When GV-Backup Center connects with GV-VMS, it will back up the recordings of all the channels connected to the GV-VMS. Each GV-Backup Center supports up to 6 units of GV-VMS, with each GV-VMS being connected under an independent LAN.

### Maximum Bit Rate & Channels supported by GV-VMS (based on 64 ch)

Bit rate affects the data size. The higher the bit rate is, the bigger the data size will be; thus, the time required to transfer files to GV-Backup Center will also be longer. The chart below shows the maximum number of channels that can be assigned to one HDD in GV-VMS in order to transfer all files to GV-Backup Center within 5 minutes.

Res.	Clip Time	FPS	Bit Rate / Ch	Data Size / Ch	Total Size	Round-the-Clock and Motion Detection		Time required to transfer all files
						Max. Ch per HDD in GV-VMS	Recommended HDD requirements	
1.3 MP	5 min	30	5.17 Mbps	199 MB	12736 MB	22 Ch	1 TB 7200RPM HDD x 3 (SATA3)	02:30 min
2.0 MP	5 min	30	6.94 Mbps	261 MB	16704 MB	22 Ch	1 TB 7200RPM HDD x 3 (SATA3)	03:10 min
3.0 MP	5 min	20	9.14 Mbps	350 MB	22400 MB	13 Ch	1 TB 7200RPM HDD x 5 (SATA3)	03:58 min
4.0 MP	5 min	15	11.74 Mbps	443 MB	28352 MB	7 Ch	1 TB 7200RPM HDD x 9 (SATA3)	04:26 min
5.0 MP	5 min	10	11.81 Mbps	443 MB	28352 MB	7 Ch	1 TB 7200RPM HDD x 9 (SATA3)	04:30 min
8.0 MP	5 min	25	12.98 Mbps	487 MB	31168 MB	7 Ch	1 TB 7200RPM HDD x 9 (SATA3)	04:52 min
12.0 MP	5 min	15	13.06 Mbps	490 MB	31360 MB	7 Ch	1 TB 7200RPM HDD x 9 (SATA3)	04:49 min

#### Note:

1. The results were obtained using SATA3 hard disks with an average write speed of 100 MB/s.
2. The results were obtained with video clip time set to 5 minutes. If the time required to transfer all files exceeds the clip time, file transferring to GV-Backup Center may not be able to keep up with recording.

## Compatible GeoVision Software

Product	Software Version
GV-DVR / NVR	8.5.5 or later
GV-Recording Server	1.2.4 or later
GV-VMS	16.10.3 or later

## Non-Compatible IP Devices

Except the following non-compatible IP Devices, the above mentioned GeoVision software, GeoVision IP cameras, Video Servers and Compact DVR all support GV-Backup Center.

Product	
GV-Box IP Camera	GV-BX2600
GV-Target Mini Fixed Dome	GV-EFD1100 Series
	GV-EFD2100 Series
	GV-EFD4700 Series
	GV-EFD2101
	GV-EFD3101
	GV-EFD5101
GV-Target Mini Fixed Rugged Dome	GV-EDR1100 Series
	GV-EDR2100 Series
	GV-EDR4700 Series
GV-Mini Fixed Rugged Dome	GV-ADR Series / GV-TDR Series
GV-Target Box Camera	GV-EBX1100 Series
	GV-EBX2100 Series
GV-Eyeball Dome	GV-EBD Series
GV-Target Vandal Proof IP Dome	GV-EVD2100
	GV-EVD3100
	GV-EVD5100
GV-Vandal Proof IP Dome	GV-AVD Series / GV-TVD Series
	GV-VD8700
GV-Target Bullet Camera	GV-EBL2101
	GV-EBL2111
	GV-EBL3101
GV-Speed IP Dome	GV-SD2322-IR
	GV-SD2722-IR
	GV-SD3732-IR
	GV-SD200-S
GV-Thermal IP Camera	GV-TM0100
GV-Virtual Reality IP Camera	GV-VR360