GeoVision inc
The Vision of Security

GV-IP Decoder Box and GV-Pad

User's Manual V1.01

Before attempting to connect or operate this product, please
read these instructions carefully and save this manual for future use.

DBV101-A-EN

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Content

GV-IP Decoder Box

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Chapter 1 Introduction

The GV-IP Decoder Box is designed to decode incoming IP streams from GeoVision and third-party IP devices, and displaying them on a digital or an analog monitor. To be used with only a monitor, the GV-IP Decoder Box provides a cost-effective solution for video surveillance as opposed to the traditional DVR and PC setup. The security administrator can monitor channels, take snapshots of critical moments, and pause at a channel when events occur, all through the supplied remote control. Connected GeoVision PTZ cameras such as GV-PTZ010D, GV-PT110D and GV-IP Speed Dome can also be controlled through GV-Joystick.

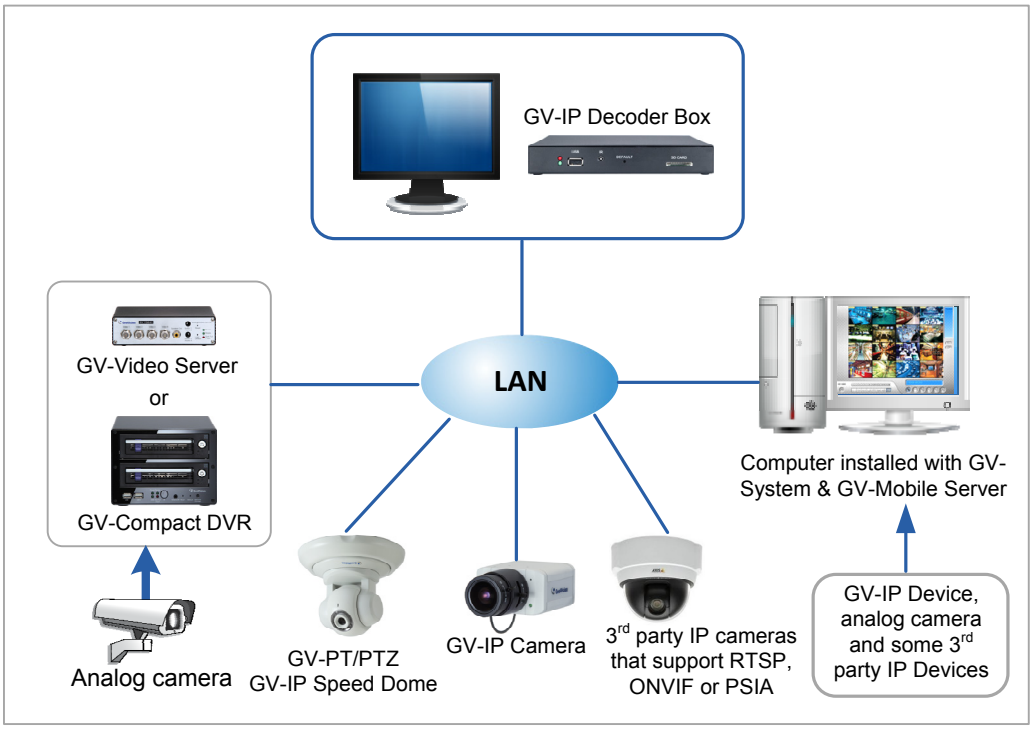


Figure 1-1

1.1 Features

- Decode video streams in H.264 codec at a maximum frame rate of the IP device
- Decode up to 5 megapixel IP cameras
- Decode up to 64 IP streams
- Support for 3rd party IP cameras that adhere to RTSP, ONVIF or PSIA
- Support for 10/100 Ethernet over LAN
- Support for single and sequential display
- VGA and High Definition Video outputs
- Video output resolution up to 1080p
- Support for GV-Joystick control of GV PTZ cameras (GV-PTZ010D and GV-PT110D) and GV-IP Speed Dome
- Support for remote firmware upgrade, IP address configuration and addition of new channel
- Display of Matrix view through GV-Mobile Server
- IR remote control
- SD card and USB drive for snapshot storage and firmware upgrade

1.2 Compatible Devices

The GV-IP Decoder Box is compatible with:

1. Most GeoVision IP devices (of the indicated firmware versions) using H.264 codec, and
2. Third-party IP devices that support H.264 and adhere to RTSP, ONVIF or PSIA.

Supported GeoVision IP Devices		
Device Type	**Models**	**Firmware Versions**
Box Camera	GV-BX110D	V1.08 or later
	All models (except GV-BX110D)	V1.06 or later
Bullet Camera	GV-BL110D	V1.08 or later
	All models (except GV-BL110D)	V1.06 or later
Cube Camera Fixed Dome Vandal Proof IP Dome	All models	V1.06 or later
Mini Fixed Dome	GV-MFD110	V1.08 or later
	All models (except GV-MFD110)	V1.06 or later
PT Camera PTZ Camera	GV-PT110D GV-PTZ010D	V1.08 or later
Speed Dome	All models	V1.02 or later
Video Server	GV-VS04H	V1.04 or later
	GV-VS11	V1.0 or later
	GV-VS12	V1.05 or later
Compact DVR	GV-Compact DVR V3 series only	V1.0 or later
IMPORTANT: The connected GeoVision and third-party channels must be set with **H.264** codec to be compatible.		

To decode and display **non-H.264** IP channels or **analog** channels, connect the devices to GV-System and access them through GV-Mobile Server. The supported devices are listed below.

Supported Devices Connected to GV-System
Analog cameras
All models of GeoVision IP cameras, GV-Video Server, GV-Compact DVR, GV-IP Speed Dome, GV-Smart Box and GV-DSP LPR
11 brands of third-party IP cameras. For detail, see http://www.geovision.com.tw/english/4_21.asp

1.3 Packing List

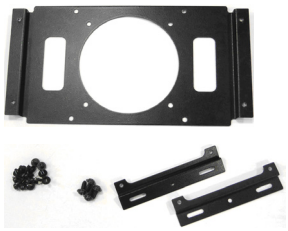
1. GV-IP Decoder Box × 1
2. IR remote control × 1
3. AC/DC adapter × 1 (12 V, 3 A, 36 W)
4. Power cord x 1
5. Software DVD x 1

1.4 Optional Accessories

1. Wall mount kit:

- L-type brackets x 2
- Small screws x 4

2. VESA monitor mount kit:



- VESA monitor mount bracket x 1
- L-type brackets x 2
- Large screws x 4
- Small screws x 8

3. GV-Joystick

- GV-Joystick x 1
- USB Type A to Type B Cable x 1
- GV-Joystick User's Manual x 1

1.5 Overview

This section identifies the components of the GV-IP Decoder Box.

1.5.1 Front View

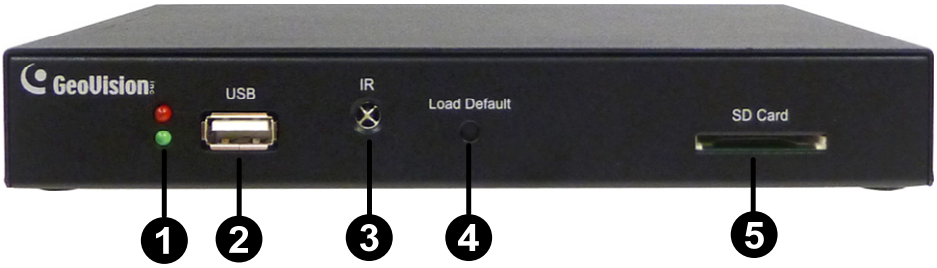


Figure 1-2

No.	Name	Function
1	LED Indicators	The **green** LED indicates the system is ready for use. The **red** LED indicates the power is supplied.
2	USB	Connect to a GV-Joystick, or to a USB storage device for local storage of snapshot and firmware upgrade.
3	IR	Built-in IR receiver to receive the IR signals from the IR remote control.
4	Default	Reset the GV-IP Decoder Box to the default factory settings. Use a pin to press the default button until the green LED fades. This will take about 10 seconds. The system will then reset and reboot itself shortly.
5	SD Card Slot	Connect to an SD card for local storage of snapshot and firmware upgrade.

1.5.2 Rear View

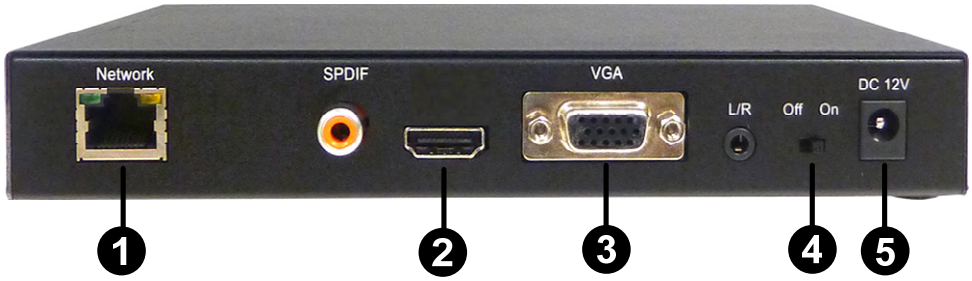


Figure 1-3

No.	Name	Function
1	Network	Connect to the network.
2	High Definition	Connect to a High Definition supported display device.
3	VGA	Connect to a VGA monitor.
4	Power OFF/ON	Switch the power on or off.
5	DC 12V	Connect to power by using the supplied power adapter.

Note: The SPDIF and L/R ports are not functional.

1.6 The IR Remote Control

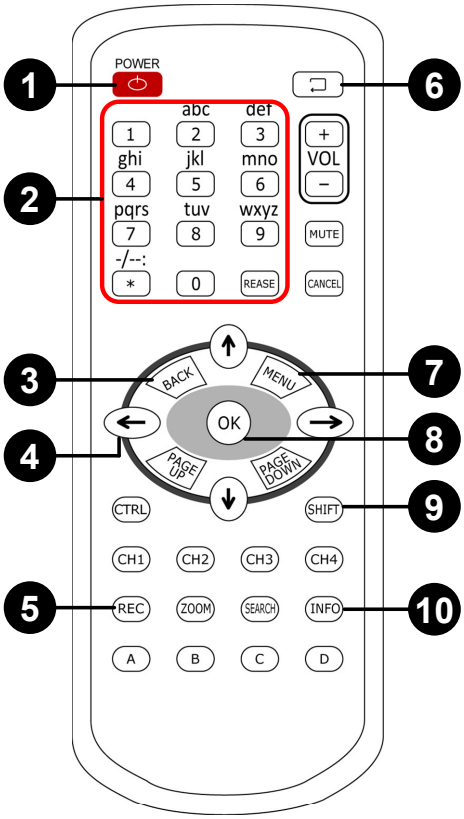


Figure 1-4

No.	Name	Function
1	Power	Turn on or off the GV-IP Decoder Box.
2	Numeric / Alphabetical / Punctuation Marks keys	Enter numbers, alphabets or punctuation marks.
3	Back	Back to the previous page in the Setup Menu.
4	Arrow	● Move up, down, right and left in the Setup Menu. ● Right arrow key: select a channel on the Device List. ● Left arrow key: unselect a channel on the Device List.
5	REC	Capture a snapshot.

No.	Name	Function
6	Loop Start / Stop	● Start or stop sequential display. ● Display and fix at a channel: press the **Loop Start / Stop** key, a **numeric** key and **OK** to display and fix at the selected channel. Press **0** and **OK** to return to the last displayed channel.
7	Menu	Switch to the setup menu.
8	OK	● Save settings in the Setup Menu. ● Display selected channels.
9	Shift	Switch among the 8 resolutions. When the key is pressed, the Green LED on the front panel flashes. Press No. 0 ~ 7 for the desired resolution within 30 seconds. Shift + 0 : VGA_640 x 480 Shift + 4 : High Definition_480p Shift + 1 : VGA_1024 x 768 Shift + 5 : High Definition_720p Shift + 2 : VGA_1280 x 768 Shift + 6 : High Definition_1080i Shift + 3 : VGA_1366 x 768 Shift + 7 : High Definition_1080p Note after the resolution is configured, the green LED will fade and GV-IP Decoder Box will reboot automatically.
10	INFO	Shows the camera name and total number of cameras under display.

Chapter 2 Getting Started

2.1 Installing the GV-IP Decoder Box

You can install the GV-IP Decoder Box on wall, behind a VESA monitor or simply use it as desk mount device.

Wall Mount Installation

For wall mount installation, you need to purchase the wall mount kit.

1. Unscrew the 4 screws on the back panel of the GV-IP Decoder Box.

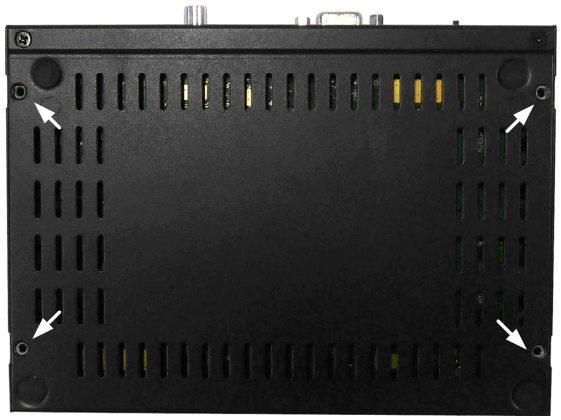


Figure 2-1

2. Use the 4 small screws in the package to tighten the L-type brackets on the GV-IP Decoder Box.

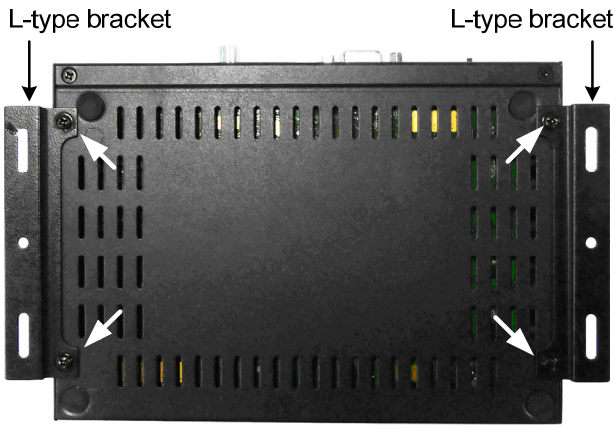


Figure 2-2

VESA Monitor Mount

For VESA monitor mount, you need to purchase VESA Monitor mount kit.

1. Follow steps 1 and 2 in *Wall Mount Installation* to install the L-type brackets on the back panel of GV-IP Decoder Box.
2. Attach the VESA monitor mount bracket on the back of the computer monitor with 4 large screws.

Figure 2-3

3. Secure the GV-IP Decoder Box with the VESA monitor mount bracket together with 4 small screws.

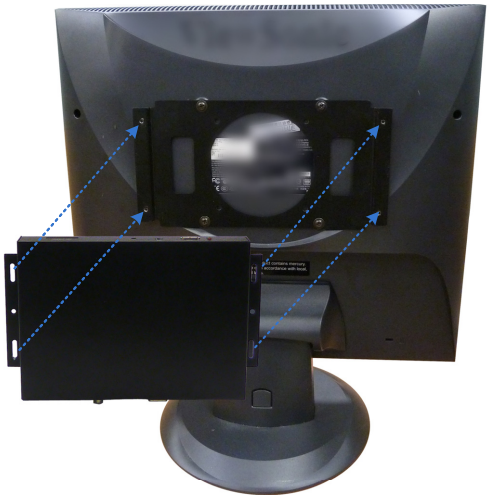


Figure 2-4

2.2 Connecting the GV-IP Decoder Box

Follow the steps below to connect the GV-IP Decoder Box:

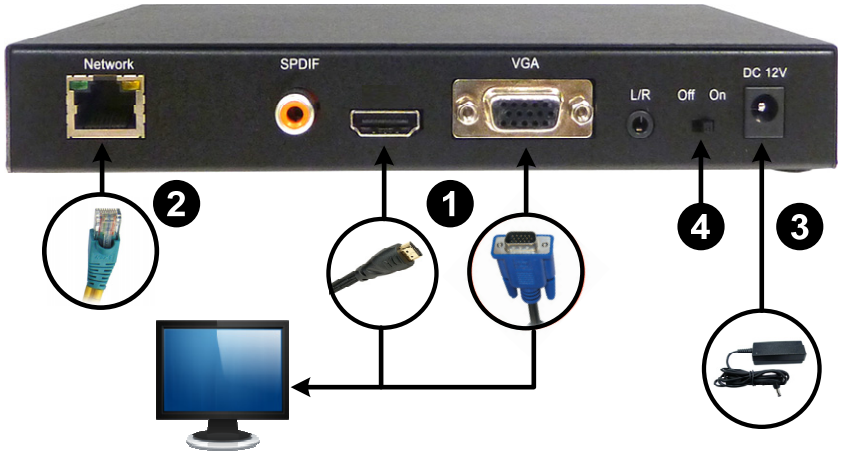


Figure 2-5

1. Connect a display device to VGA connector or High Definition connector for video output.
2. Connect to a standard network cable.
3. Connect to power using the supplied power adapter.
4. Turn the Power switch to ON.

Note:

1. You can only connect the GV-IP Decoder Box to one display device through the High Definition or VGA connector.
2. The default video output is set to VGA with 1024 x 768 resolutions. If you use a High Definition monitor, be sure to change the output type. To change the default setting or configure the output type, see *3.5 Configuring the Account, Storage and Output Type*.

2.3 Configuring the IP Address, ID and Password

After you have installed and connected the necessary cables, you are ready to configure the IP address, ID and password. The GV-IP Decoder Box supports two types of network environments: fixed IP address and DHCP for dynamic IP address assignment. Depending on your network, set up a static IP address or choose DHCP for dynamic IP address assignment by the DHCP server.

The GV-IP Decoder Box contains two sets of ID and password: one set is required when configuring GV-IP Decoder Box through GV-IP Device Utility; the other set is for direct connection between GV IP devices and GV-IP Decoder Box.

Note:

1. By default, the GV-IP Decoder Box has the IP address of **192.168.0.10** and the ID and password are **admin**.
2. Since all GV IP devices have the default IP address 192.168.0.10, it is advisable to configure the IP address of your GV-IP Decoder Box to avoid IP conflict.
3. When connecting to GV-IP Decoder Box (see *2.4 Displaying Channels from GV IP Devices*), the GV IP devices need to have the same ID and password set on the GV-IP Decoder Box.

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1. Power on your GV-IP Decoder Box. The main menu appears.

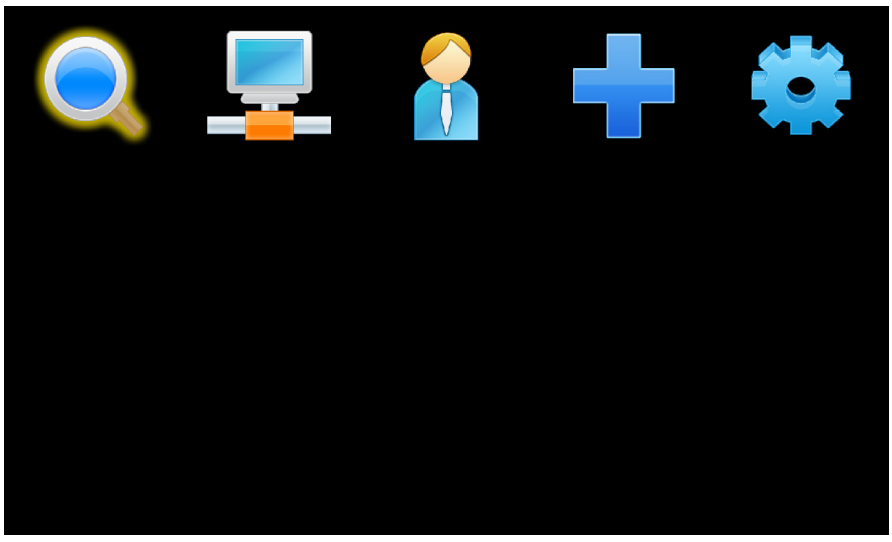


Figure 2-6

2. To configure the IP address, follow the steps below.

   A. On the main menu, select the icon and press **OK**. This window appears.

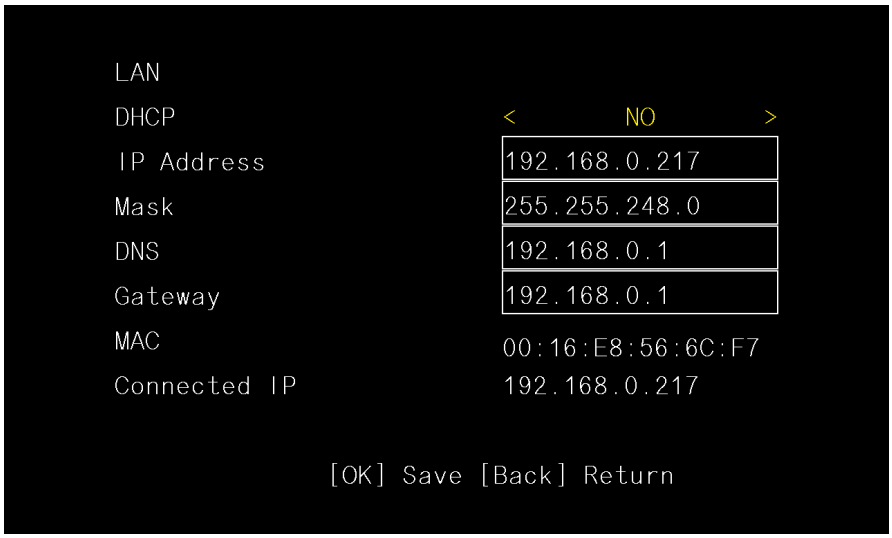


Figure 2-7

   B. If you want to use the IP address assigned by the DHCP server under the LAN, select **Yes** for the DHCP option, and press **OK** to confirm.

   C. If you want to set up a static IP address, type the network information as required and press **OK**.

   D. The system will restart and the green LED will fade. Wait for the green LED to return.

3. To configure ID and password for GV-IP Decoder Box, follow the steps below.

   A. On the main menu, select the icon and press **OK**. This window appears.

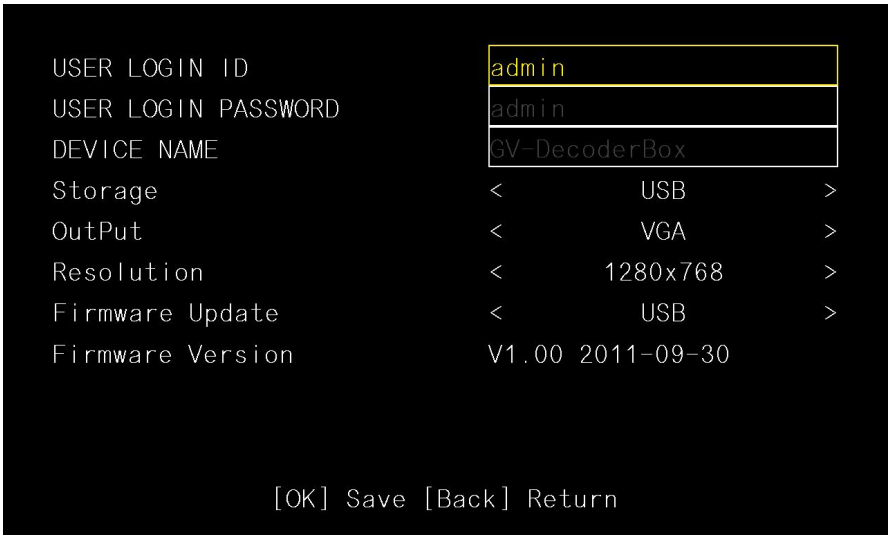


Figure 2-8

B. Type the ID and password and press **OK** to confirm. The maximum number of characters is 14.

4. To configure the ID and password for GV IP device connection, follow the steps below.

A. On the main menu, select the icon and press **OK**. This window appears.

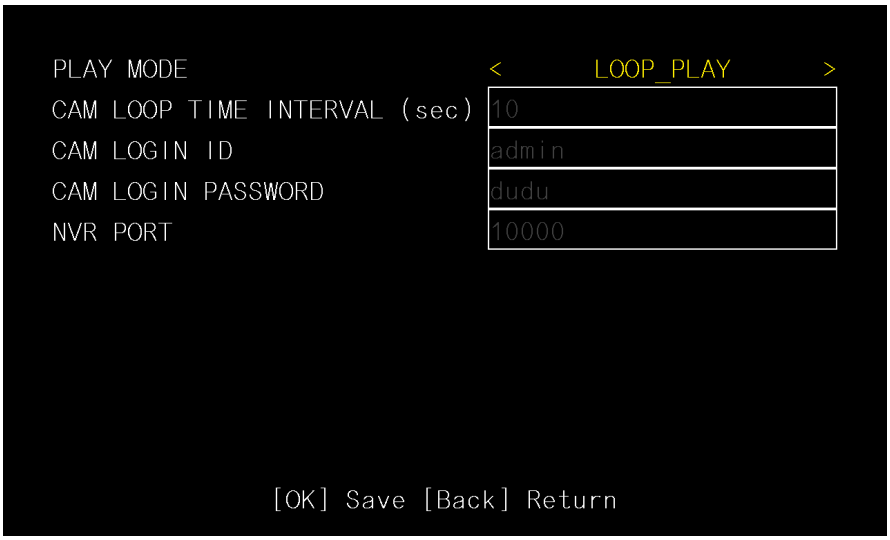
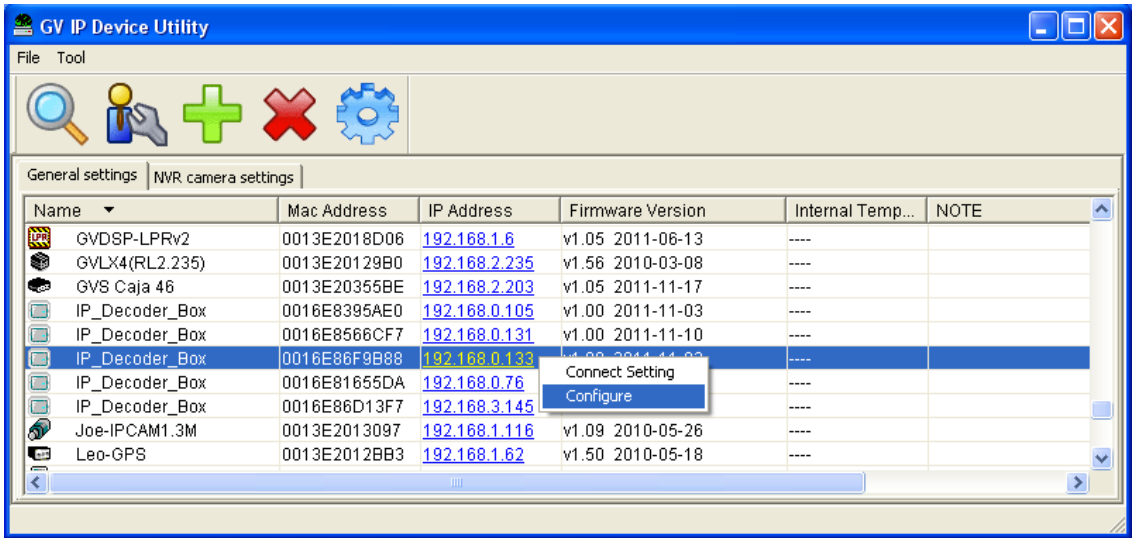


Figure 2-9

B. Type the ID and password and press **OK** to confirm. The maximum number of characters is 15.

Tip: You may also use GV IP Device Utility to modify the IP address by clicking the GV-IP Decoder Box and selecting **Configure**.



2.4 Displaying Channels from GV IP Devices

Use the search feature on GV-IP Decoder Box to display channels from GV IP devices installed under the same LAN.

Before you start:

- This method only applies to GeoVision IP devices under the same LAN with GV-IP Decoder Box.
- The NVR port (of GV-IP Decoder Box) and VSS port (of GV IP Devices) must be the same.
- The ID and password set on GV IP devices and GV-IP Decoder Box (step 4 in *2.3 Configuring the IP Address, ID and Password*) must be the same.

Note:

1. To add third-party IP channels, see *2.5 Displaying Channels Using GV IP Device Utility*.
2. To add channels connected to GV-System, see *2.6 Displaying Channels from GV-System*.

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1. Select the icon and press **OK**. The GV IP devices under the same LAN with the GV-IP Decoder Box will appear on the Device List

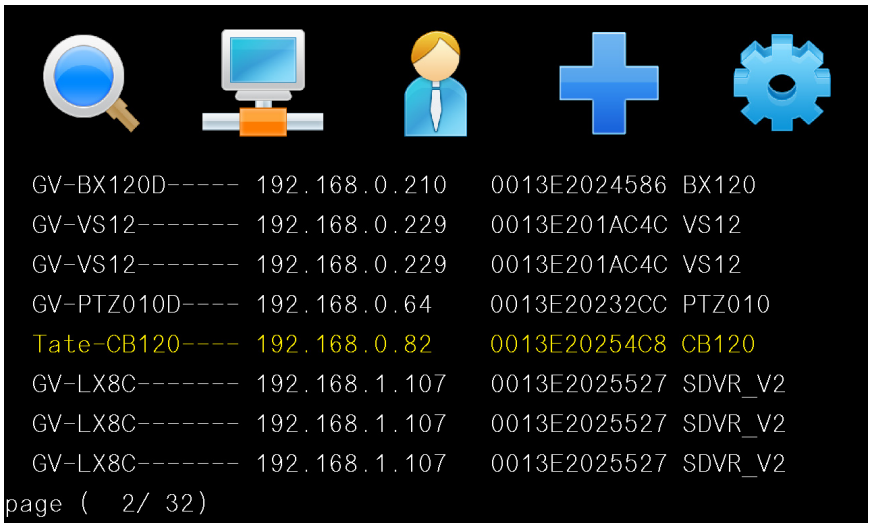

Figure 2-10

2. To select channels, press the up and down arrow keys (No.4, Figure 1-4) and press the right arrow key. The yellow shows the cursor position and the selected channels will be in red.

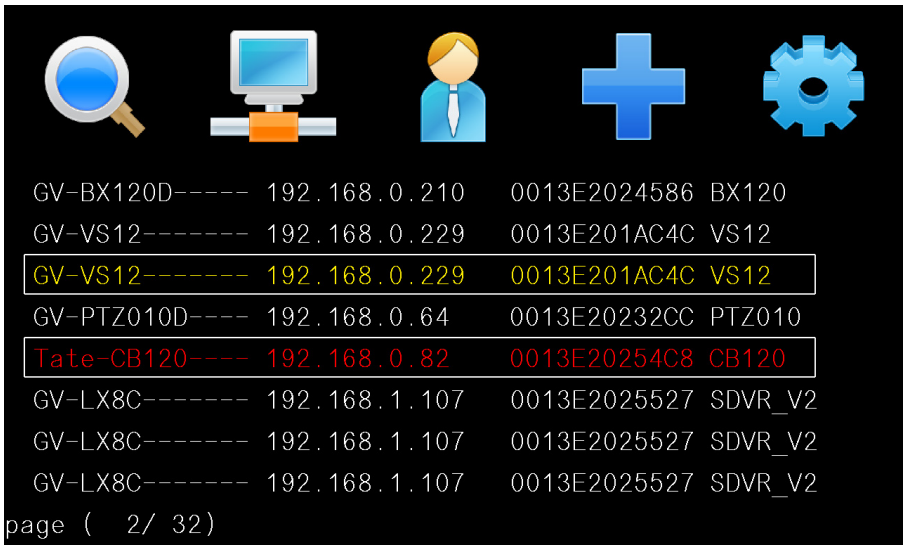

Figure 2-11

3. Press the **OK** key. The selected channels will be displayed.

Note:

1. When the system idles over 30 seconds or resumes after power interruption, the GV-IP Decoder Box will automatically display channels based on the last successful settings.
2. Every time when the search function  is performed, any channels selected previously on the Device List will be unselected.

2.5 Displaying Channels Using GV IP Device Utility

You may utilize the GV IP Device Utility to add and display channels from GV IP devices, GV-System (through GV-Mobile Server) and third-party IP devices that adhere to RTSP, ONVIF or PSIA.

Note:

1. The GV-IP Decoder Box can decode a total of 64 channels from GeoVision and third-party IP devices.
2. GV IP Device Utility is available on Software DVD. ONVIF and PSIA support is only available on the GV IP Device Utility V8.53.

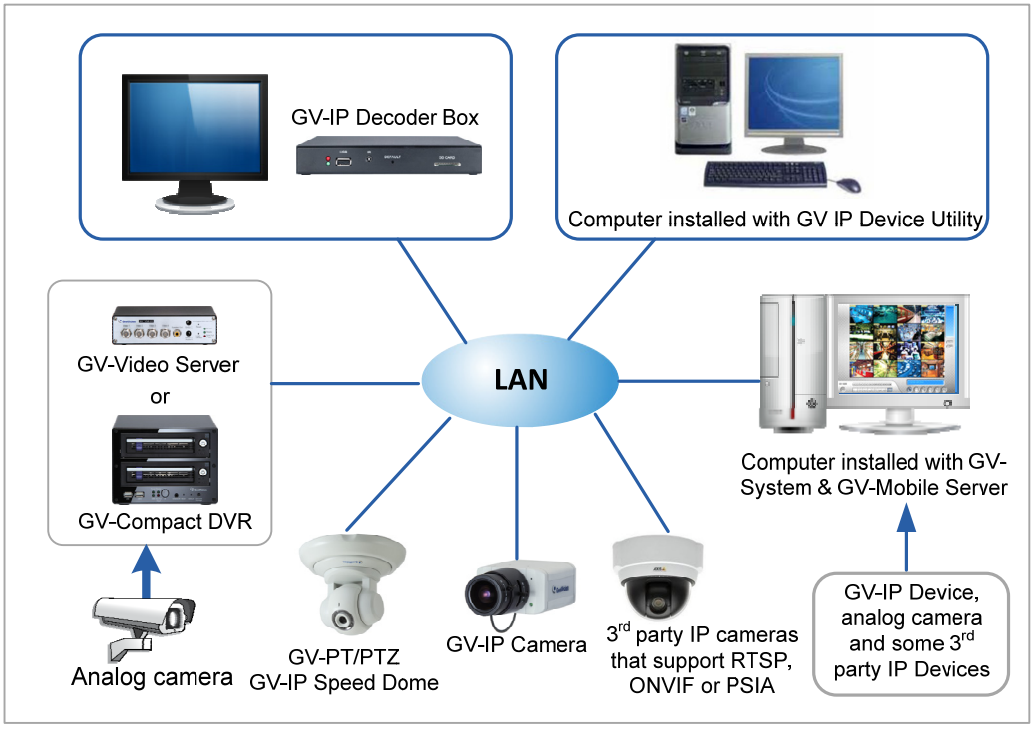

Figure 2-12

1. Make sure your GV IP devices, GV-System or third-party IP devices are under same LAN with the GV-IP Decoder Box.
2. Make sure you have installed the GV IP Device Utility program. Double-click the **GV IP Device Utility** icon on the desktop. The GV IP Device Utility window appears. It will automatically search for all the GV IP devices under the same LAN.

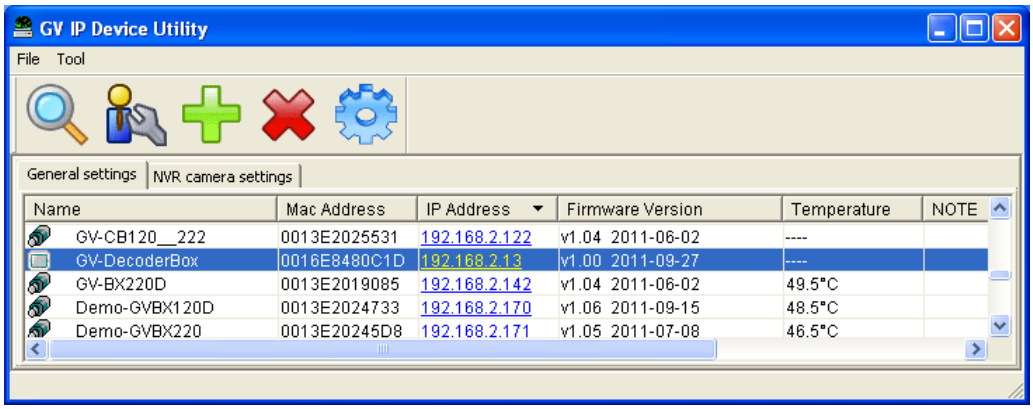

Figure 2-13

3. Click on the IP address of your GV-IP Decoder Box and select **Connect Setting**. This dialog box appears.

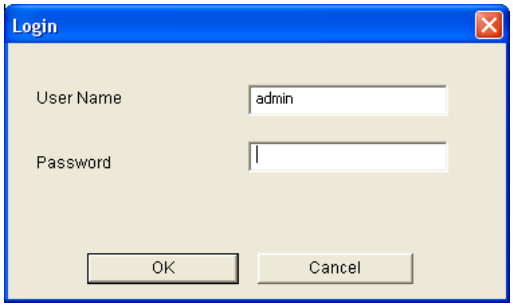

Figure 2-14

4. Type the ID and password of your GV-IP Decoder Box and click **OK**. For detail, see step 3 in *2.3 Configuring the IP Address, ID and Password*. The Video Connection Setting window appears. The IP devices under the same LAN with the GV-IP Decoder Box will be listed in the Camera List column, and the connected channels will be listed in the Connection Information column.

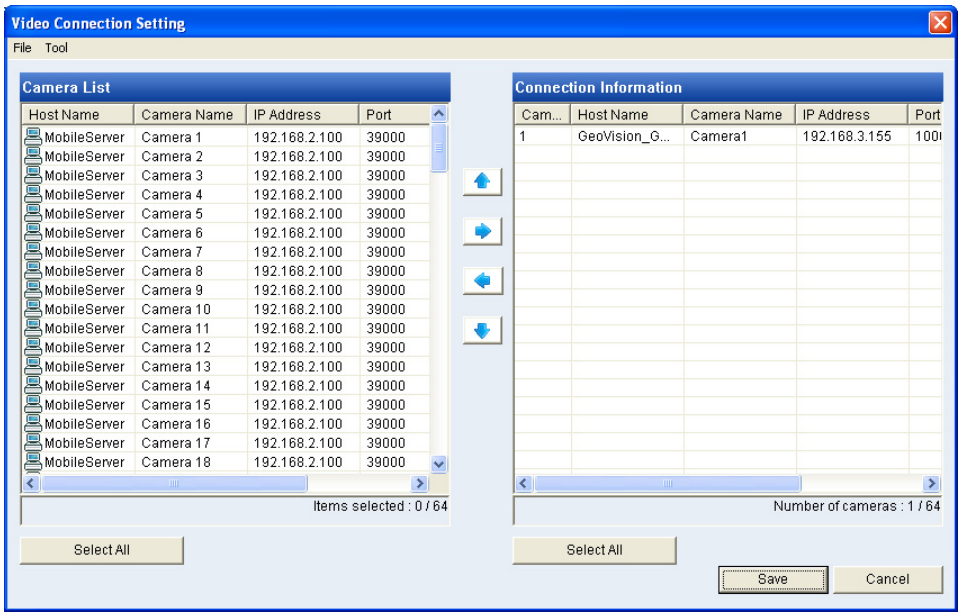

Figure 2-15

5. To connect to a GV IP device or devices from GV-System, use the **right**  and **left**  buttons to add or remove the device.

IMPORTANT: To select and connect to channels from GV-System, be sure you have run and configured GV-Mobile Server. For setup steps, see *2.6 Displaying Channels from GV-System*.

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6. Right-click the added channel, select **Edit** and type the username and password of the channel to log in. By default, the login ID and password for all GV IP devices are **admin**.

7. To add a third-party IP camera, follow the steps below.

   A. Click **Tool** on the Video Connection Setting window, and select **Add Camera**. This dialog box appears.

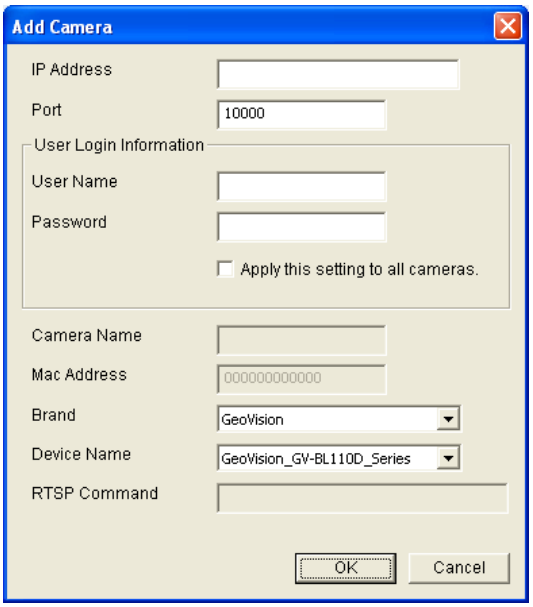


Figure 2-16

   B. Type the IP address, user name and password of the device.

   C. Select **Protocol** for Brand and one of the following protocol for Device Name. Type the RTSP command if required. Refer to your third-party IP camera's manual for this information.

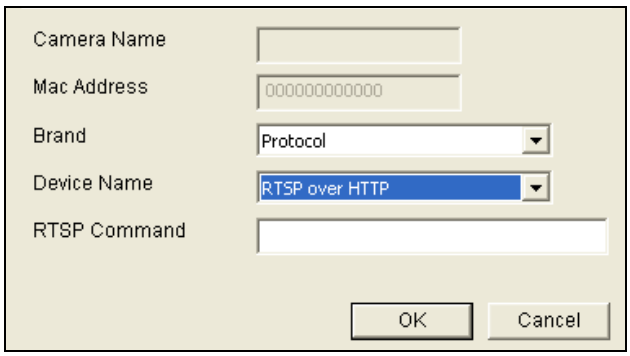
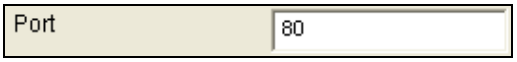


Figure 2-17

- **ONFIV:** Select this protocol if your camera adheres to ONVIF.
- **PSIA:** Select this protocol if your camera adheres to PSIA.
- **RTSP over HTTP:** The RTSP protocol uses an HTTP port for data streaming from the IP camera.

- **RTSP over TCP:** The RTSP protocol uses a TCP port for data streaming from the IP camera.
- **RTSP over UDP:** The RTSP protocol uses a UDP port for data streaming from the IP camera.

D. For **ONVIF** and **PSIA**, modify the Port to **80**, else keep the port in default.



E. Click **OK**. The camera will be added to the list.

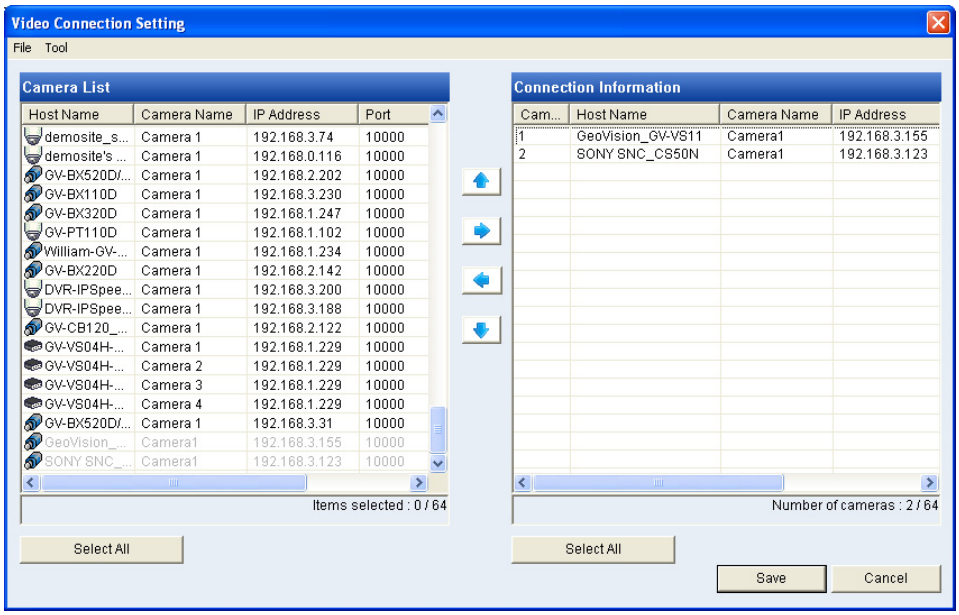


Figure 2-18

8. Use the **up** and **down** buttons to move the added channels up and down the Connection Information list. The channels will be displayed according to this order.
9. Click **Save**. The cameras on the Connection Information column will be updated to the GV-IP Decoder Box and displayed on the monitor.

Note: When the system idles over 30 seconds or resumes after power interruption, the GV-IP Decoder Box will automatically display channels based on the last successful settings.

2.6 Displaying Channels from GV-System

You can access the analog and IP channels connected to GV-System through GV-Mobile Server. Through GV-Mobile Server, the GV-IP Decoder Box can decode and display:

- up to 32 H.264 and non-H.264 channels that are connected to GV-System.
- up to 4 channels of matrix view.

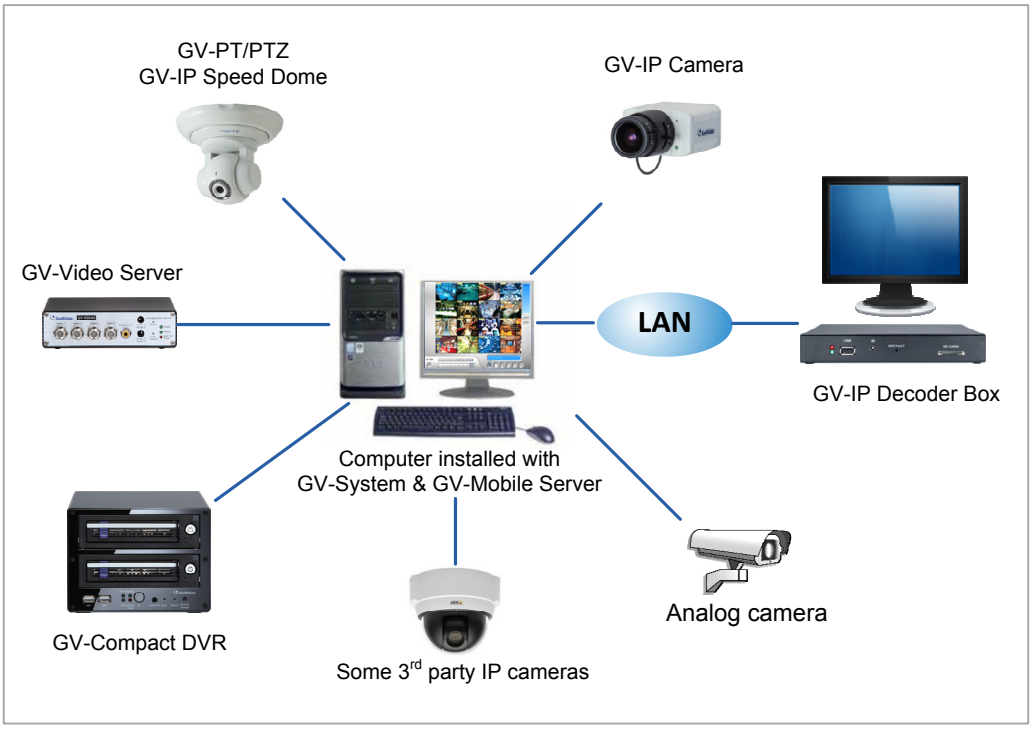


Figure 2-19

Note:

1. The GV-Mobile Server program can be found in the software DVD of GV-System.
2. For the compatible third-party IP devices with GV-System, visit http://www.geovision.com.tw/english/4_21.asp
3. The GV-IP Decoder Box can decode a total of 64 channels from GeoVision and third-party IP devices.

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1. Set up the desired IP channels on GV-System. For setup steps, see *Chapter 2 Hybrid and NVR Solution* in the *Multicam Digital Surveillance System User's Manual* in GV-System's accompanying software DVD.
2. Go to Windows **Start**, point to **Programs**, select **GV-Mobile Server** and run **Mobile Server**. The GV-Mobile Server window appears.

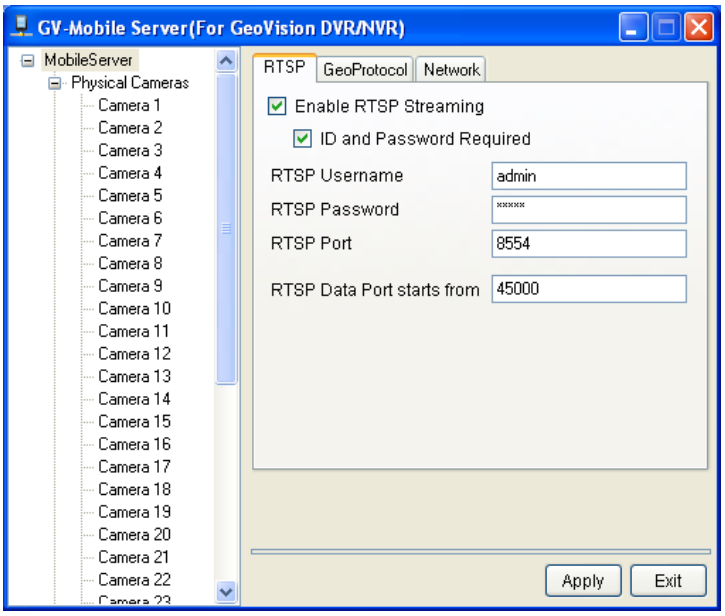

Figure 2-20

3. Click the **GeoProtocol** tab. This window appears.

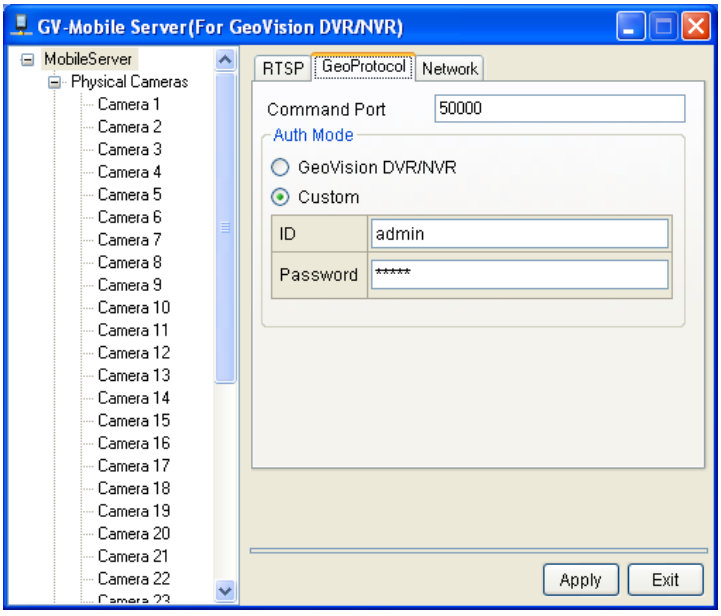

Figure 2-21

4. To connect directly with GV-IP Decoder Box, change the port to **10000**.

Note: If you are using GV-Mobile Server firmware before V1.2 and connect through GV IP Device Utility, modify the command port to 39000.

---

5. Select **Custom** and type the ID and password of the GV-Mobile Server. To connect directly with GV-IP Decoder Box, the ID and password must match the CAM Login ID and password set on the GV-IP Decoder Box (Figure 2-9).
6. Configure each connected channel.
   A. Click a camera number on the device tree. This window appears.

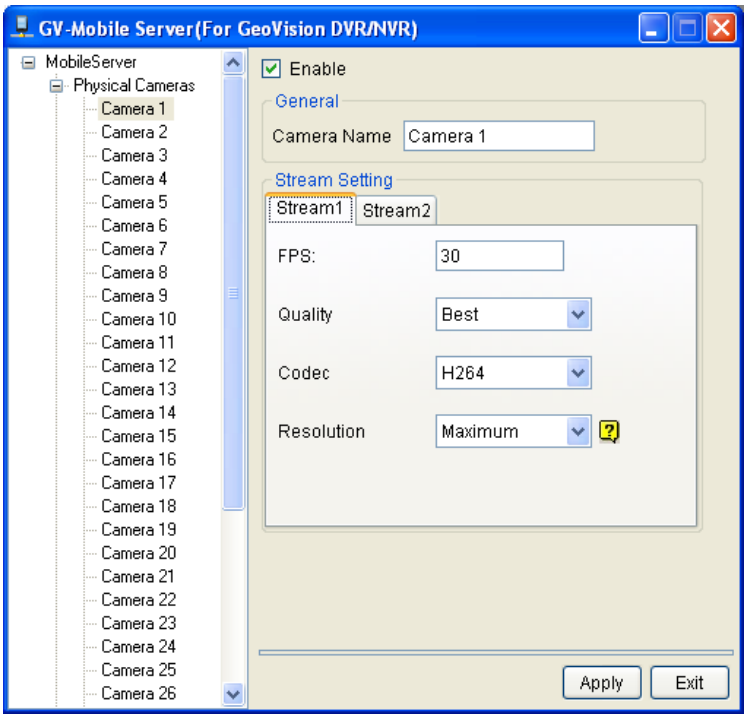

Figure 2-22

   B. Type the frame rate in the FPS field and select a Quality and Resolution using the drop-down lists. The maximum resolution supported for streaming is 704 x 480.
   C. Select **H.264** for Codec.

Note: The GV-IP Decoder Box supports Stream 1 and H.264 codec only.

   D. Repeat steps A to C to configure another channel.

7. To establish matrix view, follow the steps below.

A. On the GV-Mobile Server window, select a Matrix number from the device tree. This window appears.

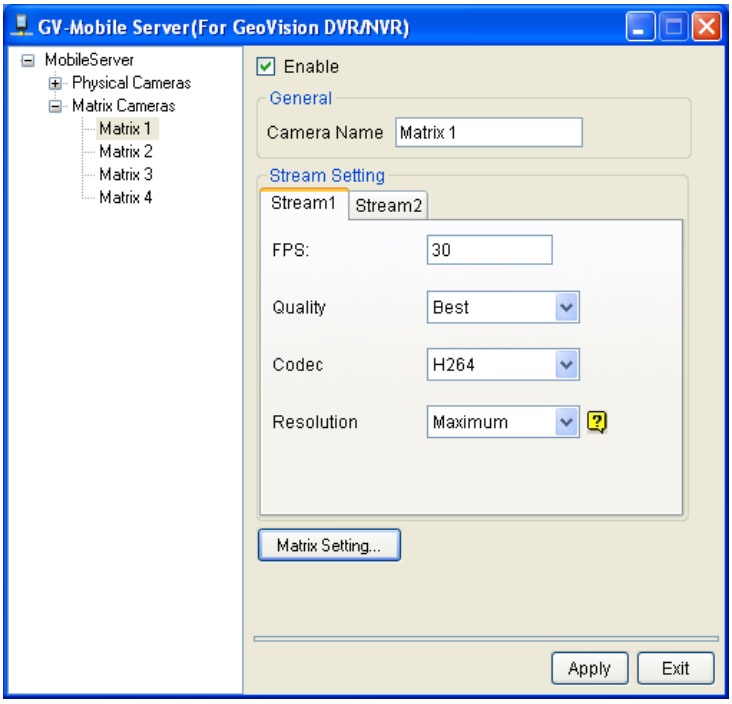

Figure 2-23

B. Type the frame rate in the FPS field and select a Quality and Resolution using the drop-down lists. The maximum resolution supported for streaming is 1.3 M.

C. Select **H.264** for Codec.

Note: The GV-IP Decoder Box supports Stream 1 and H.264 codec only.

D. Click the **Matrix Setting** button. The window appears.

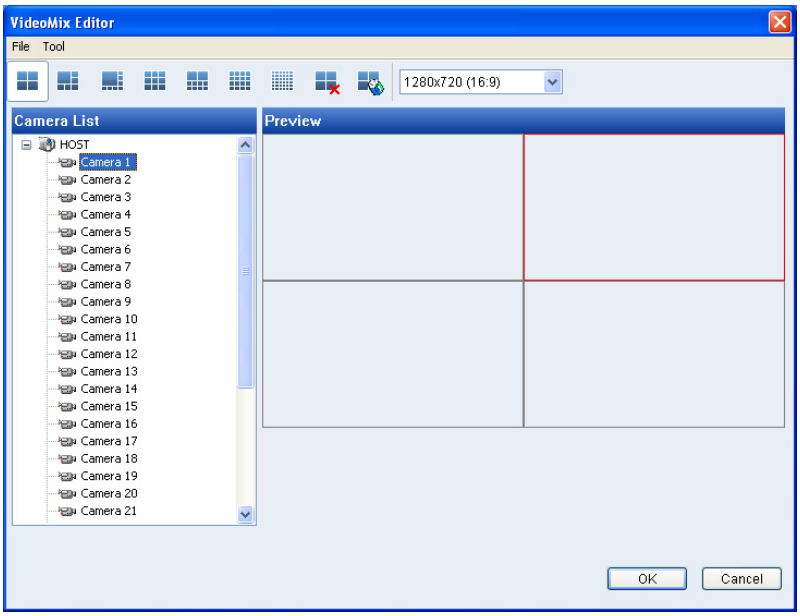

Figure 2-24

E. Select a matrix pattern from the top.

F. Click and drag channels from the device tree.

G. Click **OK**.

8. Click **Apply**.

9. To preview, right click the channel in the left menu, and select one of the following:

   - **View Actual Stream:** Watch the channel view received by the GV-Mobile Server.
   - **View Encode Stream 1:** Watch the channel view set up in step 6 (for single channel) or step 7 (for matrix view).
   - **View Encode Stream 2:** Stream 2 will not be received by the GV-IP Decoder Box.

10. To connect directly from GV-IP Decoder Box, follow the steps below.

    A. On the main menu of GV-IP Decoder Box, select  and press **OK** to search. The channels of GV-Mobile Server will be listed.

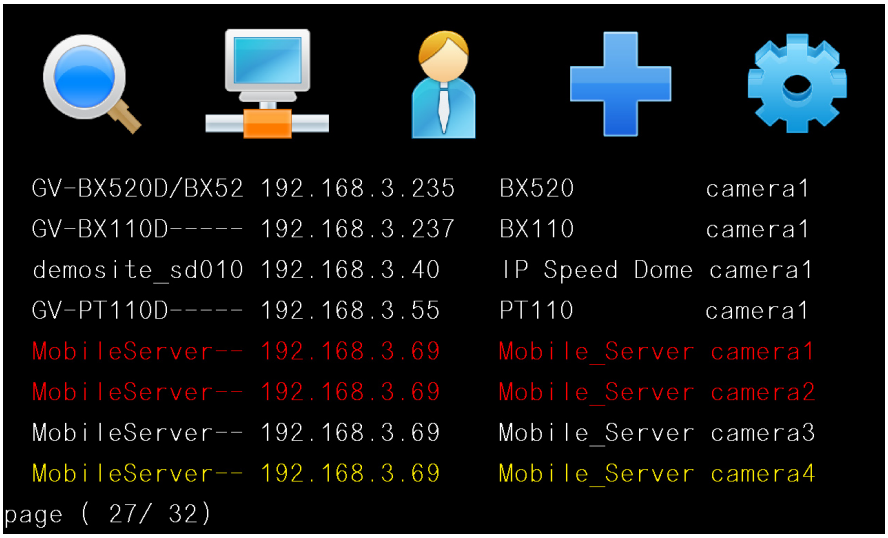

Figure 2-25

    B. To select channels, press the up and down arrow keys (No.4, Figure 1-4) and press the right arrow key. The yellow shows the cursor position and the selected channels will be in red.

    C. Press the **OK** key. The selected channels will be displayed.

11. To connect using GV IP Device Utility, follow steps in *2.5 Displaying Channels Using GV IP Device Utility*.

2.7 Taking a Snapshot

The security administrators can capture images when events occur. Snapshot images are automatically saved to an inserted storage device such as a USB drive or SD card in JPEG format.

Before you start, be sure:

- you have inserted a USB drive or SD card for storage.
- you have at least 30 MB of space on your storage device.
- the storage type is correctly configured.

Otherwise, the error icon will appear when attempting to capture an image.

1. On the main menu, select and select the inserted storage device under Storage.
2. Press the REC key to capture the image. A camera icon appears at the top right corner of the monitor and 3 consecutive snapshots will be taken and saved to the inserted storage device.

Figure 2-26

2.8 Pausing the Looped View

You can pause the looped view and fix the display on a single channel. To pause the looped view, press the ⏎ key. A loop sign with a cross will appear on the top-right corner of the display channel. To resume to the looped view, press the ⏎ key again.

Figure 2-27

2.9 Controlling PTZ Cameras

The GV-Joystick can be connected to the GV-IP Decoder Box to control GV-PTZ010D, GV-PT110D and GV-IP Speed Dome. The supported functions include zoom in, zoom out, tilt (vertical movement), pan (horizontal movement), focus in, focus out and automatic focus.

Note:

1. GV-Joystick cannot control channels accessed through GV-Mobile Server or RTSP.
2. The Previous and Next buttons of GV-Joystick are not supported on GV-IP Decoder Box.
3. The Focus In / Out buttons are not supported on GV-PT110D.

---

1. Connect a GV-Joystick to the USB port on the front panel. Once the GV-Joystick is connected, the PTZ icon will appear on the channels that support the device.

Figure 2-28

2. If you have more than one channel under display, press the ⏎ key to lock the display channel at the PTZ camera. See *2.8 Pausing the Looped View*.
3. You can now start to control the camera using the GV-Joystick.

Tip: To automatically focus the channel view, press the **Focus In** and **Focus Out** buttons on the GV-Joystick at the same time.

Chapter 3 System Setup

When the GV-IP Decoder Box is connected and powered on, the main menu appears on your display monitor:

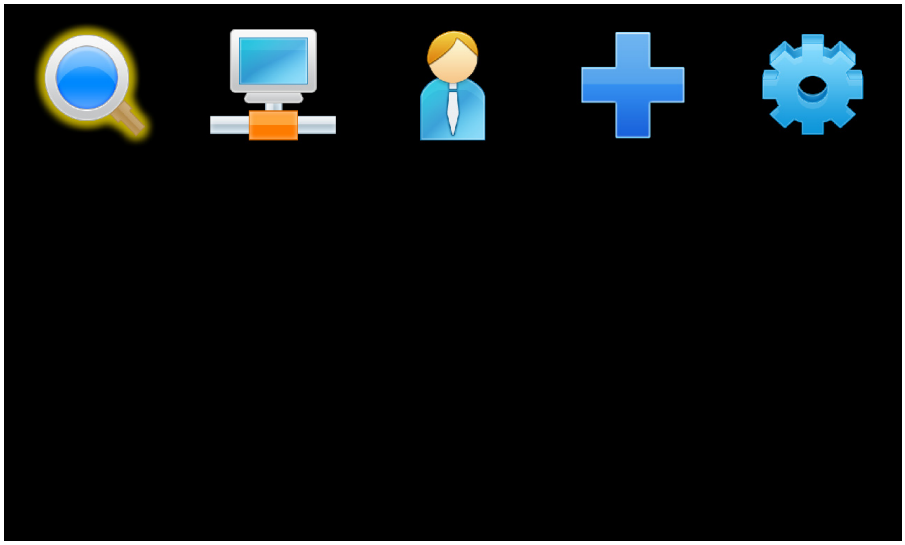

Figure 3-1

Icon	Main Functions
	Search for GV IP devices and GV-Mobile Server under the same LAN with the GV-IP Decoder Box and generates a Device List. For detail, see *3.1 Searching IP Devices*.
	Contains network settings of the GV-IP Decoder Box. For detail, see *3.2 Setting the Network*.
	Contains the settings for IP devices to be displayed on GV-IP Decoder Box. For detail, see *3.3 Configuring the Play Mode*.
	Adds a GV IP device to the GV-IP Decoder Box Device List and contains sorting options for the Device List. For detail, see *3.4 Adding a GV IP Device*.
	Contains settings for account, storage, monitor type, resolution, and firmware upgrade. For detail, see *3.5 Configuring the Account, Storage and Output Type*.

3.1 Searching IP Devices

You can search the GV IP devices and Mobile Server under the same LAN with the GV-IP Decoder Box.

1. Use the arrow keys to select  and press **OK**. The message “Waiting to Scan” appears.
2. Wait for a few seconds and the Device List appears.

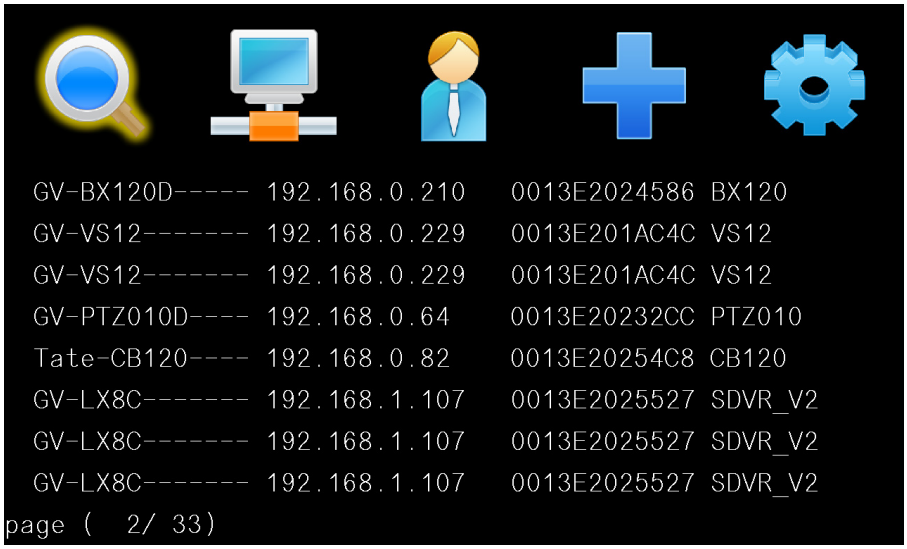

Figure 3-2

3. Use the PAGE UP and the PAGE Down keys to view the list.

3.2 Setting the Network

To configure the network settings for the GV-IP Decoder Box, on the main menu, select and press **OK**. This window appears.

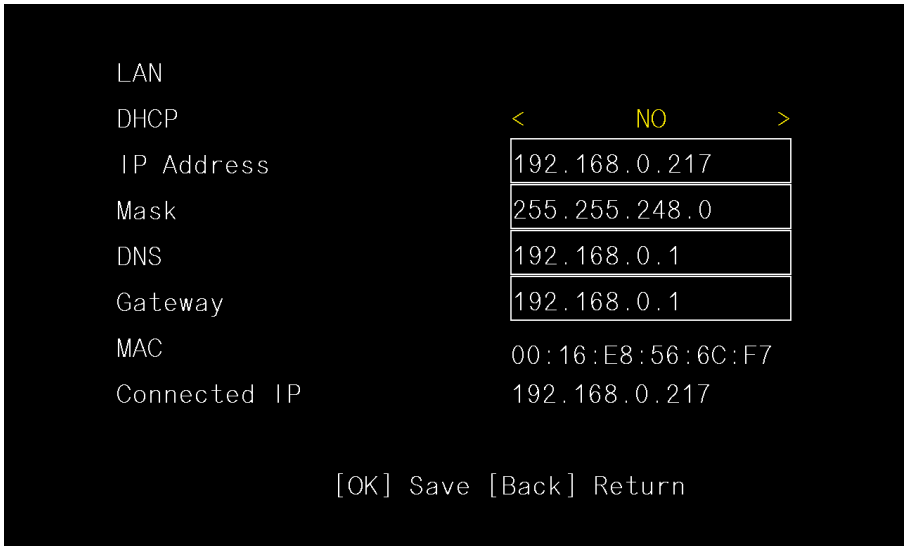

Figure 3-3

- **DHCP:** Select **Yes** to enable the DHCP function; **No** to disable the function.
- **IP Address:** Enter the IP address of the GV-IP Decoder Box.
- **Mask:** Enter the mask address of the GV-IP Decoder Box.
- **DNS:** Enter the DNS address of the GV-IP Decoder Box.
- **Gateway:** Enter the gateway address of the GV-IP Decoder Box.
- **MAC:** Shows the MAC address of the GV-IP Decoder Box.
- **Connected IP:** Shows the current IP address at use.

3.3 Configuring the Play Mode

You can configure the play mode for the live view display. On the main menu, select  and press **OK**. This window appears.

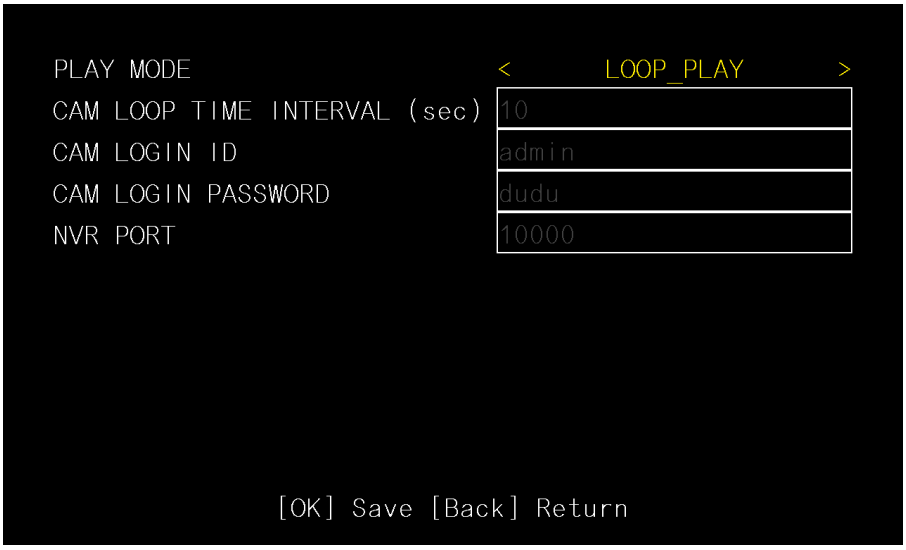

Figure 3-4

- **CAM Loop Time Interval:** Enter the time interval (in seconds) between each looped channel. The valid range is from 10 to 600. The default is **30** seconds.
- **CAM Login ID:** Enter the ID of the camera. The default is **admin**. The maximum number of characters is 15.
- **CAM Login Password:** Enter the password of the camera. The default is **admin**. The maximum number of characters is 15.
- **NVR Port:** Keep the NVR port in default (**10000**). Modify it only when necessary.

Note: The channels added directly with GV-IP Decoder Box for display must also have the same ID and password established here.

3.4 Adding a GV IP Device

You can manually add a GV IP device, select the sorting method and configure the displayed information on the Device List. On the main menu, select  and press **OK**. This window appears.

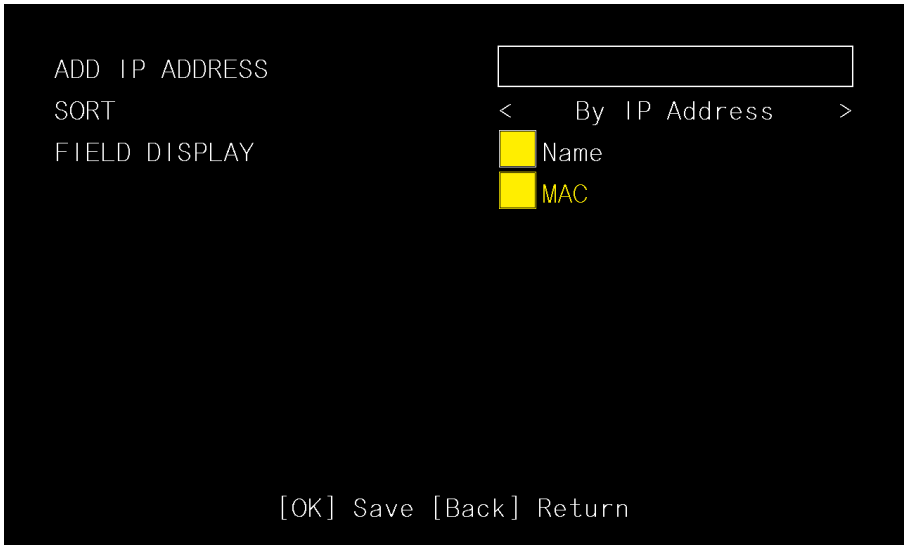

Figure 3-5

- **Add IP Address:** Type the IP address of the GV IP device.

Note: This function is not applicable to adding third-party IP devices. To add third-party IP cameras, see *2.5 Displaying Channels Using GV IP Device Utility*.

- **Sort:** Sort the Device List (Figure 3-2) according to IP address, MAC address, camera name or NONE. (When NONE is selected, the IP devices will be listed in the order of search). The default is **By IP Address**.
- **Field Display:** Select or unselect the device name and/or MAC address displayed on the Device List. The yellow block represents a selected option.

Tip: Select the **Name** option only to display the device name and the channel number.

3.5 Configuring the Account, Storage and Output Type

You can configure the account information, select storage and monitor connector, and look up firmware version. On the main menu, select  of the GV-IP Decoder Box and press **OK**. This window appears.

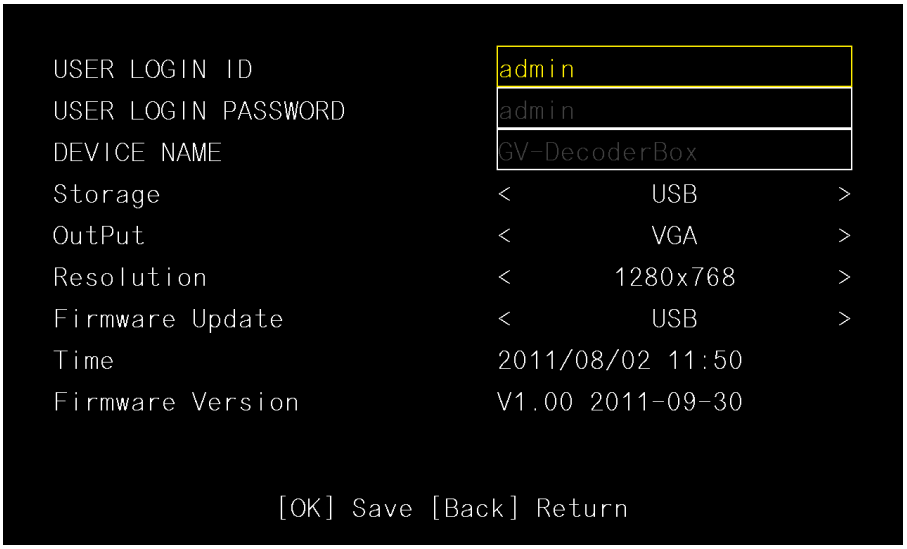

Figure 3-6

- **User Login ID:** Type the login ID for the GV-IP Decoder Box. The default is admin. The maximum number of characters is 14.
- **User Login Password:** Type the password for the GV-IP Decoder Box. The default is admin. The maximum number of characters is 14.
- **Device Name:** Name your GV-IP Decoder Box.
- **Storage:** Select the inserted storage device (**USB** or **SD**).
- **Output:** Select the output format between **VGA** and **High Definition**. The available options for resolution will be automatically brought up.
- **Resolution:** Select a resolution. The system will reboot when the resolution is modified.
- **Firmware Update:** Select the device that stores the firmware files. For upgrading steps. See *3.6 Upgrading the Firmware*.
- **Firmware Version:** Displays the firmware version of the device.

3.6 Upgrading the Firmware

We will periodically release the updated firmware on the website. You may choose to update firmware locally using a USB drive or SD card, or remotely through the GV IP Device Utility program.

Before you start:

- Be sure you have inserted a storage device (USB drive or SD card) and it contains one firmware file only.
- The USB drive or SD card must have at least 100 MB of free space.

3.6.1 Updating Firmware through USB Drive or SD Card

1. Copy the firmware file to the root folder of a USB storage device or a SD card.
2. Connect the USB drive or SD card to the GV-IP Decoder Box.
3. On the setup menu, select  and press **OK**. This window appears.

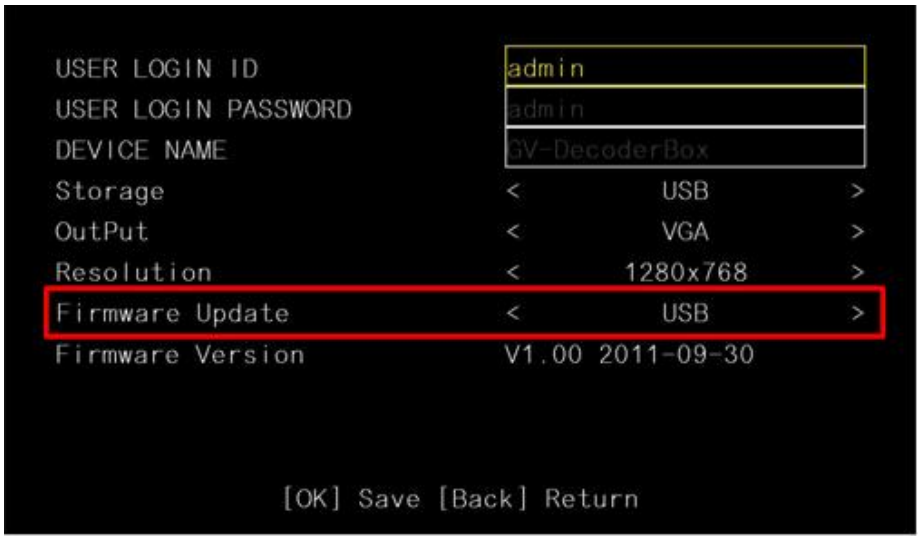

Figure 3-7

4. In the **Firmware Update** field, select **USB** or **SD** storage that stores the firmware file.
5. Press **OK**. The firmware upgrade runs automatically, and the GV-IP Decoder Box will restart after the firmware upgrade is completed.

3.6.2 Updating Firmware through GV IP Device Utility

1. On the main menu of GV-IP Decoder Box, select and select the inserted storage device under **Storage**.

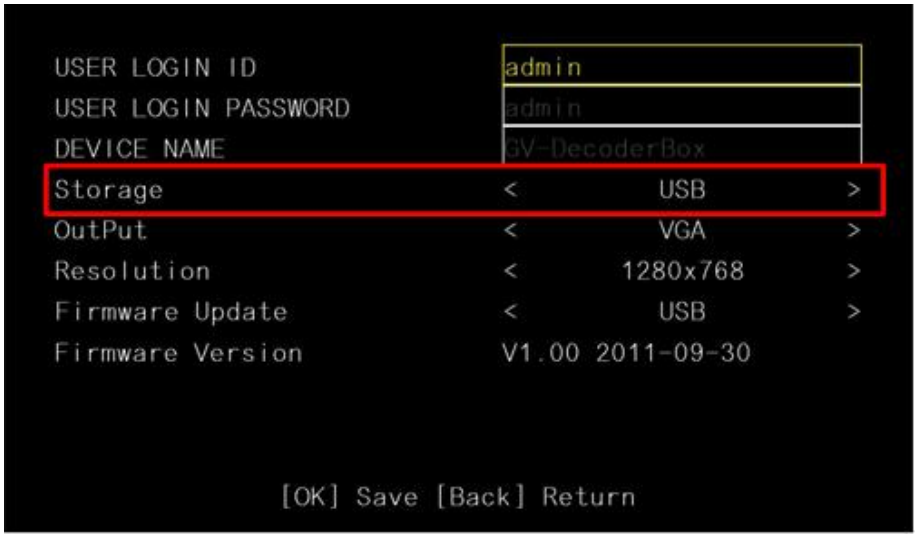

Figure 3-8

2. Make sure you have installed the GV IP Device Utility program. Double-click the GV IP Device Utility icon on the desktop. This window appears.

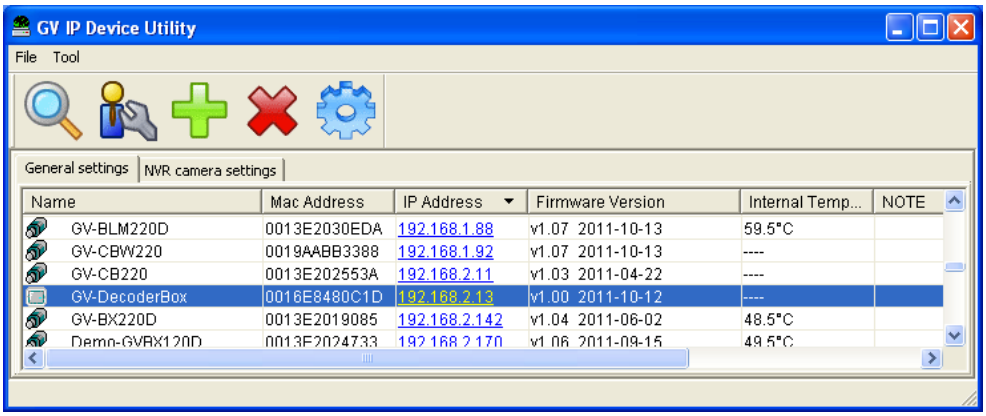

Figure 3-9

3. Click on the IP address of your GV-IP Decoder Box and select **Configure**. This window appears.

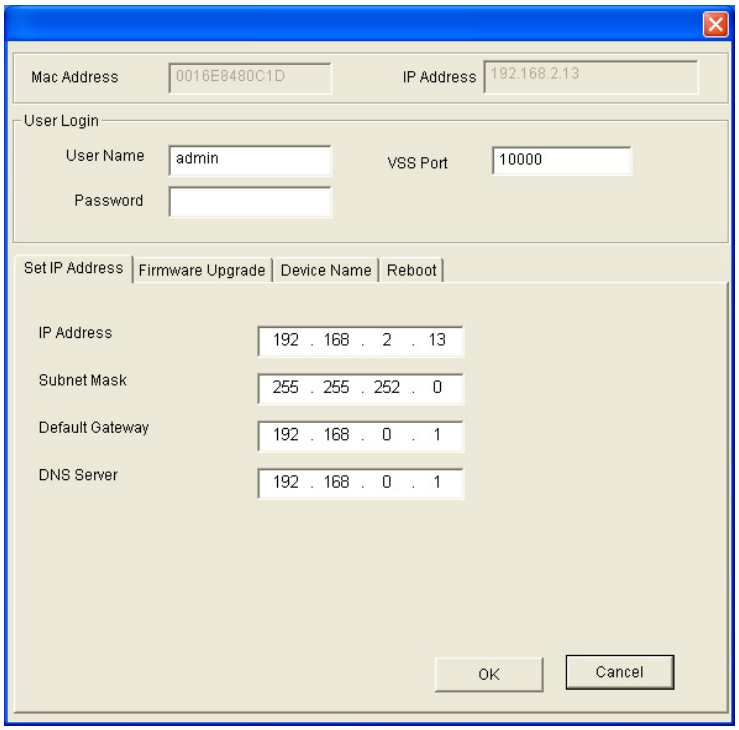

Figure 3-10

4. Select the **Firmware Upgrade** tab, type the User Name and Password, and click the **Browse** button to locate the firmware file saved at your local computer.

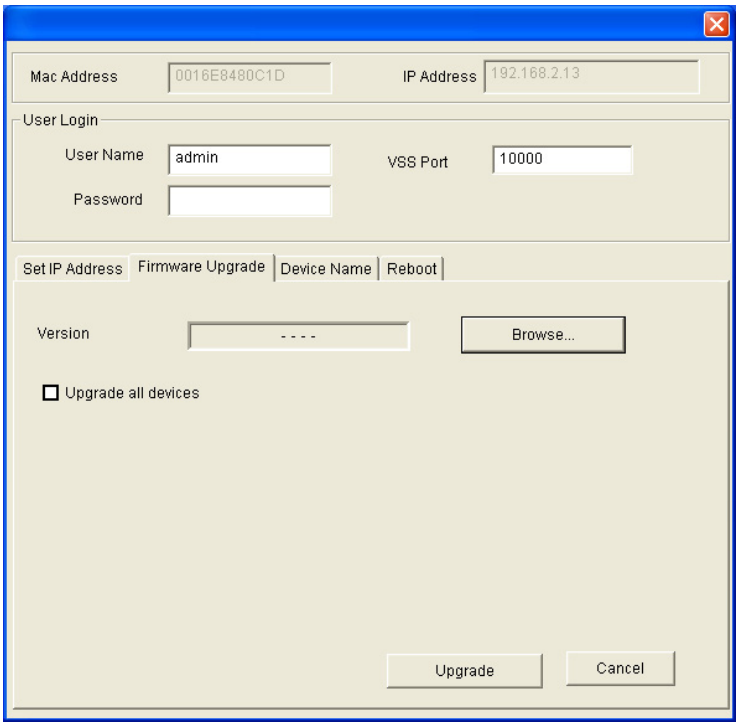

Figure 3-11

5. Type the password and click **Upgrade** to start upgrading. The system will reboot itself when the upgrade is completed.

Specifications

Video

Video Codec	H.264	
Video Output at 60 Hz	**High Definition**	**VGA**
	480p	640 x 480
	720p	1024 x 768
	1080i	1280 x 768
	1080p	1366 x 768

Network

Interface	10/100 Ethernet
Protocol	TCP, RTSP, ONVIF, PSIA

Mechanical

IR Remote Control		Yes
Connectors	**Power**	12V DC Jack
	Ethernet	RJ-45
	Monitor Output	High Definition, VGA
	Local Storage & Firmware Upgrade	USB slot (2.0 backward compatible, FAT32 format) SD card slot (for Class 6 card or above, FAT32 format)

General

Operating Temperature	0°C ~ 40°C / 32 °F ~ 104 °F
Operating Humidity	20 % ~ 80 % (with no condensation)
Dimensions (W x H x D)	182.5 × 29 × 141.5 mm / 7.19 × 1.14 × 5.58 in
Net Weight	615 g / 1.36 lb
Power	DC 12 V
Power Consumption	36 W (max. 3 A at 12V DC)
Regulatory	CE, FCC compliant

All specifications are subject to change without notice.

GV-Pad

Chapter 4 Introduction

The GV-Pad is a pad that decodes and displays incoming IP streams from GeoVision and third-party IP devices. It is light-weighted and requires only minimal amount of installation. As a standalone device, the GV-Pad does not require an extra monitor and yet it supports almost all the features of a GV-IP Decoder Box. Through the network, a GV-Pad can receive and manage up to 64 IP streams simultaneously. The administrators can monitor channels, take snapshots, pause at a specific channel and control GeoVision PTZ cameras such as GV-PTZ010D, GV-PT110D and GV-IP Speed Dome through a connected GV-Joystick.

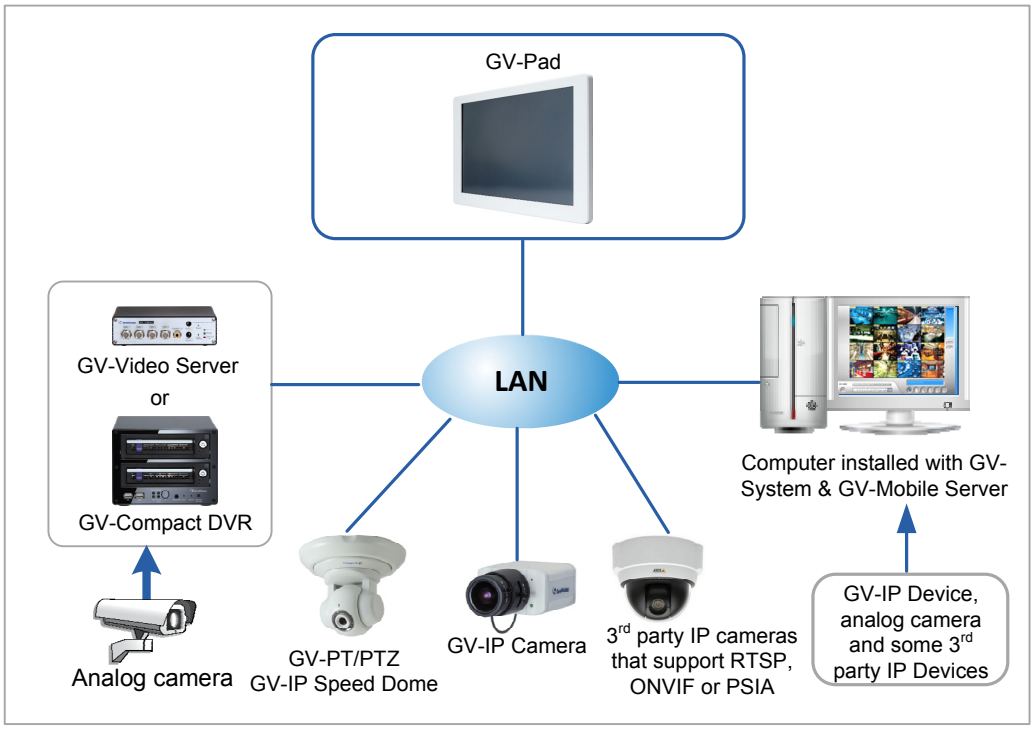

Figure 4-1

4.1 Features

- Decode video streams in H.264 codec at a maximum frame rate of the IP device
- Decode up to 5 megapixel IP cameras
- Decode up to 64 IP streams
- Support for 3rd party IP cameras that adhere to RTSP, ONVIF or PSIA
- Support for 10/100 Ethernet over LAN
- Support for single and sequential display
- Support for GV-Joystick control of GV PTZ cameras (GV-PTZ010D and GV-PT110D) and GV-IP Speed Dome
- Support for remote firmware upgrade, IP address configuration and addition of new channel
- IR remote control
- SD card and USB drive for snapshot storage and firmware upgrade

4.2 Compatible Devices

The GV-Pad compatible devices are the same with those for GV-IP Decoder Box. For detail, see *1.2 Compatible Devices*.

4.3 Packing List

1. GV-Pad × 1
2. IR remote control × 1
3. Magnetic hinge x 1
4. Screw x 4
5. AC/DC adapter × 1 (12 V, 3 A, 36 W)
6. Power cord x 1
7. Software DVD x 1

4.4 Optional Accessories

GV-Joystick

- GV-Joystick x 1
- USB Type A to Type B Cable x 1
- GV-Joystick User's Manual x 1

4.5 Overview

This section identifies the components of the GV-Pad.

4.5.1 Right Panel View

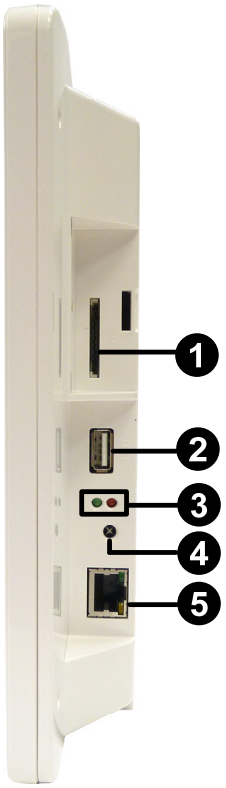

Figure 4-2

No.	Name	Function
1	SD Card Slot	Connect to an SD card for local storage of snapshot and firmware upgrade.
2	USB	Connect to a GV-Joystick, or to a USB storage device for local storage of snapshot and firmware upgrade.
3	LED Indicators	The **green** LED indicates the system is ready for use. The **red** LED indicates the power is supplied.
4	IR	Built-in IR receiver to receive the IR signals from the IR remote control.
5	Network	Connect to the network.

4.5.2 Left Panel View

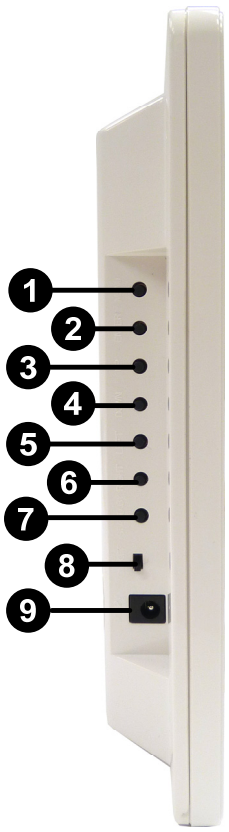

Figure 4-2

No.	Name	Function
1.	MENU	● Switch to the setup menu. ● Load default: Press for 10 seconds to load default settings.
2	ENTER	● Save settings in the Setup Menu. ● Display selected channels.
3	UP	Move the cursor up.
4	DOWN	Move the cursor down.
5	LEFT	● Move the cursor left. ● Unselect a channel on the Device List.

No.	Name	Function
6	RIGHT	● Move the cursor right. ● Select a channel on the Device List.
7	STAND BY	Press to enter the Standby mode. In the standby mode, the screen turns off to minimize power consumption. Press the key again to enter the ON mode.
8	Power OFF/ON	Switch the power on or off.
9	DC 12V	Connect to power using the supplied power adapter.

4.6 The IR Remote Control

The supplied IR remote control for GV-Pad is the same with GV-IP Decoder Box. For the functions of each key, see *1.6 The IR Remote Control*.

Note: The **Menu**, **OK**, **Arrow**, and **Power** keys on the IR remote control are also available on the left panel of the GV-Pad. For detail, see *4.5.2 Left Panel View*.

Chapter 5 Getting Started

5.1 Installing the GV-Pad

The GV-Pad can be used as a desktop device, installed on the wall or adhere to a magnetic surface.

Note: To mount your GV-Pad on the wall, be sure to prepare 4 screws to secure the device to the wall.

---

1. Secure the magnetic hinge to the back of the GV-Pad with 4 screws.
2. Adjust the angle of the magnetic hinge according to your needs.
3. To install the GV-Pad on a wall, secure the magnetic hinge with self-prepared screws.
4. Connect the necessary wires and cables. See *5.2 Connecting the GV-Pad*.

5.2 Connecting the GV-Pad

Follow the steps below to connect the GV-Pad:

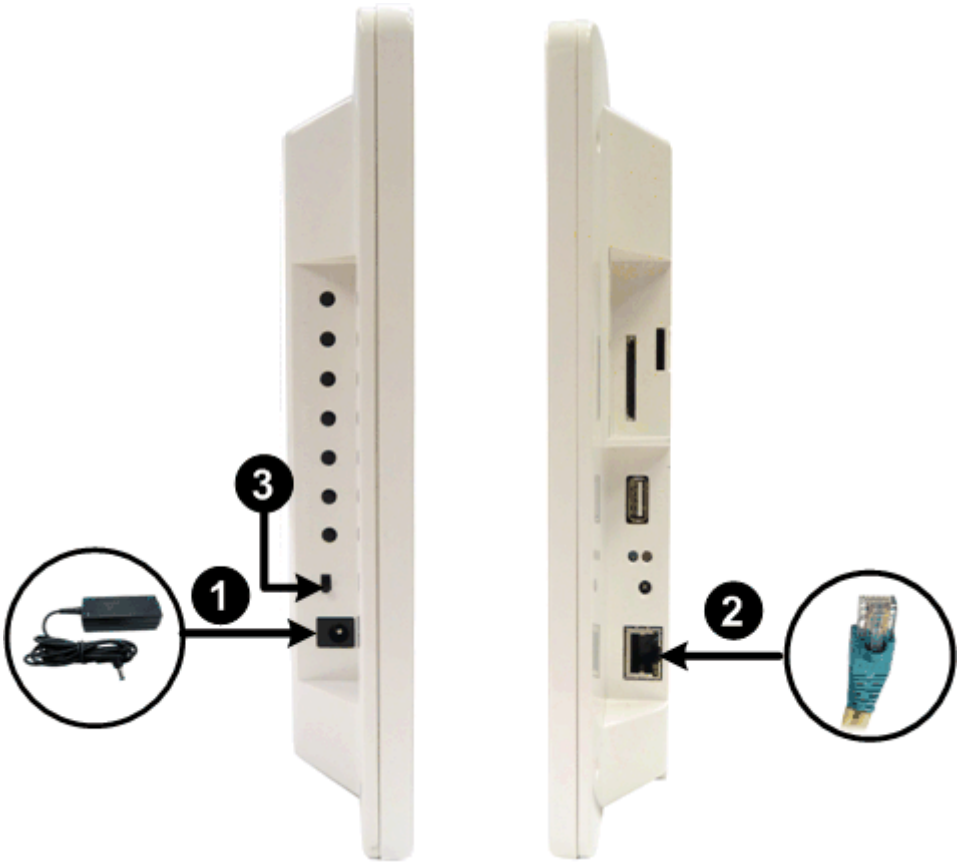

Figure 5-1

1. Connect to power using the supplied power adapter.
2. Connect to a standard network cable.
3. Turn the Power switch to ON.

5.3 Configuring the Basics

After you have installed and connected the necessary wire and cable to your GV-Pad, you are ready to configure the GV-Pad.

1. Configure the IP address, ID and password. See *2.3 Configuring the IP Address, ID and Password*.

Note:

1. Since all the GV IP devices have the default IP address **192.168.0.10**. Therefore, it is strongly advisable to modify the IP address to avoid IP conflict.
2. The default ID and password are **admin**.
3. The IP devices to be connected need to have the same ID and password set on the GV-Pad.

---

2. Display channels. The GV-Pad can display up to 64 IP channels from GeoVision and/or third-party devices. Refer to the sections indicated below to set up the channels.

Functions	Reference
To display channels from GV IP devices	See *2.4 Displaying Channels from GV IP Devices*
To display channels form third-party IP devices	See *2.5 Displaying Channels Using GV IP Device Utility*
To display channels connected to GV-System	See *2.6 Displaying Channels from GV-System*

5.4 Managing the GV-Pad

The administrator can take snapshots, pause at a single channel and control PTZ cameras.

Functions	Reference
Taking a snapshot	See *2.7 Taking a Snapshot*
Pausing at a channel	See *2.8 Pausing the Lopped View*
Controlling PTZ cameras	See *2.9 Controlling PTZ Cameras*

Chapter 6 System Setup

When the GV-Pad is connected and powered on, the main menu appears:

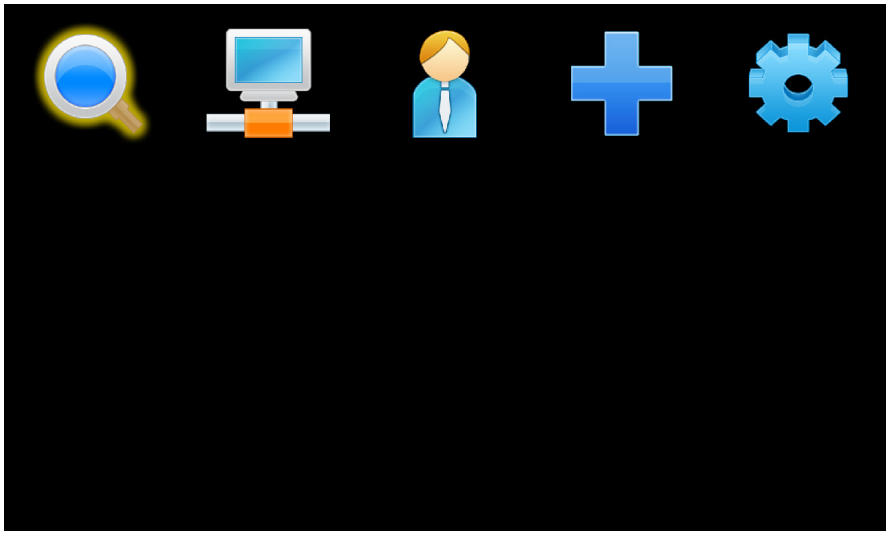

Figure 6-1

Icon	Main Functions
	Search for GV IP devices and GV-Mobile Server under the same LAN with the GV-Pad and generates a Device List. For detail, see *3.1 Searching IP Devices*.
	Contains network settings of the GV-Pad. For detail, see *3.2 Setting the Network*.
	Contains the settings for IP devices to be displayed on GV-Pad. For detail, see *3.3 Configuring the Play Mode*.
	Adds a GV IP device to the Device List and contains sorting options for the Device List. For detail, see *3.4 Adding a GV IP Device*.
	Contains settings for account, storage, monitor type, resolution, and firmware upgrade. For detail, see *3.5 Configuring the Account, Storage and Output Type*.

Specifications

Video

Video Codec	H.264
Resolution	1280 x 800

Network

Interface	10/100 Ethernet
Protocol	TCP, RTSP, ONVIF, PSIA

Mechanical

IR Remote Control		Yes
Connectors	**Power**	12V DC Jack
	Ethernet	RJ-45
	Local Storage & Firmware Upgrade	USB slot (2.0 backward compatible, FAT32 format) SD card slot (for Class 6 card or above, FAT32 format)

General

Operating Temperature	0°C ~ 40°C / 32 °F ~ 104 °F
Operating Humidity	20 % ~ 80 % (with no condensation)
Dimensions (W x H x D)	342.8 × 220.3 × 38.3 mm / 13.5 x 8.7 x 1.5 in
Net Weight	1160 g / 2.6 lb
Power	DC 12 V
Power Consumption	36 W (max. 3 A at 12V DC)
Regulatory	CE, FCC compliant

All specifications are subject to change without notice.