GeoVision inc
The Vision of Security

Quick Start Guide

GV-Recording Server V1.1.1

Thank you for purchasing GV-Recording Server. This guide is designed to assist the new user in getting immediate results from the GV-Recording Server. For advanced information on how to use the GV-Recording Server, please refer to *GV-Recording Server User's Manual* on Software DVD.

2012/11
English

RSV111-QG-B

1 Introduction

Welcome to the *GV-Recording Server Quick Start Guide*. This quick guide will guide you through the basic installation of GV-Recording Server, connecting to IP video devices and distributing to clients. For the detailed user manual, see the *GV-Recording Server User Manual* on the Software DVD.

Packing List

- Software DVD
- GV-USB Dongle

The GV-USB Dongle supports connection with up to 128 IP channels. GV-Video Gateway dongle comes in two types, internal and external dongles. GV-Recording Server dongle comes in internal type. The following dongle options are available:

GV-Video Gateway Only (without recording functions):

- **Third-party IP devices (includes GV-IP devices):** 128 IP channels.

GV-Recording Server (full functions available):

- **GV-IP video devices only:** 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 IP channels.
- **Third-party IP devices (includes GV-IP devices):** 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 IP channels.

Note: To see how to install the internal GV-USB Dongle, refer to *Appendix D. Install the Internal USB Dongle* in the *GV-Recording Server User Manual*.

2 System Requirements

Minimum System Requirements

Servers meeting the following minimum system requirements have the capacity to receive up to 128 channels and transmit up to 300 channels with the image settings of 1280 x 1024 resolution, 30 fps and H.264 / MPEG4 codec for each channel.

OS	64-bit Windows 7 / Server 2008
CPU	Core i5 750, 2.67 GHz
Memory	4 GB Dual Channels (without recording) 6 GB Dual Channels (with recording)
Hard Disk	1 GB (for installation)
Browser	• Internet Explorer 8.0.7600.16385 • Internet Explorer 9.00.7930.16406 • Firefox 3.6.13 • Google Chrome 9.0.597.94 • Safari 5.33.19.4
LAN	Gigabit Ethernet X 1
Hardware	• GV-Video Gateway: Internal or external USB Dongle • GV-Recording Server: Internal USB Dongle

Note:

1. Memory required varies depending on the number of channels and resolution of videos received.
2. The 1 GB hard disk requirement is for installation of GV-Recording Server only. To see hard disk requirements for recording, refer to *Recommended Hard Disk Requirements*.
3. In order to receive 128 channels and transmit up to 300 channels with the image settings of 1280 x 1024 resolution, 30 fps and JPEG codec for each channel, Gigabit Ethernet x 6 is required.
4. Firefox, Google Chrome and Safari users can only access single live view with Quick Time player and cannot play back recorded files.

Optimal System Requirements

Servers meeting the optimal system requirements have the capacity to perform one of the following:

- Receive up to 128 ch and transmit up to 300 ch with the image settings of 1280 x 1024 resolution, 30 fps and JPEG codec for each channel. OR
- Receive up to 128 ch and transmit up to 128 ch with the image settings of 1920 x 1080 resolution, 30 fps and JPEG codec for each channel. OR
- Receive up to 128 ch and transmit up to 128 ch with the image settings of 2048 x 1536 resolution, 20 fps and JPEG codec for each channel. OR
- Receive up to 128 ch and transmit up to 300 ch with the image settings of 1280 x 1024 or 1920 x 1080 resolution, 30 fps and H.264 / MPEG4 codec for each channel. OR
- Receive up to 128 ch and transmit up to 300 ch with the image settings of 2048 x 1536 resolution, 20 fps and H.264 codec for each channel.

OS	64-bit Windows 7 / Server 2008
CPU	Core i7 920, 2.67 GHz
Memory	6 GB Dual Channels (without recording) 8 GB Dual Channels (with recording)
Hard Disk	1 GB (for installation)
Browser	• Internet Explorer 8.0.7600.16385 • Internet Explorer 9.00.7930.16406 • Firefox 3.6.13 • Google Chrome 9.0.597.94 • Safari 5.33.19.4
LAN	Gigabit Ethernet X 6
Hardware	• GV-Video Gateway: Internal or external USB Dongle • GV-Recording Server: Internal USB Dongle

Note:

1. Memory required varies depending on the number of channels and resolution of videos received.
2. The 1 GB hard disk requirement is for installation of GV-Recording Server only. To see hard disk requirements for recording, refer to *Recommended Hard Disk Requirements*.
3. Users of Firefox, Google Chrome and Safari can only access single live view with QuickTime player and cannot play back recorded files.

Recommended Hard Disk Requirements

The recommended hard disk requirements are listed as below.

Resolution	Frame rate	Codec	Motion	Round-the-Clock		
			Max. channel per hdd	Max. channel per hdd and required hdd capacity	Hdd capacity required (Recording 128 ch, 24 hr)	Hdd requirements for 24 hr recording (7200RPM hdd, SATA3)
1.3 M	30 fps	H.264 / MPEG4	10 ch	32 ch / 2.5 TB	10 TB	3 TB hdd x 4
		JPEG	N/A	8 ch / 2.7 TB	43.2 TB	3 TB hdd x 16
2.0 M	30 fps	H.264	7 ch	21 ch / 2.2 TB	13.5 TB	3 TB hdd x 7
		JPEG	N/A	5 ch / 2.5 TB	64 TB	3 TB hdd x 26
3.0 M	20 fps	H.264	10 ch	32 ch / 3 TB	12 TB	3 TB hdd x 4
		JPEG	N/A	4 ch / 2 TB	64 TB	3 TB hdd x 32

Note:

1. The number of hard drive required varies depending on the write speed of the hard drive and the hard disk size required varies depending on the recorded file size and bitrate. The recommended hard disk requirement is just for your reference.
2. Motion detection is not supported when codec is set to JPEG.

Network Requirements

The server's transmitting capacity varies depending on the number of Gigabit connections:

- 1 Gigabit connection: Transmits up to 75 channels.
- 2 Gigabit connections: Transmit up to 150 channels.
- 3 Gigabit connections: Transmit up to 225 channels.
- 4 Gigabit connections: Transmit up to 300 channels.

Note: The data above was determined with the image settings of 1280 x 1024 resolution, 13.5 Mbps bitrate, 30 fps and JPEG codec for each channel. The network requirements may vary depending on the bit rate of the streams.

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.

GV-Recording Server + 6 Network Cards assigned on different networks

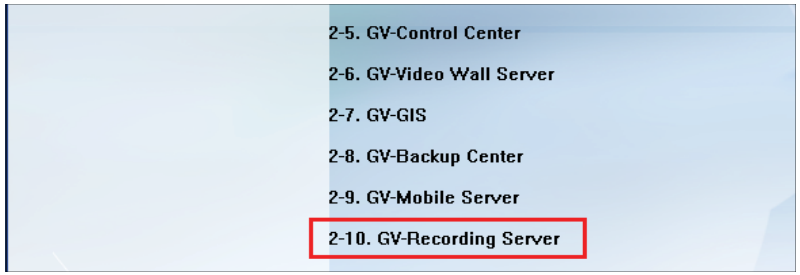
Compatible Versions of GeoVision Applications

- **GV-System, GV-Control Center, Multi View, Multicast**: version 8.4 or later. GV-System V8.4 only supports single streaming from the GV-Recording Server. GV-System V8.5 can support dual streaming from the GV-Recording Server.
- **GV-GIS**: version 3.0 or later.

3 Installation

Installing the GV-Recording Server

1. Insert GV-USB Dongle and Software DVD to a dedicated computer or server. A window appears.
2. To install USB driver, select **Install or Remove GeoVision GV-Series Driver** and click **Install GeoVision USB Devices Driver**.
3. To install .Net Framework, select **Download Microsoft .NET Framework 3.5**.
4. To install GV-Recording Server, select **Install GeoVision Paid Software** and then select **GV-Recording Server**.

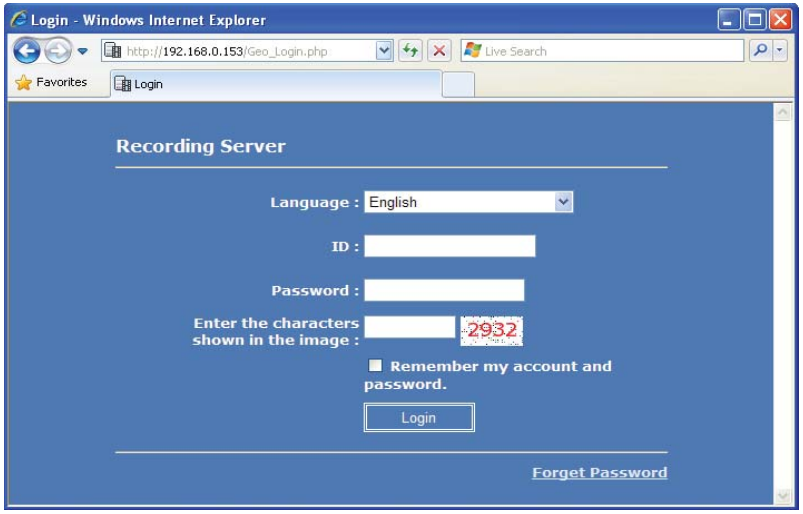


Starting the GV-Recording Server

After installing GV-Recording Server, the GV-Recording Server icon 

will appear in the system tray. Follow the steps below to access the Web interface of GV-Recording Server.

1. The default **HTTP** port is 80 and the **Command** port is 20000. To customize the port number, right-click the GV-Recording Server icon and select **Configure**.
2. Right-click the GV-Recording Server icon and select **Start Service**.
3. After the GV-Recording Server icon turns green, right-click the icon again and select **Access Web Interface**. You can also access the Web interface from a remote computer by typing the IP address in the Internet browser. The Web interface login page appears.



4. Type the **ID** and **Password**. The default login name and password for the Administrator are **admin**.
5. Type the verification number shown in the image.
6. Click **Login**. The GV-Recording Server Web interface is now displayed.

For more details, see *2.2 Starting the GV-Recording Server* in the *GV-Recording Server User Manual*.

Note:

1. To enable the image updating in Internet Explorer, you must set your browser to allow ActiveX Controls and perform a one-time installation of GeoVision's ActiveX component onto your computer.
2. If the GV-Recording Server is installed behind a firewall or router, you may need to open these default ports: HTTP port 80, server connection port (Active connection port) 11000 and passive connection port 50000, remote playback (Remote ViewLog) port 5552.

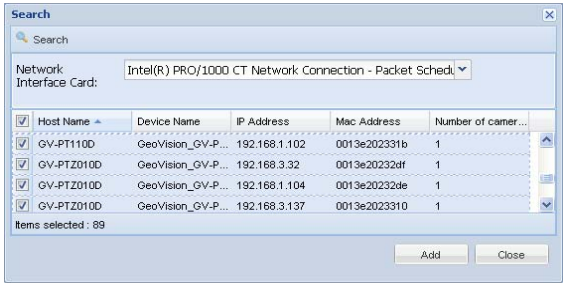
4 Connecting to IP Devices

When logging in the GV-Recording Server for the first time, the Install Wizard will be prompted to help you add IP video devices, assign storage path to store recorded files and start connections to IP devices.

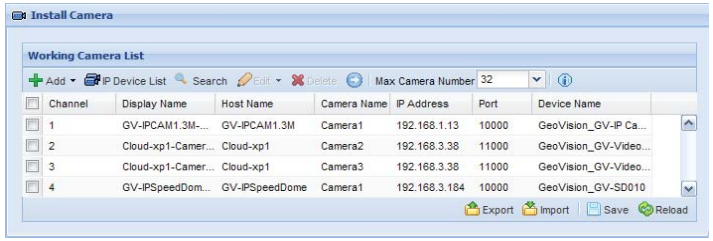
Note: To start the Install Wizard manually, click **Install Wizard** under the Server section in the left menu.

Adding IP Video Devices

1. When the Install Wizard is launched, the GV-Recording Server automatically detects available IP video devices under LAN. This dialog box appears.



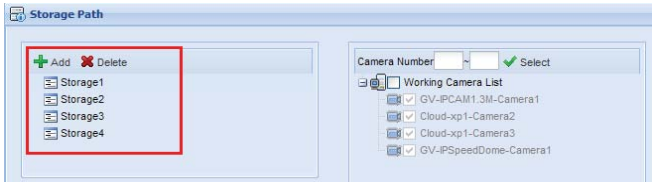
2. If you have multiple network interface cards, use the drop-down list to select one and click **Search**.
3. Select the IP video devices you want to establish active connection with.
4. Click **Add** and map the device to a channel. The Working Camera List appears.



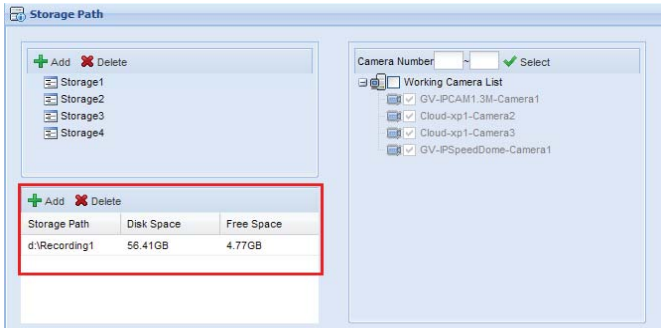
5. The GV-Recording Server will try to connect to the devices using **admin** as the default ID and password. To connect with other ID and password, select the camera, click the **Edit** button Edit and select **Host Setting**. In the dialog box, select **Change ID and Password**, type a new ID and password and click **OK**.
6. Click **Save** and click **Next Page**.

Assigning Storage Paths

1. In the Storage Path page, click the **Add** button to add a new storage folder in a different disk drive, or select an existing storage folder.



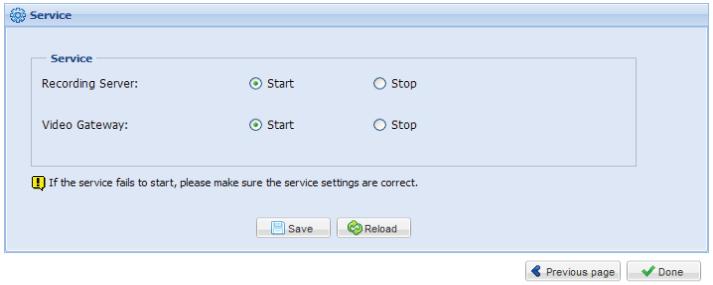
2. Use the default storage path, or click the **Add** button to select a new storage path.



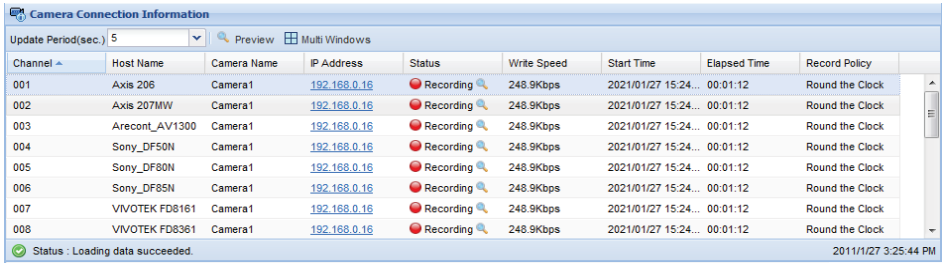
3. In the Working Camera List section, type a range of camera number and click the **Select** button. You can also select the **Working Camera List** checkbox to select cameras individually. Videos of the cameras selected will be recorded to the storage path indicated.
4. To specify a recycle threshold, select **Recycle** and type a minimum free space. When the remaining free space falls below the threshold, the oldest files will be overwritten.
5. Click **Save** and click **Next Page** at the lower-right corner of the page.

Starting Service

1. In the Service page, to be able to receive and record IP channels, select **Start** for Recording Server.
2. To enable the video gateway to transmit video to clients, select **Start** for Video Gateway.



3. Click **Save** and click **Done**. The Camera Connection Information page appears and shows the connection status of the camera added.

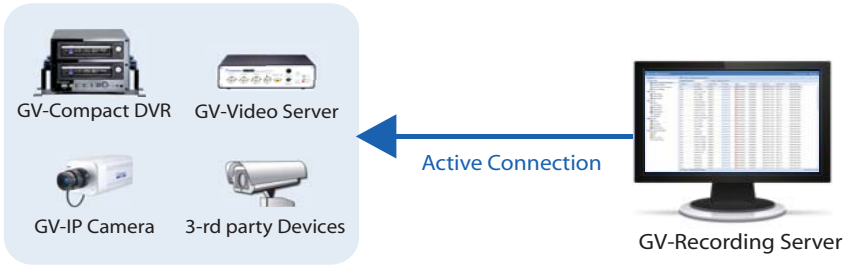


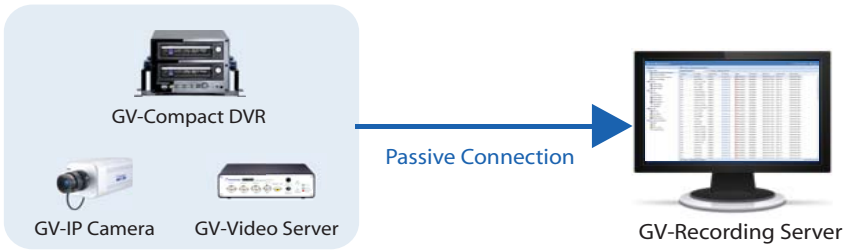
After adding camera, refer to *5.2.2 Camera Setting* in the *GV-Recording Server User Manual* to see how to customize camera settings such as setting video attributes, recording policy and recording schedule.

Note: The GV-Recording Server is compatible with the following third-party IP device brands: **Arecont Vision**, **AXIS**, **HikVision**, **Panasonic**, **Sony**, **VIVOTEK** and protocols: **ONVIF**, **PSIA**, **RTSP**. To see the supported models for each brand, refer to the Supported IP Camera List at http://www.geovision.com.tw/english/4_21.asp. To see how to add IP devices using protocols, refer to *5.2.1 Install Camera* in the *GV-Recording Server User Manual*.

5 Active and Passive Mode

There are two ways to establish connection with IP video devices, **active connection** where GV-Recording Server initiates the connection and **passive connection** where the GV-IP video device initiates the connection. IP devices added with the Install Wizard introduced in section 3 is using active connection.





Note:
1. Passive connection is only supported for GV-IP devices.
2. Two-way audio communication is only supported for GV-IP devices through active connection.

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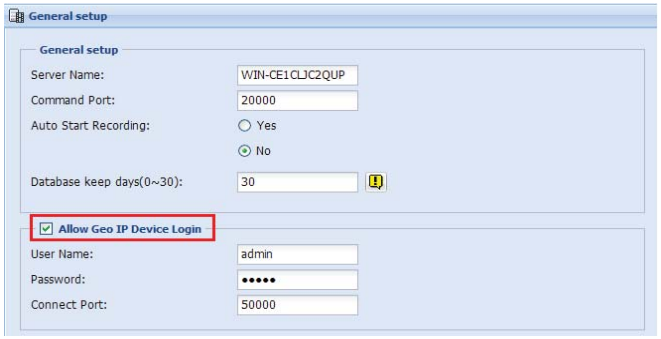
Passive Connection

To create passive connection, the GV-Recording Server must be configured to allow connections from GV-IP video devices.

To allow passive connection on GV-Recording Server:

1. In left menu, select **General Setup**.
2. Select **Allow Geo IP Device Login**. The default ID and Password to log onto the GV-Recording Server is **admin**, and the default port value is 50000. If you change the ID and Password, they must match the same settings configured on the GV-IP device.

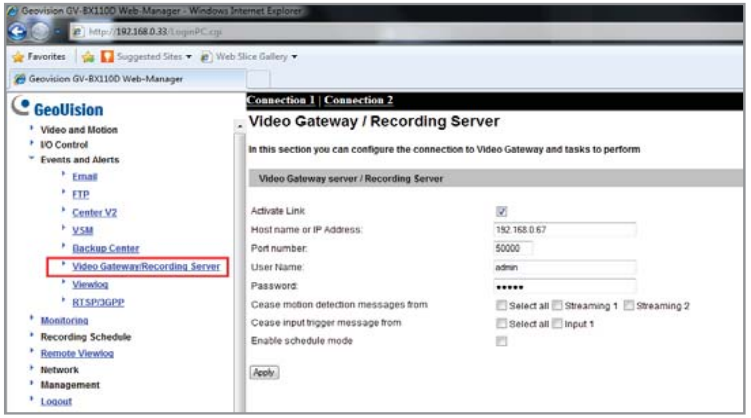


3. Click **Save**.

To access GV-Recording Server on GV-IP devices:

The GV-IP device must also be configured to access the GV-Recording Server.

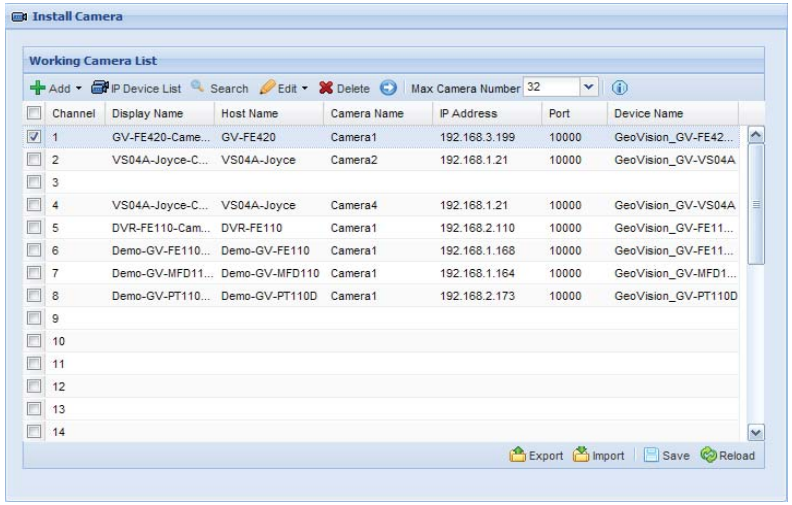
1. Access the **Video Gateway / Recording Server** setting page on the Web interface of the GV-IP device.

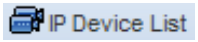


2. Select **Activate Link**.
3. Type IP address or domain name of the GV-Recording Server.
4. Keep default port number as 50000. Otherwise modify the port number to match the connect port specified in General Setup page on the GV-Recording Server.
5. Type **User Name** and **Password** to log onto the GV-Recording Server. These user name and password must match the settings configured on the GV-Recording Server. The default values for both login username and password are **admin**.
6. Click **Apply** to start connection. When the connection is established, the following message will be displayed at the bottom of the Web interface.

To start passive connection on GV-Recording Server:

1. On the GV-Recording Server, select **Install Camera** in the left menu. This dialog box appears.



2. Click the **IP Device List** button  on the Working Camera List. The passive connection is listed in the **Host List**.

3. Click **Add** and select a channel. The IP device will be added to the Working Camera List.
4. Click **Save**.
5. In the left menu, click **Service** and select **Start** to enable the Recording Server and Video Gateway services.
6. Click **Save** to start services.

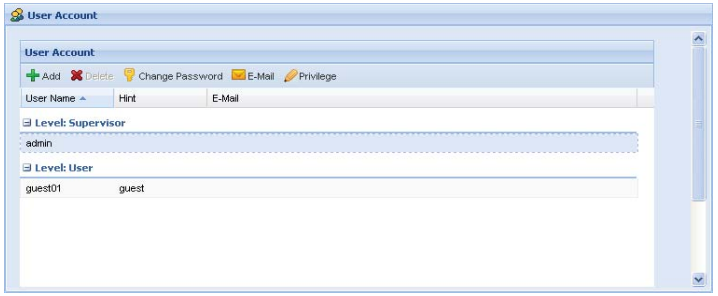
6 Distributing to Clients

The GV-Recording Server can simultaneously transmit up to 300 channels to clients. User accounts can be created for clients to access GV-Recording Server through Web interface. In addition, GV-System, Multi View, and GV-Control Center can be configured to receive streaming from GV-Recording Server.

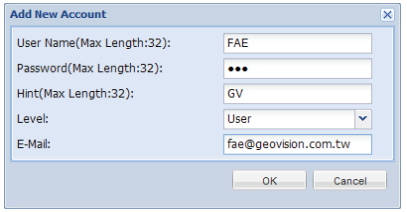
Web Interface through User Account

You can create up to 1000 User and Supervisor accounts to access GV-Recording Server. The Supervisor accounts have full access to GV-Recording Server, and you can set up different level of access rights for the User accounts.

1. In the left menu, click **User Account**. This dialog box appears.



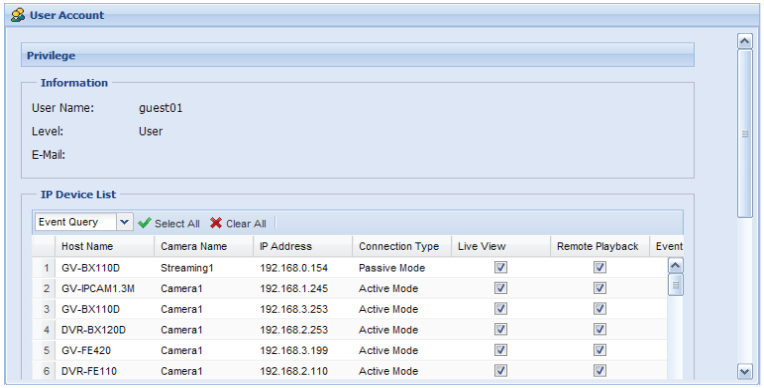
2. Click the **Add** button  . This dialog box appears.



3. Type the **User Name, Password** and a password **Hint** for the account.
4. Use the **Level** drop-down list to select **Supervisor** or **User**.
5. Type an e-mail address for the account. When you forget the password, the password can be sent to your e-mail account using the Forget Password link in the login page.

6. Click **OK** to return to the User Account List.
7. To set access rights, select a user account and click the **Privilege** button 

. The cameras listed in the IP Device List are displayed.



8. Select the checkboxes to allow the user to access the **Live View**, **Remote Playback** and **Event Query** of the camera.
9. To access the Web interface in User Mode, type the user account's User Name and Password in the GV-Recording Server login page.

For details on User Mode, see *Chapter 6 User Mode* in the *GV-Recording Server User Manual*.

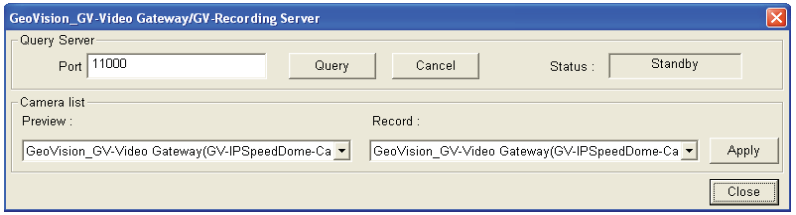
Connecting with the GV-System

You need to configure the GV-System to access video streaming from the GV-Recording Server.

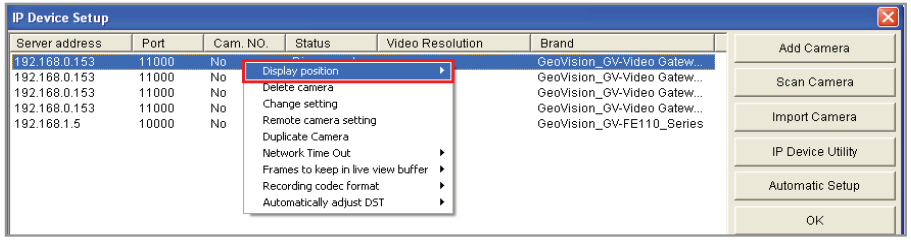
1. On the main screen of GV-System, click the **Configure** button, select **System Configure**, select **Camera Install** and select **IP Camera Install**. This dialog box appears.

2. Click the **Add Camera** button. This dialog box appears.

3. Type the IP address or domain name of the GV-Recording Server. Keep default HTTP port as 80 or change to match the HTTP port configured in GV-Recording Server. Type the client's username and password. Select **GV-Video Gateway / GV-Recording Server** from the **Device** drop-down list. This dialog box appears.



4. Keep the default communication port of GV-Recording Server as 11000, or modify to match the TCP/IP port on the GV-Recording Server. Click the **Query** button to attempt connection to the GV-Recording Server. When the connection is established, the camera options will be displayed in the **Preview** and **Record** drop-down lists.
5. Select one camera to be connected. The selections in the Preview and Record drop-down lists will be the same.
6. Click **Apply**. The IP camera is added to the list.
7. Click the listed camera, and select **Display Position** to map the IP camera to any channel on the GV-System. After the mapping is complete, the Status column will display “Connected”.



8. Click **OK** to exit all open dialog boxes. The IP camera from the GV-Recording Server is now displayed at specified channel.

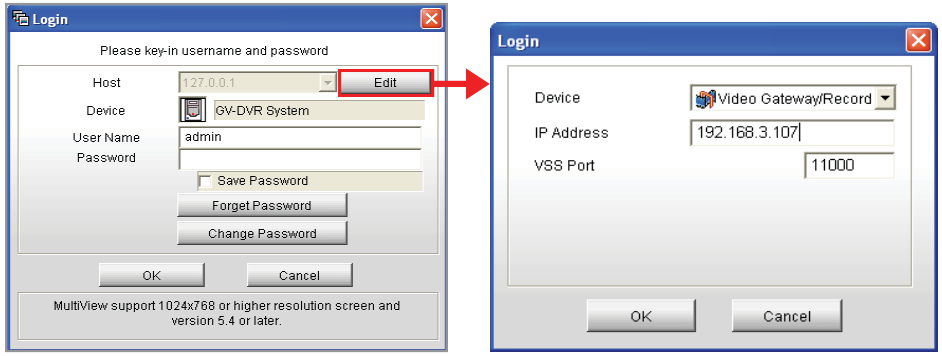
For more details, see *Chapter 7.1 Connecting with GV-System* in the *GV-Recording Server User Manual*.

Connecting with the Multi View

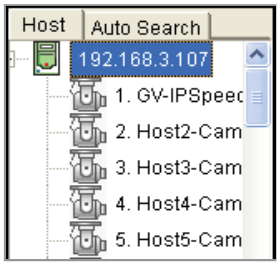
You can install MultiView from the Software DVD or download Multi View through the Web interface of GV-Recording Server. In the left menu, click **Advanced Query** and in the window that pops up, select **Utility Download**. Click the **Download** button of **DMMultiView** to download the program.

After installing the program, you need to log in the Multi View to access video streaming from the GV-Recording Server.

1. In the login dialog box, click the **Edit** button.This dialog box appears.



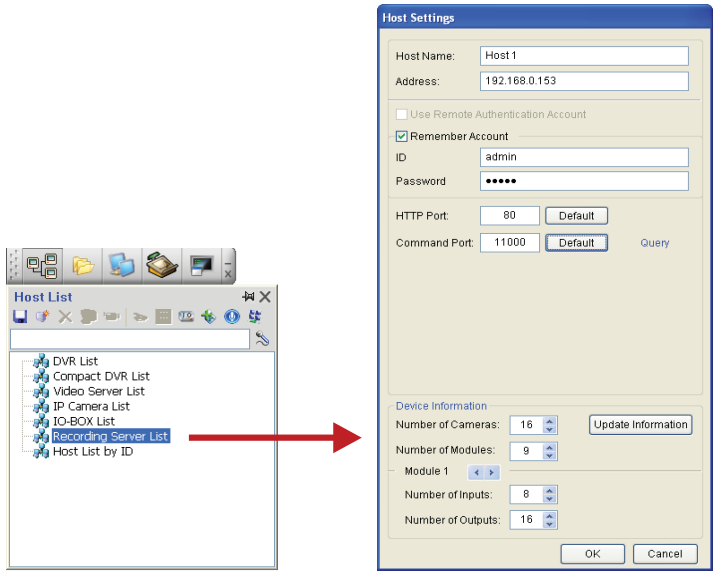
2. Select **Video Gateway / Recording Server** from the Device drop-down list.
3. Type IP address or domain name of the GV-Recording Server.
4. Keep the default VSS Port as 11000; otherwise modify it to match the TCP/IP port on the GV-Recording Server.
5. Click **OK** to return to the login page.
6. Type the client’s username and password created on the GV-Recording Server.
7. Click **OK** to log in.
8. The GV-Recording Server will be listed under the Host list. Drag and drop its IP cameras to the desired channels on the Multi View.



Connecting with the GV-Control Center

You need to configure the GV-Control Center to access video streaming from the GV-Recording Server.

1. On the Host List of GV-Control Center, right-click **Recording Server List** and select **Add Recording server**. The Host Settings dialog box appears.

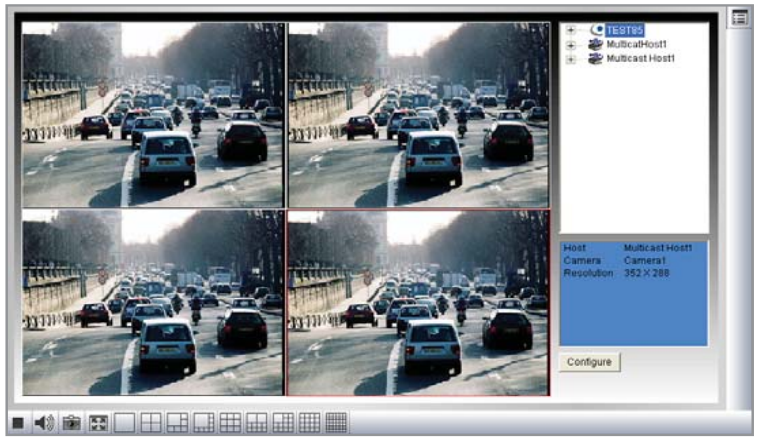


2. Name the host of GV-Recording Server.
3. Type the IP address or domain name of the GV-Recording Server.
4. Type the client's username and password created on the GV-Recording Server.
5. Keep the communication ports as default settings; otherwise modify them to match the HTTP (default value: 80) and TCP/IP (default value: 11000) ports on the GV-Recording Server.
6. Click the **Update Information** button to request the number of cameras from the GV-Recording Server. When the update is complete, the message "*Update system information successfully*" will appear.
7. Click **OK**. The host is created under the Recording Server List.

Connecting with Multicast

The Multicast view allows you to receive video and audio streams from a multicast group. You need to first enable the multicast function. See *5.3.5 Video Gateway* in the *GV-Recording Server User Manual* for details.

In the left menu, click **Advanced Query** and in the window that pops up, select **Utility Download**. Click the **Download** button of **GVMulticastSetup** to download the program.



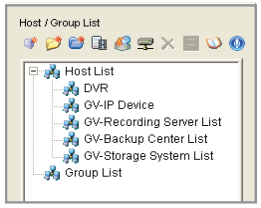
1. The host(s) in the multicast group is displayed automatically. If not, click the **Configure** button, select **General Setup**, select **Multicast** and ensure the settings are correctly configured.
2. Expand the Host folder and drag the cameras to the screen for display. If the host has already set a password, you will be promoted to enter it.
3. To receive audio broadcasting, first ensure a speaker is properly installed. Then click the **Configure** button, select **General Setup**, select **Receive broadcast audio**, and ensure the broadcast IP address and port number are correctly configured.
4. To save the current settings of screen division and camera display for future use, click the **Configure** button, select **Video List Setup**, and select **Export**.

Connecting with the Remote ViewLog

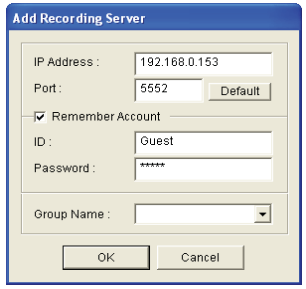
You can install Remote ViewLog from the Software DVD or download Remote ViewLog through the Web interface of GV-Recording Server. In the left menu, click **Advanced Query** and in the window that pops up, select **Utility Download**. Click the **Download** button of **Remote ViewLog** to download the program.

After installing the program, you need to configure the Remote ViewLog to access recorded files from the GV-Recording Server.

1. On the main screen of Remote ViewLog, click the **Tools** button and select **Address Book**. This dialog box appears.



2. Click **Add GV-Recording Server** button . This dialog box appears.



3. Type the **IP address** of the GV-Recording Server. Use the default connection port 5552 or modify to match the settings on GV-Recording Server.
4. Type the **ID** and **Password** of a GV-Recording Server user account.
5. To add the GV-Recording Server to address book under a group, select a **Group Name** or type a new name.
6. Click **OK** and the GV-Recording Server is now added to the address book.

7. Select an IP video device listed under the GV-Recording Server and click the **Connect** button . The ViewLog video player appears and recorded events will be listed for playback.

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