

GV-Edge Recording Manager

User's Manual V1.1





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Naming and Definition

GV-System	GeoVision Analog and Digital Video Recording Software. The GV-System also refers to Multicam System , GV-NVR System and GV-Hybrid DVR System at the same time.
GV-Recording Server	GeoVision video streaming server designed for large-scale video surveillance deployments which can record up to 128 channels while transmitting up to 300 channels.
GV-VMS	GeoVision Video Management System for IP cameras

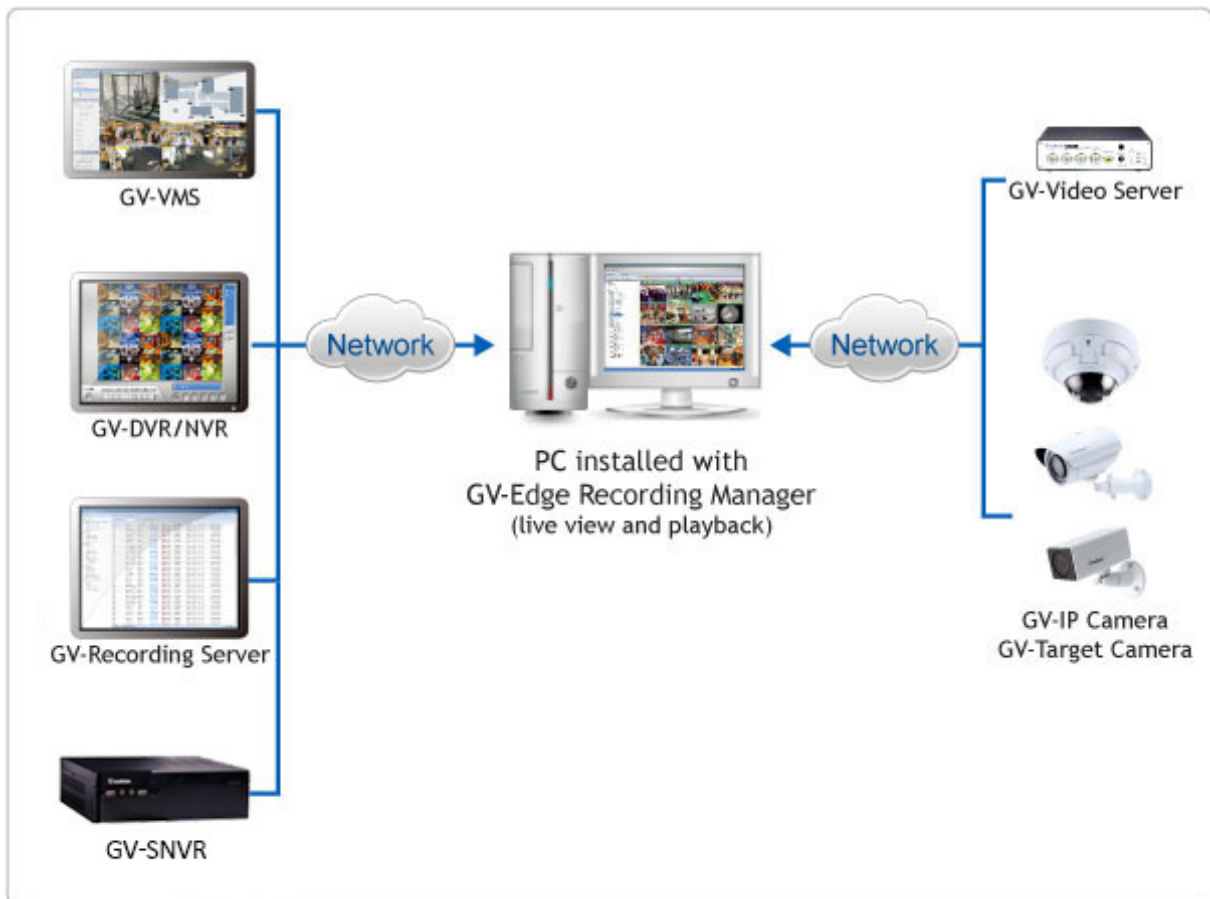
Option

GV-NAS System	GV-NAS System is a Linux-based, network attached storage device designed to store GV-IP Camera and GV-Target Camera recordings.
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Introduction

GV-Edge Recording Manager is a tool designed for recording management of remote GV-IP Cameras and GV-Target Cameras. GV-Edge Recording Manager is an integrated interface from which you can assess live view, assign recording to NAS servers, enable recording, play back videos and view storage space without visiting each host's Web interface. Any connection with hosts can be disabled without affecting or stopping the hosts' normal functioning. GV-Edge Recording Manager also supports live view display and video playback of hosts connected to GV-Video Server, GV-VMS, GV-System, GV-Recording Server and GV-SNVR.

Windows Version



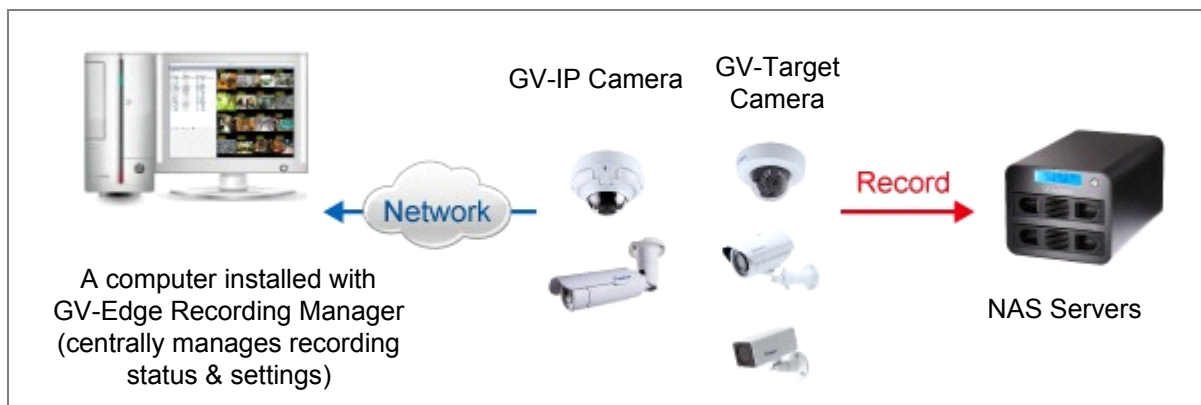
Mac Version



Note: GV-Recording Server is not supported for playback on GV-Edge Recording Server.

Assigning Recording to NAS Servers

Through GV-Edge Recording Manager, you can have GV-IP Cameras or GV-Target Cameras record to NAS servers and also view the storage information such as the occupied space and remaining space. GV-NAS Systems are also available at your choice.



Windows and Mac Support

GV-Edge Recording Manager is supported by the Windows-based and Mac computers. For details on the Windows version, refer to chapters 1 to 7 and for the Mac version, refer to chapters 8 to 14.

Features for the Windows Version

- Display up to 32 channels for free, up to 64 channels using a GV-USB dongle
- On-demand display for dual channels
- Fisheye dewarping
- PIP / PAP view
- Manual snapshot
- Enable and disable host recording for GV-IP Devices
- Host storage assignment to NAS servers for compatible GV-IP Devices
- Remote playback
- Batch IP address assignment for GV-IP Devices
- PTZ control
- Two-way audio
- Import and export of system configuration
- View storage information (free and occupied space) for GV-IP Devices

Features for the Mac Version

- Display up to 32 channels for free
- On-demand display for dual channels
- Fisheye dewarping
- Manual snapshot
- Enable and disable host recording for GV-IP Devices
- Host storage assignment to NAS servers for compatible GV-IP Devices
- Remote playback
- Batch IP address assignment
- PTZ control
- One-way audio
- Import and export of system configuration
- View host storage information (free and occupied space) for GV-IP Devices

System Requirements

Make sure that you install GV-Edge Recording Manager to a computer that meets the following system requirements.

Minimum System Requirements (Windows Version)

OS Supported	32-bit 64-bit	Windows 7 / 8 / 8.1 / Server 2008 R2 / Server 2012 R2
CPU	32 channels (Dual Streams)	Core i3-4130, 3.4 GHz
	64 channels (Dual Streams)	Core i5-4670, 3.4 GHz
Memory	32 channels (Dual Streams)	2 x 1 GB
	64 channels (Dual Streams)	2 x 2 GB
Graphic Card		AGP or PCI-Express, 800 x 600 (1280 x 1024 recommended), 32-bit color

Minimum System Requirements (Mac Version)

OS Supported		OS X 10.9 or later
Mac PC	32 channels (Dual Streams)	Mac mini (Core i5-3210M, 8 GB RAM)

Software License (Windows Version)

Free License	32 channels
Maximum License	64 channels
Increment for Each License	N/A
Optional Combinations	N/A
Dongle Type	Internal or external
Note: It is recommended that you use the internal GV-USB Dongle to have the Hardware Watching function which restarts the PC when Windows crashes or freezes.	

Supported GV-IP Devices and Software

GV-IP Devices		Supported Version
GV-IP Camera		V3.00 or later
GV-IP Speed Dome	GV-SD220	V1.04 or later
	GV-SD220-S	
GV-Target Camera		V1.02 or later
GV-Video Server	GV-VS11	V1.03 or later
	GV-VS12	V1.07 or later
	GV-VS14	V1.01 or later
GV-NVR System	GV-SNVR0400F	V1.10 or later for Windows version
	GV-SNVR1600	V1.10 or later for Windows version
GV-Software		Supported Version
GV-Recording Server		V1.2.4.0 or later
GV-System (GV-DVR/ NVR)		V8.5.9.0 or later for Windows version
GV-VMS		V14.10 or later
Note: <ol style="list-style-type: none"> Recording to GV-NAS Systems is only supported by GV-IP Camera and GV-Target Camera of the specified versions. Files recorded to GV-NAS Systems are stored in the MPEG4 format and those recorded to memory cards are stored in the AVI format. 		
IMPORTANT: Currently, the Mac version of GV-Edge Recording Manager does not support GV-System (GV-DVR / NVR). It will support GV-System (GV-DVR / NVR) in the near future.		

Windows Version



Chapter 1 Overview

1.1 Main Window

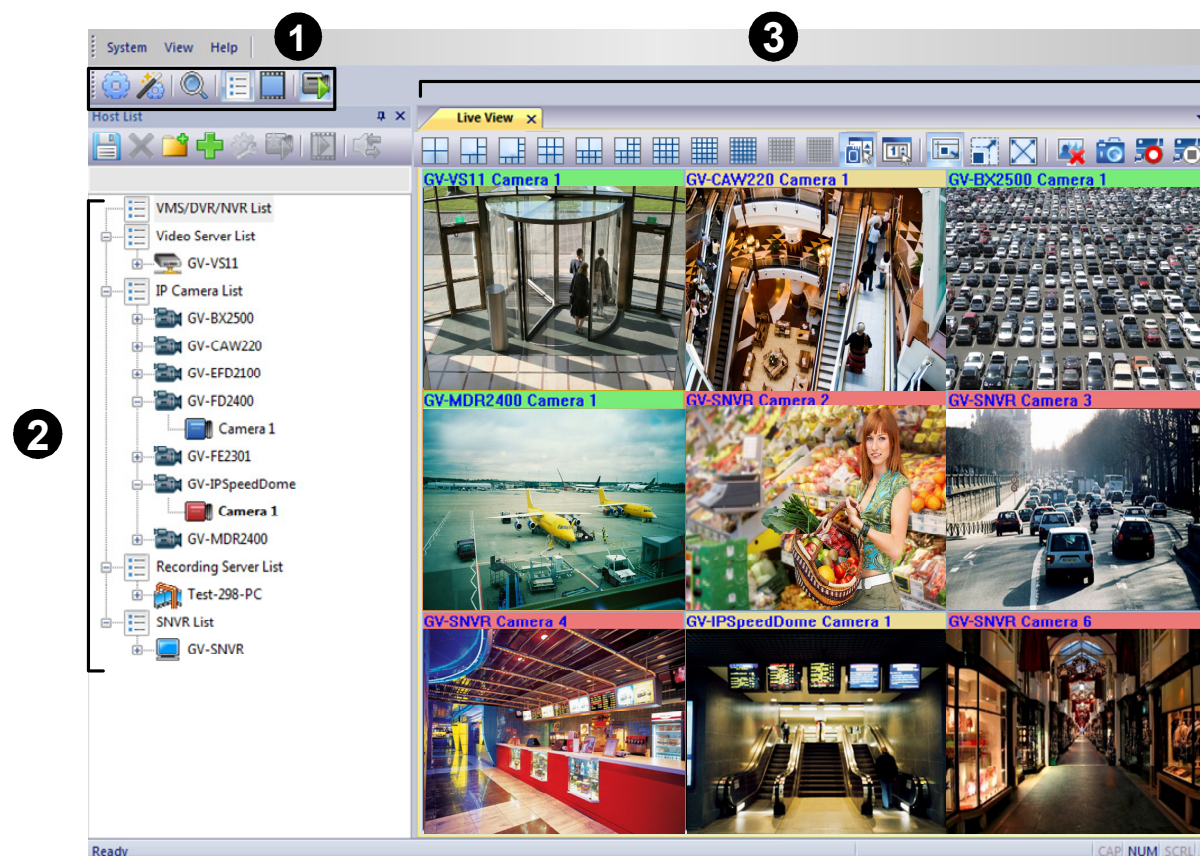


Figure 1-1

By default, there are three areas on the main window:

No.	Name	Description
1	Toolbar	Contains buttons to quickly access system settings, functions and main screen windows. For details, see <i>1.2.2 The Toolbar</i> .
2	Host List	Contains the hosts added to the GV-Edge Recording Manager. For details, see <i>1.2.3 The Host List</i> .
3	Live View Window	Displays live views from hosts. For details, see <i>4.1 The Live View Window</i> .

1.2 The Toolbar

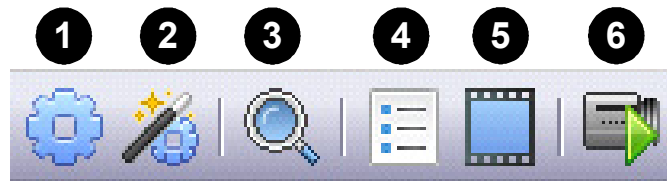


Figure 1-2

No.	Name	Description
1	Configure	Contains system settings. For details, see <i>Chapter 7 System Configuration</i> .
2	Batch Update Wizard	Contains the settings with which users can modify the IP address, device name, enable/disable recording to NAS and view storage information of multiple GV-IP Devices at the same time. For details, see <i>Chapter 3 Batch Management</i> .
3	Search Host	Searches the GV-IP Devices and the servers installed with GeoVision software under the same LAN with the GV-Edge Recording Manager. For details, see <i>2.2.1 Automatically Adding Multiple Hosts</i> .
4	Host List	Opens and closes the Host List on the main window.
5	Remote Playback	Opens and closes the Remote Playback window on the main window. For details, see <i>Chapter 6 Playback</i> .
6	Live View	Opens and closes the Live View Window. For details, see <i>4.1 The Live View Window</i> .

1.3 The Host List

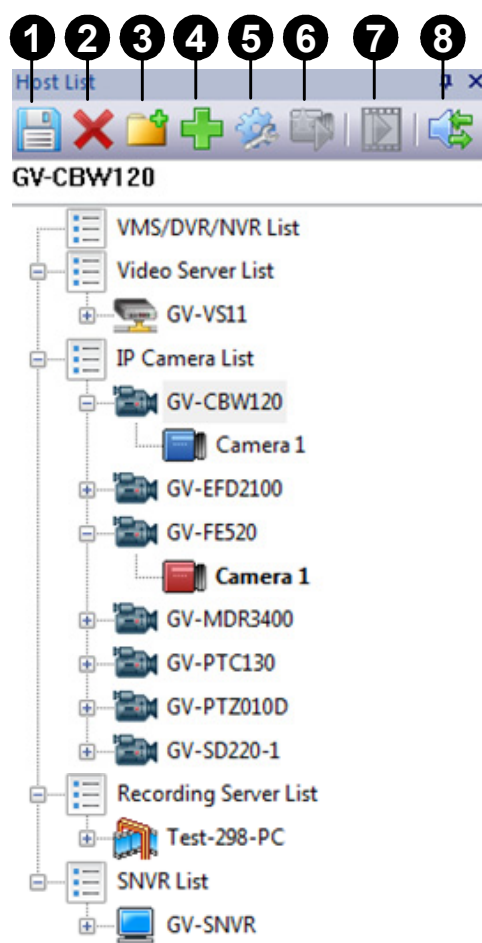



Figure 1-3

No.	Name	Description
1	Save	Saves configurations on Host List.
2	Delete Host	Deletes the selected host.
3	Add Group	Adds a group under the selected host type (DVR, Video Server, IP Camera or Recording Server).
4	Add Host	Adds a host. For details, see <i>2.2.2 Manually Adding a Host</i> .
5	Host Settings	Modifies the host settings including host name, IP address, ID, password, connection ports, numbers of cameras and I/O devices.
6	Live View	Displays live view of the selected camera in a Single Live View Window. For details, see <i>4.2 The Single Live View Window</i> .
7	Remote Playback	Plays back the selected camera in the Remote Playback window. For details, see <i>Chapter 6 Playback</i> .
8	Microphone	Allows the user to speak to, listen to and engage in two-way communication with a selected camera. For details, see <i>Chapter 5 Audio Communication</i> .

Chapter 2 Getting Started

2.1 Installing the GV-Edge Recording Manager


Follow the steps below to install GV-Edge Recording Manager from the GeoVision Website.

1. Go to the Software Download and Upgrading page of GeoVision Website:
http://www.geovision.com.tw/english/5_8_VMS.asp
2. Select **Video Management Software** tab, select **GV-Edge Recording Manager** from the drop-down list and click the **Download** icon  of **GV-Edge Recording Manager (Windows)**.

2.2 Adding Hosts

At first startup, GV-Edge Recording Manager automatically searches and displays GV-IP Devices and the servers installed with GeoVision software that are under the same LAN. To add multiple hosts, follow the instruction in *2.2.1 Automatically Adding Multiple Hosts*. To add a single host, follow the instruction in *2.2.2 Manually Adding a Host*.

2.2.1 Automatically Adding Multiple Hosts

1. Click the **Search Host** button  on the toolbar to start searching. The GV-IP Devices and servers installed with GeoVision software that are under the same LAN with the GV-Edge Recording Manager are listed in the Search Host window.

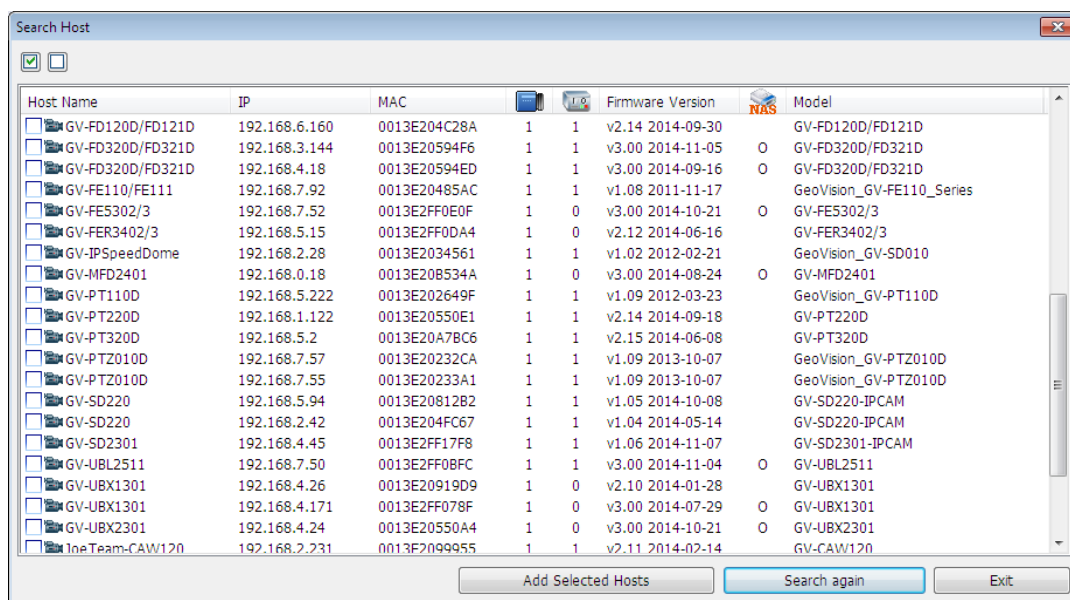



Figure 2-1

2. When the search is finished, you are prompted to select hosts. Click **OK** to proceed.
3. To add all the hosts found:
 - A. Click  on the Search Host window. This dialog box appears.

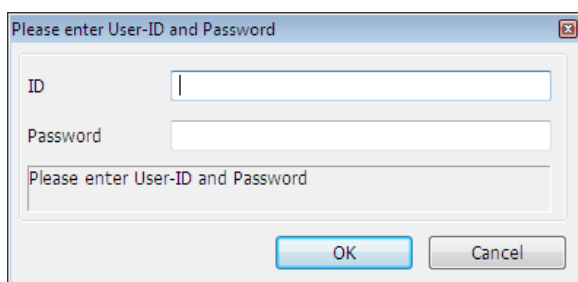


Figure 2-2

- B. Type the ID and Password for all the hosts and click **OK**.
4. To add a selection of hosts:
 - A. Click a host to be added. The ID and password request appears (Figure 2-2).
 - B. Type the ID and Password of the selected host and click **OK**.
 - C. To add more hosts, repeat steps 4A and 4B.
5. The selected hosts are indicated with a green plus sign.

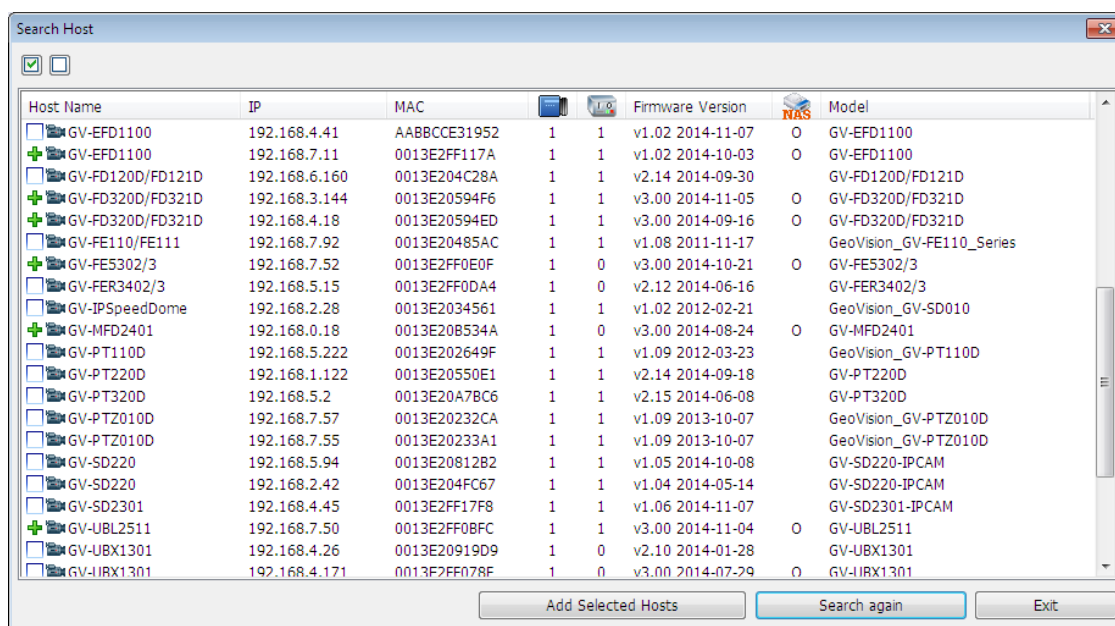
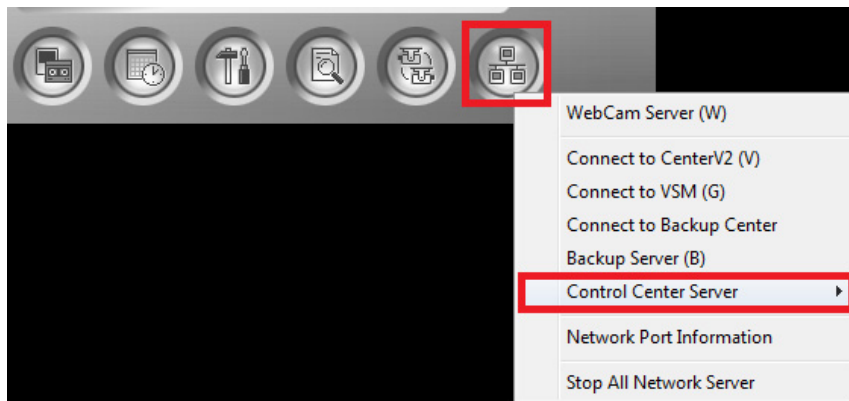


Figure 2-3

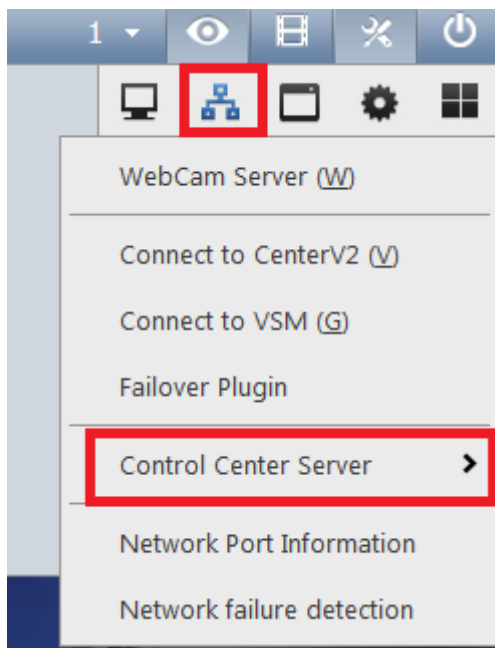
6. Click the **Add Selected Hosts** button to add the selected hosts. A prompt appears.
7. Click **OK** to accept the prompt. The selected hosts are added to the Host List shortly.
8. Click **Next Step**. The message "Do you want to add all cameras to live view?" appears.
9. Click **Yes**. The live views for these cameras are displayed. You can also drag and drop the cameras from the Host List to live view for immediate display.

Note:


1. If a router or firewall is installed, ensure the following communication ports required by the Host Search function are open:
 - TCP/IP ports **5201** (for searching GV-System / GV-VMS) and **5202** (for searching GV-IP Devices)
 - Multicast port **5200**
 2. If antivirus software is installed, the Host Search function may be interfered and will not detect the available hosts. In this case, turn off the antivirus software and try again.
 3. To add GV-System / GV-VMS hosts, make sure that **Control Center Service** and **Remote ViewLog Service** are enabled ahead to allow remote access from GV-Edge Recording Manager. (Network button < Control Center Server < Start Default Service)
- [GV-System]



[GV-VMS]



2.2.2 Manually Adding a Host

1. From the Host list, click the **Add Host** button  and select a device type. The Host Settings dialog box appears. The settings may vary slightly for different device types. The following is an example of GV-IP Camera.

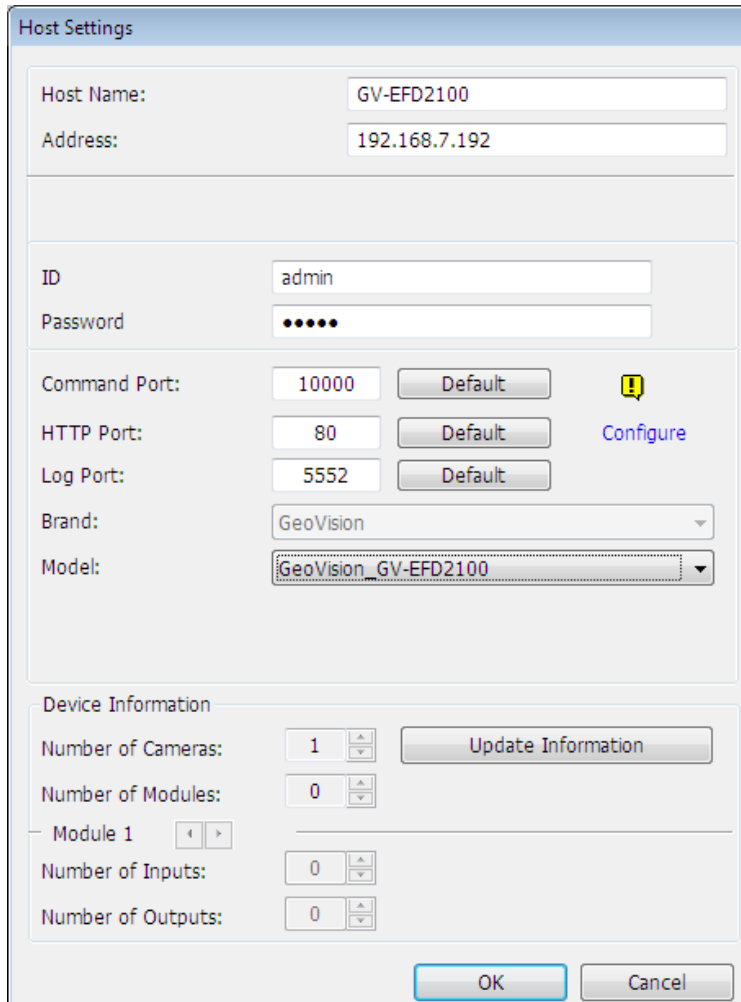


Figure 2-4

2. Type the Host Name, IP address, ID and password of the host. Modify the Communication Port if necessary.
3. Click the **Update Information** button to request the number of cameras and I/O modules installed.
4. Click **OK** to add the host. The host is added to the Host List.
5. Drag and drop the added camera to the Live View Window (Figure 4-1) for live view display.

2.3 Setting Up the Password

By default, no password is required to access GV-Edge Recording Manager. However, you can also establish a password to lock up all the settings and functions except the Live View Window and the Instant Playback function. To set up a password, follow the steps below.

1. On the main screen, select **System** and select **Change Administrator Password**. This dialog box appears.

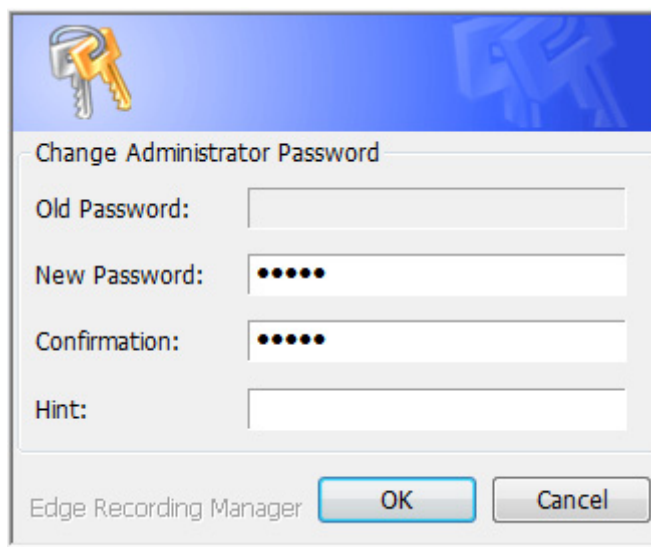


Figure 2-5

2. Type the New Password and the Confirmation (new password).
3. Type a hint that would remind you of the password when the password you entered is incorrect.
4. Click **OK**. When the password is changed, you will be prompted to confirm.
5. Click **OK** to confirm.

Chapter 3 Batch Management

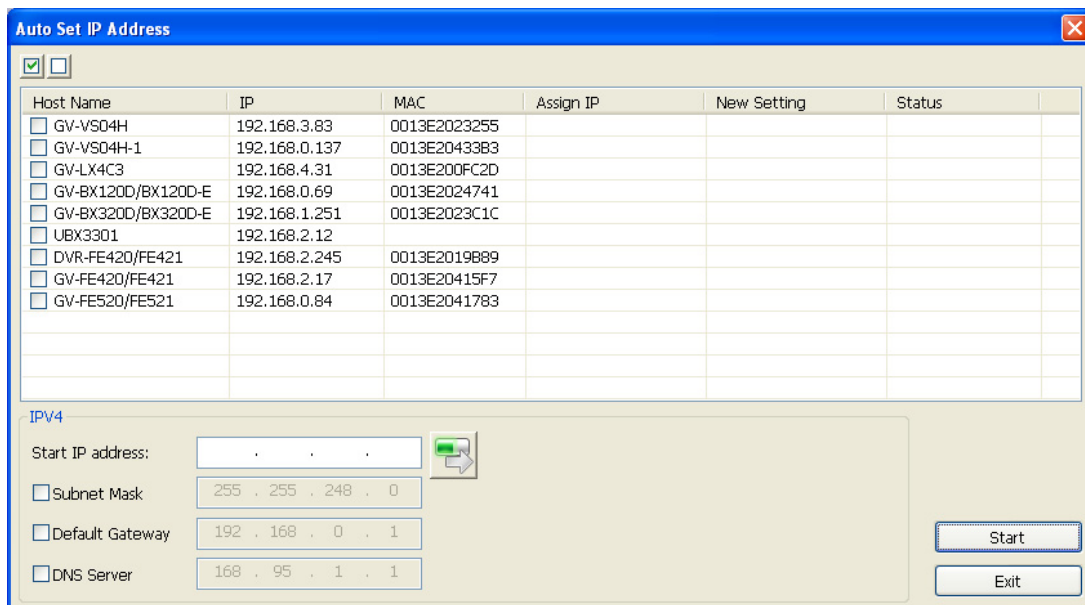
The batch functions are integrated interfaces designed for management of mass number of GV-IP Devices without the need to visit each device's Web interface. On these interfaces, you can change/assign IP address, rename devices, assign NAS and view storage space information of multiple GV-IP Devices.

Note: The batch management functions described in this chapter do not apply to GV-Recording Server, GV-System and GV-VMS.

3.1 Configuring the IP Address

You can set the IP address of more than one GV-IP Devices at a time. Follow the steps below.


1. On the main screen, click the **Batch Update Wizard** button  and select **Auto Set IP Address**. This dialog box appears.



The dialog box titled "Auto Set IP Address" contains a table with columns: Host Name, IP, MAC, Assign IP, New Setting, and Status. Below the table, there are input fields for IPv4 settings: Start IP address, Subnet Mask, Default Gateway, and DNS Server. At the bottom right, there are "Start" and "Exit" buttons.

Host Name	IP	MAC	Assign IP	New Setting	Status
<input type="checkbox"/> GV-VS04H	192.168.3.83	0013E2023255			
<input type="checkbox"/> GV-VS04H-1	192.168.0.137	0013E20433B3			
<input type="checkbox"/> GV-LX4C3	192.168.4.31	0013E200FC2D			
<input type="checkbox"/> GV-BX120D/BX120D-E	192.168.0.69	0013E2024741			
<input type="checkbox"/> GV-BX320D/BX320D-E	192.168.1.251	0013E2023C1C			
<input type="checkbox"/> UBX3301	192.168.2.12				
<input type="checkbox"/> DVR-FE420/FE421	192.168.2.245	0013E2019B89			
<input type="checkbox"/> GV-FE420/FE421	192.168.2.17	0013E20415F7			
<input type="checkbox"/> GV-FE520/FE521	192.168.0.84	0013E2041783			

IPv4



Start IP address: 


☐ Subnet Mask

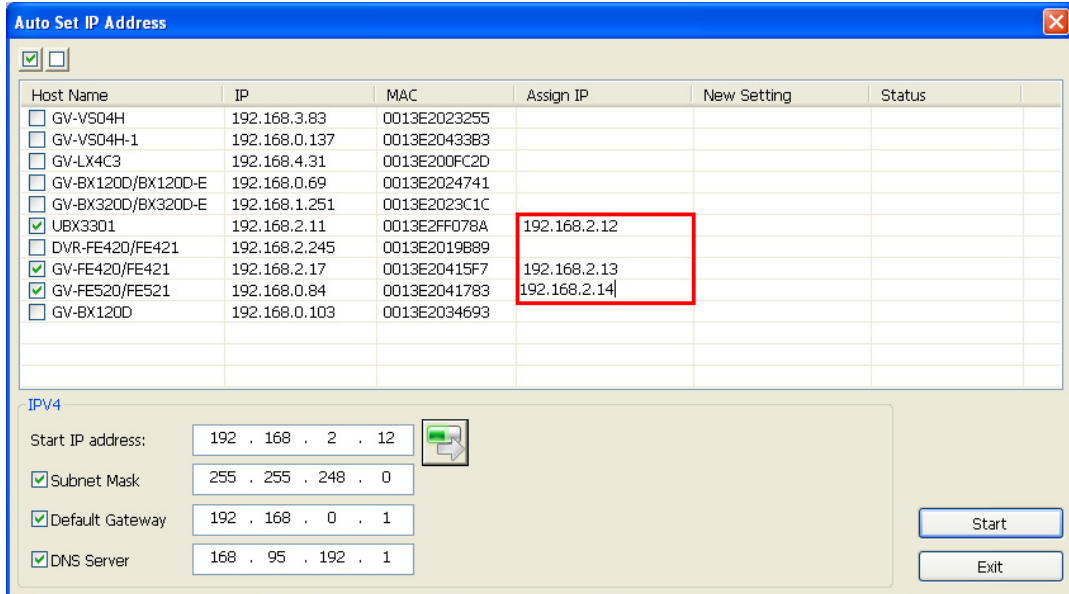
☐ Default Gateway

☐ DNS Server

Figure 3-1


2. Select the devices to be configured from the **Host Name** column. To select all the devices, click . To uncheck all the devices, click .

3. To assign consecutive IP addresses to multiple GV-IP Devices, follow the steps below.
 - A. Under the IPV4 section, select and type the **Start IP address**, **Subnet Mask**, **Default Gateway** and **DNS server**.
 - B. Click the button  to preview the new IP address in the **Assign IP** column. If more than one device is selected, their IP addresses will proceed after the **Start IP address**.



Host Name	IP	MAC	Assign IP	New Setting	Status
<input type="checkbox"/> GV-VS04H	192.168.3.83	0013E2023255			
<input type="checkbox"/> GV-VS04H-1	192.168.0.137	0013E2043383			
<input type="checkbox"/> GV-LX4C3	192.168.4.31	0013E200FC2D			
<input type="checkbox"/> GV-BX120D/BX120D-E	192.168.0.69	0013E2024741			
<input type="checkbox"/> GV-BX320D/BX320D-E	192.168.1.251	0013E2023C1C			
<input checked="" type="checkbox"/> UBX3301	192.168.2.11	0013E2FF078A	192.168.2.12		
<input type="checkbox"/> DVR-FE420/FE421	192.168.2.245	0013E2019889			
<input checked="" type="checkbox"/> GV-FE420/FE421	192.168.2.17	0013E20415F7	192.168.2.13		
<input checked="" type="checkbox"/> GV-FE520/FE521	192.168.0.84	0013E2041783	192.168.2.14		
<input type="checkbox"/> GV-BX120D	192.168.0.103	0013E2034693			

IPV4

Start IP address: 192 . 168 . 2 . 12 

☒ Subnet Mask 255 . 255 . 248 . 0

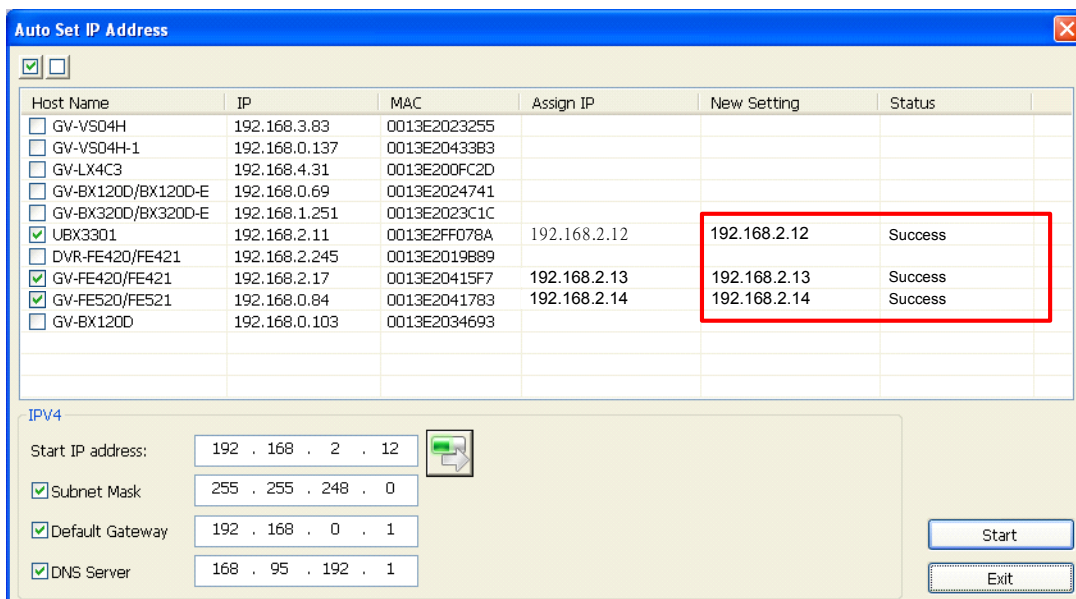
☒ Default Gateway 192 . 168 . 0 . 1

☒ DNS Server 168 . 95 . 192 . 1

Start Exit


Figure 3-2

4. To manually enter IP addresses, type the IP addresses in the **Assign IP** column.
5. Click **Start** to start changing the IP address. When the update is completed, the new IP address is shown in the **New Setting** and "Success" is shown in the **Status** columns.



Host Name	IP	MAC	Assign IP	New Setting	Status
<input type="checkbox"/> GV-VS04H	192.168.3.83	0013E2023255			
<input type="checkbox"/> GV-VS04H-1	192.168.0.137	0013E2043383			
<input type="checkbox"/> GV-LX4C3	192.168.4.31	0013E200FC2D			
<input type="checkbox"/> GV-BX120D/BX120D-E	192.168.0.69	0013E2024741			
<input type="checkbox"/> GV-BX320D/BX320D-E	192.168.1.251	0013E2023C1C			
<input checked="" type="checkbox"/> UBX3301	192.168.2.11	0013E2FF078A	192.168.2.12	192.168.2.12	Success
<input type="checkbox"/> DVR-FE420/FE421	192.168.2.245	0013E2019889			
<input checked="" type="checkbox"/> GV-FE420/FE421	192.168.2.17	0013E20415F7	192.168.2.13	192.168.2.13	Success
<input checked="" type="checkbox"/> GV-FE520/FE521	192.168.0.84	0013E2041783	192.168.2.14	192.168.2.14	Success
<input type="checkbox"/> GV-BX120D	192.168.0.103	0013E2034693			

IPV4

Start IP address: 192 . 168 . 2 . 12 

☒ Subnet Mask 255 . 255 . 248 . 0

☒ Default Gateway 192 . 168 . 0 . 1


☒ DNS Server 168 . 95 . 192 . 1

Start Exit

Figure 3-3

3.2 Renaming Devices

You can modify the device name for multiple devices through a single interface, without visiting each device's host settings page.

1. On the main screen, click the **Batch Update Wizard** button  and select **Upgrade Device Name**. This dialog box appears.

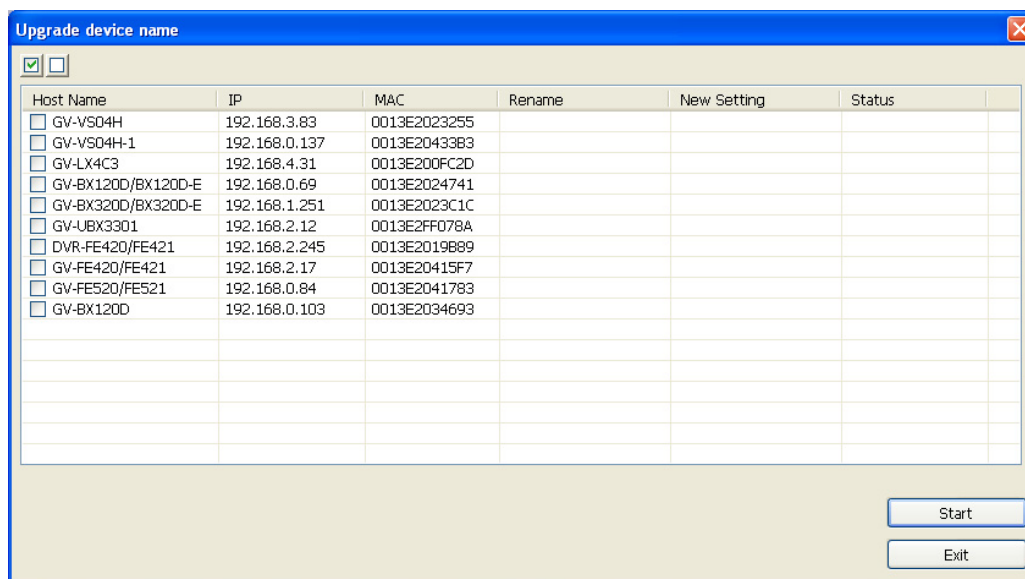




Figure 3-4

2. Select a device to be configured from the **Host Name** column. To select all the devices, click . To uncheck all the devices, click .
3. Type the new device name in the **Rename** column.

- Click **Start** to start updating. When the update is completed, the new name is shown in the **New Setting** column and the **Status** shows "Success".

The screenshot shows a window titled "Upgrade device name" with a table of devices. A red box highlights the "New Setting" and "Status" columns for the last four rows, which show "Exit 1", "Room 3", "Room 6", and "Exit 2" with a status of "Success".

Host Name	IP	MAC	Rename	New Setting	Status
<input type="checkbox"/> GV-VS04H	192.168.3.83	0013E2023255			
<input type="checkbox"/> GV-VS04H-1	192.168.0.137	0013E20433B3			
<input type="checkbox"/> GV-LX4C3	192.168.4.31	0013E200FC2D			
<input type="checkbox"/> GV-BX120D/BX120D-E	192.168.0.69	0013E2024741			
<input type="checkbox"/> GV-BX320D/BX320D-E	192.168.1.251	0013E2023C1C			
<input checked="" type="checkbox"/> GV-UBX3301	192.168.2.12	0013E2FF078A	Exit 1	Exit 1	Success
<input type="checkbox"/> DVR-FE420/FE421	192.168.2.245	0013E2019B89			
<input checked="" type="checkbox"/> GV-FE420/FE421	192.168.2.17	0013E20415F7	Room 3	Room 3	Success
<input checked="" type="checkbox"/> GV-FE520/FE521	192.168.0.84	0013E2041783	Room 6	Room 6	Success
<input checked="" type="checkbox"/> GV-BX120D	192.168.0.103	0013E2034693	Exit 2	Exit 2	Success

Start

Exit

Figure 3-5

3.3 Configuring the NAS


You can set GV-IP Cameras and GV-Target Cameras to record to NAS (Network-Attached Storage) devices.

IMPORTANT:

1. For the NAS application, it is required to use GV-IP Cameras (firmware V3.00 or later) and GV-Target Cameras (firmware V1.02 or later).
2. For system performance and compatibility, it is highly recommended to use GV-NAS Systems for recording.
3. Make sure the computer installed with GV-Edge Recording Manager is under the same LAN with the NAS devices.

3.3.1 Assigning NAS Storage for Recording

IMPORTANT: For system performance and compatibility, it is highly recommended to use GV-NAS Systems for recording.

1. On the main screen, click the **Batch Update Wizard** button  and select **NAS Setup**. The cameras that support NAS devices appear in the NAS Setup window.

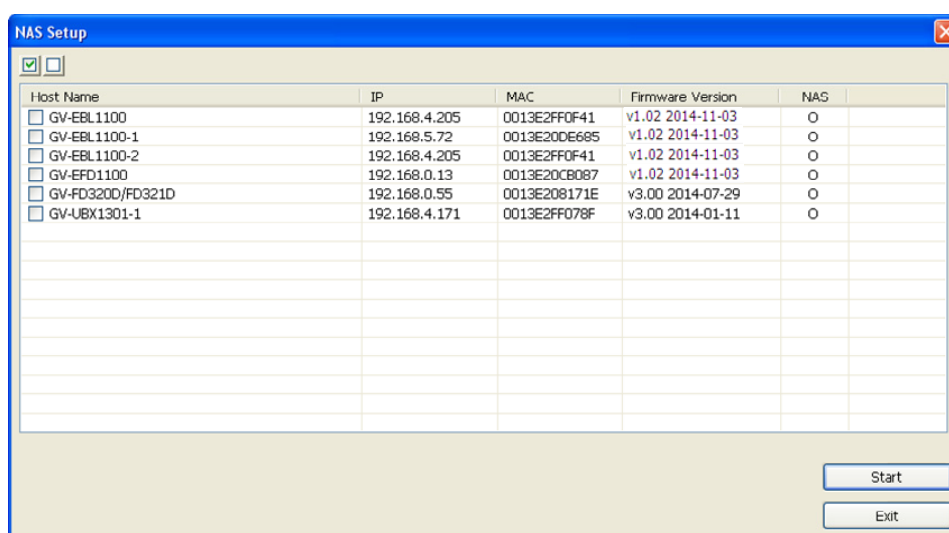



Figure 3-6

2. Select cameras for NAS management and click **Start**. The NAS Setup window appears.

- Click the **Search for network host**  button to detect the NAS installed under the LAN. The detected network hosts are listed.

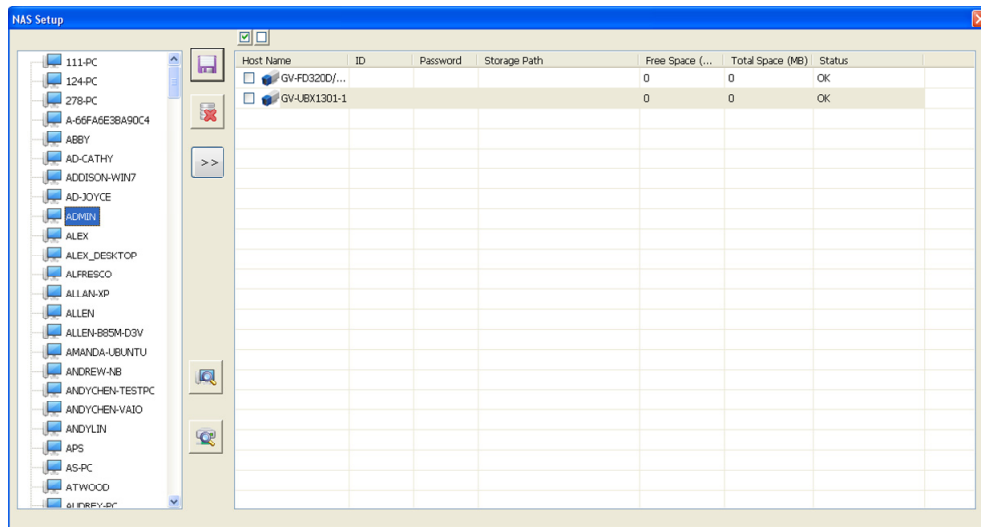



Figure 3-7

- Select a NAS from the list and click the **Search the host's network storage**  button to detect its shared folder(s). This dialog box appears.

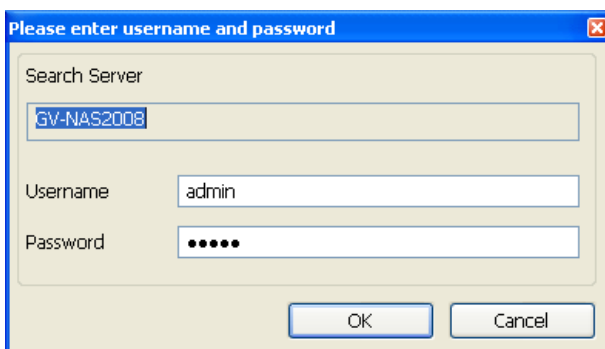


Figure 3-8

- Type the administrator username and password of the NAS device that allows for highest level of access. The default username and password for a GV-NAS System are both **admin**. The server's folders are detected and shown.

6. Expand the sever to show its folders

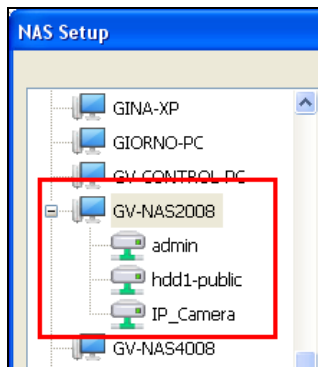


Figure 3-9

7. Assign storage paths for the cameras.

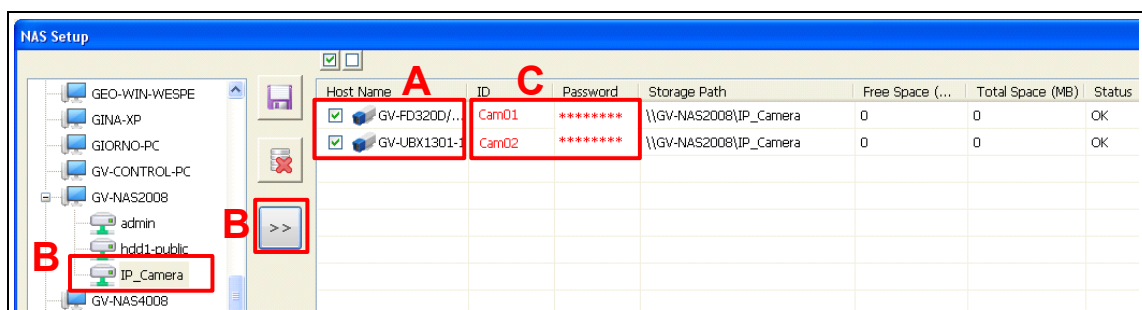






Figure 3-10

- A. On the NAS Setup window, select at least one camera to assign the storage path.
 - B. Select a NAS folder from the list and click the **Select this storage path for the device**  button to assign this storage path. The storage path appears in the Storage Path column immediately.
 - C. In the ID and Password column, type the ID and password of an established account of the NAS server. For example, for a GV-NAS System, type the default username **Cam01** and default password **12345678**.
8. Click the **Save**  button to store the settings.



Note:

1. Be sure that you assign each IP camera to record to a different user account in GV-NAS System to avoid disrupting the recycling process.
2. For GV-NAS2008 / 4008, the default user name is **Cam01** up to **Cam08** for each of the 8 user accounts; for GV-NAS2016 / 4016, the default user name is **Cam01** up to **Cam16** for each of the 16 user accounts. The default passwords are all **12345678**. For details, see *GV-NAS System Quick Start Guide* and *User's Manual*.

3.3.2 Changing the NAS Storage for Recording

In the NAS Setup window (Figure 3-10), select a camera, select a NAS folder and click . The new storage path is immediately assigned. Alternatively type the storage path, ID and password of a NAS folder. Click **Save**  to apply the settings.

3.3.3 Deleting the NAS Storage for Recording

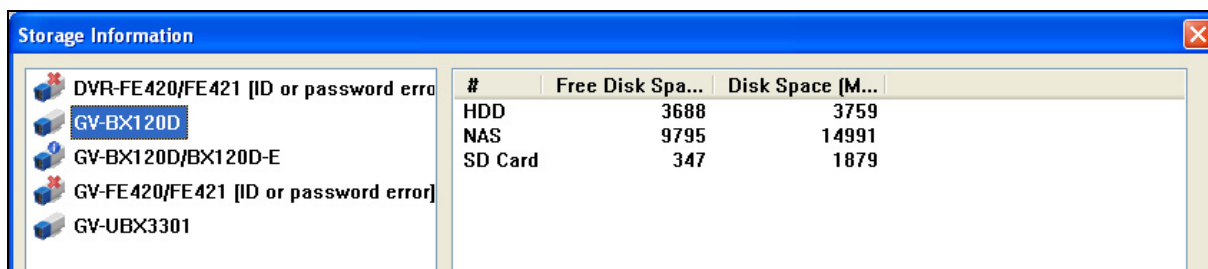
1. In the NAS Setup window (Figure 3-10), select a camera and its storage path, and click the **Delete the selected storage path**  button (Figure 3-10).
2. Click the **Save**  button (Figure 3-10) to store the settings.

3.4 Viewing the Storage Information

You can view storage information such as the storage type, free space and the overall disk space of GV-IP Devices.

Note: This function is only available for GV-IP Devices. For the supported firmware version, see *Supported GV-IP Devices and Software in Introduction of this manual*.

Click the **Batch Update Wizard** button  and select **Storage Information**.



The screenshot shows a window titled "Storage Information" with a list of devices on the left and a table of storage details on the right. The devices listed are DVR-FE420/FE421 (with an error icon), GV-BX120D (highlighted), GV-BX120D/BX120D-E, GV-FE420/FE421 (with an error icon), and GV-UBX3301. The table on the right has columns for "#", "Free Disk Spa...", and "Disk Space (M...".

#	Free Disk Spa...	Disk Space (M...
HDD	3688	3759
NAS	9795	14991
SD Card	347	1879

Figure 3-11

3.5 Time Synchronization

You can synchronize the system time of connected GV-IP Devices with GV-Edge Recording Manager.

Note: Make sure you have disabled device monitoring before synchronization.

1. On the main screen, click the **Batch Update Wizard** button  and select **Time Synchronization with Edge Recording Manager**.

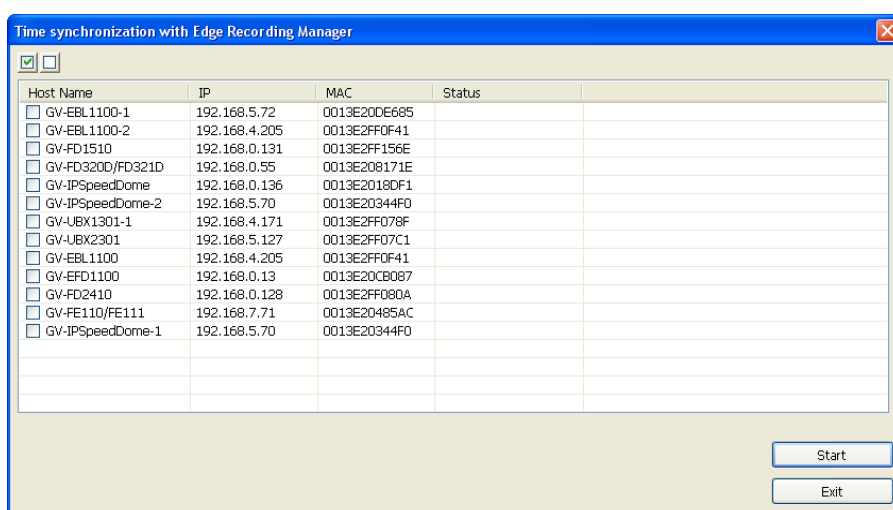


Figure 3-12

2. Select the devices you wish to synchronize with GV-Edge Recording Manager and click **Start**. The synchronization starts immediately. The results are indicated in the **Status** column.

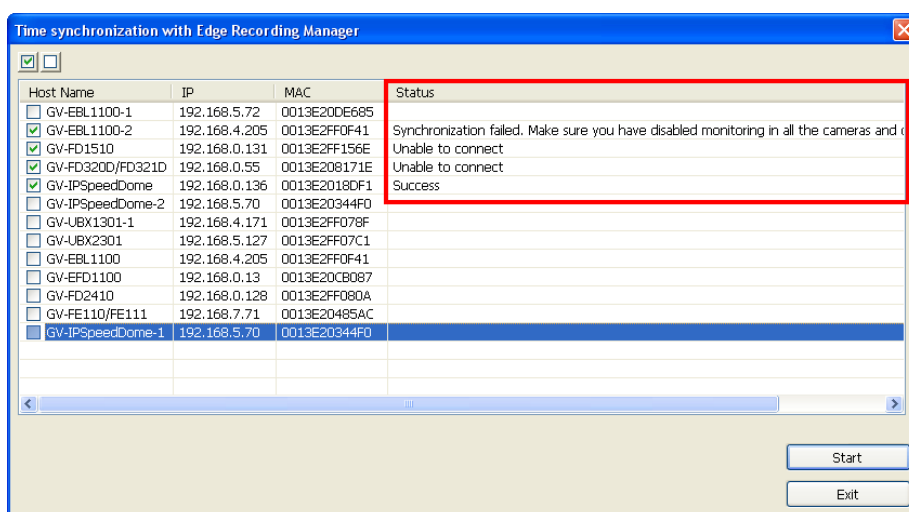


Figure 3-13

3.6 Updating Host Information

You can update the information of multiple GV-IP Devices (such as the port and the number of cameras, input and output modules installed) to GV-Edge Recording Manager.

1. On the main screen, right-click a group you want to update. For example, right-click the **IP Camera List** and select **Update IP Camera**.

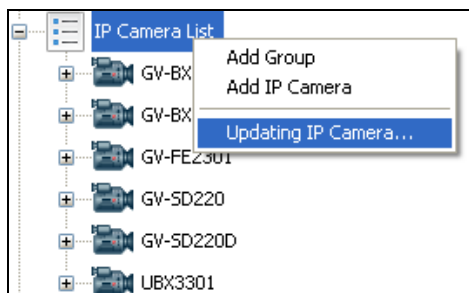


Figure 3-14

2. The Update Host Information window appears. All the hosts of the selected group are listed.

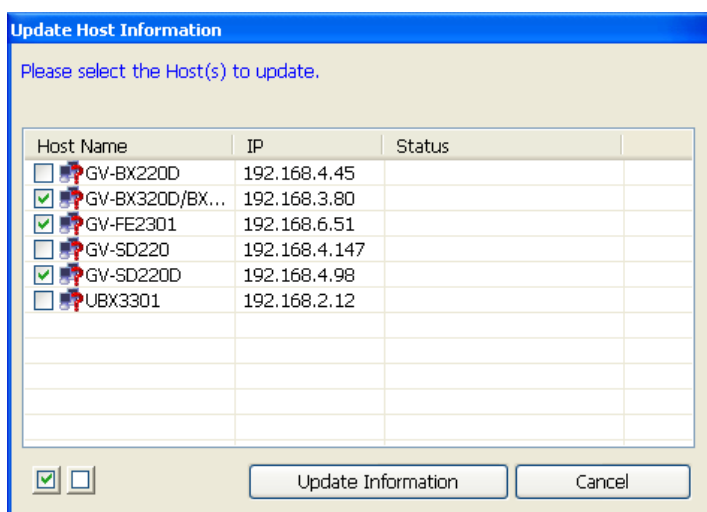


Figure 3-15

3. Select hosts and click the **Update Information** button to start updating.
4. You will be prompted when the update is completed. Click **OK** to finish.

Chapter 4 Live View

You can utilize GV-Edge Recording Manager to manage multiple live views and their recording status.

4.1 The Live View Window

The Live View Window displays multiple channels and provides access to the displayed channels. You can monitor up to 64 channels simultaneously. To display live view on this window, drag and drop cameras from the Host List (Figure 1-3).

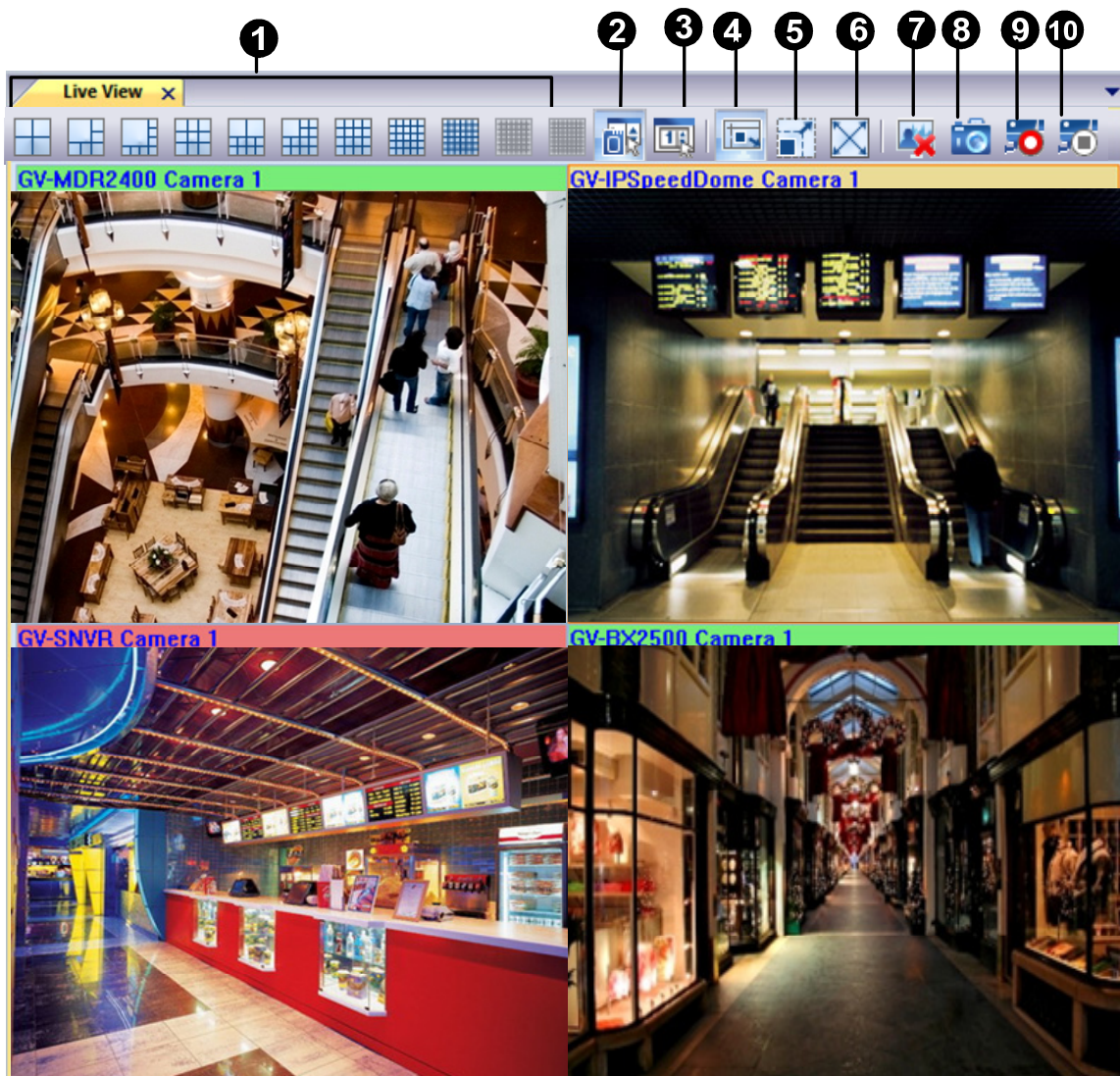


Figure 4-1

The controls on the Live View Window:

No.	Name	Description
1.	Screen Division	Select among the screen division 4, 9, 16, 25, 36, 49, and 64 channels.
2.	Custom Layout	Switch to the screen division set in Live View Setup (No. 3, Figure 4-1).
3.	Live View Setup	Contains settings for channel divisions, full-screen display, host and camera name caption and storage path for Snapshot (No. 8, Figure 4-1).
4.	Fit Window	Extends the live view to fill the channel.
5.	Keep Image Ratio	Displays the live view proportionally to its source.
6.	Full Screen	Extends the Live View Window to full-monitor display. Press the Esc key on your keyboard to exit the full-monitor display.
7.	Close All Video	Closes all the live view channels.
8.	Snapshot	Takes snapshots of the live views currently shown on the Live View Window. To snapshot a single channel, right-click the live view and select Snapshot .
9.	Monitor	Starts monitoring of all the displayed channels.
10.	Stop All Monitoring	Stops monitoring of all channels from GV-IP Camera and GV-Video Server hosts.

Right-click the live view to access the following features:

No.	Name	Description
1.	Snapshot	Takes a snapshot of the select channel.
2.	Advanced Control	Displays the live view in a separate window. For details, see 4.2 <i>The Single Live View Window</i> .
3.	PTZ	Enables the PTZ function. Note this function is only supported by IP Cameras that support the PTZ function.
4.	Remote Playback	Plays back the recordings from NAS or the SD Card. See 6 <i>Playback</i> for more playback features.
5.	Audio	Select Mic to enable speaking to the host. Select Audio Out to receive live audio from the host. Select 2-way to capture audio from both the microphone and the speaker.
6.	Close	Closes the selected live view.
7.	Show Position	Highlights the host camera of the live view on the Host List (Figure 1-3).

No.	Name	Description
8.	Monitor	Enables monitoring (recording) the channel.
9.	Zoom	Zooms the live view to full-window display on the Live View Window. Double-click the zoomed view to restore.
10.	PIP View	The Picture-in-Picture view is used to show a closed-up view or a zoom view of a portion of the live view. For details, see <i>4.6 PIP and PAP View</i> .
11.	PAP View	The Picture-and-Picture view is used to create multiple close-up views on the video. For details, see <i>4.6 PIP and PAP View</i> .
12.	Geo Fisheye	Dewarps the fisheye view. This function is only available for GV-Fisheye Camera. For details, see <i>4.4 Fisheye View</i> .
13.	IMV1 Panomorph	Dewarps the fisheye view. Note this option is only available for GV-IP Cameras installed with ImmerVision lenses and when the camera resolution is set as 1280 x 1024 or higher.
14.	Wide Angle Lens Dewarping	Enables the dewarping setting. For details, see <i>4.3 Adjusting the Distorted View</i> .
15.	Wide Angle Lens Setting	Corrects the distortion on live view images. For details, see <i>4.3 Adjusting the Distorted View</i> .

4.2 The Single Live View Window

To display live view in a Single Live View Window:

- Right-click a camera from the Host List (Figure 1-3) and click the **Live View**.
- Right-click a channel from the Live View Window (Figure 4-1) and select **Advanced Control**.

A Single Live View Window automatically closes when another Single Live View Window is opened.

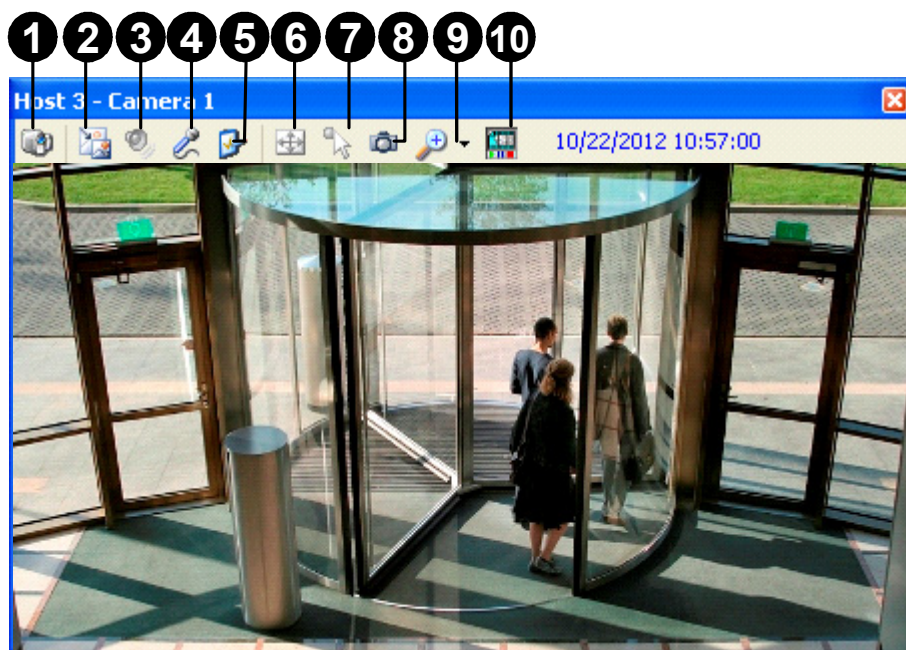


Figure 4-2

The controls in a Single Live View window:

No.	Name	Description
1	Change Camera	Switches to another camera of the same host if available.
2	Change Size	<ul style="list-style-type: none"> ■ Size: Changes the size of the live video. The size corresponds to the video resolution set at the host. The size choices are only available when the video resolution is higher than 320 x 240. ■ Defog: Enhances image visibility. ■ Stabilizer: Stabilizes live images. ■ Stream1/Stream2: Switches between stream 1 and 2. ■ Wide Angle Lens Dewarping: Applies the live view adjustments. See <i>4.5 Adjusting Distorted Views</i>.

No.	Name	Description
2	Change Size	<ul style="list-style-type: none"> ■ Wide Angle Setting: Adjusts the live view distortions. See <i>4.5 Adjusting Distorted Views</i>. ■ PIP View: The Picture-in-Picture view is used to show a closed-up view or a zoom view of a portion of the live view. For details, see <i>4.6 PIP and PAP View</i>. ■ PAP View: The Picture-and-Picture view is used to create multiple close-up views on the video. For details, see <i>4.6 PIP and PAP View</i>. ■ Geo Fisheye: Dewarps the fisheye view to quad view. ■ IMV1 Panomorph: Dewarps the fisheye view. Note this option is only available for a GV-IP Camera installed with ImmerVision lens and when the camera resolution is set as 1280 x 1024 or higher.
3	Audio	Receives audio from the host.
4	Microphone	Enables speaking to the host. A microphone must be installed properly in the computer.
5	Setting	Enables and configures the audio and video settings; Adjusts the image color (Normalization) and decreases the foggiess of the image (Sampling Range).
6	PTZ	Activates the PTZ control by selecting PTZ Panel or PTZ Automation.
7	Visual Automation	Allows you to change the current state of an electronic device, e.g. light ON, by clicking on its image directly. The function is only available when the same function is set at the host.
8	Snapshot	Takes the snapshot of the displayed live video.
9	Zoom	When video resolution is smaller than the monitor resolution, you can zoom the video by 1.0x, 2.0x or 3.0x; when the video resolution is larger than the monitor resolution, you can zoom the video by 1.0X, 0.5X or 0.25X.
10	Instant Play	Plays back recordings. For GV-System / GV-VMS hosts, you can also play back recordings of the last 10 seconds, 30 seconds, 1 minute and 5 minutes. For GV-Recording Server hosts, you can only play back recordings of the last 5 minutes. This function does not apply to GV-IP Cameras.

4.3 Fisheye View

The hemispherical image of a fisheye host can be converted to a conventional rectilinear projection and displayed on the Live View Window and the Single Live View Window.

Note: This function requires a graphic card supporting DirectX 10.1 or later.

The following camera types are supported:

- GV-Fisheye Camera
- GV-IP Camera installed with an ImmerVision IMV1 Panorama Lens

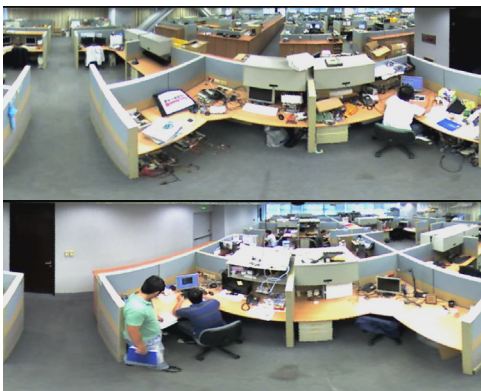
You can choose among four view modes and adjust the PTZ views to different angles.



Quad view: 4 PTZ views



360 degree: 2 PTZ view & 1 360° view



Dual 180 degree: 2 180° views



Single view: 1 PTZ view

Figure 4-3

4.3.1 Setting Up the Fisheye View

1. Enable the dewarped view.
 - On Live View Window (Figure 4-1), right-click a fisheye channel and select **Geo Fisheye**.
 - On the Single Live View Window, select the **Change Size** button (No. 2, Figure 4-2) and select **Geo Fisheye**.

By default, the original hemispherical view is converted to 4 PTZ views, the **Quad View** on the Live View Window or the Single Live View Window.

2. To customize other settings, right-click the channel on the Live View Window or the Single Live View and select **Fisheye Option** to access the following.
 - **Camera Modes:** You can choose among four view modes.
 - **Geo Fisheye: Quad view:** Composed of four PTZ views.
 - **Geo Fisheye: 360 degree:** Composed of two PTZ views and one 360° panoramic view.
 - **Geo Fisheye: Dual 180 degree:** Composed of two 180° views.
 - **Geo Fisheye: Single view:** Composed of one PTZ view. Click on the inset window to watch a close-up view on the Live View Window.
 - **Camera Position:** Select **Ceiling**, **Wall** or **Ground** according to where the camera is mounted.
 - **Adjust Auto Pan Speed At Top-Left Channel:** Select **low**, **medium**, or **high speed** to enable Auto Pan for one PTZ view at the rotation speed of your choice. This option applies to **Quad view**, **360 degree** and **Single view**.
 - **Zoom:** Select **Zoom In** or **Zoom Out** and then click on the image.
 - **Show Source Video At Top-Right Channel:** You can display the circular source image in the top-right quadrant when **Quad view** is selected.
 - **360 Degree Object Tracking:** Tracks and highlights detected motion in the live view. This option is only available when the **Camera Mode** is set to **Geo Fisheye: 360 degree**.
 - **Tracking:** Enables the 360 Degree Object Tracking function.
 - **Advanced Settings:** Defines the mask region, object size, dwell time and schedule for object tracking. For details, see *4.3.2 Object Tracking*.

- **Guard Tour Setting:** This function is only available under the Single View mode. Enable this function to set up a virtual PTZ tour using the selected preset points on live view. For details, see 4.3.3 *Virtual PTZ*.

- **Settings:**

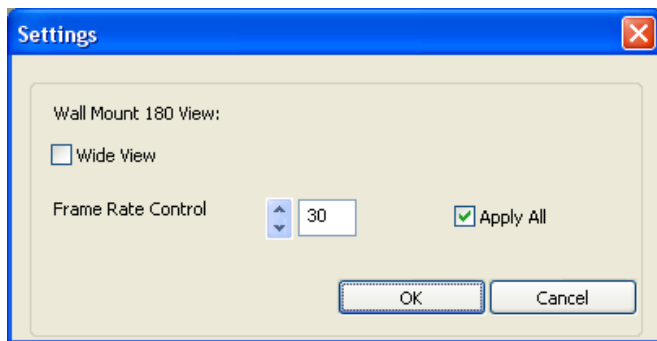


Figure 4-4

- **Wide View:** Increases the height of the 180 degree view when camera position is set to wall mount.

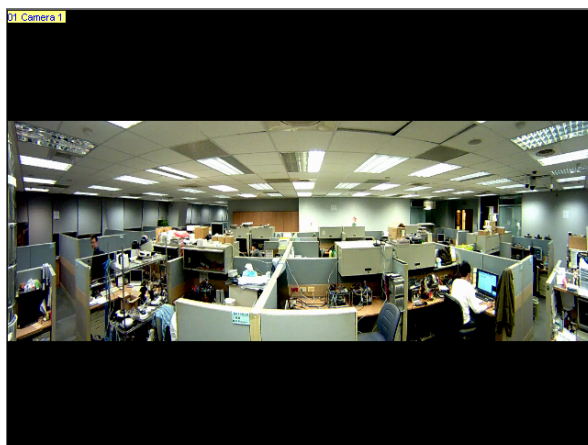


Figure 4-5-1: Wide View Disabled



Figure 4-5-2: Wide View Enabled

- **Frame Rate Control:** Limits the frame rate of the fisheye live view to the number specified here. Select **Apply All** to apply the frame rate control to other fisheye views.
3. You can drag and drop any PTZ view or 180 degree view to adjust the viewing angle.

4.3.2 Object Tracking

You can now set up object tracking in fisheye live view to track moving object. The function is only available when the fisheye camera mode is set to be **Geo Fisheye: 360 degree**. When motion is detected in the fisheye, the top-right channel will start tracking the moving object and in the 360 degree view at the bottom, the moving object will be highlighted.

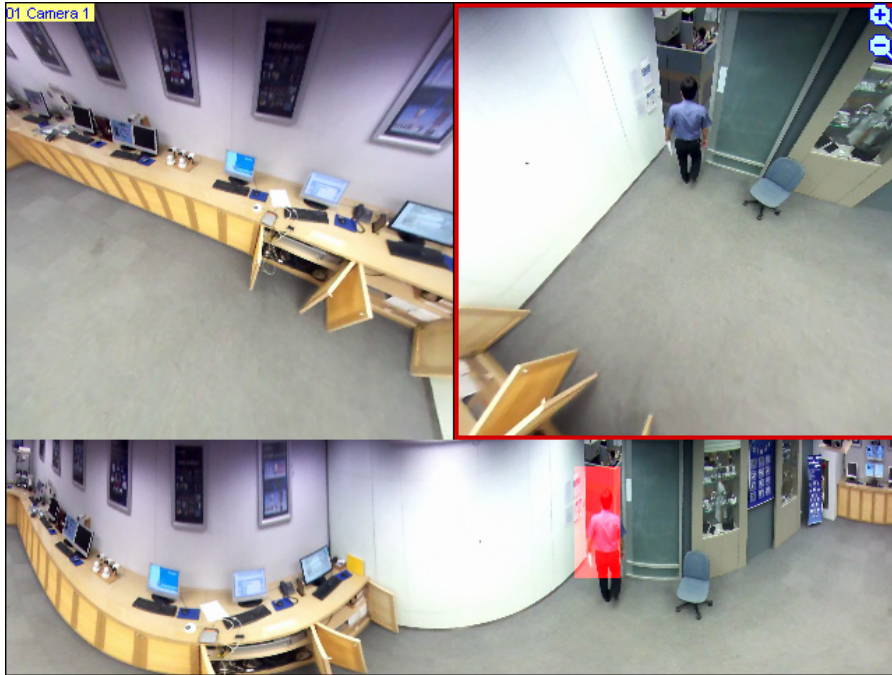


Figure 4-6

1. Set the camera to Geo Fisheye: 360 degree mode.
 - A. Right-click the fisheye view, select **Geo Fisheye**.
 - B. Right-click the fisheye view, select **Fisheye Option**, select **Camera Mode** and select **Geo Fisheye: 360 degree**.

2. Configure the settings for object tracking.
 - A. Right-click the fisheye view, select **Fisheye Option**, select **360 Object Tracking** and select **Advanced Settings**. This dialog box appears.

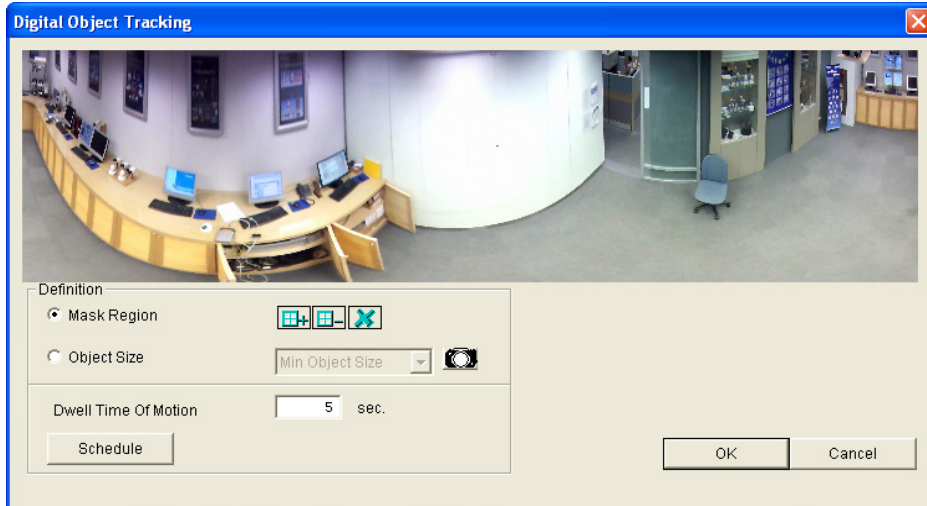



Figure 4-7

- B. Customize the settings for object tracking.
 - **Mask Region:** Use the mouse to outline a mask region where motions are ignored.
 - **Object Size:** Click the  button to pause the live view and then use the mouse to outline the maximum and minimum size of the target object.
 - **Dwell Time of Motion:** When the targeted object stops moving, the highlighted region and the top-right channel will remain fixed on the area for the number of seconds specified. Any new motion detected during the dwell time will be ignored to prevent the camera view from frequently jumping from one area to another.
 - **Schedule:** Click Schedule to activate object tracking only at the specified time frames.
3. To enable object tracking, right-click the fisheye view, select **Fisheye Option**, select **360 Object Tracking** and select **Tracking**.

4.3.3 Virtual PTZ Tour

Set up a virtual PTZ tour to monitor important spots of your surveillance site. Before you start, make sure your GV-Fisheye Camera is set to the Single View mode. For details on the view mode, see *Cameras Modes*, 4.3.1 *Setting Up the Fisheye View*.

1. Move your live view to a desired starting place for the PTZ tour by clicking on the inserted window on the bottom right of the live view.
2. Right-click the camera live view on the Live View Window (Figure 4-1), select **Fisheye Option** and then select **Guard Tour Setting**. This dialog box appears.

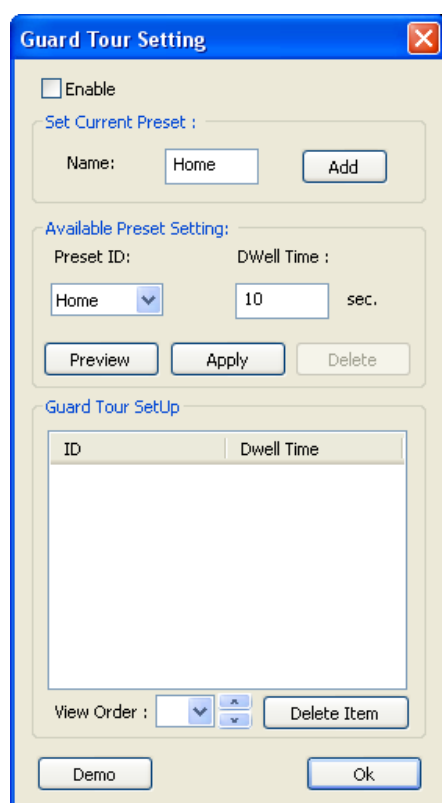


Figure 4-8

3. Type a name for the current live view and click **Add**. This live view point (preset point) automatically appears under Preset ID.

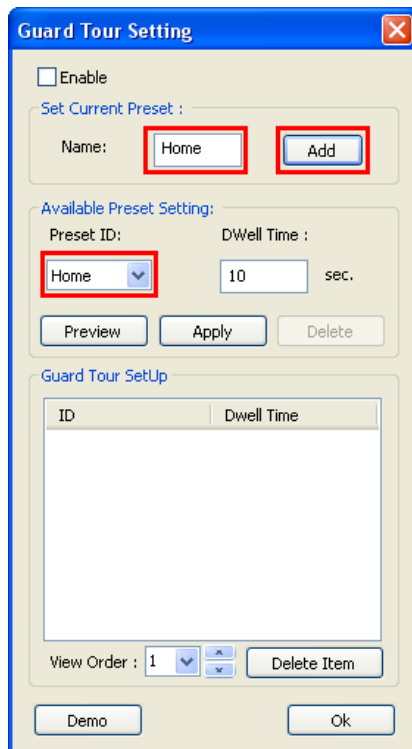
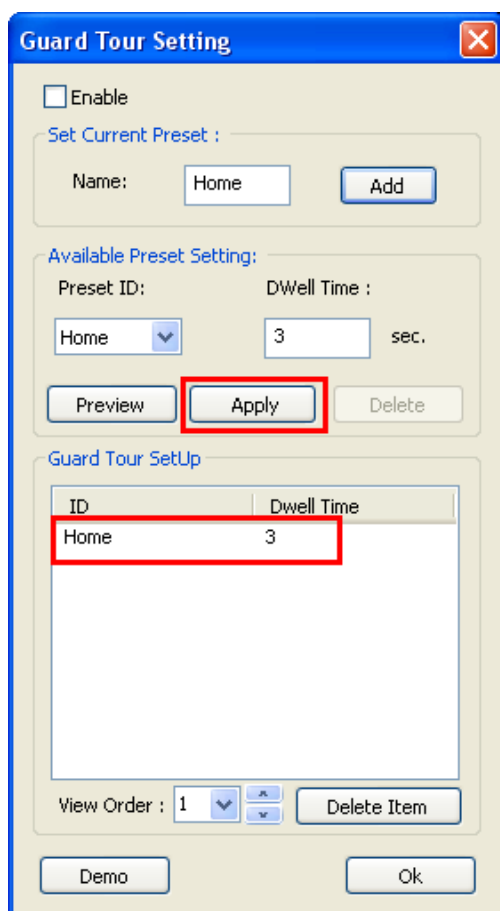


Figure 4-9

4. Specify the duration for the live view to stay on this preset point (dwell time). The default setting is **10** seconds.
5. Optionally click **Preview** to see a preview of the preset point.

6. Click **Apply**. This point is added to Guard Tour Setup.

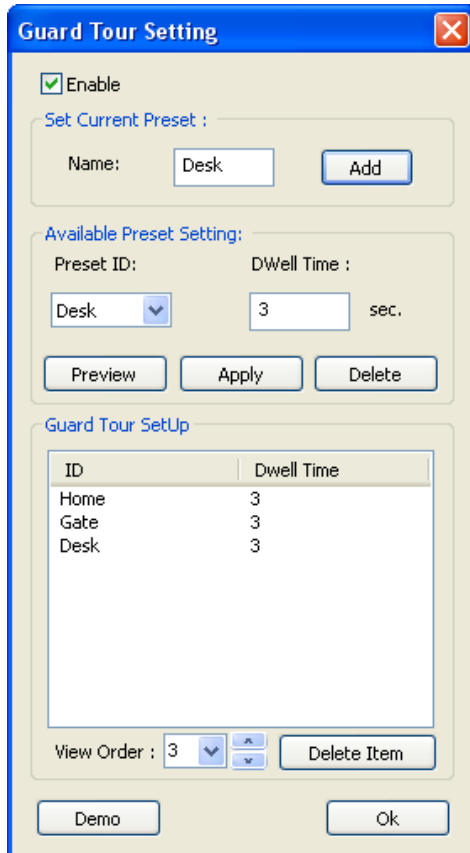


The image shows a 'Guard Tour Setting' dialog box with a blue title bar and a close button. It contains several sections: 'Enable' with an unchecked checkbox; 'Set Current Preset :' with a 'Name:' field containing 'Home' and an 'Add' button; 'Available Preset Setting:' with 'Preset ID:' set to 'Home' and 'DWell Time :' set to '3 sec.', and buttons for 'Preview', 'Apply' (highlighted with a red box), and 'Delete'; 'Guard Tour SetUp' with a table containing one row 'Home' with '3' in the 'Dwell Time' column (this row is also highlighted with a red box); 'View Order : 1' with a dropdown and 'Delete Item' button; and 'Demo' and 'Ok' buttons at the bottom.

ID	Dwell Time
Home	3

Figure 4-10

7. To add more preset points, repeat steps 1 to 6. For example, three preset points Home, Gate and Desk are established in this setup.



The dialog box titled "Guard Tour Setting" contains the following sections:

- Enable:** A checked checkbox labeled "Enable".
- Set Current Preset:** A section with a "Name:" label, a text box containing "Desk", and an "Add" button.
- Available Preset Setting:** A section with "Preset ID:" and "DWell Time:" labels. The "Preset ID:" dropdown is set to "Desk", and the "DWell Time:" text box contains "3" followed by "sec.". Below these are "Preview", "Apply", and "Delete" buttons.
- Guard Tour SetUp:** A section containing a table with two columns: "ID" and "Dwell Time".

ID	Dwell Time
Home	3
Gate	3
Desk	3
- View Order:** A section with a "View Order:" label, a dropdown menu set to "3", and "up" and "down" arrow buttons. Next to it is a "Delete Item" button.
- Buttons:** "Demo" and "Ok" buttons at the bottom.

Figure 4-11

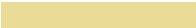


8. To change the order of the preset points, select a preset point from the ID column and select a number from the drop-down list to move this preset point up or down the list.
9. Optionally click **Demo** to watch a preview of the PTZ tour.
10. Select **Enable** to start the PTZ tour. To stop the PTZ tour, disable this function on the Guard Tour Setting.

4.4 Enabling Host Recording

You can remotely enable the monitoring function on host using GV-Edge Recording Manager.

Note: This function is only available for GV-IP Devices. For the supported firmware versions, see *Supported GV-IP Devices and Software in Introduction of this manual*.

From the Live View Window (Figure 4-1), right-click a live view channel and select **Monitor**. The monitoring and recording status is indicated on each channel:

Channel Color	Monitoring & Recording Status
	Not under monitoring
	Under monitoring but not being recorded
	Under monitoring and is being recorded

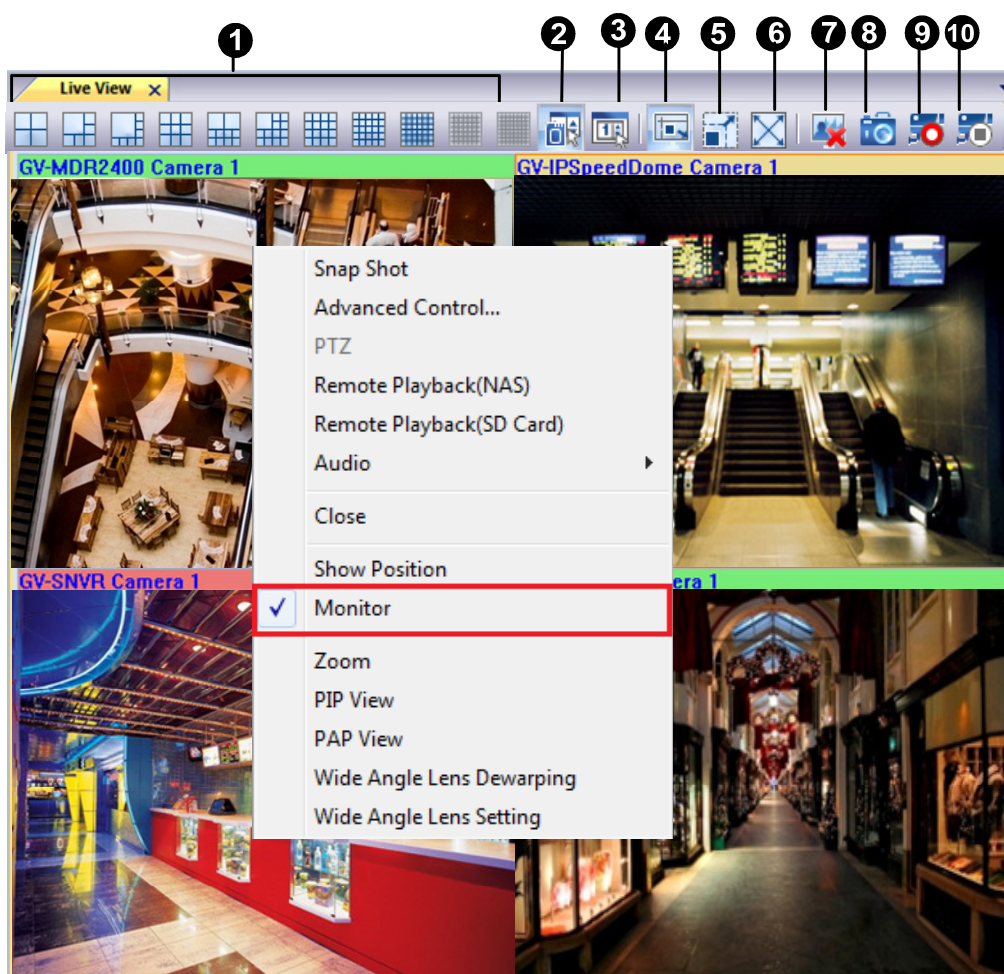



Figure 4-12

4.5 Snapshot

You can snapshot and save important live view images.

Taking Snapshots of All the Live Views

To take snapshots of all the live views displayed on the Live View Window (Figure 4-1) simultaneously, click the **Snapshot** button  (No. 8, Figure 4-1). The images are saved to the default path **C:\GVEdgeRecording\Snapshot**. To change the default path, click the **Live View Setup** button (No. 7, Figure 4-1).

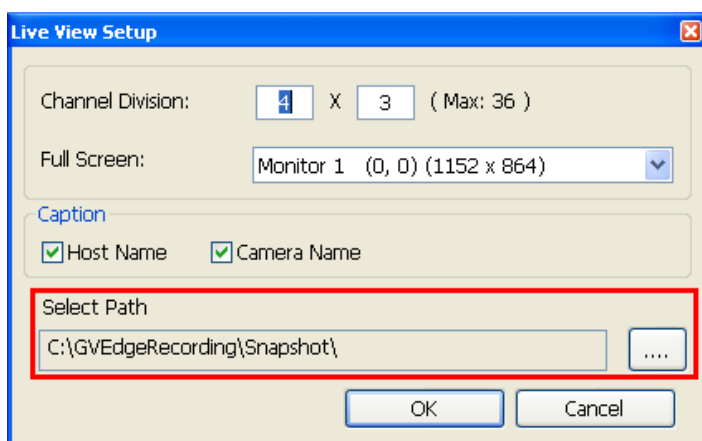


Figure 4-13

Taking a Single Snapshot

To take a snapshot of a single live view, right-click the channel on the Live View Window (Figure 4-1), select **Snapshot** and designate a path to save the snapshot.

4.6 Zoom

You can zoom a selected channel for closer view. Right-click a channel from the Live View Window (Figure 4-1) and select **Zoom**. The live view is immediately zoomed to a single channel on the Live View Window. To disable the function, right-click the channel and select **Zoom** again.

4.7 Adjusting Distorted Views

Live view images may be curved near the corners. Use the Wide Angle Lens Dewarping feature to adjust image distortion.

1. On the Live View Window (Figure 4-1), right-click a channel and select **Wide Angle Lens Settings**. Alternatively, select the **Change Size** button from the Single Live View Window (Figure 4-2). The Wide Angle Dewarping Setting dialog box appears.
2. Move the slider at the bottom to correct the degree of warping. The adjusted view is shown on the right.



Figure 4-14

3. To apply this dewarping setting to the other channels on the Live View Window, select **Apply All**.
4. To enable the dewarping setting, right-click the channel and select **Wide Angle Lens Dewarping**. The selected channel is adjusted immediately.

4.8 PIP and PAP View

With PIP (Picture in Picture), you can crop your video to get a close-up view or zoom in on your video. With PAP (Picture and Picture), you can create a split video effect with multiple close-up views on the video.

You can access the PIP and PAP View from:

- **Live View Window (Figure 4-1):** Right-click a channel and select **PIP** or **PAP**.
- **Single Live View Window (Figure 4-2):** In the Single Live View Window, click the **Change Size** button and select **PIP View** or **PAP View**.

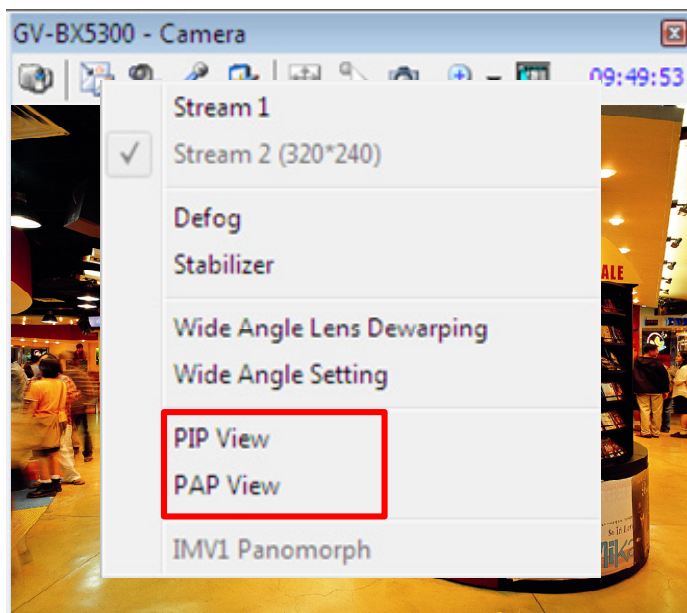


Figure 4-15

4.8.1 Starting PIP View

To start the PIP View, follow the instructions below:

1. After you select **PIP View**, an inset window of the camera view with a navigation box appears in the image.



Figure 4-16

2. Point the cursor to the inset window. A hand icon appears. You can drag the inset window to the desired area on the image.
3. Point the cursor to the navigation box. A star icon appears. You can move the navigation box around in the inset window to have a close-up view of the selected area.
4. To adjust the navigation box size, move the cursor to any of the box corners, enlarge or diminish the box.
5. To change the frame color of the navigation box, right-click the image and select **Mega Pixel Setting** and then select **Set Color of Focus Area**.
6. To exit the PIP view, click **PIP View** again.

4.8.2 Starting PAP View

To start the PAP View, follow the instructions below:

1. After you select **PAP View**, a row of three inset windows appears on the bottom of the screen.



Figure 4-17

2. Draw a navigation box on the image, and this selected area is immediately reflected in one inset window. Up to seven navigation boxes can be drawn on the image.

Note: When the live view division is smaller than 200 x 140 pixels, the navigation boxes will not be configurable.

3. To adjust a navigation box size, move the cursor to any of the box corners, enlarge or diminish the box.
4. To move a navigation box to another area on the image, drag it to that area.
5. To change the frame color of the navigation box, right-click the image, select **Mega Pixel Setting** and then select **Set Color of Focus Area**.
6. To hide the navigation box on the image, right-click the image, select **Mega Pixel Setting** and then select **Display Focus Area of PAP Mode**.
7. To delete a navigation box, right-click the desired box and select **Delete**.

8. To add another navigation box, right-click the image, select **Enable Add-Focus-Area-Mode** and draw boxes on the image. You can add up to **7** navigation boxes.
9. To exit the PAP view, click **PAP view** again.

Chapter 5 Audio Communication

You can speak to, listen to and engage in two-way communication with a selected host.

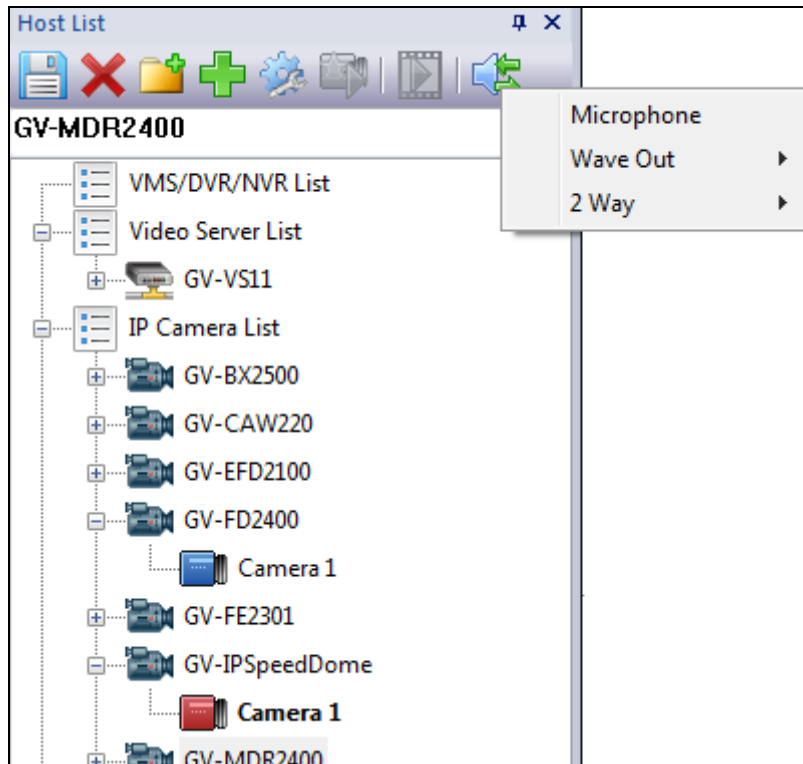



Figure 5-1

Speaking to a Host

1. Select a host from the Host List. The name of the selected host appears in the space below the toolbar (Figure 5-1).
2. Click the **Microphone** button  (No. 8, Figure 1-3) and select **Microphone**. The button is highlighted blue when it is enabled. You can speak to the host through a microphone.

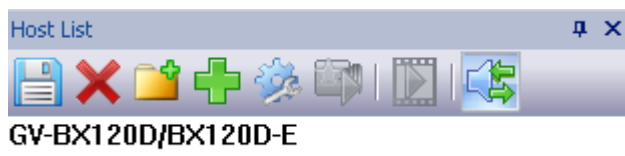




Figure 5-2

Listening to a Host

1. Select a host from the Host List. The name of the selected host appears in the space below the toolbar (Figure 5-2).
2. Click the **Microphone** button  (No. 8, Figure 1-3), select **Wave Out** and select a **camera number** if there is more than one camera. The button turns yellow when it is enabled. You can listen to the camera through a speaker.

Speaking and Listening to a Host


1. Select a host from the Host List. The name of the selected host appears in the space below the toolbar (Figure 5-1).³
2. Click the **Microphone** button  (No. 8, Figure 1-3), select **2 Way** and select a **camera number** if there is more than one camera. The button turns yellow when it is enabled. You can speak and listen to the camera with microphone and speaker.

Chapter 6 Playback

You can remotely play back host recordings on GV-Edge Recording Manager using the Remote Playback function.

Note: For a GV-System / GV-VMS host, make sure **Remote ViewLog Service** (under Control Center Service) is enabled ahead to allow GV-Edge Recording Manager to remotely access the host for playback.

1. To play back at a pre-defined duration

From the Single Live View Window (Figure 4-2), click the **Instant Play** button  and select **10 Sec**, **30 Sec**, **1 Min** or **5 Min** for GV-System / GV-VMS and **5 Min** for GV-Recording Server. The feature is only available for GV-System, GV-VMS and GV-Recording Server.

2. To play back by event, use one of the following methods.

- Right-click the host from the Host List (Figure 1-3) or live view (Figure 4-1) and select **Remote Playback (NAS)** or **Remote Playback (SD Card)**

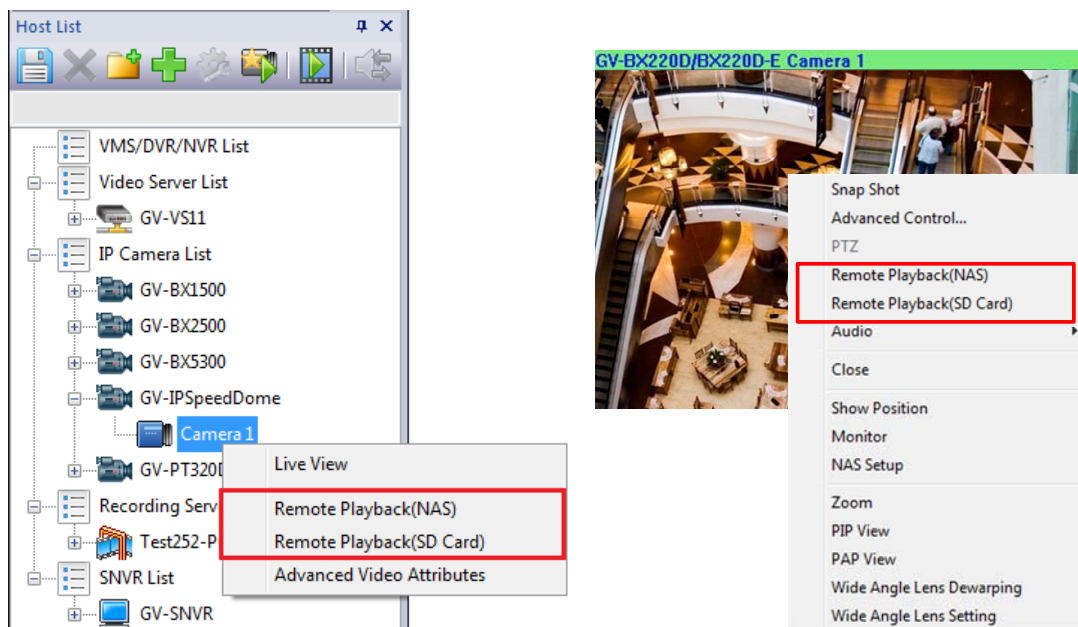



Figure 6-1

- Click the Remote Playback button  on the main window and drag a camera from the Host List (Figure 1-3) to the Video Event List of the Remote Playback window. For example:

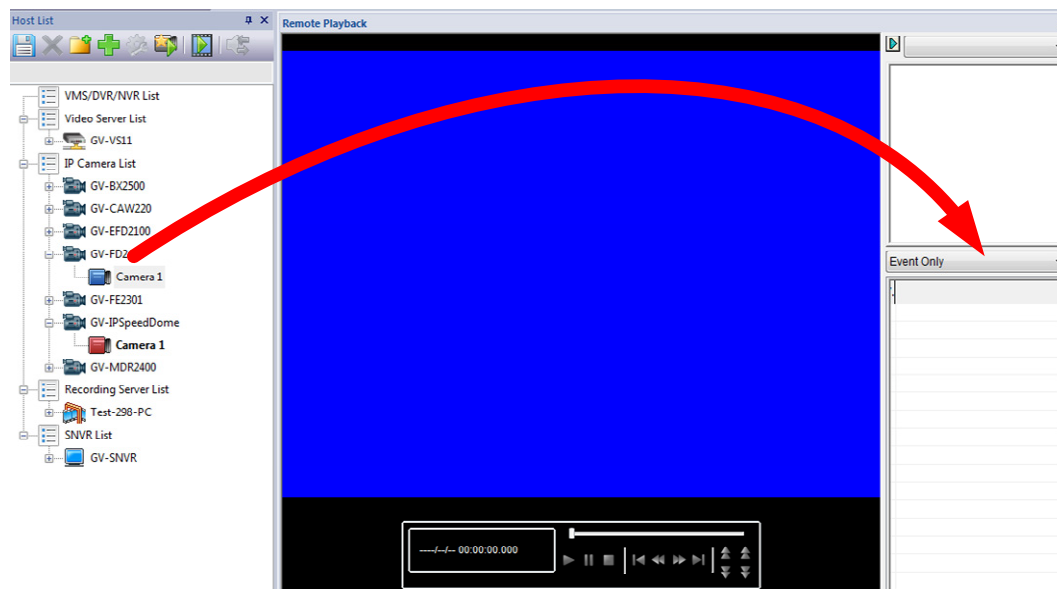


Figure 6-2

- The camera's recording is played back shortly.

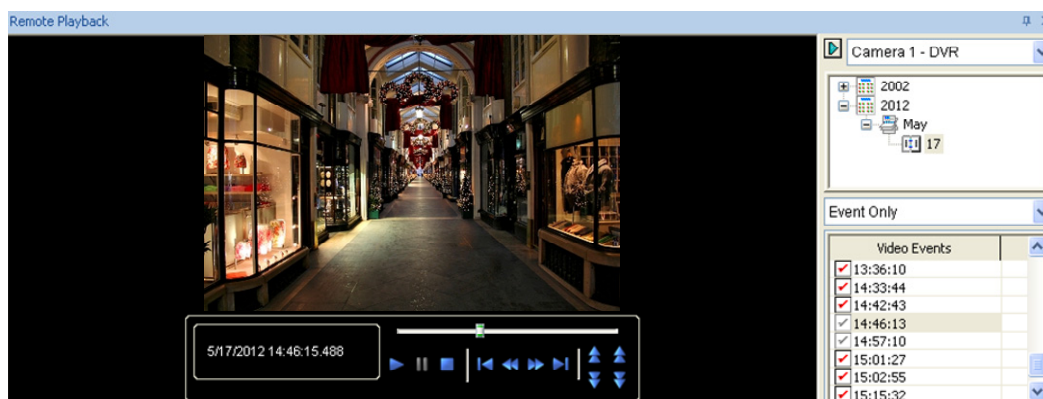


Figure 6-3

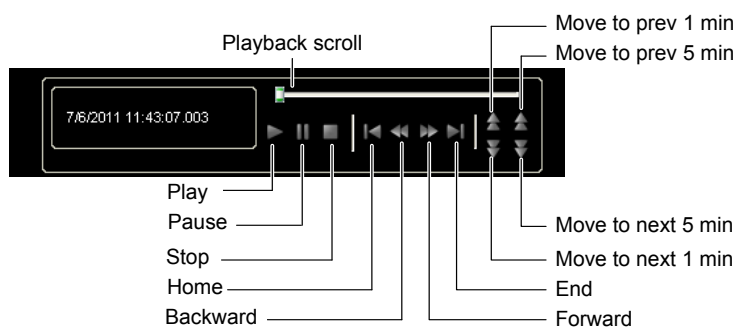


Figure 6-4

To access more playback features, right-click the Remote Playback window.

Name	Functions
Play Mode	<ul style="list-style-type: none"> • Frame by Frame: Plays back video frame by frame. • Real Time: Plays back video on real time. This mode saves waiting time for rendering, but drop frames to give the appearance of real-time playback. • Key frame: Plays back the key frame of the video. • Smooth Playback: Evenly distributes 30 frames per second. Select this play mode to enhance smoothness when the playback appears choppy. • Audio: Turns the video sound on or off and reduce noise. • Auto play next 5 minutes: Plays back video up to 5 minutes.
Render	<ul style="list-style-type: none"> • Deinterlace: Converts the interlaced video into non-interlaced video. • Scaling: Smoothens mosaic squares when enlarging a playback video, and applies the colorful mode to enhance the coloring. • Deblocking: Removes the block-like artifacts from low-quality and highly compressed video. • Defog: Enhances image visibility. • Stabilizer: Reduces camera shake. • Text overlay's camera name and time: Overlays camera name and time onto the video. • Text overlay's POS/GV-Wiegand: Overlays POS or GV-Wiegand Capture data onto the video. • Wide Angle Lens Dewarping: Corrects image distortion. See <i>Adjusting Distorted Views, 4.3 Recording</i>. • Fisheye: Select Geo Fisheye to choose a camera mode. For details, see 4.4 Fisheye View. • Mega Pixel View: Enable PIP or PAP view. See <i>4.6 PIP and PAP View</i>. • Full Screen: Switches to the full screen view.
Tools	<ul style="list-style-type: none"> • Snapshot: Saves a video image. • Save as AVI: Saves a video as avi format. • Download: Downloads the video clip from the GV-System / GV-VMS / GV-SNVR to the local computer.

Note: GV-VMS and GV-SNVR does not support the POS text overlay function.

Chapter 7 System Configuration

This chapter describes GV-Edge Recording Manager's startup mode, windows and dialog box layout and port settings.

7.1 General Settings

On the main screen, click **System** and select **Configure**. This window appears. The General tab contains settings on startup, windows layout and interface style.

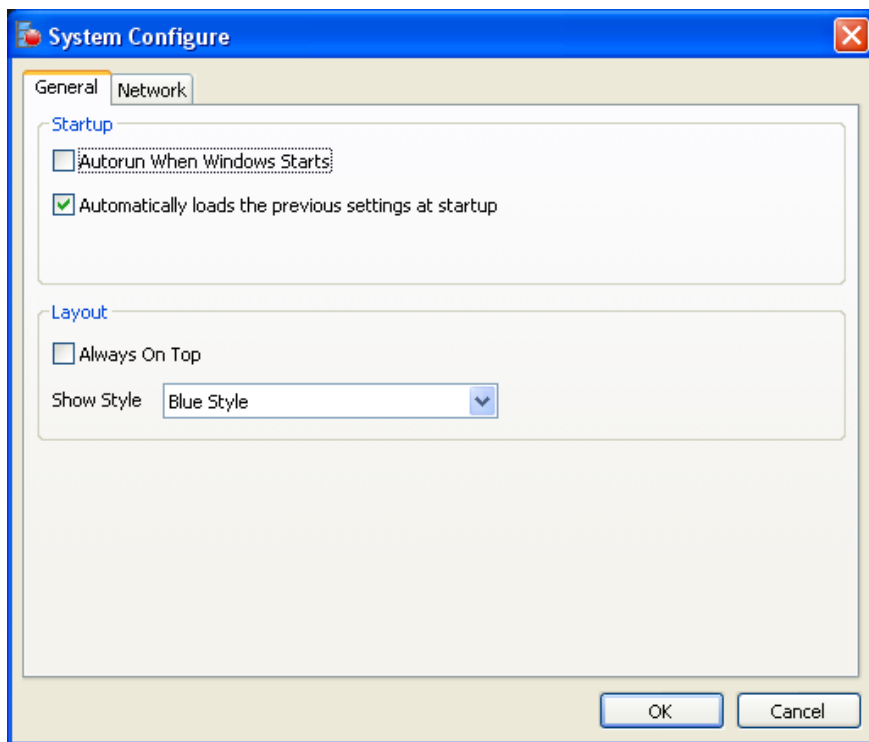


Figure 7-1

[Startup]

- **Autorun When Windows Starts:** GV-Edge Recording Manager starts up when Windows is started.
- **Automatically loads the previous settings at startup:** Automatically saves the live view settings before exiting the program and loads these settings at next startup.

[Layout]

- **Always On Top:** Each newly opened window or dialog box will stay on the top of other windows or dialog boxes.
- **Show Style:** Select a theme color for the interface.

7.2 Network Settings

To access GV-Edge Recording Manager's port settings, click **System** from the main screen, select **Configure** and then select the **Network** tab.

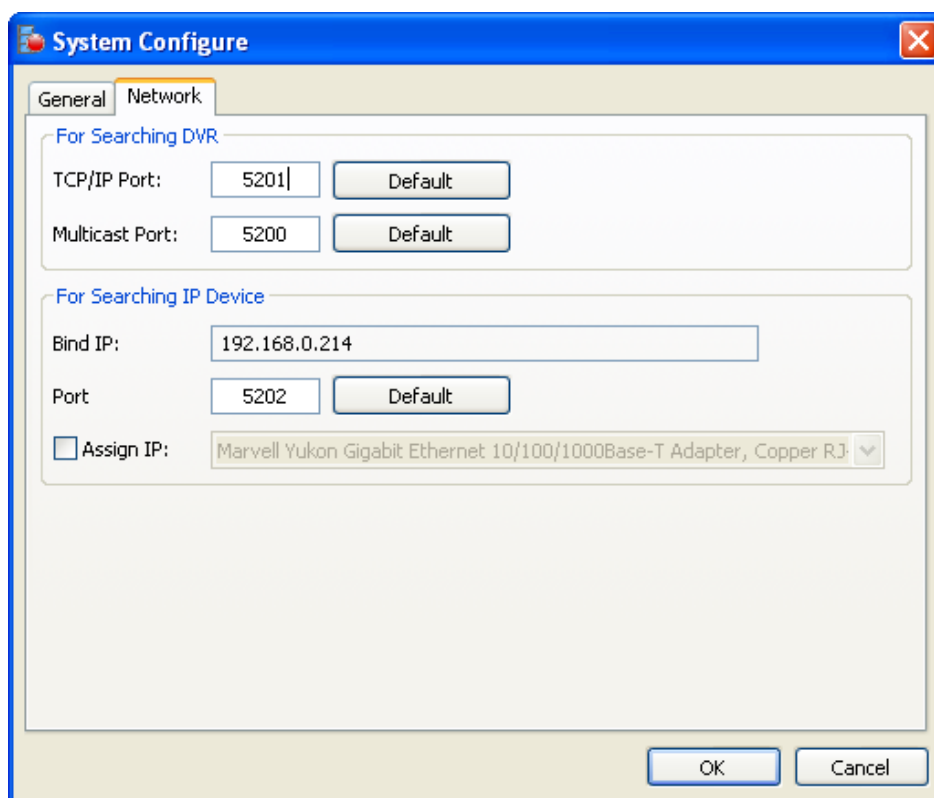


Figure 7-2

The Network tab contains port settings for GV-System hosts and IP device hosts. To use the **Search Host** function (No. 3, Figure 1-2), make sure the hosts' TCP port and multicast port match the port settings here in GV-Edge Recording Manager.

For searching GV-System hosts, the default TCP/IP port is **5201** and **5200** for multicast port. For searching IP devices, the default TCP/IP port is **5202**. You can select a LAN card to perform the search for IP devices if you have more than one LAN card installed. Keep the default settings and only change them when necessary.

Note: If a router or firewall is installed, ensure the following communication ports are open: TCP/IP port **5201** and Multicast port **5200** (both for searching GV-System) and TCP/IP port **5202** (for searching GV-IP Devices).

7.3 Exporting and Importing Settings

7.3.1 Exporting Settings

You can back up the settings in host list (Figure 1-3) and live view window (Figure 4-1).

1. On the main window, click **System** and select **Export Data**. This dialog box appears.

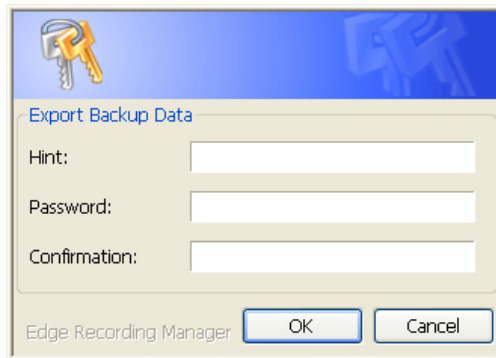


Figure 7-3

2. Set up a password for the exported settings. This password is required when the settings are being imported.
3. Click **OK** to confirm. This window appears.

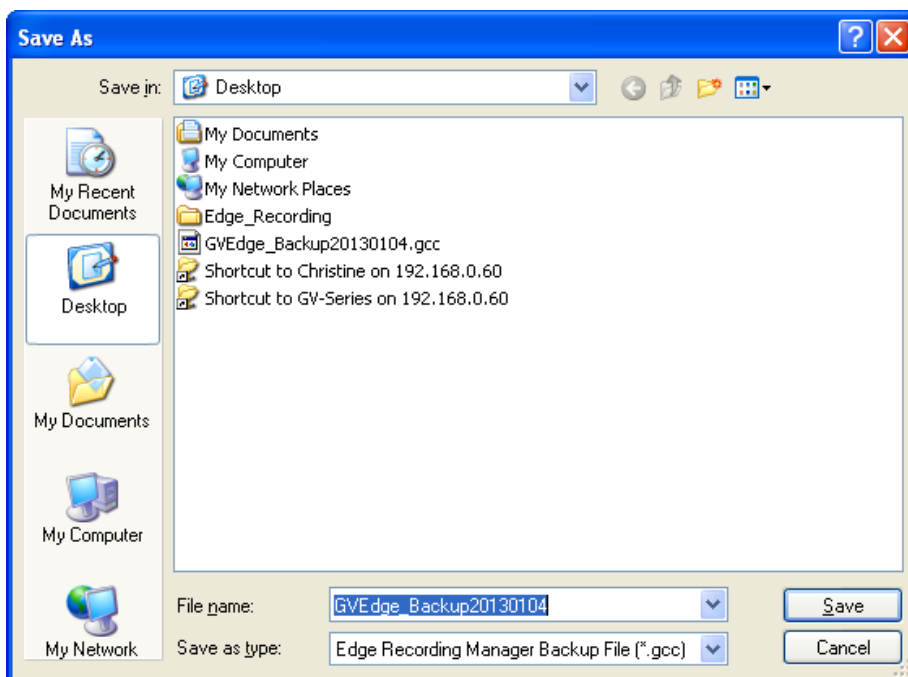


Figure 7-4

4. Select a storage location and modify the file name if necessary.
5. Click **Save**.

7.3.2 Importing Settings

You can import the previously saved settings.

1. On the main window, click **System** and select **Import Data**. A notification message appears.
2. Click **Yes** to confirm. This window appears.

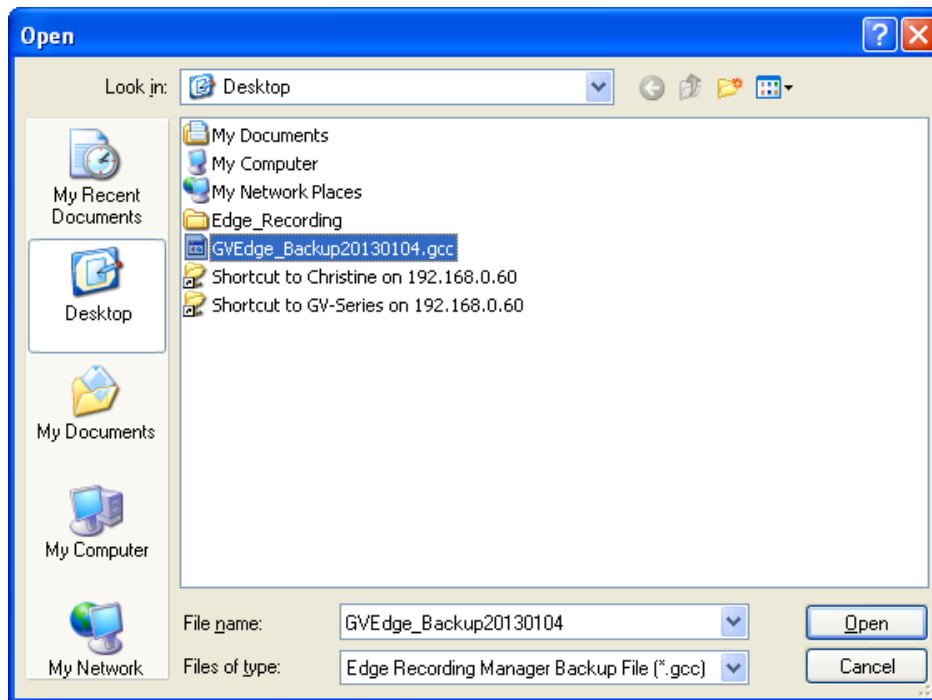


Figure 7-5

3. Locate a previously backed up file and click **Open**. The password request appears.

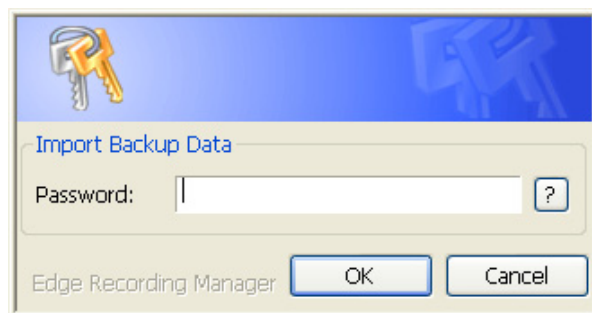


Figure 7-6

4. Type the password and click **OK**.

Mac Version



Chapter 8 Overview

8.1 Main Window

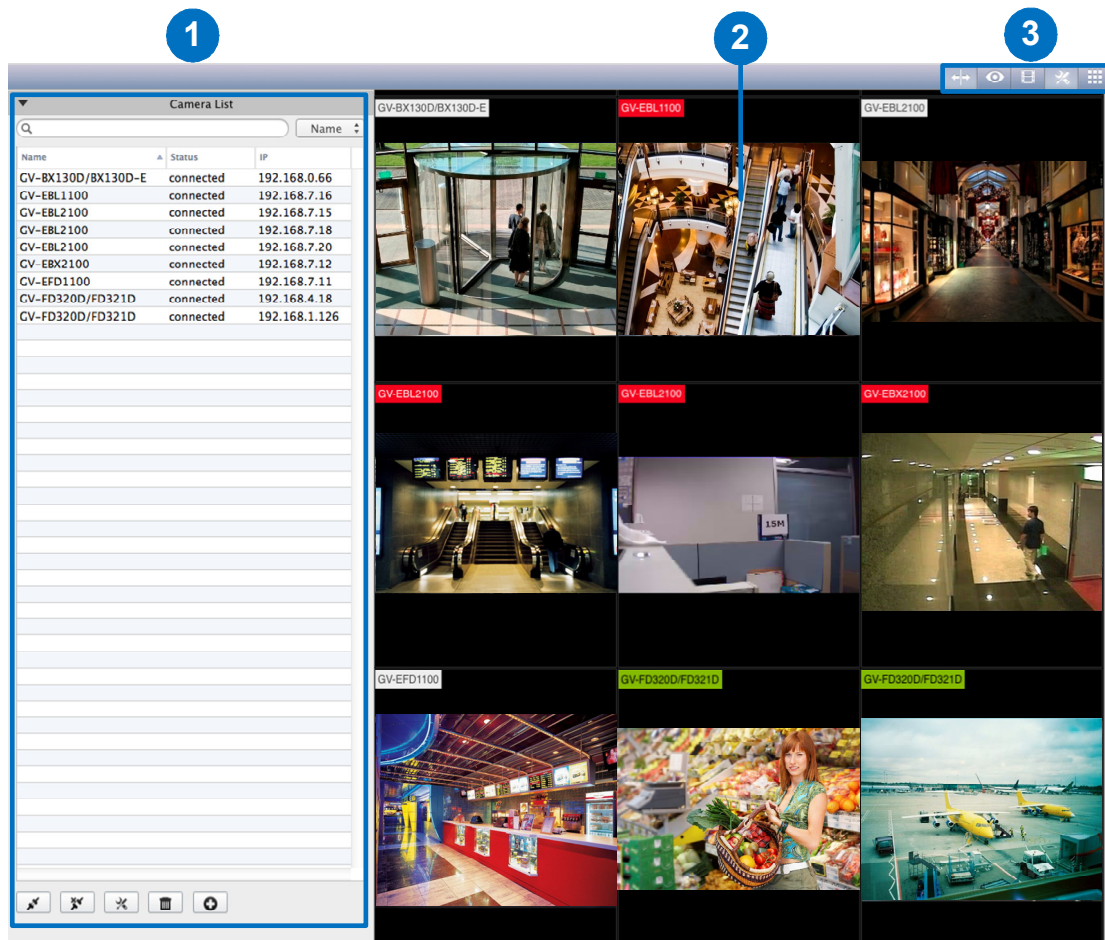


Figure 8-1

By default, there are three areas on the main screen:

No.	Name	Description
1	Camera List	Contains the hosts added to the GV-Edge Recording Manager. For details, see 8.2 <i>The Camera List</i> .
2	Live View Window	Displays live views from hosts. For details, see 11.1 <i>the Live View Window</i> .
3	Toolbar	Contains buttons to quickly access system settings, functions and main screen windows. For details, see 8.3 <i>The Toolbar</i> .

8.2 The Camera List

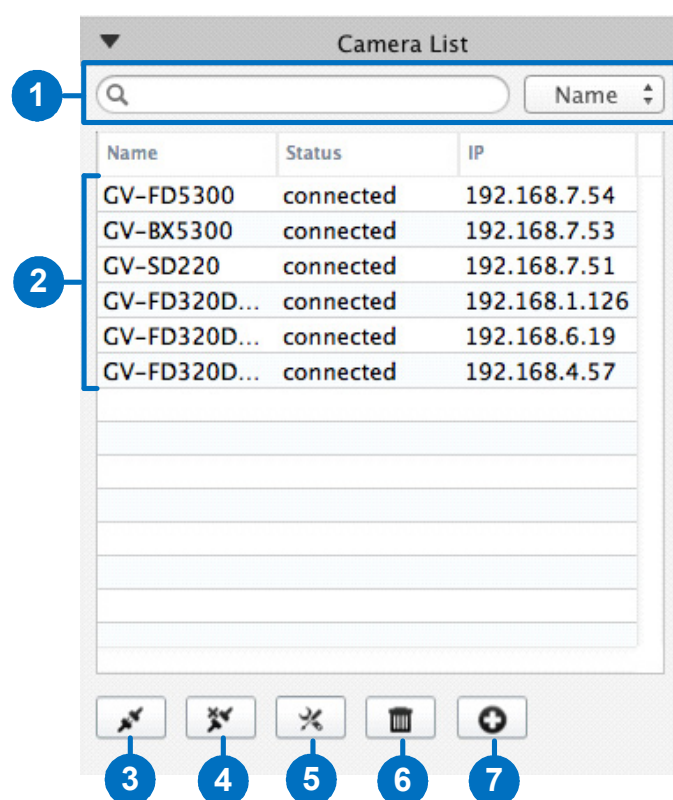


Figure 8-2

No.	Name	Description
1	Search	Search the hosts are under the same LAN with GV-Edge Recording Manager. Select Name or IP using the drop-down list and then type key words to search by host name or IP address.
2	Host Information	Displays the host information including host name, status and IP address. Click the header to sort the devices according to name, status or IP address.
3	Connect	Displays the live view of the selected host.
4	Disconnect	Removes the live view of the selected host.
5	Host Settings	Modifies host settings including the host name, IP address, username, password and connection ports.
6	Delete Host	Deletes the selected host from the Camera List.
7	Add Host	Adds a host. For details, see <i>9.2.2 Manually Adding a Host Manually</i> .

8.3 The Toolbar




Figure 8-3

No.	Name	Description
1	Controller	Click to extend the Live View Window (No. 3, Figure 8-1) to full screen.
2	Event List	Displays events with event type, device name and detection time. For details, see <i>11.5 Event List</i> .
3	Remote Playback	Click to access the recording calendar which notes dates in which recordings are done. For details, see <i>Chapter 13 Playback</i> .
4	Setup	Click to access the Camera List for host management. For details, see <i>8.2 The Camera List</i> .
5	Layout	Click to switch the live view division. You can choose among 1, 4, 9, 16 and 36 channels.

Chapter 9 Getting Started

9.1 Installing the GV-Edge Recording Manager

Follow the steps below to install GV-Edge Recording Manager from the GeoVision Website.

1. Go to the Software Download and Upgrading page of GeoVision Website:
http://www.geovision.com.tw/english/5_8_VMS.asp
2. Select **Video Management Software** tab, select **GV-Edge Recording Manager** from the drop-down list and click the **Download** icon  of **GV-Edge Recording Manager (Mac)**.
3. Open the downloaded folder, drag and drop the **Edge Recording Manager.dmg** file to your computer.

9.2 Adding Hosts

At first startup, GV-Edge Recording Manager automatically searches and displays GV-IP Devices and servers installed with GeoVision software that are under the same LAN. To add multiple hosts, follow the instruction in *9.2.1 Automatically Adding Multiple Hosts*. To add a single host, follow the instruction in *9.2.2 Manually Adding a Host*.

9.2.1 Automatically Adding Multiple Hosts

1. For the first startup, you will be prompted to search GV-IP Devices and servers installed with GeoVision software that are under the same LAN with GV-Edge Recording Manager. Click **Start** to search.

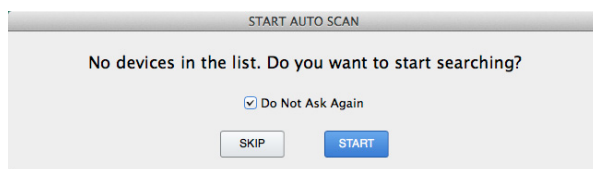




Figure 9-1

2. Click **Start** and click  from the Camera List. The Add Camera window appears and the searched devices are displayed.
3. To refresh the list, click . GV-Edge Recording Manager starts browsing for GV-IP Devices under the same LAN and the found devices are immediately listed.

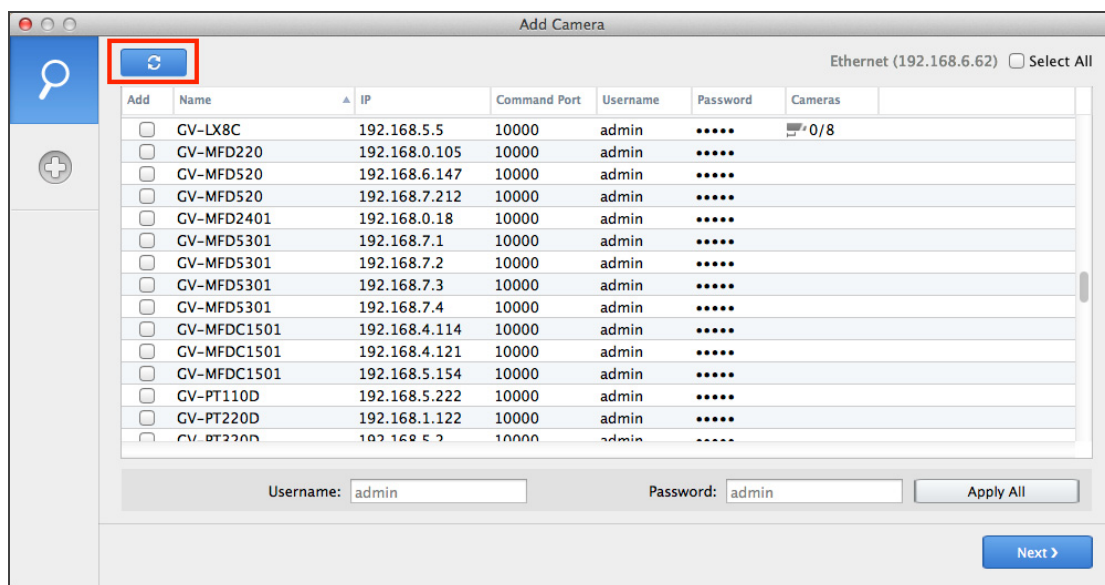


Figure 9-2

4. To add multiple hosts:
 - A. Select hosts from the Add Camera window or click **Select All** to add all the hosts.
 - B. Type the username and Password and click **Apply All** to log in the selected hosts using the username and password or type the Username and Password for each camera. Click **Next**.

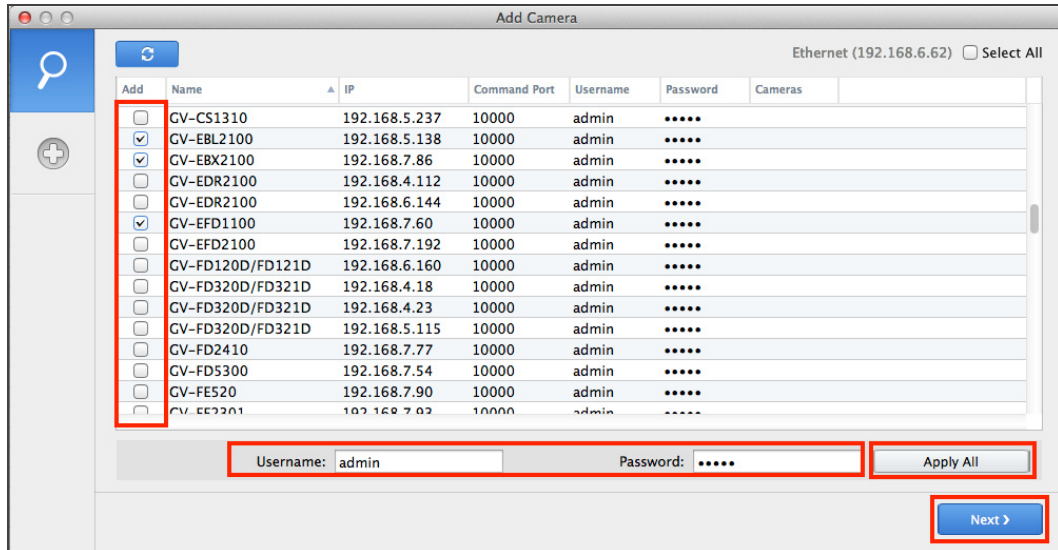


Figure 9-3

- C. The selected hosts are shown.

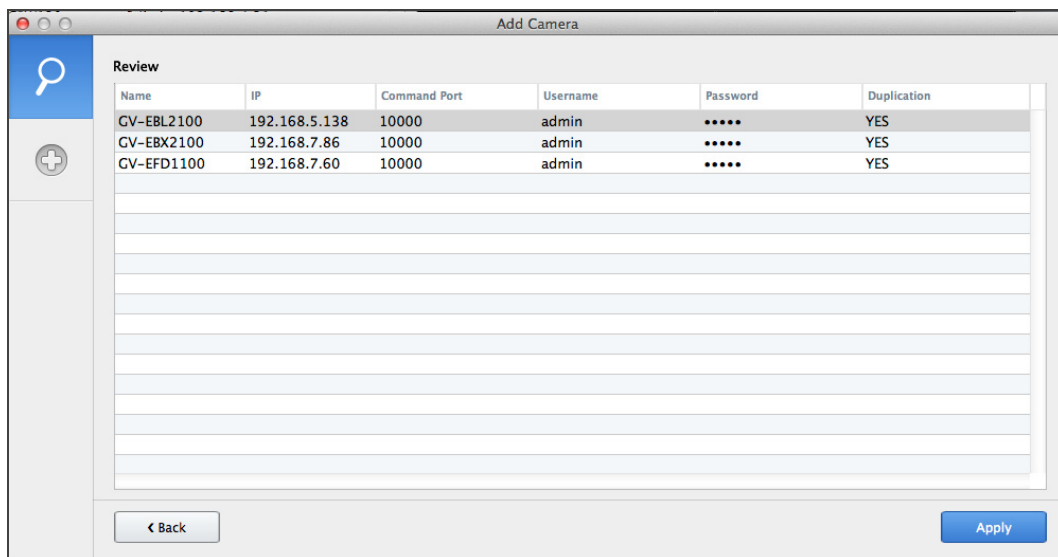
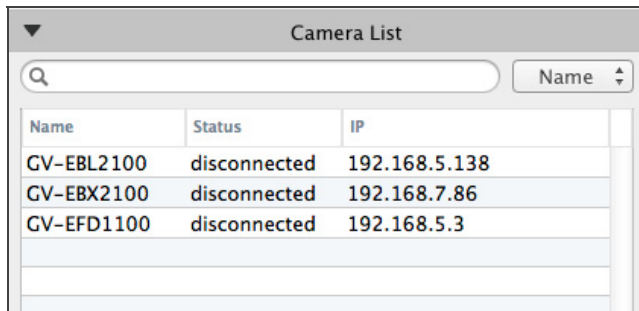



Figure 9-4

- D. To remove unwanted hosts, click **Back** to return to the previous step to unselect them. To add these hosts to Camera List, click **Apply**. They are immediately added.



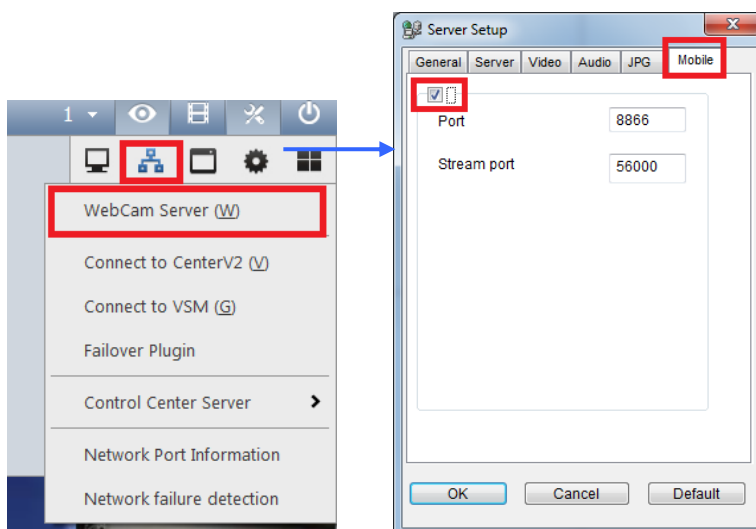
Name	Status	IP
GV-EBL2100	disconnected	192.168.5.138
GV-EBX2100	disconnected	192.168.7.86
GV-EFD1100	disconnected	192.168.5.3

Figure 9-5



5. You can display live view using any of the following method:
- Double-click a host
 - Drag and drop a host to the live view
 - Select a host on the Camera List and click 

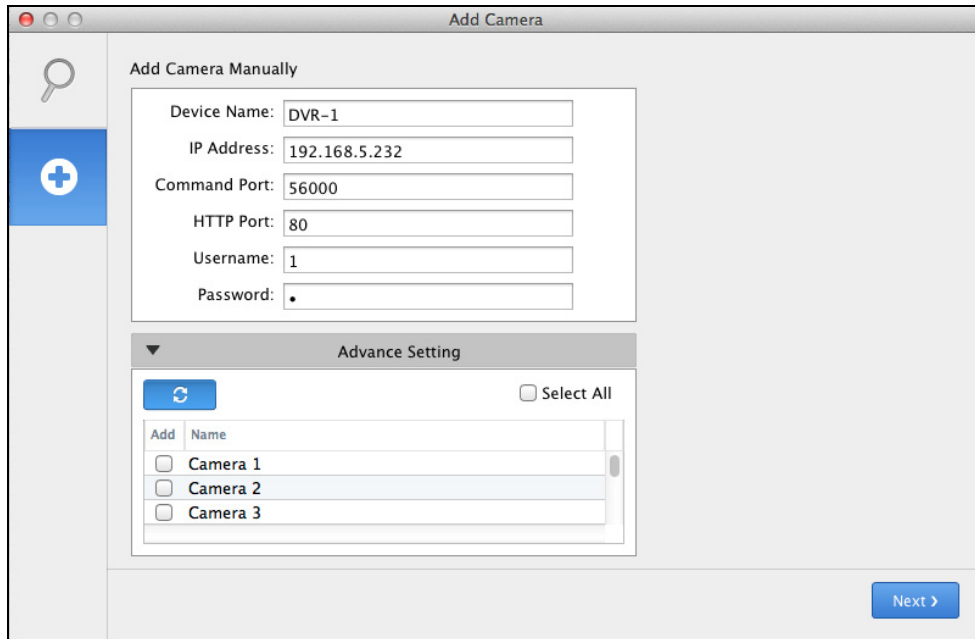
Note:

1. If a router or firewall is installed, ensure the following communication ports required by the Host Search function are open:
 - TCP/IP ports **5201** (for searching GV-VMS) and **5202** (for searching GV-IP Devices)
 - Multicast port **5200**
2. If antivirus software is installed, the Host Search function may be interfered and will not detect the available hosts. In this case, turn off the antivirus software and try again.
3. To add GV-VMS hosts, make sure that **Webcam Server** with **Mobile** function is enabled ahead to allow remote access from GV-Edge Recording Manager. (Network button < WebCam Server < Mobile tab)



9.2.2 Manually Adding a Host

1. Click  from the Camera List. The Add Camera window appears.
2. Click . This page appears.




The screenshot shows the 'Add Camera' window with the following fields and sections:

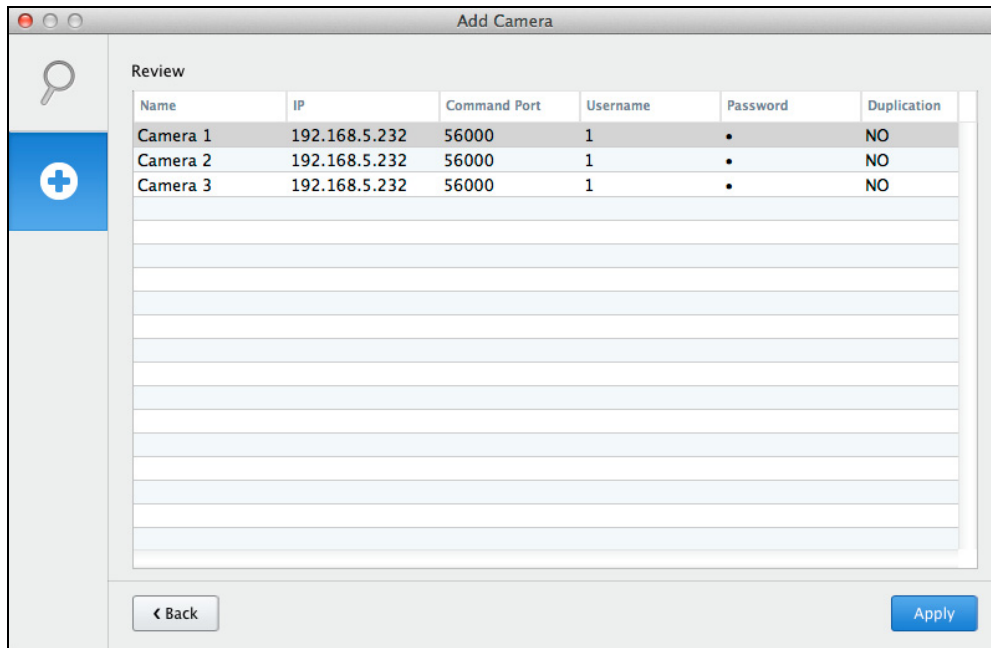
- Add Camera Manually** section:
 - Device Name: DVR-1
 - IP Address: 192.168.5.232
 - Command Port: 56000
 - HTTP Port: 80
 - Username: 1
 - Password: •
- Advance Setting** section:
 - A refresh button (circular arrow icon) and a 'Select All' checkbox.
 - A table with columns 'Add' and 'Name':

Add	Name
<input type="checkbox"/>	Camera 1
<input type="checkbox"/>	Camera 2
<input type="checkbox"/>	Camera 3
- A 'Next >' button at the bottom right.

Figure 9-6

3. Type the host's device name, IP address, username and password. The default command port is **10000** for GV-IP Devices, **56000** for GV-VMS, **11000** for GV-Recording Server, and the default HTTP port is **80**. Only modify these values if necessary.
4. Optionally click  to obtain a list of cameras that are connected to the host. This function only applies to GV-VMS and GV-Recording Server which contain multiple cameras.

Select the cameras to be added and then click **Next**. This page appears.



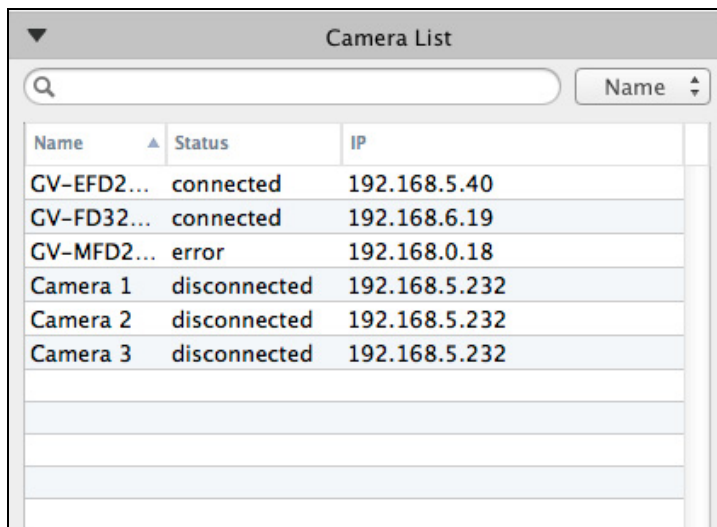
The screenshot shows a window titled "Add Camera" with a "Review" section. On the left is a sidebar with a magnifying glass icon and a blue button with a white plus sign. The "Review" section contains a table with the following data:

Name	IP	Command Port	Username	Password	Duplication
Camera 1	192.168.5.232	56000	1	•	NO
Camera 2	192.168.5.232	56000	1	•	NO
Camera 3	192.168.5.232	56000	1	•	NO

At the bottom of the window are two buttons: "< Back" and "Apply".

Figure 9-7

5. Click **Apply**. These cameras are added to the Camera List.



The screenshot shows a window titled "Camera List" with a search bar and a dropdown menu set to "Name". The table below lists the cameras and their status:

Name	Status	IP
GV-EFD2...	connected	192.168.5.40
GV-FD32...	connected	192.168.6.19
GV-MFD2...	error	192.168.0.18
Camera 1	disconnected	192.168.5.232
Camera 2	disconnected	192.168.5.232
Camera 3	disconnected	192.168.5.232

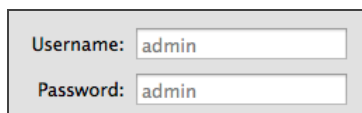
Figure 9-8

Chapter 10 Batch Management

The batch functions are integrated interfaces designed for management of mass number of GV-IP Devices without the need to visit each device's Web interface. On these interfaces, you can change/assign IP address, rename devices, assign NAS and view storage space information of multiple GV-IP Devices.

Note:

1. The batch management functions described in this chapter do not apply to GV-Recording Server and GV-VMS.
2. By default, all the username and password for batch management functions (under Utilities) are **admin**. To use a different set of username and password, type in the Username and Password fields.



Username:

Password:

10.1 Configuring the IP Address

You can set the IP address of more than one GV-IP Devices at a time. Follow the steps below.

1. On the main screen, move the cursor to the top, from the emerging toolbar, click **Tools** and then click **Utilities**. The Utilities window appears.

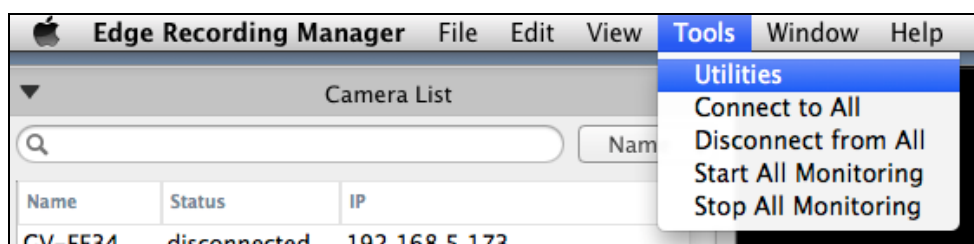



Figure 10-1

- Click  to browse for GV-IP Devices under the same LAN. The devices found are listed.

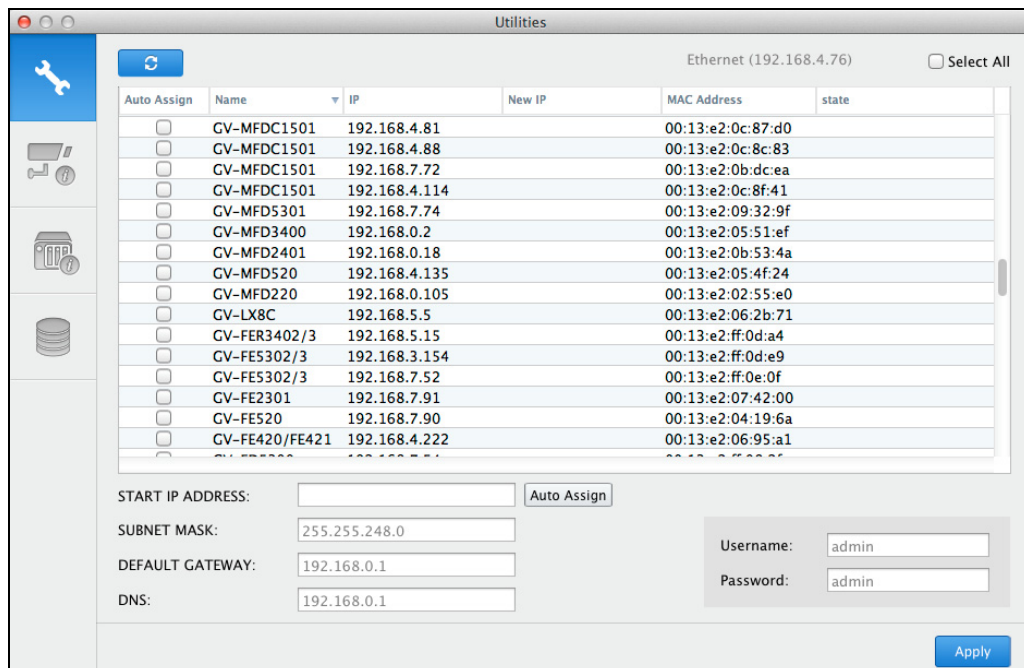


Figure 10-2

- Select at least one device, type the Start IP address, subnet mask, default gateway, DNS, username and password. For multiple devices, the IP address will proceed from the start IP address you specified.
- To preview the new IP addresses, click **Auto Assign**. The IP addresses to be assigned are shown in the New IP column.

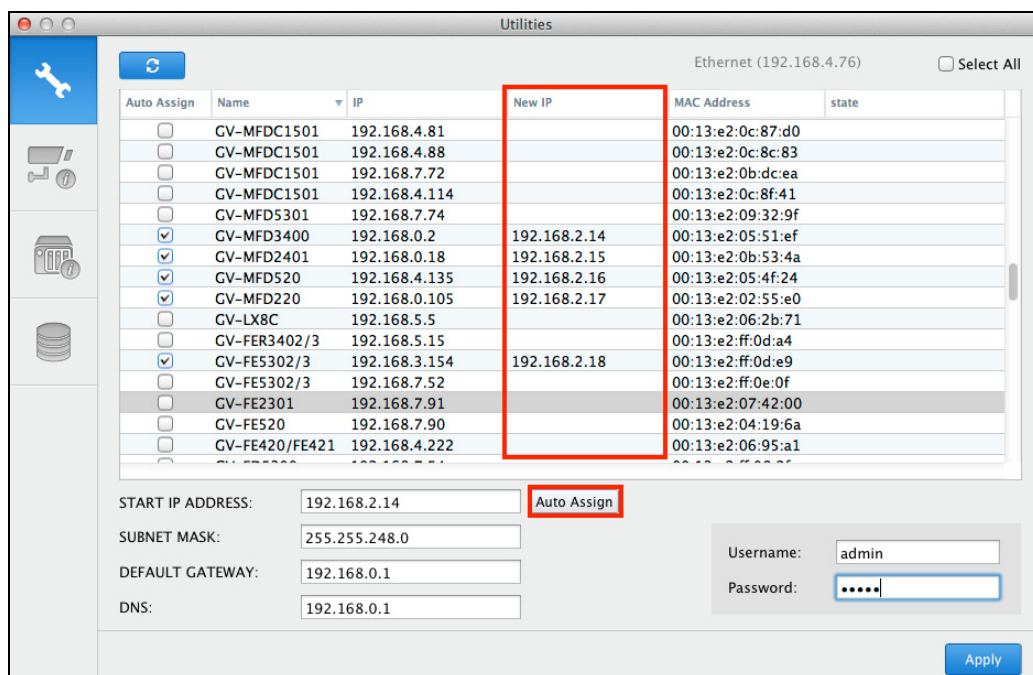


Figure 10-3

- Click **Apply** to start the update. When update is completed, the “Success” message appears in the State column.

The screenshot shows a window titled 'Utilities' with a sidebar on the left containing icons for a wrench, a server rack, and a database. The main area displays a table of network devices. The table has columns: 'Auto Assign', 'Name', 'IP', 'New IP', 'MAC Address', and 'state'. Below the table are input fields for 'START IP ADDRESS', 'SUBNET MASK', 'DEFAULT GATEWAY', and 'DNS', along with an 'Auto Assign' button. To the right of these fields are 'Username' and 'Password' fields. An 'Apply' button is located at the bottom right of the window.

Auto Assign	Name	IP	New IP	MAC Address	state
<input type="checkbox"/>	GV-MFDC1501	192.168.4.81		00:13:e2:0c:87:d0	
<input type="checkbox"/>	GV-MFDC1501	192.168.4.88		00:13:e2:0c:8c:83	
<input type="checkbox"/>	GV-MFDC1501	192.168.7.72		00:13:e2:0b:dc:ea	
<input type="checkbox"/>	GV-MFDC1501	192.168.4.114		00:13:e2:0c:8f:41	
<input type="checkbox"/>	GV-MFD5301	192.168.7.74		00:13:e2:09:32:9f	
<input checked="" type="checkbox"/>	GV-MFD3400	192.168.0.2	192.168.2.14	00:13:e2:05:51:ef	Success
<input checked="" type="checkbox"/>	GV-MFD2401	192.168.0.18	192.168.2.15	00:13:e2:0b:53:4a	Success
<input checked="" type="checkbox"/>	GV-MFD520	192.168.4.135	192.168.2.16	00:13:e2:05:4f:24	Success
<input checked="" type="checkbox"/>	GV-MFD220	192.168.0.105	192.168.2.17	00:13:e2:02:55:e0	Success
<input type="checkbox"/>	GV-LX8C	192.168.5.5		00:13:e2:06:2b:71	
<input type="checkbox"/>	GV-FER3402/3	192.168.5.15		00:13:e2:ff:0d:a4	
<input checked="" type="checkbox"/>	GV-FE5302/3	192.168.3.154	192.168.2.18	00:13:e2:ff:0d:e9	Success
<input type="checkbox"/>	GV-FE5302/3	192.168.7.52		00:13:e2:ff:0e:0f	
<input type="checkbox"/>	GV-FE2301	192.168.7.91		00:13:e2:07:42:00	
<input type="checkbox"/>	GV-FE520	192.168.7.90		00:13:e2:04:19:6a	
<input type="checkbox"/>	GV-FE420/FE421	192.168.4.222		00:13:e2:06:95:a1	

START IP ADDRESS: 192.168.2.14 Auto Assign

SUBNET MASK: 255.255.248.0

DEFAULT GATEWAY: 192.168.0.1

DNS: 192.168.0.1

Username: admin

Password:

Apply

Figure 10-4

10.2 Renaming Devices

You can modify the device name for multiple devices through a single interface, without visiting each device's settings page.

1. On the main screen, move the cursor to the top, from the emerging toolbar, click **Tools** and then click **Utilities**. The Utilities window appears.

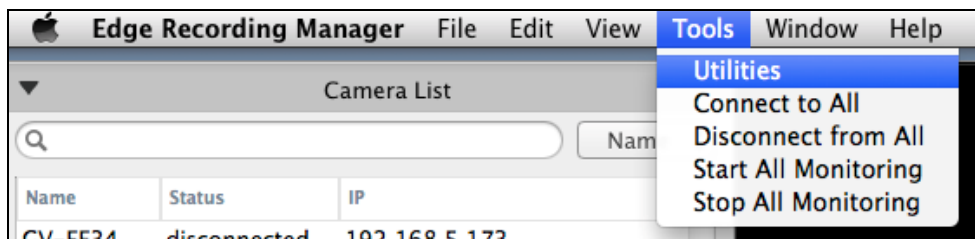




Figure 10-5

2. Click  to switch to the Camera Name page and then click  to browse for GV-IP Devices under the same LAN. The devices found are listed.

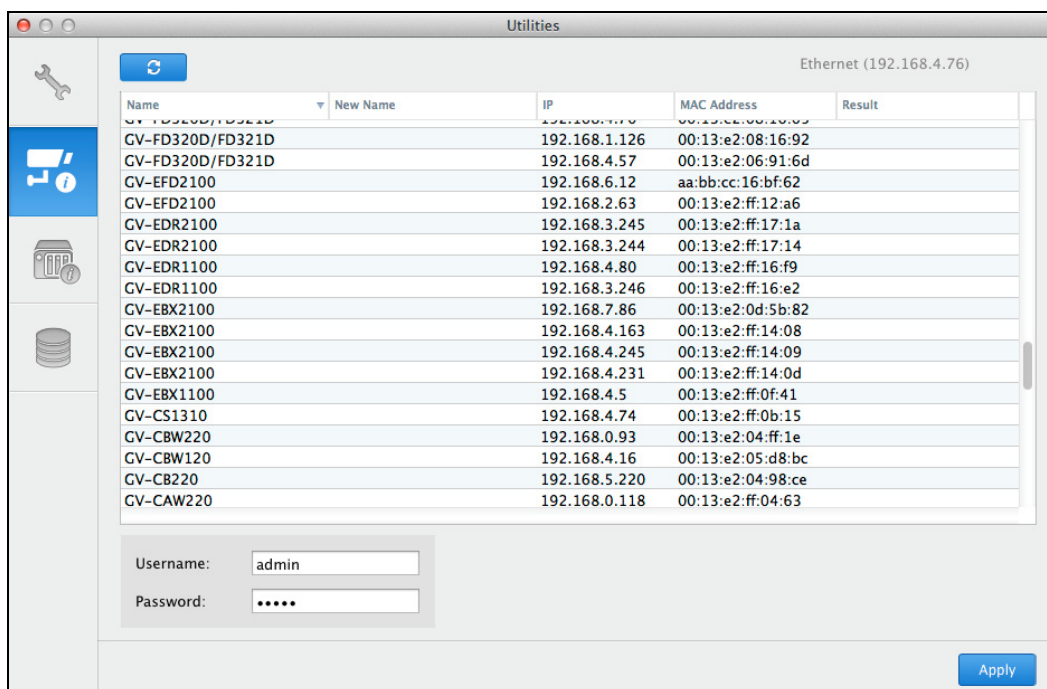


Figure 10-6

3. Type the new device name in the New Name column, username and password and then click **Apply** to start the update. When the update is completed, the “Success” message appears in the State column.

The screenshot shows a window titled "Utilities" with a sub-header "Ethernet (192.168.4.76)". It contains a table with columns: Name, New Name, IP, MAC Address, and Result. Below the table is a form with fields for Username (admin) and Password (*****), and an Apply button.

Name	New Name	IP	MAC Address	Result
idi-GV-BX520D		192.168.6.246	00:13:e2:02:55:68	
idi-GV-EBX1100		192.168.6.247	00:13:e2:ff:12:1c	
idi-GV-EBL2100		192.168.6.248	00:13:e2:ff:14:2f	
idi-GV-FD320D		192.168.6.249	00:13:e2:03:61:b3	
CV-EBL1100		192.168.7.17	00:13:e2:ff:12:84	
CV-BX220D/BX220D-E		192.168.7.25	00:13:e2:04:e3:34	
CV-SD220	Front Gate	192.168.7.51	00:13:e2:04:fc:68	Success
CV-FE5302/3		192.168.7.52	00:13:e2:ff:0e:0f	
5300	Office A	192.168.7.53	00:13:e2:ff:08:37	Success
CV-FD5300	Side Door	192.168.7.54	00:13:e2:ff:08:2f	Success
CV-MFDC1501		192.168.7.72	00:13:e2:0b:dc:ea	
CV-UBLC2401		192.168.7.73	00:13:e2:08:98:19	
CV-MFD5301		192.168.7.74	00:13:e2:09:32:9f	
CV-FD1200		192.168.7.75	00:13:e2:09:77:89	
CV-FD2400		192.168.7.76	00:13:e2:0b:49:c0	
CV-FD2410		192.168.7.77	00:13:e2:ff:08:04	
CV-EBX2100		192.168.7.86	00:13:e2:0d:5b:82	
CV-EFD2100		192.168.7.87	00:13:e2:ff:14:6b	

Username:

Password:

Figure 10-7

10.3 Viewing Storage Information

You can view the free and total storage space on this page.

Note: This function is only available for GV-IP Devices. For the supported firmware version, see *Supported GV-IP Devices and Software in Introduction* of this manual.

1. On the main screen, move the cursor to the top, from the emerging toolbar, click **Tools** and then click **Utilities**. The Utilities window appears.

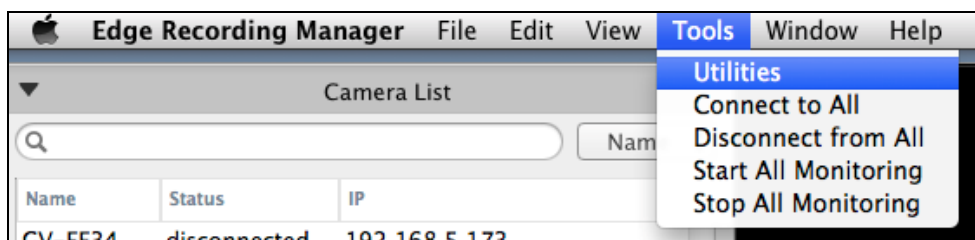




Figure 10-8

2. Click  to show the HDD Information page.
3. Type the username and password of the devices you wish view, and then click  to browse for GV-IP Devices under the same LAN.

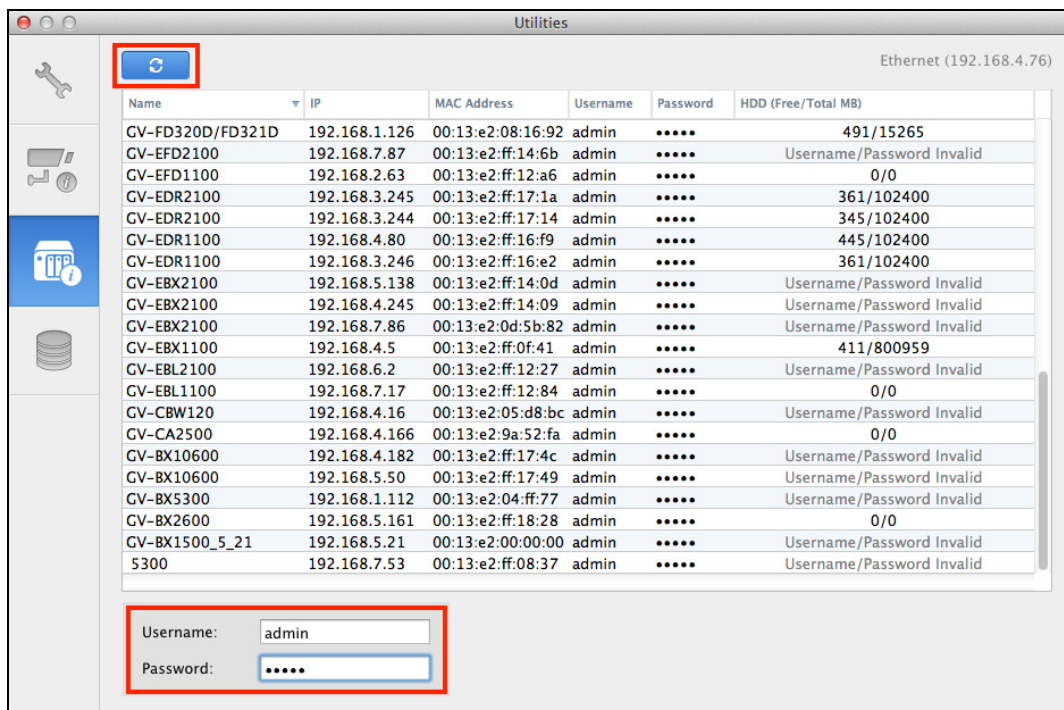


Figure 10-9

- Click an HDD entry to view the device's free and total storage. This information is only accessible for devices with valid username and password.

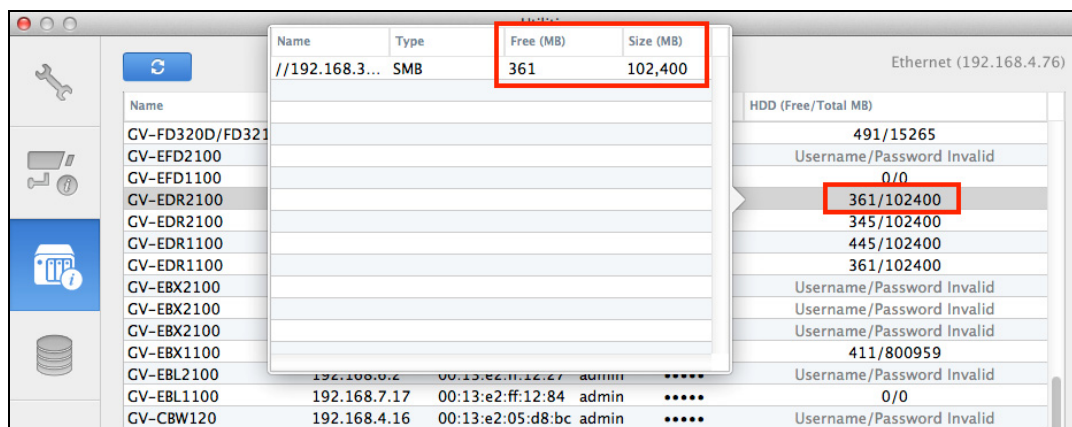


Figure 10-10

10.4 Assigning Storage to NAS

You can record multiple GV-IP Cameras and GV-Target Cameras to NAS through GV-Edge Recording Manager.

IMPORTANT:

1. For the NAS application, it is required to use GV-IP Cameras (firmware V3.00 or later) and GV-Target Cameras (firmware V1.02 or later).
2. For system performance and compatibility, it is highly recommended to use GV-NAS Systems for recording.
3. Make sure the computer installed with GV-Edge Recording Manager is under the same LAN with the NAS.

1. On the main screen, move the cursor to the top, from the emerging toolbar, click **Tools** and then click **Utilities**. The Utilities window appears.

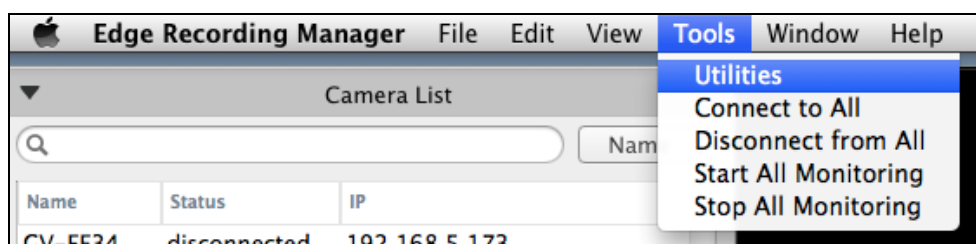



Figure 10-11

2. Click  to show the Storage Setup page.

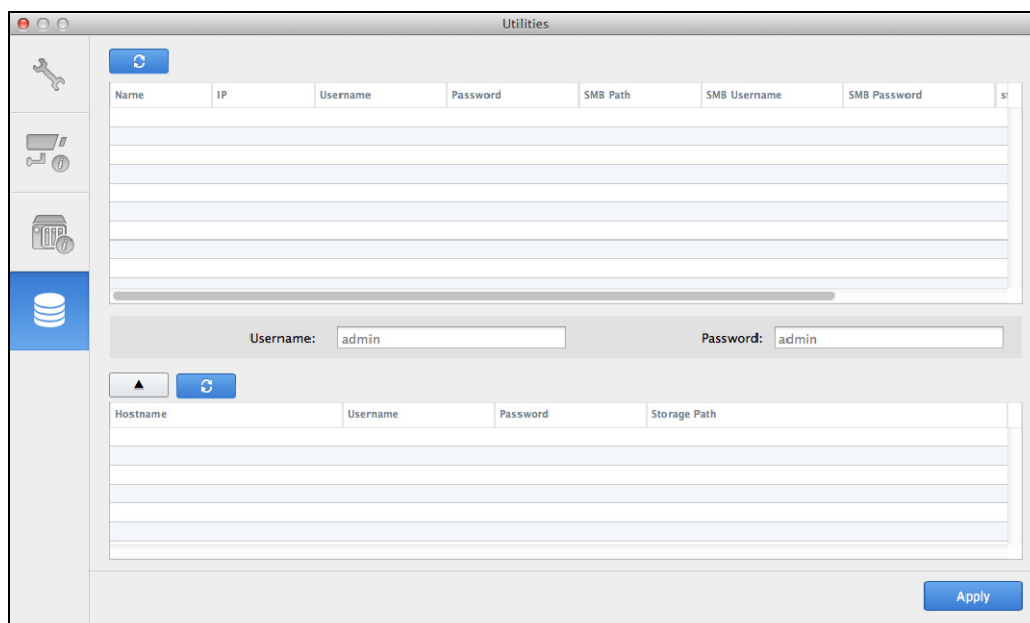



Figure 10-12

3. Type the username and password of the cameras you wish to search and click  to browse. In this example, we search for cameras with the username and password **admin**. This dialog box appears.

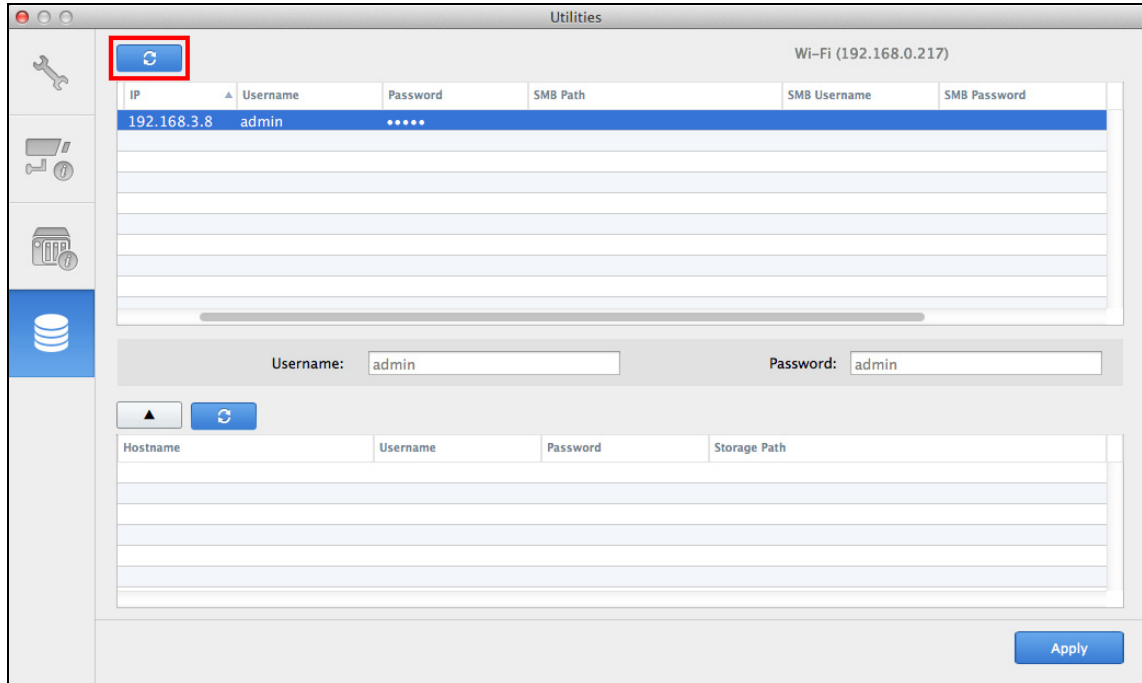


Figure 10-13

4. Select a camera and click  to browse for NAS servers under the same LAN.

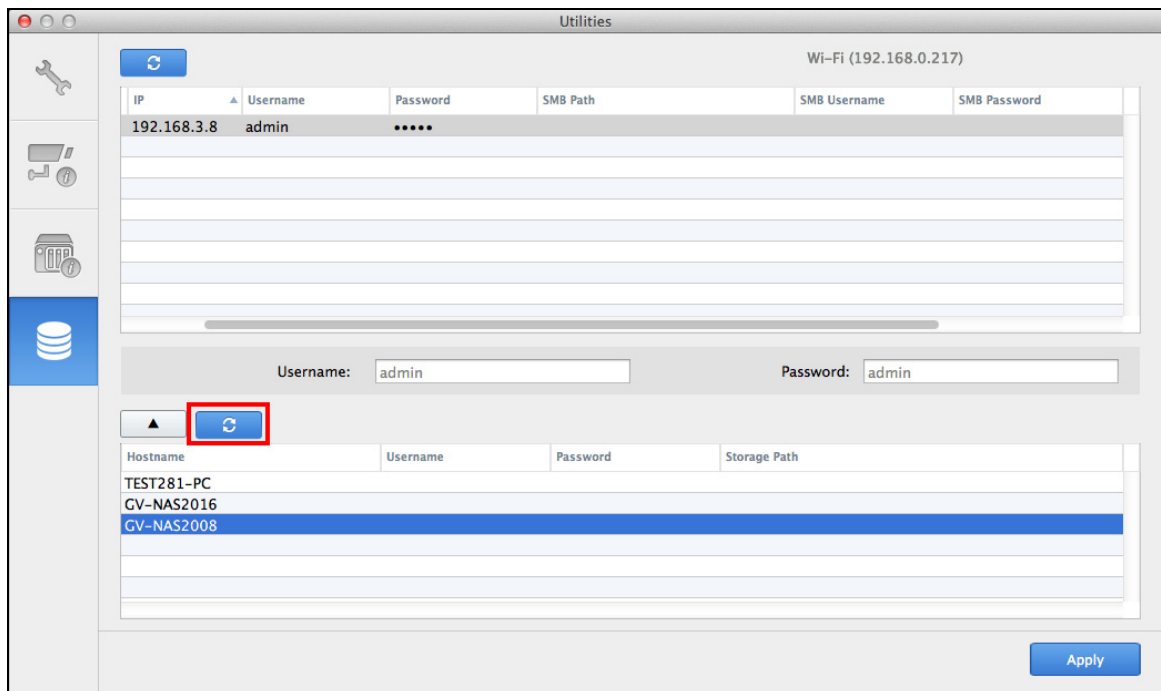


Figure 10-14

5. To assign the storage path, follow the steps below.

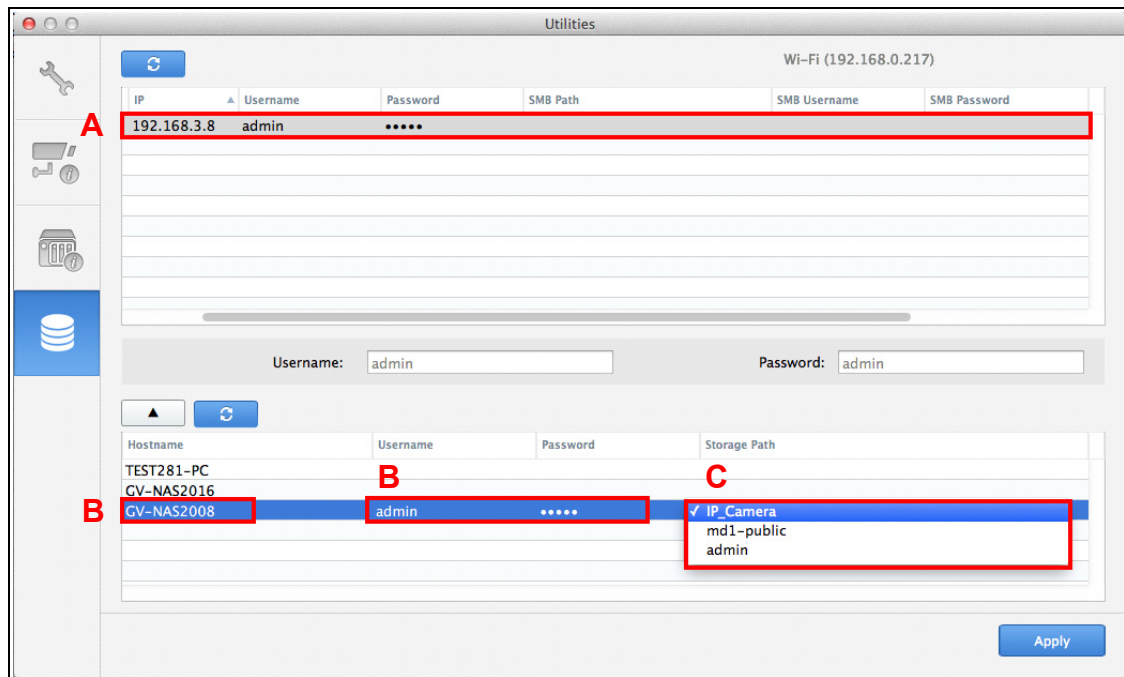



Figure 10-15

- Select a camera from the top list.
- Select a NAS server from the bottom list and type the administrator username and password of the NAS server. For GV-NAS Systems, the default username and password are both **admin**.
- Optionally click on the folder name to change the storage folder.

6. Click  to assign this path to the camera. The storage path appears immediately in the SMB Path column.

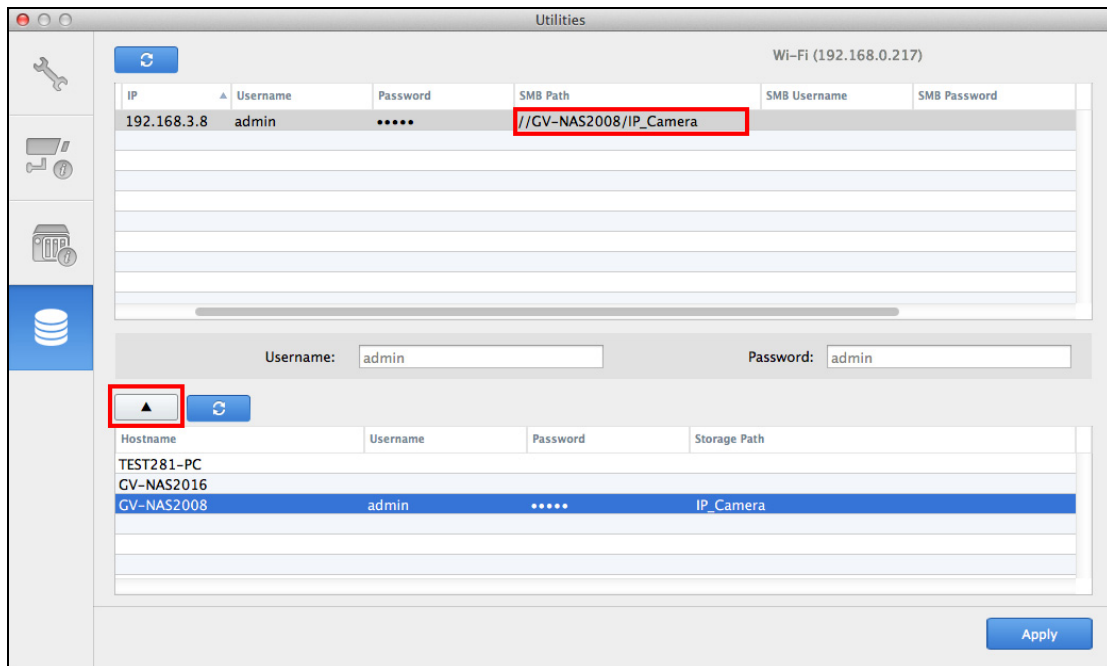


Figure 10-16

7. Type the username and password of an established account in the NAS server. For example, the default username and password for a GV-NAS System is **Cam01** and **12345678**.

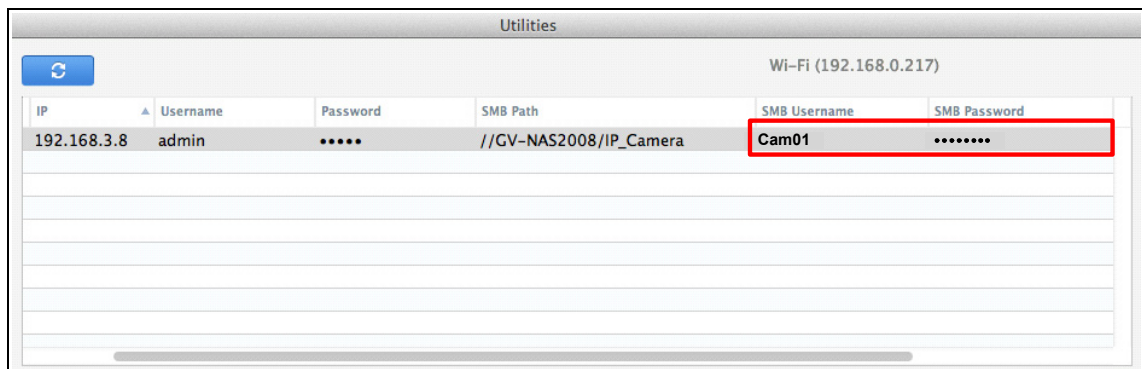


Figure 10-17

Note:

- Be sure that you assign each IP camera to record to a different user account in GV-NAS Systems to avoid disrupting the recycling process.
- For GV-NAS2008 / 4008, the default user name is **Cam01** up to **Cam08** for each of the 8 user accounts; for GV-NAS2016 / 4016, the default user name is **Cam01** up to **Cam16** for each of the 16 user accounts. The default passwords are all **12345678**. For details, see *GV-NAS System Quick Start Guide* and *User's Manual*.

8. To assign a different recording path for another camera, follow steps 6 and 7.
9. Click **Apply** to save the settings.

Chapter 11 Live View

You can utilize GV-Edge Recording Manager to manage multiple live views and their recording status.

11.1 The Live View Window

The Live View Window can display up to 32 channels and support functions including snapshot, image rotation, PTZ control, monitoring and time synchronization.

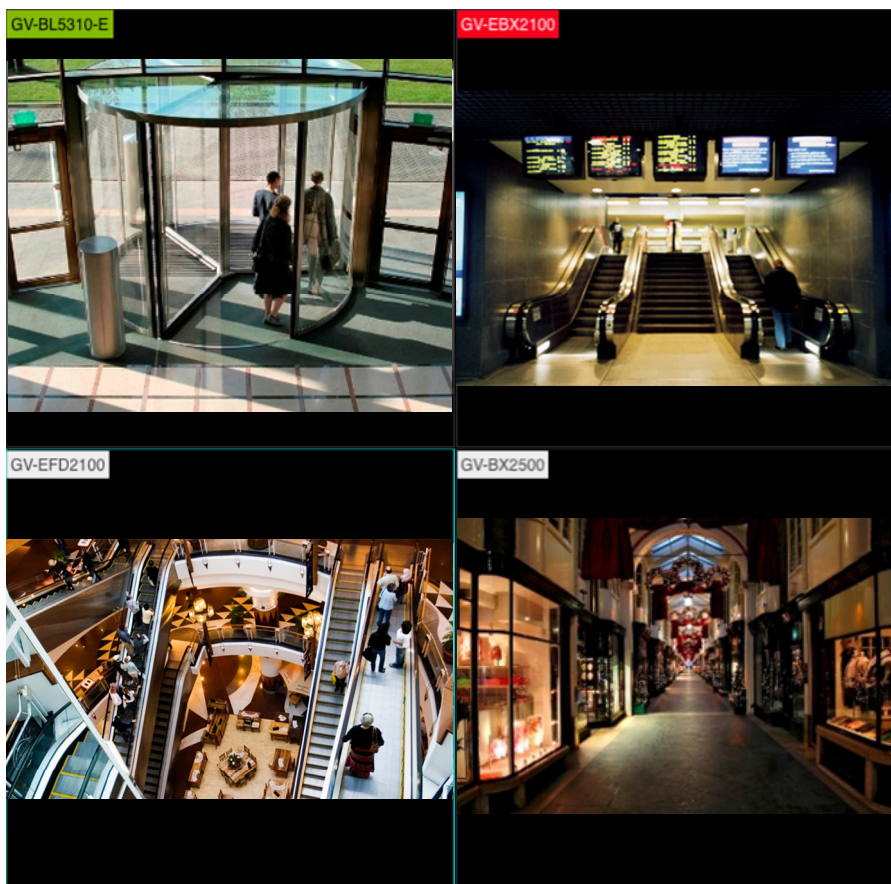



Figure 11-1

Use any of the following method to display live view on this window:

- Drag and drop cameras from the Camera List (Figure 8-2).
- Double-click a camera from the Camera List (Figure 8-2) and double-click again to disconnect.
- Select a device from the Camera List (Figure 8-2) and click .

- To connect the first 32 cameras, move your cursor to the top of the main screen, from the emerging toolbar, click **Tools** and then click **Connect to All**.

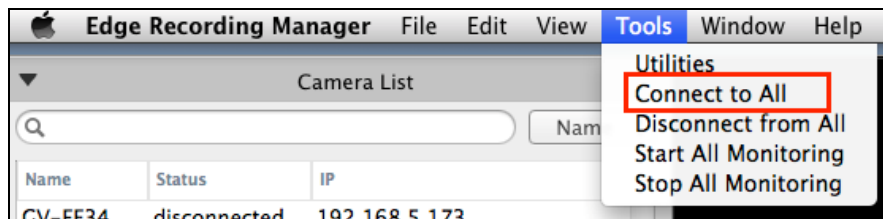



Figure 11-2

To disconnect a live view:

- Right-click a live view and select **Disconnect**.
- Double-click a device from the Camera List (Figure 8-2).
- Select a device from the Camera List (Figure 8-2) and click .
- To disconnect all cameras on the live view, move your cursor to the top of the main screen, from the emerging toolbar, click **Tools** and then click **Connect to All**.

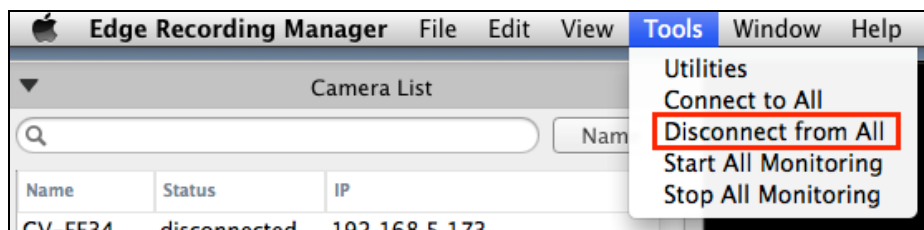


Figure 11-3

Tip:

1. Double-click a channel to display it in full screen and double-click the channel again to resume the current division setting.
 2. If you do not have all the live views displayed on one channel, scroll your mouse to view more live views.
-

Right-click the live view to access the following features:

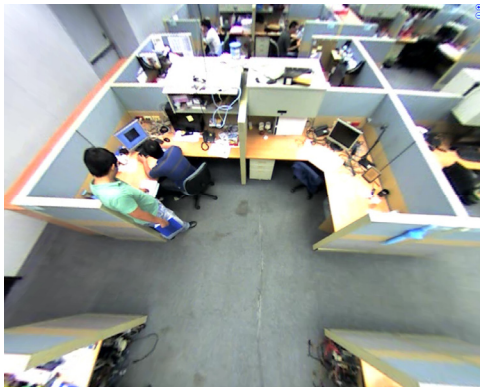
No.	Name	Description
1.	Snapshot	Takes a snapshot of the select channel. For details, see <i>11.4 Snapshot</i> .
2.	Audio	Receives audio from the host. For details on audio communication, see <i>Chapter 12 Audio Communication</i> .
3.	Rotation	Displays the live view rotated at 0°, 90°, 180° and 270°.
4.	PTZ	Enables the PTZ panel. Note this function is only supported by IP Cameras that support the PTZ function.
4.	Monitoring	Enables monitoring (recording) the channel. For details, see <i>11.3 Enabling Host Recording</i> .
5.	Time Synchronization	Synchronizes the device time with the GV-Edge Recording Manager.
7.	Video Stream	Switches between stream 1 and 2. Note this function is only available when Auto Change Video Stream function is disabled. For details, see <i>14.1 General Settings</i> .
8.	Fisheye	Dewarps the fisheye view. This function is only available for GV-Fisheye Camera. For details, see <i>11.2 Fisheye View</i> .
9.	Disconnect	Disconnects the device and removes its live view.

11.2 Fisheye View

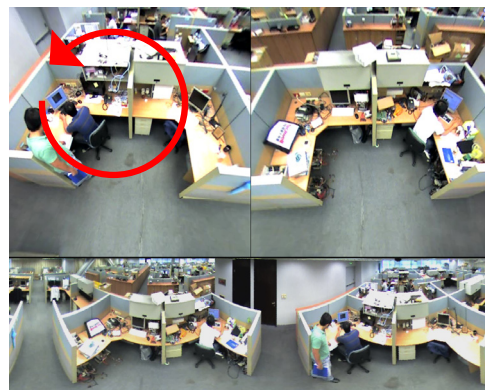
The hemispherical image of a fisheye host can be converted to a conventional rectilinear projection and displayed on the Live View Window.

Note: This function only supports GV-Fisheye Cameras.

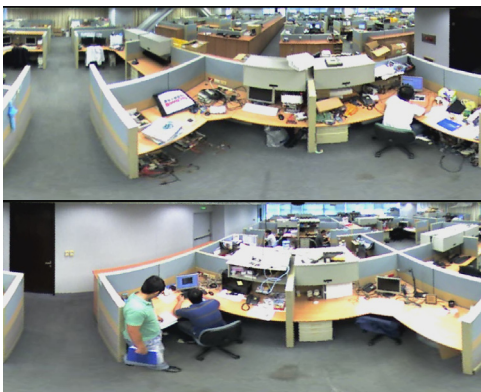
You can choose among four view modes and adjust the PTZ views to different angles.



PTZ: 1 PTZ view



Panorama 360: 2 PTZ view & 1 360° view



Panorama 180: 2 180° views



Quad: 4 PTZ views

Figure 11-4

11.2.1 Setting Up the Fisheye View

1. Right-click the live view and select **Fisheye** to enable the dewarped view. By default, the original hemispherical view is converted to the PTZ view.
2. To customize other settings, right-click the channel to access the following:
 - **Fisheye Alignment:** Aligns the center and part for live view display. Double-click the channel to display it in full screen first before alignment. Unselect this option when alignment is set.
 - **View Mode:** You can choose among four view modes.
 - **PTZ:** Composed of one PTZ view.
 - **Panorama 360:** Composed of two PTZ views and one 360° panoramic view.
 - **Panorama 180:** Composed of two 180° views.
 - **Quad:** Composed of four PTZ views.
 - **Mount Type:** Select **Ceiling**, **Wall** or **Ground** according to where the camera is mounted.
3. You can drag and drop any PTZ view to adjust the viewing angle. Display the channel in full-screen to allow for drag-and-drop control.

11.3 Enabling Host Recording

You can remotely enable the monitoring function on host using GV-Edge Recording Manager.

Note: This function is only available for GV-IP Devices. For the supported firmware version, see *Supported GV-IP Devices and Software* in *Introduction* of this manual.

Enable Monitoring for a Single Channel

Right-click a live view from the Live View Window (Figure 11-1), and then select **Monitoring**. Select the same option again to disable. The monitoring and recording status is indicated by the color of device name on the Live View Window:

Channel Color	Monitoring & Recording Status
GV-BX2500	Not under monitoring
GV-BL5310-E	Under monitoring but not being recorded
GV-EBX2100	Under monitoring and is being recorded

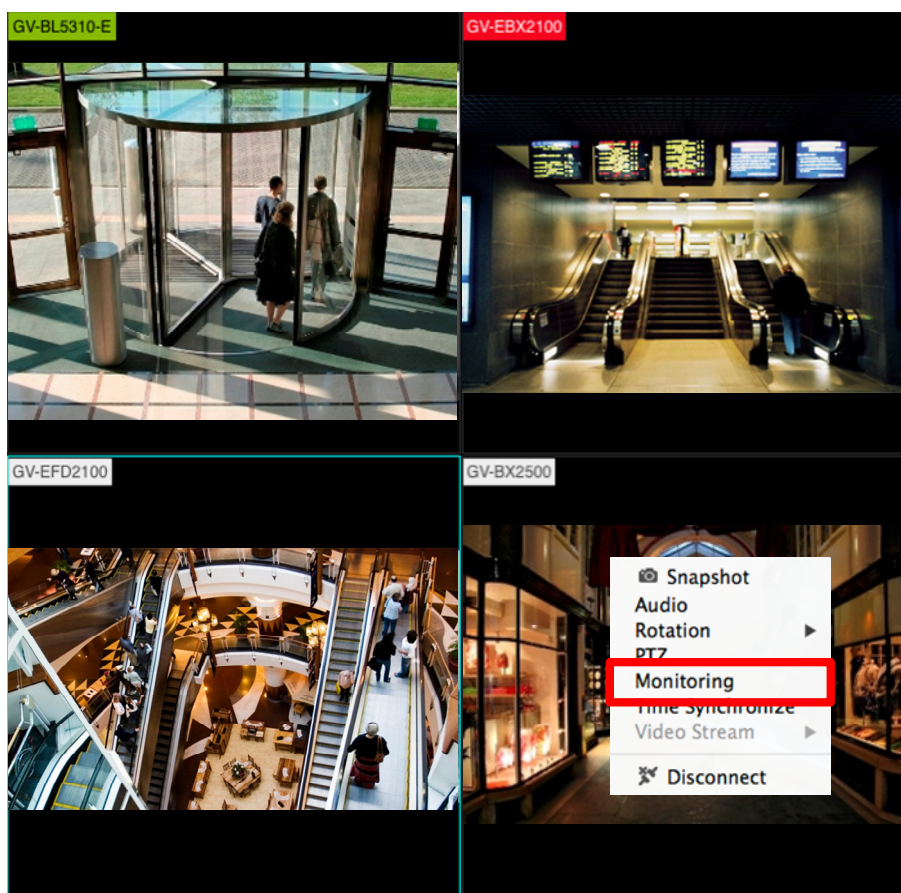


Figure 11-5

Enable Monitoring for All Channels

On the main screen, move the cursor to the top, from the emerging bar, select **Tools** and then select **Start All Monitoring**. To disable monitoring, select **Tools** again and then select **Stop All Monitoring**.

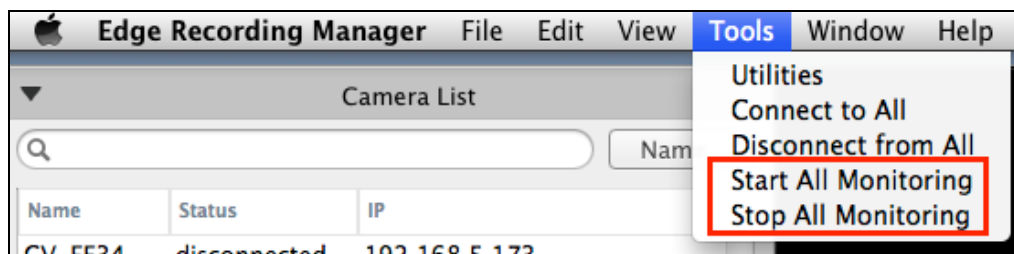


Figure 11-6

11.4 Snapshot

You can take snapshot of live view images. Right-click a live view on the Live View Window (Figure 11-1) and select **Snapshot**. The snapshot is immediately saved and a message appears at the top-right corner of the Live View Window. By default, snapshots are saved to **/user/<username>/Documents/GeoVision/edge_record_mgr/snapshot**. To configure the storage path for snapshots, see **Snapshot Folder** in *14.1 General Settings*.

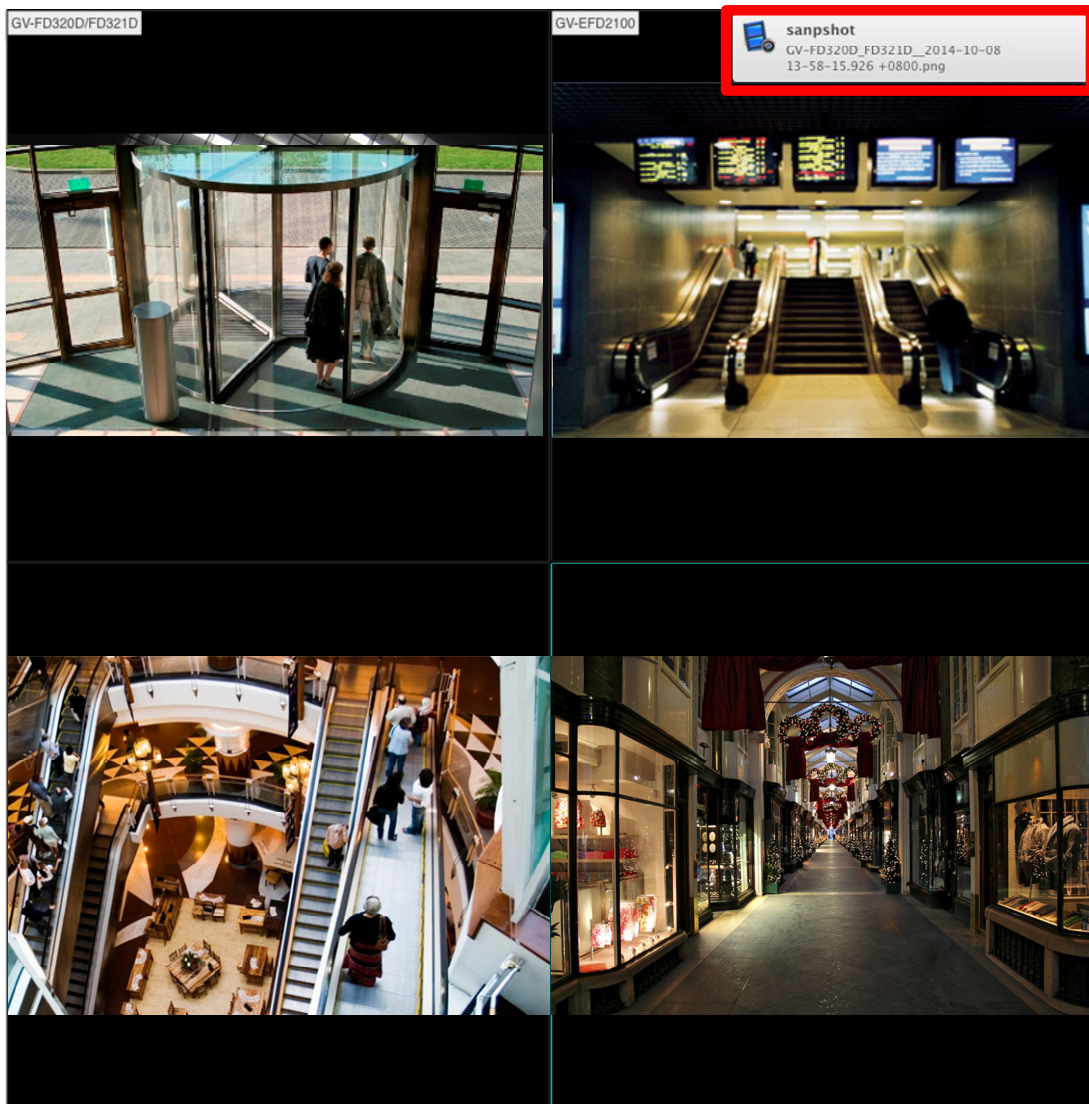



Figure 11-7

11.5 Event List

You can view a list of events from standalone GV-IP Cameras, GV-Target Cameras, GV-SD220/220S, GV-Video Server and IP Cameras/GV-Target Cameras connected to GV-Recording Server. Click the **Live** button  on the main window. The Event list appears next to the Live View Window.

Note:

1. Make sure that the motion detection function is enabled ahead for each GV-IP Camera, GV-Target Camera, GV-SD220/220-S and GV-Video Server.
2. GV-VMS is not supported for this function.

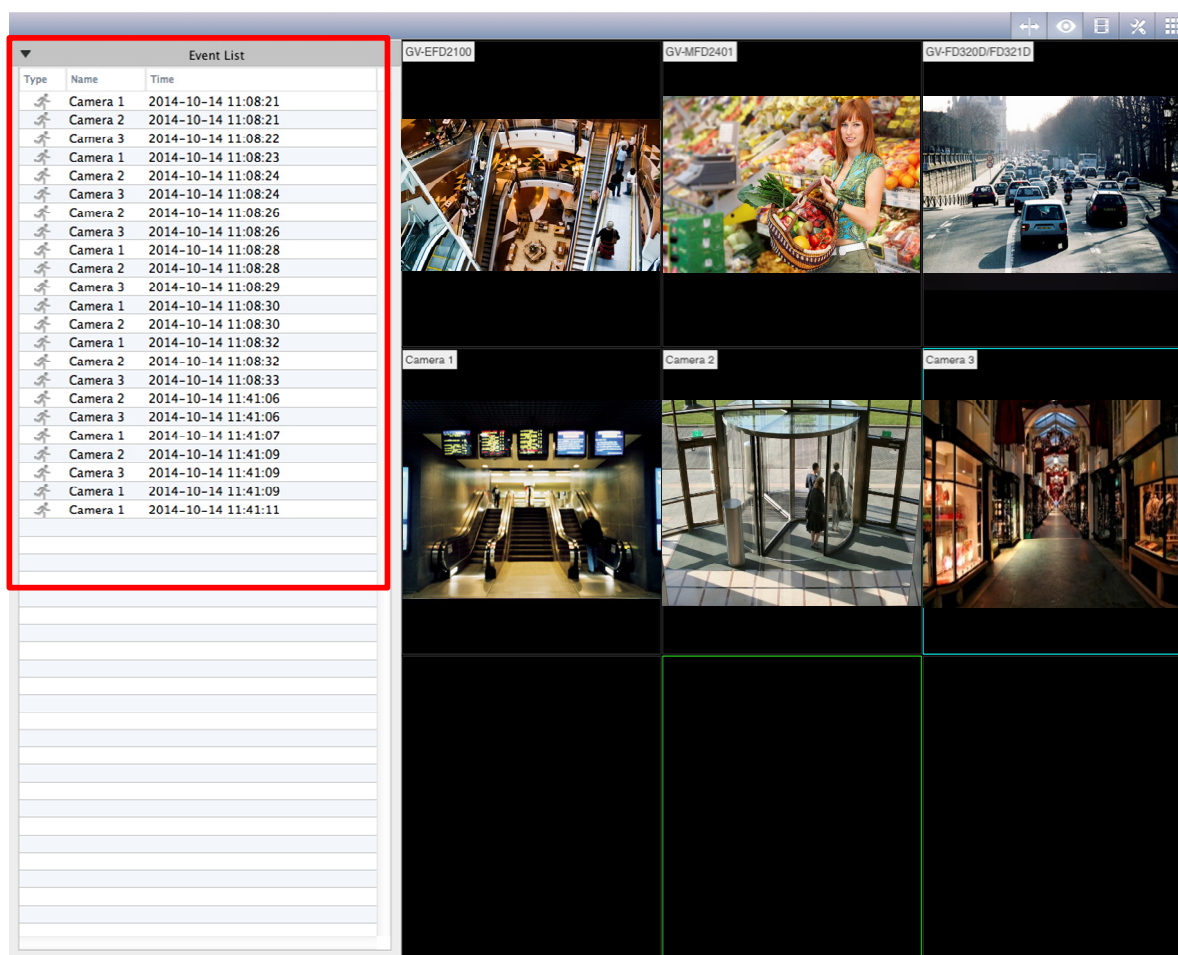


Figure 11-8

Chapter 12 Audio Communication

You can receive sounds from a selected host. Right-click a channel and select **Audio**. The function is immediately enabled and a speaker icon appears on the channel.

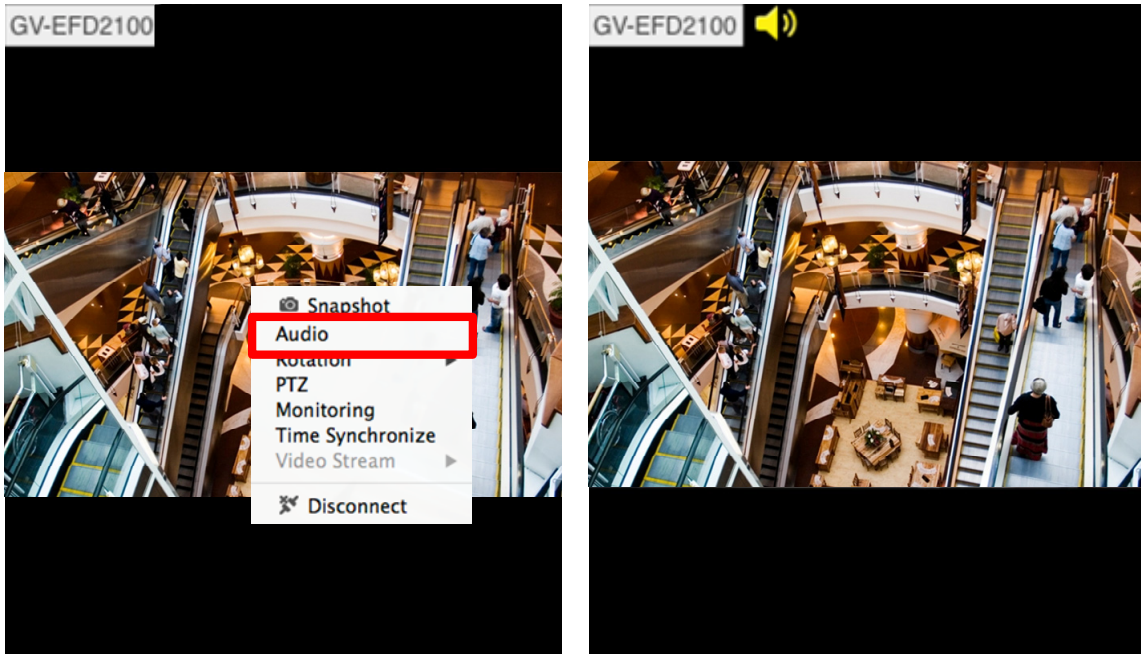




Figure 12-1

Chapter 13 Playback

You can remotely play back host recordings on GV-Edge Recording Manager.

Note: For a GV-VMS host, make sure **Remote Viewlog Service** (under Control Center Service) is enabled ahead to allow remote access from GV-Edge Recording Manager for playback.

Follow the steps below to playback:

1. Click the **Playback** button  on the main window. The Playback page appears.
2. Select a device from the left. A calendar appears below.
3. Click to select a date for playback. Recordings of the selected date are listed (if any).
 - On AVI Player: The current date is highlighted yellow and the selected date blue.
 - On MPEG4 Player: The current date is highlighted blue, the selected date blue and dates with recordings are circled red.
4. Click an entry and click . The recording is immediately played back.

[AVI Player] Click an entry to play back.

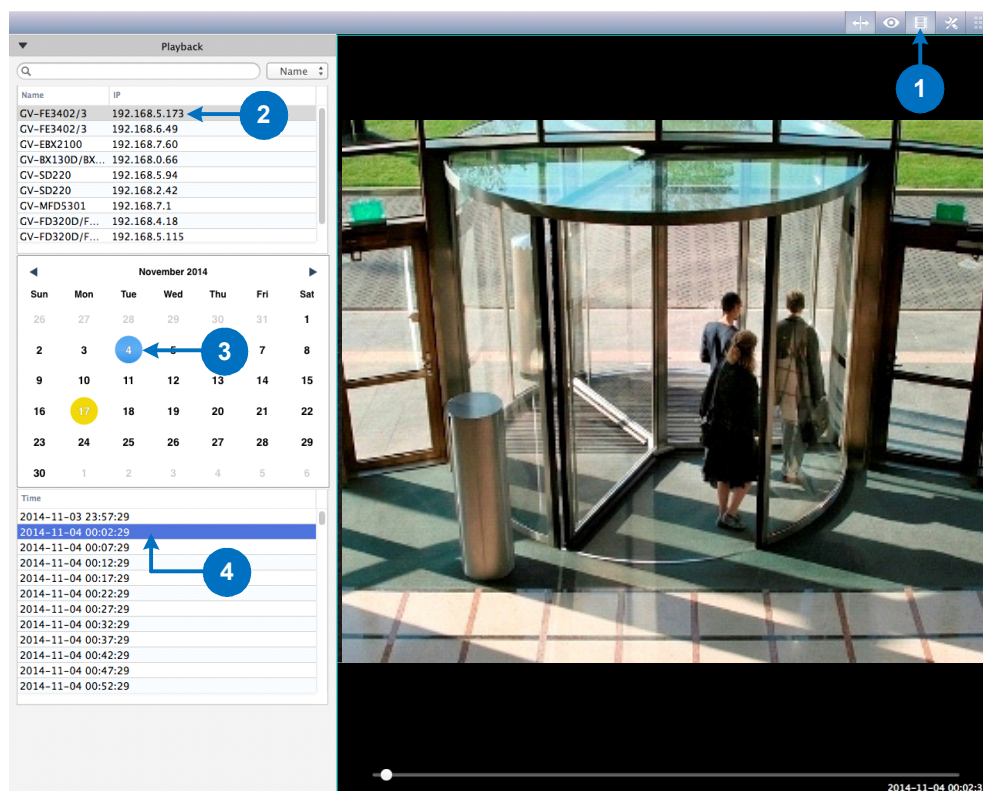


Figure 13-1

[MPEG4 Player]

Files saved on GV-NAS Systems are played back by the MPEG4 player.

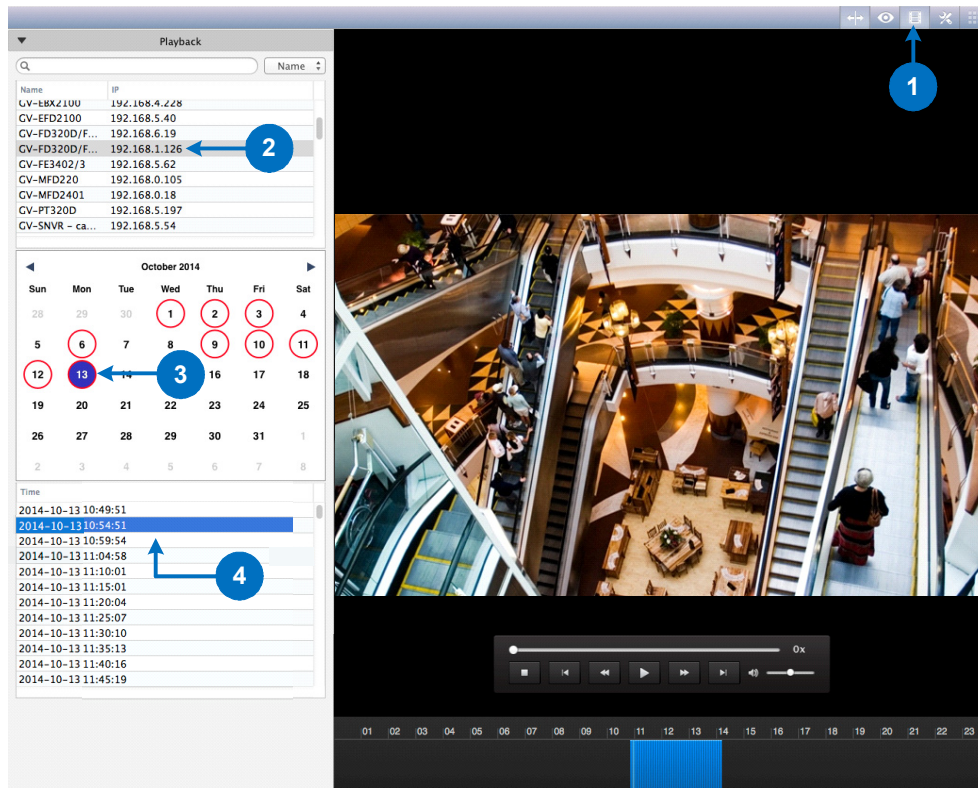


Figure 13-2

The MPEG4 player contains a control panel and a timeline.

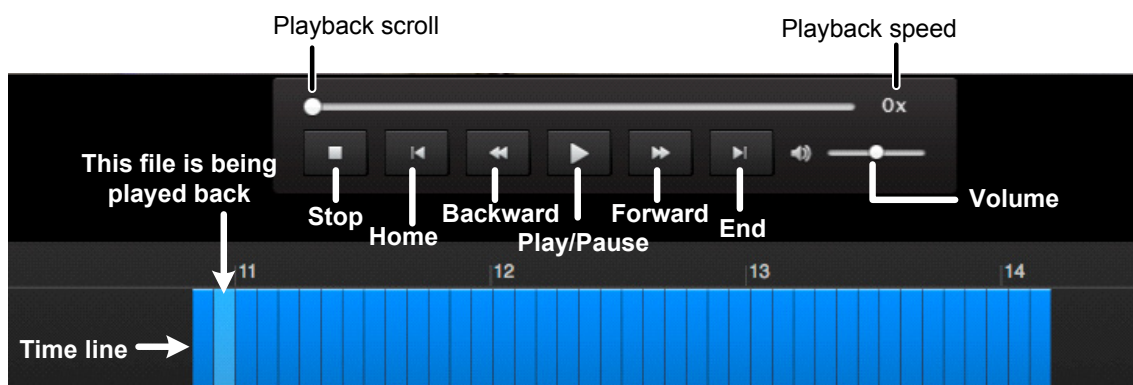


Figure 13-3

- Each recording entry is represented by a blue block. Click to play back.
- Use the mouse scroll to change the displayed hours of the timeline.
- Hold and drag the hour numeral to move to different parts of the timeline.

Chapter 14 System Configuration

This chapter describes GV-Edge Recording Manager's general settings, panel settings and network settings.

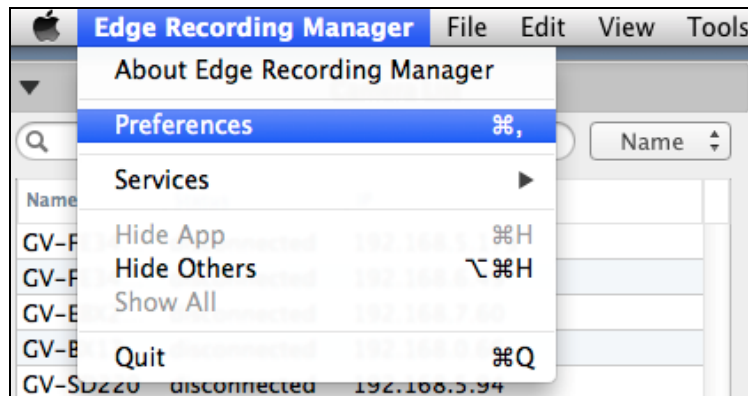


Figure 14-1

14.1 General Settings

On the main screen, move the cursor to the top, from the emerging bar, select **Edge Recording Manager** and then select **Preferences**. This window appears.

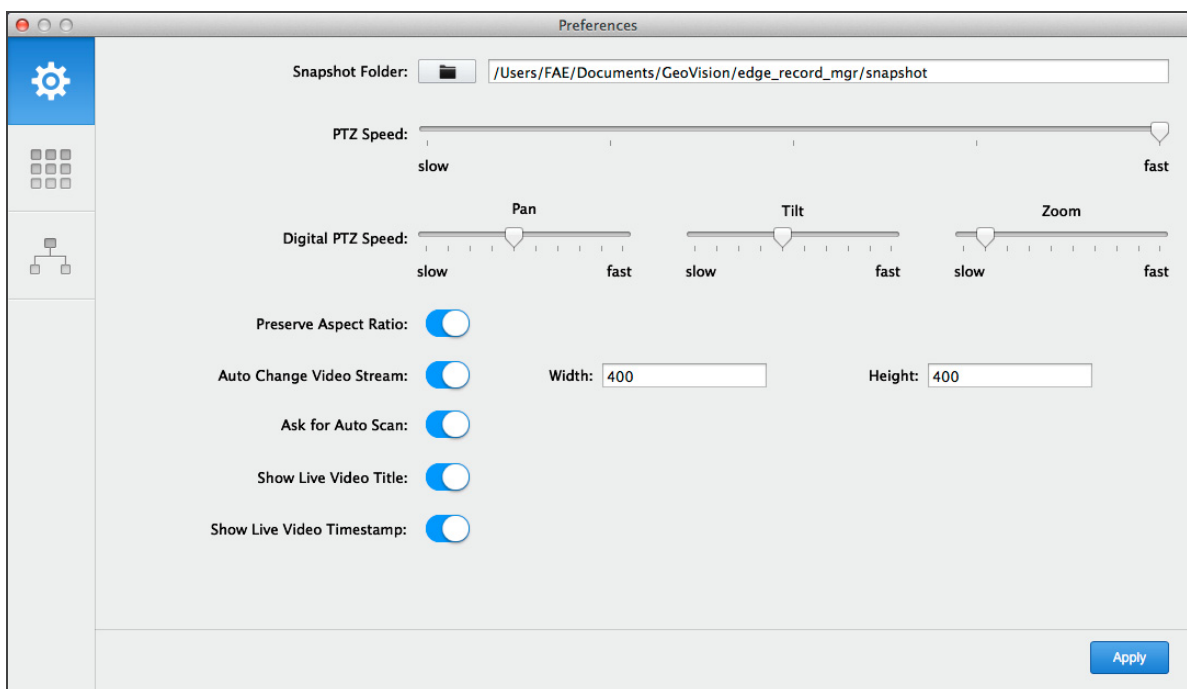




Figure 14-2

- **Snapshot Folder:** Specifies the storage path for snapshots. By default, snapshots are saved to `/user/<username>/Documents/GeoVision/edge_record_mgr/snapshot`. You can type the storage path in the blank or click  to select a folder.
- **PTZ Speed:** Specifies the PTZ speed for PTZ control panel.
- **Digital PTZ Speed:** Specifies the speed for digital pan, tilt and zoom. Under single channel display, you can scroll to zoom the live view and then drag and hold to see different parts of the live view.
- **Keep Video Aspect Ratio:** Displays live view in ratio with its current resolution.
- **Auto Change Video Stream:** Displays stream 1 on live view when the source video exceeds the specified Width and Height. By default, this function is enabled and the Weight and Height are both **400** pixels.
- **Ask Auto Scan:** Prompts the user to search and add GV-IP Devices at startup (of GV-Edge Recording Manager) when the Camera List (Figure 8-2) is empty.
- **Show Live Grid Title:** Shows the device name on live view
- **Show Live Grid Timestamp:** Shows the device time on live view

14.2 Live View Color Settings

You can define the color of grid background, video background and video border, grid title hud color, grid animation speed, grid animation type and scroll speed.

On the main screen, move the cursor to the top, select **Edge Recording Manager**, select **Preferences** and then click . This page appears. Click each option or move the slider bar to change the settings.

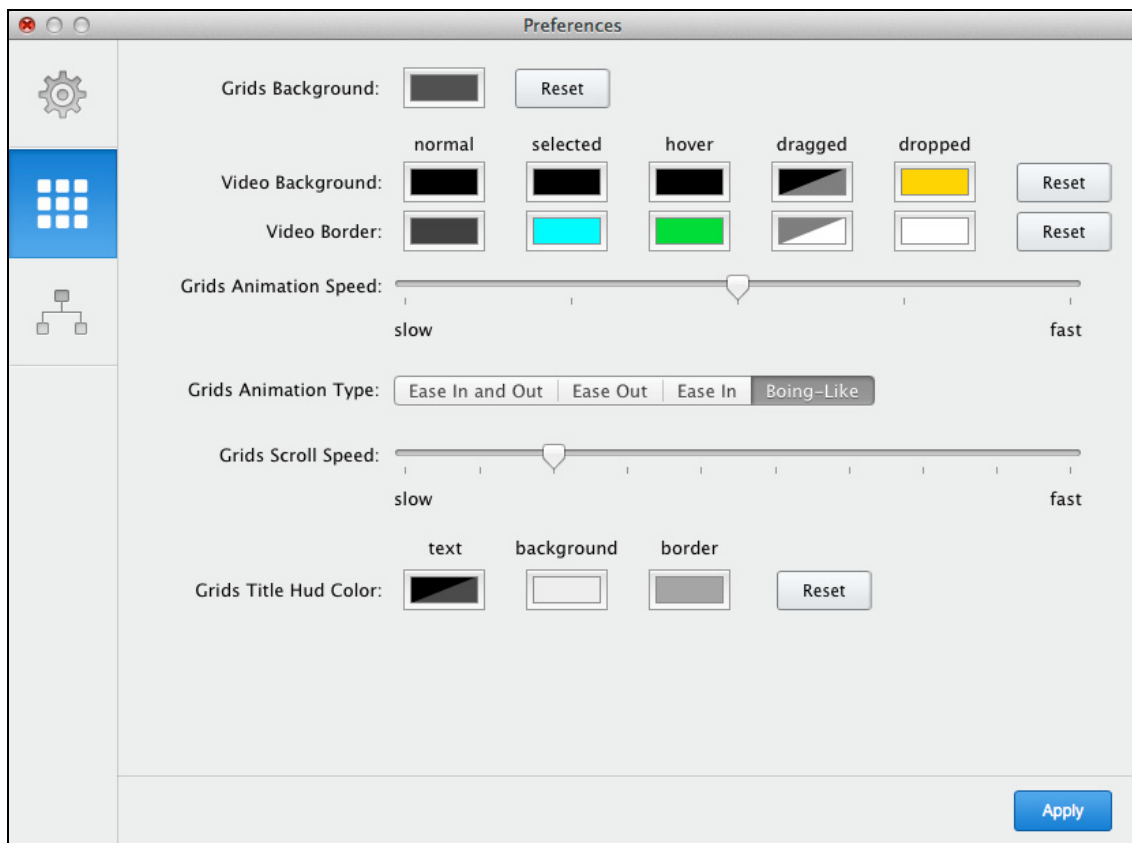



Figure 14-3

14.3 Network Settings

You can change the network interface and look up the current IP address of the computer to which GV-Edge Recording Manager is installed.

On the main screen, move the cursor to the top, select **Edge Recording Manager**, select **Preferences** and then click . This page appears.

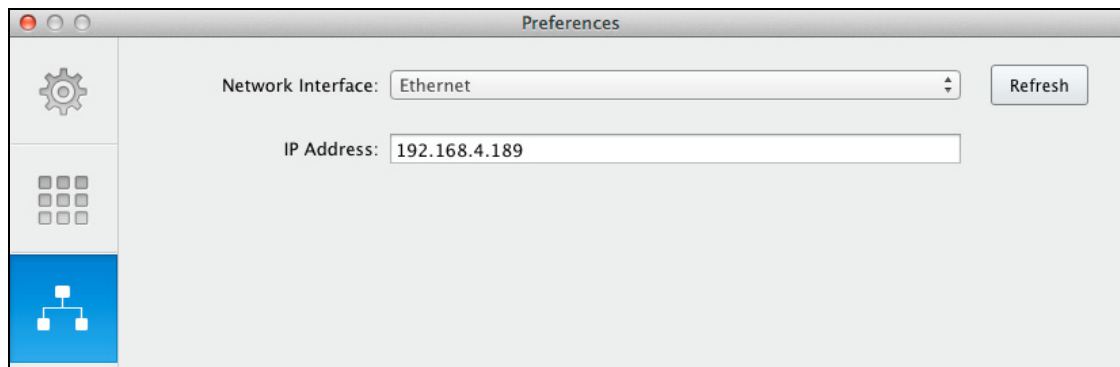


Figure 14-4

- **Network Interface:** Click arrow button to select a network card. To update the network card options, click **Refresh**.
- **IP Address:** Displays the current IP address.

14.4 Exporting and Importing Settings

14.4.1 Exporting Settings

You can back up the settings in camera list (Figure 8-2) and live view window (Figure 11-1).

1. On the main window, move the cursor to the top, from the emerging toolbar, select **File** and then select **Export**. This window appears.

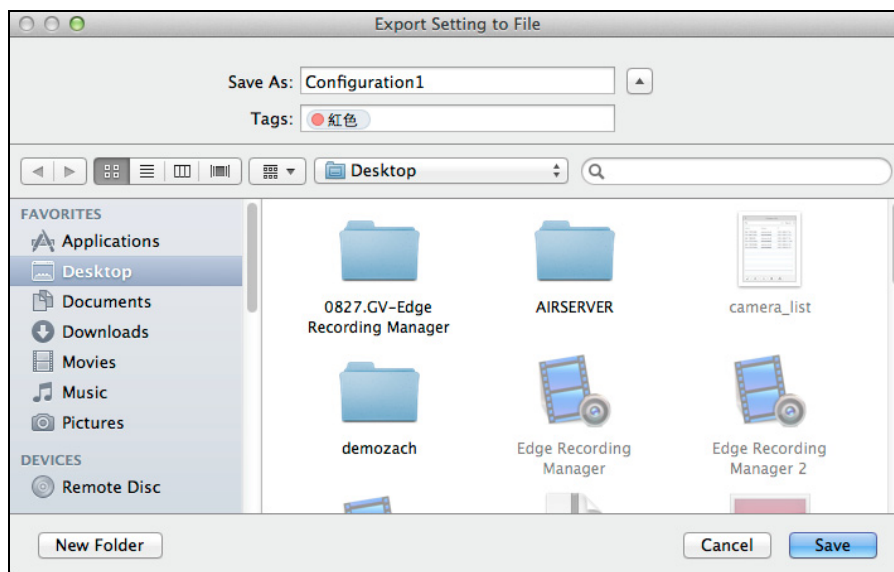


Figure 14-5

2. Select a storage location and modify the file name if necessary.
3. Click **Save**.

14.4.2 Importing Settings

You can import previously saved settings.

1. On the main window, move the cursor to the top, from the emerging toolbar, select **File** and then select **Import**. This window appears.

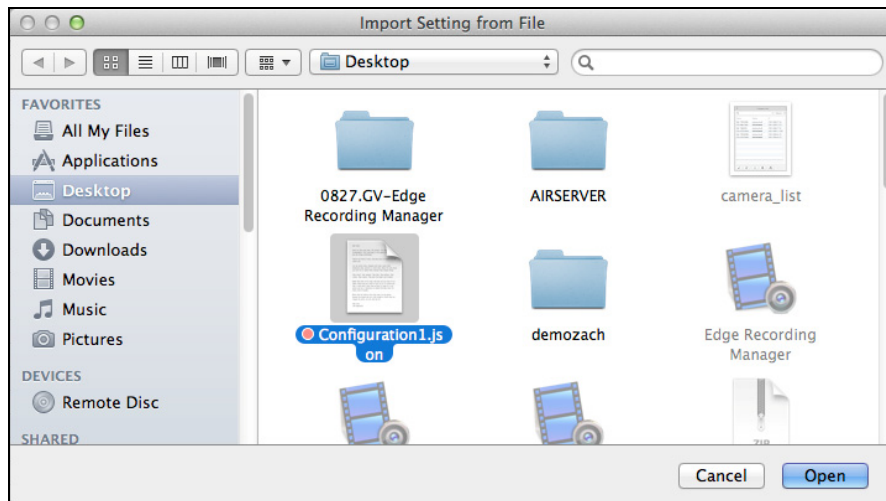


Figure 14-6

2. Select a previously saved file and click **Open**. The settings are immediately applied.

Specifications

Windows Version

Supported Number of Hosts		
GV-System (GV-DVR / NVR)		64 hosts
GV-VMS		
GV-Recording Server		
GV-IP Camera		
GV-Target Camera		
GV-SD220/SD220-S		
GV-Video Server		
GV-SNVR0400F/1600		
Live View		
No. of Channels		32 (free); 64 (with GV-USB Dongle)
Window Division		4, 6, 8, 9, 10, 13, 16, 25, 36, 49, 64
Single Live View Window		1
Display Mode		Fisheye dewarping, PIP, PAP, wide angle lens dewarping, fisheye object tracking, zoom, snapshot
Audio		Two-way
PTZ		Pan, tilt and zoom
Host Recording (Monitoring)		Enable/disable monitoring of a single host or all hosts (for GV-IP Devices)
Channel Status Indicator	Yellow	Not under monitoring
	Green	Under monitoring but not being recorded
	Red	Under monitoring and is being recorded
Host Batch Management		NAS setup, IP address configuration, time synchronization with GV-Edge Recording Manager (for GV-IP Devices) Note: NAS setup is supported by GV-IP Camera (firmware V3.00 or later) and GV-Target Camera (firmware V1.02 or later).
Playback		
No. of Remote Playback windows		1
Playback Mode		Fisheye dewarping, wide angle lens dewarping, defog, PIP, PAP, Stabilizer

Others	
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

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

Mac Version

Supported Number of Hosts		
GV-VMS		Unlimited
GV-Recording Server		
GV-IP Camera		
GV-Target Camera		
GV-SD220/220-S		
GV-Video Server		
Live View		
No. of Channels		32
Window Division		4, 9, 16, 36
Display Mode		Fisheye dewarping, zoom, snapshot
Audio		One-way
PTZ		Pan, tilt and zoom
Host Recording (Monitoring)		Enable/disable a single host or all hosts on the Live View Window (for GV-IP Devices)
Channel Status Indicator	White	Not under monitoring
	Green	Under monitoring but not being recorded
	Red	Under monitoring and is being recorded
Host Batch Management		NAS setup, IP address configuration (for GV-IP Devices) Note: NAS setup is supported by GV-IP Camera (firmware V3.00 or later) and GV-Target Camera (firmware V1.02 or later).
Playback		
No. of Remote Playback windows		1
Others		
Language		Bulgarian / English / French / German / Hebrew / Italian / Japanese / Russian

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