

GV-IP Decoder Box and GV-Pad

User's Manual V1.06



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



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GV-IP Decoder Box



Chapter 1 Introduction

The GV-IP Decoder Box is designed to decode incoming IP streams from GeoVision and third-party IP devices, and to serve as a medium for connecting the cameras and the monitor for video display in Single View or Quad View. It supports third-party IP cameras that adhere to RTSP, ONVIF or PSIA, and can automatically search for ONVIF supported third-party IP devices under the same LAN. 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. GV-Joystick can be installed to control GeoVision and third-party PT / PTZ / Speed Dome cameras. GV-Joystick can be installed to control GeoVision and third-party PT / PTZ / Speed Dome cameras.

Connecting IP Cameras with GV-IP Decoder Box through LAN



Figure 1-1

The IP Devices and GV-Software that Can Connect with GV-IP Decoder Box

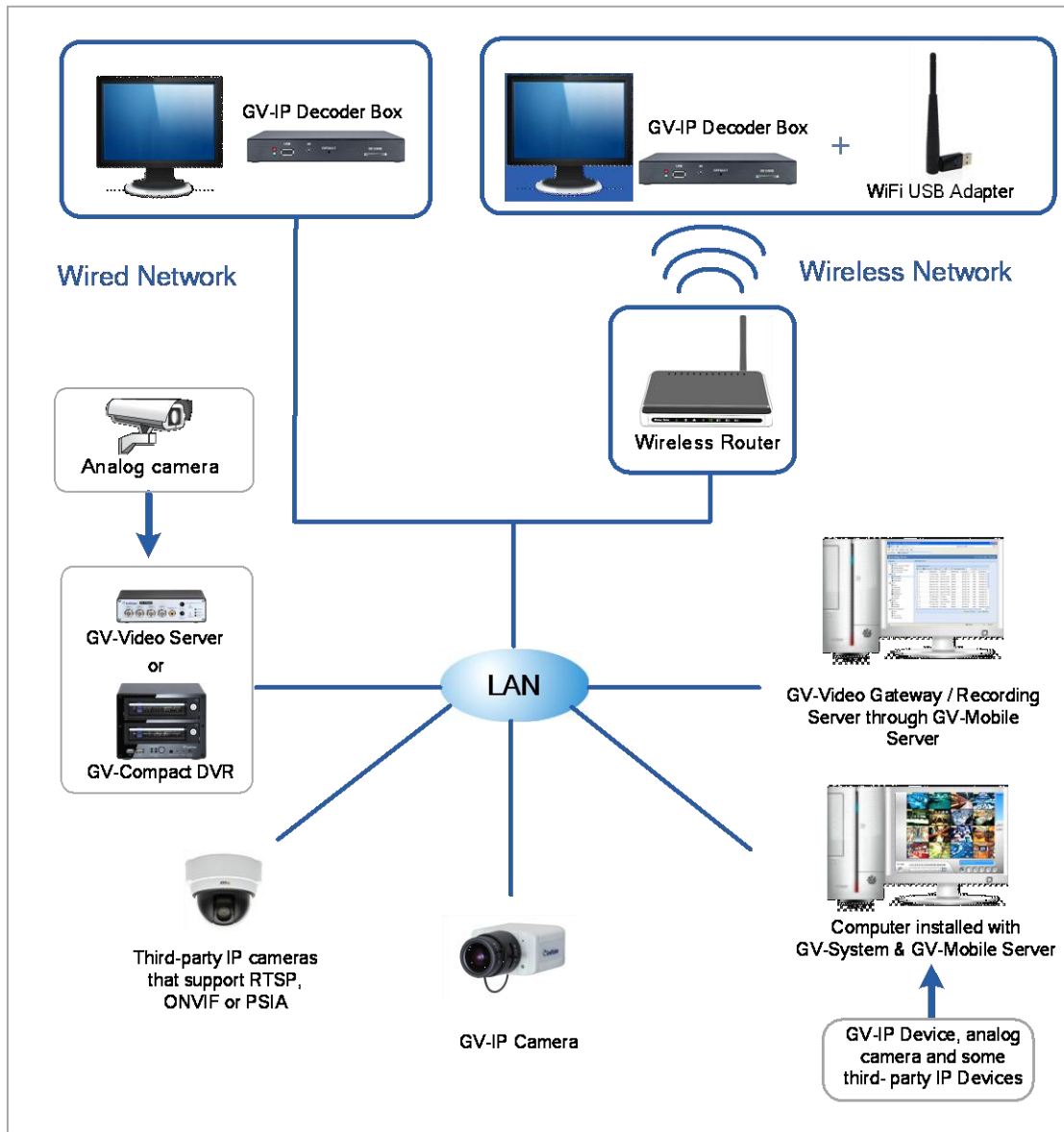


Figure 1-2

1.1 Features

- Decode video streams in H.264 codec at a maximum frame rate of the IP device
- Decode up to 64 IP streams
- Decode up to 5 megapixel IP cameras
- Automatically search for ONVIF IP devices
- Support for third-party IP cameras that adhere to RTSP, ONVIF or PSIA
- Single View and Quad View in sequential display
- Display of Matrix view through GV-Mobile Server
- Support for 10/100 Ethernet over LAN
- Support for Wi-Fi
- VGA and HDMI Video outputs
- Video output resolution up to 1080p
- IR remote control
- Control PTZ and Speed Dome cameras using GV-Joystick
- Remote firmware upgrade, IP address configuration and addition of new channel
- SD card and USB drive for snapshot storage and firmware upgrade

1.2 Compatible Devices

The GV-IP Decoder Box is compatible with:

1. GV-IP Camera, GV-Video Server and GV-Compact DVR using H.264 codec
2. Third-party IP devices that support H.264 and adhere to RTSP, ONVIF or PSIA
3. GV-Mobile Server





Note: Upgrade your GV-IP Devices to the latest firmware version if you encounter any connection problems.


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.

1.3 Packing List

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

1.4 Optional Accessories

Optional Accessories	Detail
<p data-bbox="373 405 582 439">Wall Mount Kit</p> 	<p data-bbox="783 416 1394 495">The Wall Mount Kit is used to mount the GV-IP Decoder Box to the wall.</p> <ul data-bbox="783 533 1098 622" style="list-style-type: none"> ● L-type brackets x 2 ● Small screws x 4
<p data-bbox="304 656 655 689">VESA Monitor-Mount Kit</p> 	<p data-bbox="783 667 1394 790">The VESA Monitor Mount Kit is used to mount the GV-IP Decoder Box to the back of a VESA monitor.</p> <ul data-bbox="783 831 1230 1037" style="list-style-type: none"> ● VESA monitor mount bracket ● L-type brackets x 2 ● Large screws x 4 ● Small screws x 8
<p data-bbox="368 1066 544 1099">GV-Joystick</p>  <p data-bbox="347 1447 564 1480">GV-Joystick V2</p> 	<p data-bbox="783 1077 1406 1249">The GV-Joystick facilitates focusing, zooming, panning, tilting of GeoVision and third-party PT, PTZ and Speed Dome cameras on GV-IP Decoder Box.</p> <p data-bbox="783 1290 959 1323">GV-Joystick</p> <ul data-bbox="783 1350 1225 1496" style="list-style-type: none"> ● GV-Joystick ● USB Type A to Type B Cable ● GV-Joystick User's Manual <p data-bbox="783 1581 1002 1615">GV-Joystick V2</p> <ul data-bbox="783 1641 1225 1843" style="list-style-type: none"> ● GV-Joystick V2 ● USB Type A to Type B Cable ● RJ-45 Cable ● Software CD

Optional Accessories	Detail
<p data-bbox="252 353 560 389">GV-WiFi USB Adapter</p> 	<p data-bbox="635 353 1382 533">The GV-WiFi USB adapter is a plug-and-play device that provides wireless connectivity to GeoVision IP devices. The GV-WiFi USB Adapter complies with IEEE802.11 b/g/n (Draft 3.0) standards for wireless networking.</p>

1.5 Overview

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

1.5.1 Front View



Figure 1-3

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, a USB storage device or a GV-WiFi USB adapter.
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

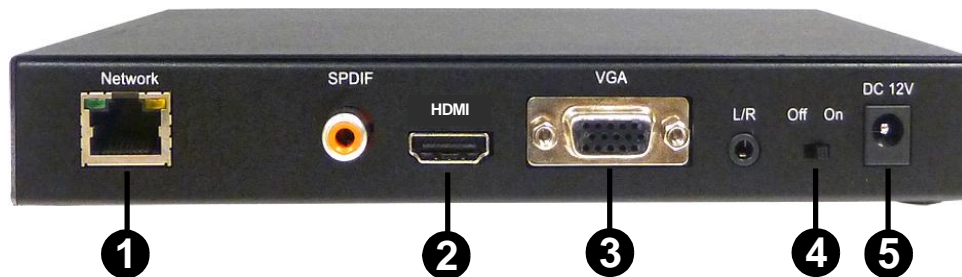


Figure 1-4

No.	Name	Function
1	Network	Connect to the network.
2	HDMI	Connect to an HDMI 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

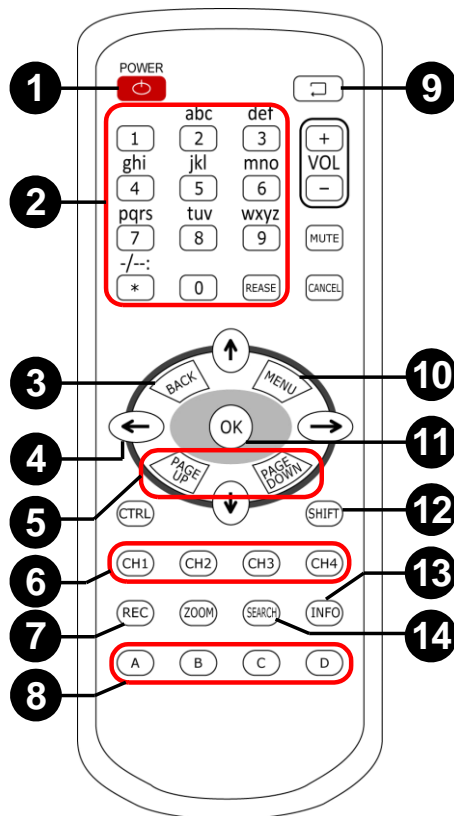


Figure 1-5

No.	Name	Function
1	POWER	Turn on or off the GV-IP Decoder Box.
2	Numeric / Alphabetical / Punctuation Marks / ERASE keys	Enter numbers, alphabets or punctuation marks and erase the entered characters.
3	BACK	Back to the previous page in the Setup Menu.
4	Arrow	<ul style="list-style-type: none"> ● 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	PAGE UP / PAGE DOWN	<ul style="list-style-type: none"> ● Go to the previous / next page on the main screen. ● Switch between the cameras on the looped view: press the Loop Start / Stop key to stop the looped view, and then press Page Up / Page Down to switch to the previous / next camera.
6	Division Extension Keys (CH1 ~ CH4)	Extend the selected division (in Quad View mode) to full-monitor display. Press the same key again to resume.
7	REC	Capture a snapshot.
8	Capitalized alphabetical keys (A / B / C / D)	Specify a GV-IP Decoder Box for IR remote control.
9	Loop Start / Stop	<ul style="list-style-type: none"> ● Start or stop the looped view. ● Display and fix at a channel: press the Loop Start / Stop key to stop the looped view, a numeric key and OK to display and fix at the selected channel. Press 0 and OK to return to the last displayed channel.
10	MENU	Switch to the setup menu.
11	OK	<ul style="list-style-type: none"> ● Save settings in the Setup Menu. ● Display selected channels.

No.	Name	Function								
12	SHIFT	<p>Switch among 8 resolution options.</p> <ol style="list-style-type: none"> 1. Press Shift. The Green LED on the front panel flashes. 2. Press No. 0 ~ 7 for the desired resolution within 30 seconds. <table style="margin-left: 40px; border: none;"> <tr> <td>0 : VGA_640 x 480</td> <td>4 : HDMI_480p</td> </tr> <tr> <td>1 : VGA_1024 x 768</td> <td>5 : HDMI_720p</td> </tr> <tr> <td>2 : VGA_1280 x 768</td> <td>6 : HDMI_1080i</td> </tr> <tr> <td></td> <td>7 : HDMI_1080p</td> </tr> </table> <p>Note after the resolution is configured, the green LED will fade and GV-IP Decoder Box will reboot automatically.</p>	0 : VGA_640 x 480	4 : HDMI_480p	1 : VGA_1024 x 768	5 : HDMI_720p	2 : VGA_1280 x 768	6 : HDMI_1080i		7 : HDMI_1080p
0 : VGA_640 x 480	4 : HDMI_480p									
1 : VGA_1024 x 768	5 : HDMI_720p									
2 : VGA_1280 x 768	6 : HDMI_1080i									
	7 : HDMI_1080p									
13	INFO	Shows the camera name and total number of cameras under display.								
14	SEARCH	Scan for available Access Points or wireless stations when wireless network is selected.								

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.

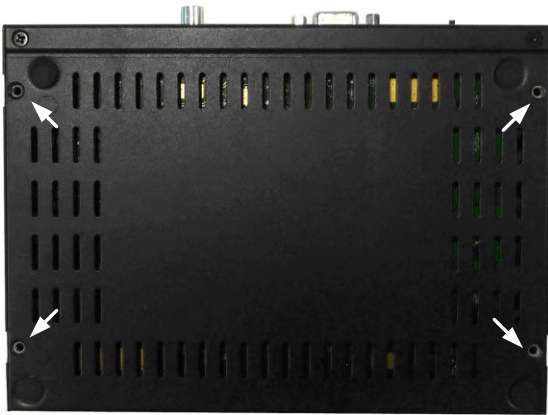


Figure 2-1

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

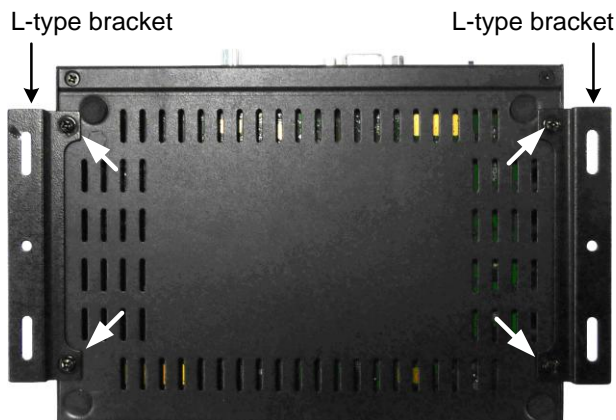


Figure 2-2

3. Secure the GV-IP Decoder Box to the wall with self-prepared screws.

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 to 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 with 4 small screws.

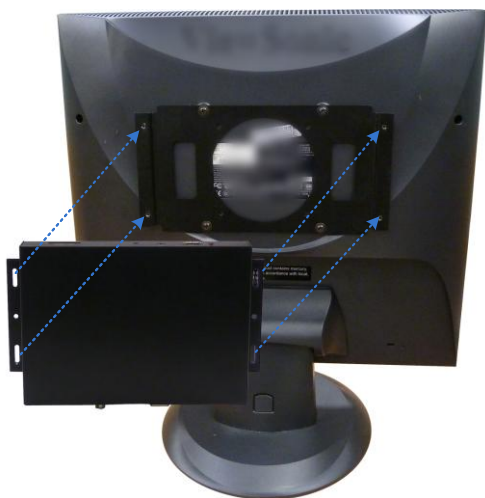


Figure 2-4

2.2 Connecting the GV-IP Decoder Box

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

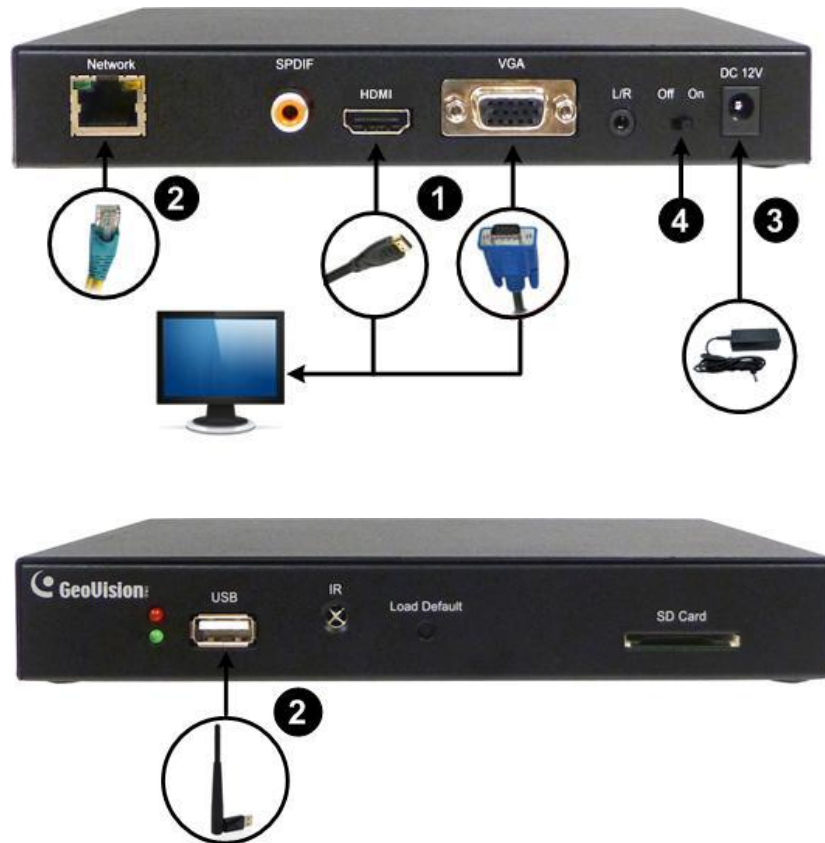


Figure 2-5

1. Connect a display device to VGA connector or HDMI connector for video output.
2. Connect the device to LAN.
 - A. For wired network, connect to a standard network cable.
 - B. For wireless network, insert a Wi-Fi USB adapter.
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 HDMI or VGA connector.
 2. The default video output is set to VGA with 1024 x 768 resolutions. If you use an HDMI 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*.
 3. Optionally configure the device date and time. For details, see *3.5 Configuring the Account, Storage and Output Type*.
-

2.3 Setting Up the Network

After you have connected the necessary wires and cables, set up a wired or a wireless network connection for the GV-IP Decoder Box.

Wired Network Connection

If you have connected your GV-IP Decoder Box for a wired network connection, by default, the device will be **automatically assigned an IP address** by the DHCP server without further settings. To change the IP address to a fixed one, follow the steps below.

1. Select the  icon, select **LAN Setting** and press **OK**. This window appears.

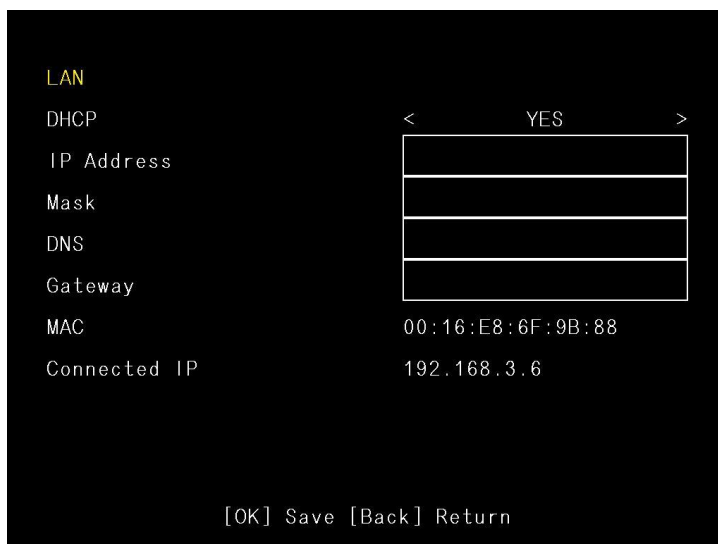


Figure 2-6

2. Select **NO** in the DHCP section and enter a fixed IP address, subnet mask and DNS and gateway.
3. Press **OK** to save the settings. When the device is connected to the network, the IP address will be shown in the **Connected IP** field.

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

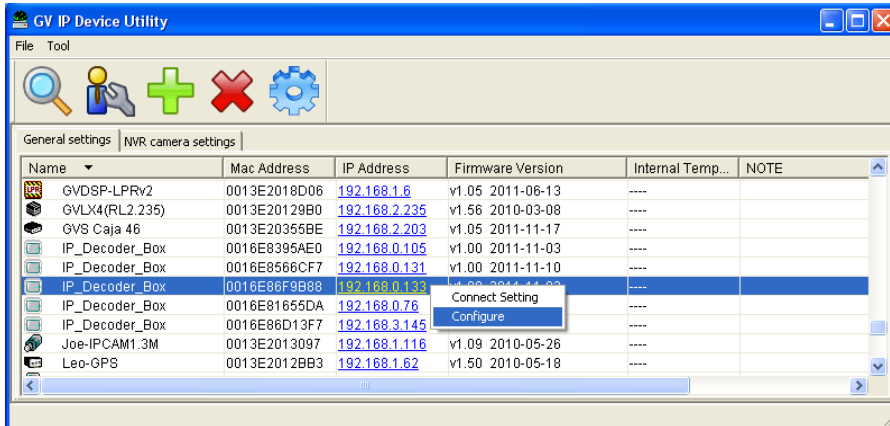


Figure 2-7

Wireless Network Connection

A GV-WiFi USB Dongle is required to connect the device to wireless network. Follow the steps below to establish a wireless network connection.

Note: The GV-IP Decoder Box only supports dynamic IP address assignment (DHCP) in a wireless network.


1. Select the  icon, select **WLAN Setting** and press **OK**. This window appears.



Figure 2-8

2. Press the **Search** button to scan for available Access Points / wireless stations.
3. Select an Access Point / wireless station in the **ESSID** field and complete the settings below.
 - **ESSID:** Shows the name of the Access Point. Press the left and right button to select an Access Point.
 - **Quality:** Shows the connection quality on a scale of 1 to 100 with 100 being the highest quality.
 - **AuthMode:** Select **WEP Auto** or **WPAPSK** according to the encryption setting of the Access Point.
 - **EncryMode:** Select the Encryption Mode according to the encryption setting of the Access Point.
 - **Password:** Type a password to match the Access Point. You can type up to 26 characters.
4. Press **OK** to save the settings and connect to wireless LAN. When the device is connected to the network, the IP address will be shown in the **Connected IP** field.

2.4 Displaying Channels on the Monitor


Use the search feature  on GV-IP Decoder Box to display channels from GV-IP Devices, GV-Mobile Server and the third-party devices that adhere to ONVIF under the same LAN.

Before you start, make sure the following:

- All IP devices and GV-Mobile Server must be under the same LAN with GV-IP Decoder Box.
- The NVR port (of GV-IP Decoder Box) and VSS port (of GV-IP Devices) or Command Port (of GV-Mobile Server) must be the same. The default NVR and VSS port is **10000**.
- The ID and password for all IP devices and GV-Mobile Server must be the same. By default, the ID and password of GV-IP Devices are **admin**.

Note: The Command Port of GV-Mobile Server is 55000 by default. To change the port value, see [2.6 Displaying Channels from GV-Mobile Server](#).

2.4.1 Displaying Channels in Single View

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

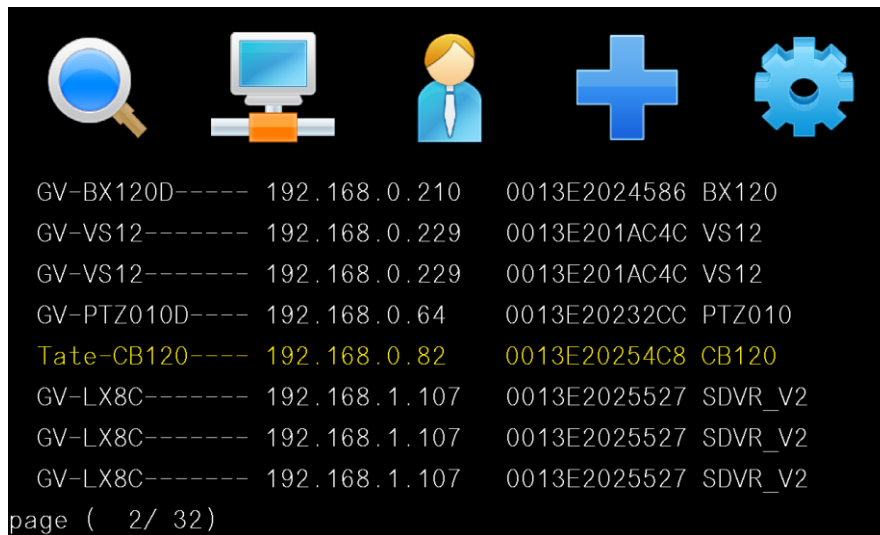


Figure 2-9

2. To select channels, press the up and down arrow keys (No.4, Figure 1-5) and press the right arrow key. The cursor position is displayed in yellow, and the selected channels will be in red. To cancel the selection, press the left arrow key.

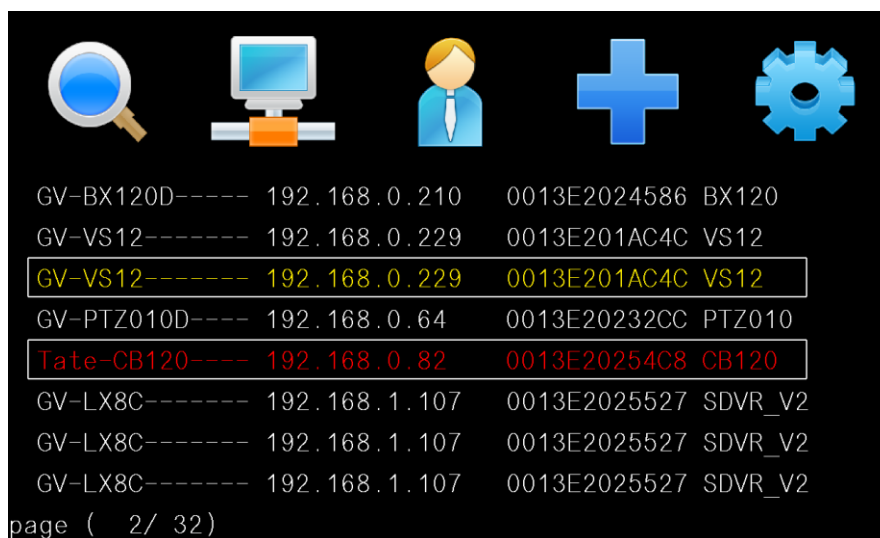



Figure 2-10

3. Press **OK** to apply the settings.



The selected channels will be displayed on the monitor and be looped at an interval of 30 seconds by default.

Note:

1. The camera view will display the message “Connection Lost” if the device does not have the same ID and password with GV-IP Decoder Box. To add a single IP device with a different ID and password, see [2.4.3 Adding Channels Manually](#). To add multiple IP devices with different IDs and passwords, see [2.5 Displaying Channels Using GV-IP Device Utility](#).
 2. The GV-IP Decoder Box supports a maximum resolution of 5 MP for single view. The message “Resolution Error” appears on the monitor when the connected stream exceeds this specification limit.
 3. To change the looping interval, see **CAM Loop Time Interval** in [3.3 Configuring the Play Mode](#).
 4. Every time when the search function  is performed, any channels selected previously on the Device List will be unselected.
-

2.4.2 Displaying Channels in Quad View

By default, the GV-IP Decoder Box displays the camera channels in Single View. To change the view mode to Quad View and add channels, follow the steps below.

1. Select the  icon and press **OK**. In the Play Mode field, select **SPLIT PLAY 4** and press **OK**.
2. To search for IP devices, select the  icon and press **OK**. The devices under the same LAN with the GV-IP Decoder Box appear on the Device List (Figure 2-9).
3. Select a channel and press a number from 1 to 4 (No.2, Figure 1-5) to set the channel to one of the four divisions on the Quad View for display. The selected channel will be in red, with a number at the front. To reset the division, press the left arrow key on the channel and select another number.

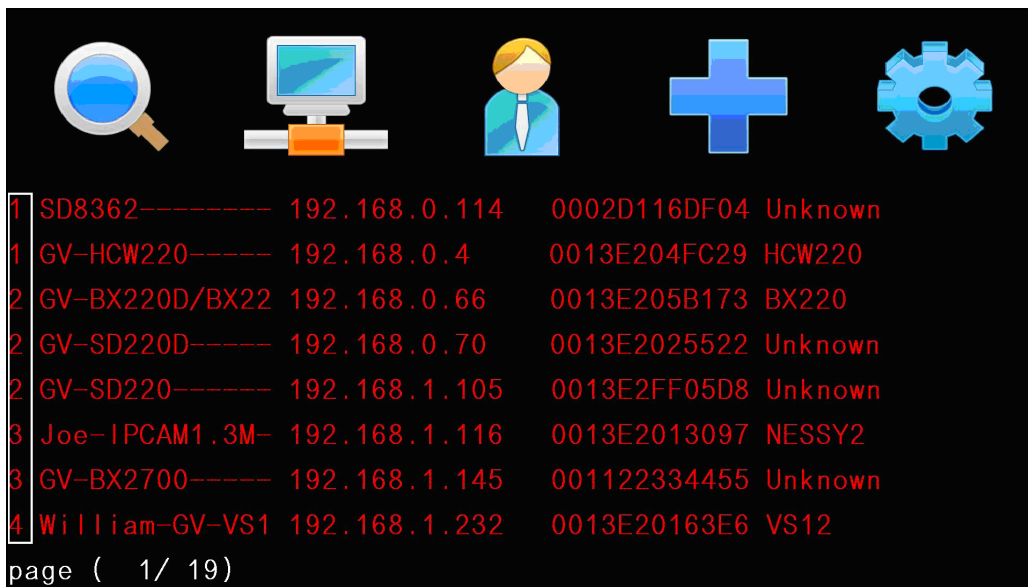


Figure 2-11

Corresponding position on Quad View to the number set for selected channel

1	2
3	4


Figure 2-12

4. Press the **OK** key to apply the settings.

The selected channels will be displayed on the assigned divisions on the Quad View, and the channels in the same division will be looped at an interval of 30 seconds by default.

Tip: Press the **CH1 ~ CH4** keys to extend a division to full-monitor view (in its Quad View resolution) and press the key again to resume.

Note:

1. The camera view will display the message “Connection Lost” if the device does not have the same ID and password with GV-IP Decoder Box. To add a single IP device with a different ID and password, see *2.4.3 Adding Channels Manually*. To add multiple IP devices with different IDs and passwords, see *2.5 Displaying Channels Using GV-IP Device Utility*.
 2. The GV-IP Decoder Box supports a maximum resolution of 1280 x 720 for each division under quad view. The message “Resolution Error” appears on the monitor when the connected stream exceeds this specification limit.
 3. To change the time interval, see ***CAM Loop Time Interval*** in *3.3 Configuring the Play Mode*.
 4. Every time when the search function  is performed, any channels selected previously on the Device List will be unselected.
-

2.4.3 Adding Channels Manually

When you cannot detect any IP device using the search function, or the IP device has a different ID and Password with GV-IP Decoder Box, you can add GV-IP Devices or third-party devices manually.

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

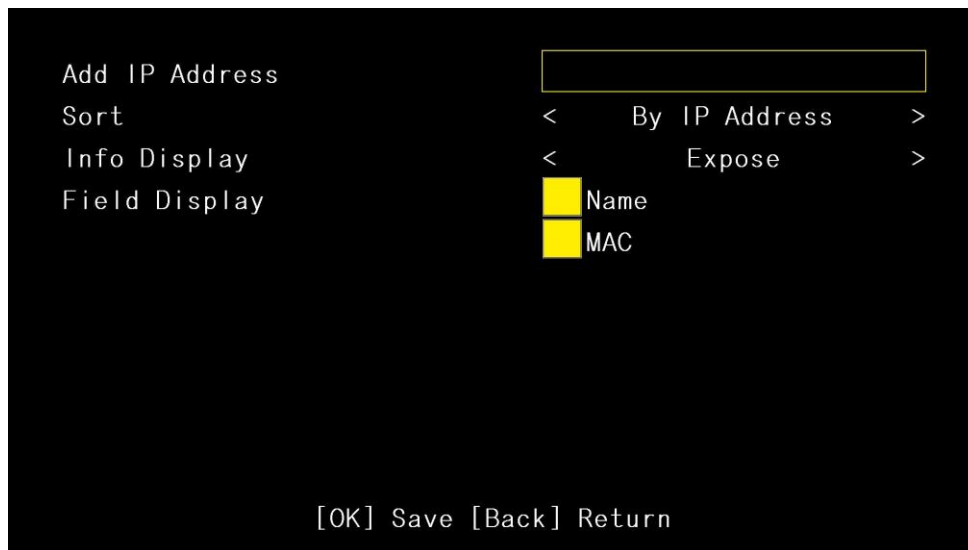



Figure 2-13

2. In the **Add IP Address** field, type the IP address of the device and click **OK** to confirm.
3. To set the ID and password for connecting the IP device and GV-IP Decoder Box, select  and modify **CAM Login ID** and **CAM Login Password**.
4. To add another IP device, follow steps 1 to 3.
5. To set up the display of added channels, follow step 2 to 3 in *2.4.1 Displaying Channels in Single View* and *2.4.2 Displaying Channels in Quad View*.

Note: To add multiple IP devices having different IDs and passwords with GV-IP Decoder Box, see *2.5 Displaying Channels Using GV-IP Device Utility*.

2.5 Displaying Channels Using GV-IP Device Utility

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

This approach is recommended for adding multiple IP devices that have different IDs and passwords with GV-IP Decoder Box.

Before you start, make sure the following:

- All IP devices and GV-Mobile Server must be under same LAN with the GV-IP Decoder Box.
- You have installed the GV-IP Device Utility on a computer under the same LAN.

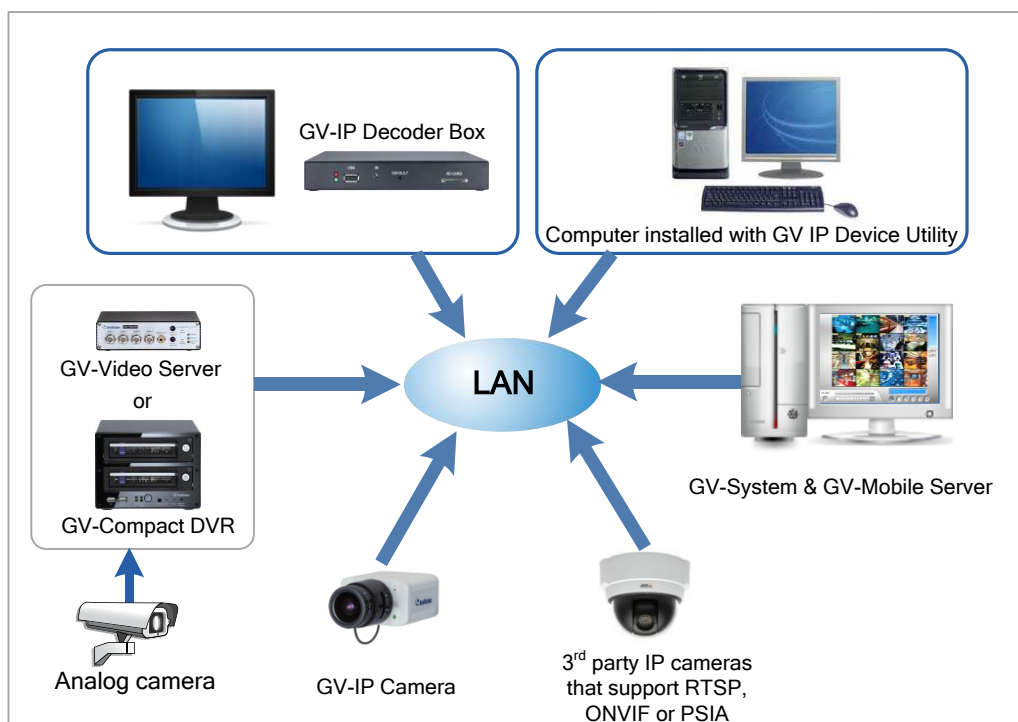


Figure 2-14

Note: For GV-Mobile Server version 1.2 or earlier, you need to modify its Command Port to **39000** (Figure 2-22) for being detected through GV-IP Device Utility.

2.5.1 Adding a GV-IP Device

1. Run the **GV IP Device Utility** from the Software DVD. The GV-IP Device Utility window appears. It automatically searches for all the GV-IP Devices under the same LAN.

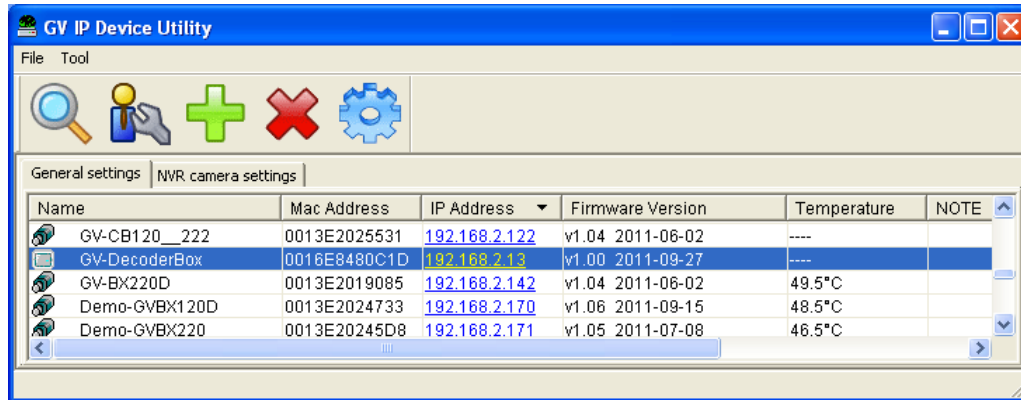


Figure 2-15

2. Double-click the IP address of your GV-IP Decoder Box and select **Connect Setting**. This dialog box appears.

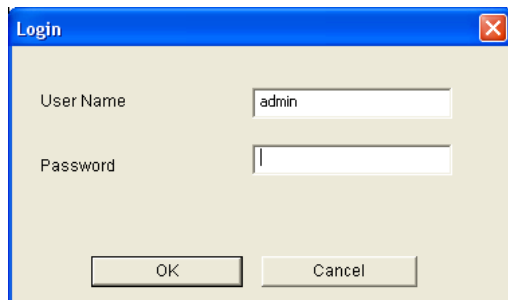


Figure 2-16

3. Type the ID and password of your GV-IP Decoder Box and click **OK**. The default ID and password are **admin**. The Video Connection Setting window appears.

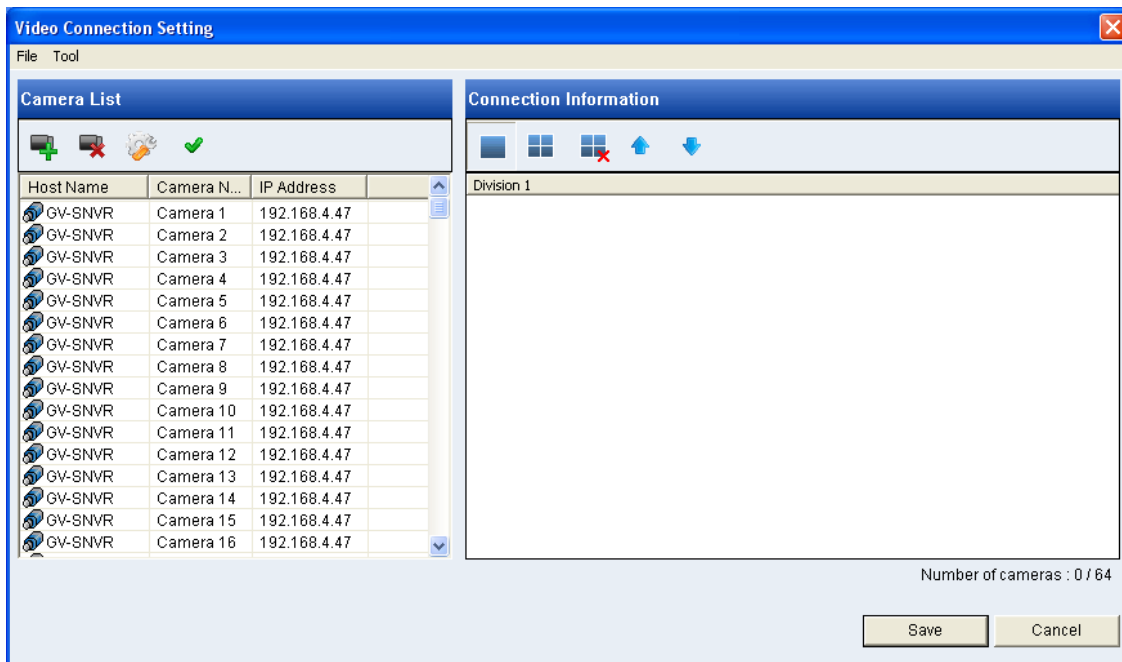







Figure 2-17

4. Use the Camera List toolbar to add, remove or configure a selected camera in the Camera List. Click the **Select All** button to select all the cameras on the list.
5. Select the play mode using the Connection Information toolbar. For single view, click the **1 Division** button . For quad view, click the **4 Division** button .
6. Add channels to the Connection Information column.
 - A. Drag and drop the camera from the Camera List to the Connection Information column.
 - B. Use the **Move Up**  and **Move Down**  buttons to change the display order of these channels.
 - C. To remove a selected camera, click the **Remove**  button.

- D. If you have changed the default ID and password of the added GV-IP Devices and GV-Mobile Server, right-click the channel, select **Edit** and type the username and password to log in for connection. By default, the login ID and password for all GV-IP Devices are **admin**.

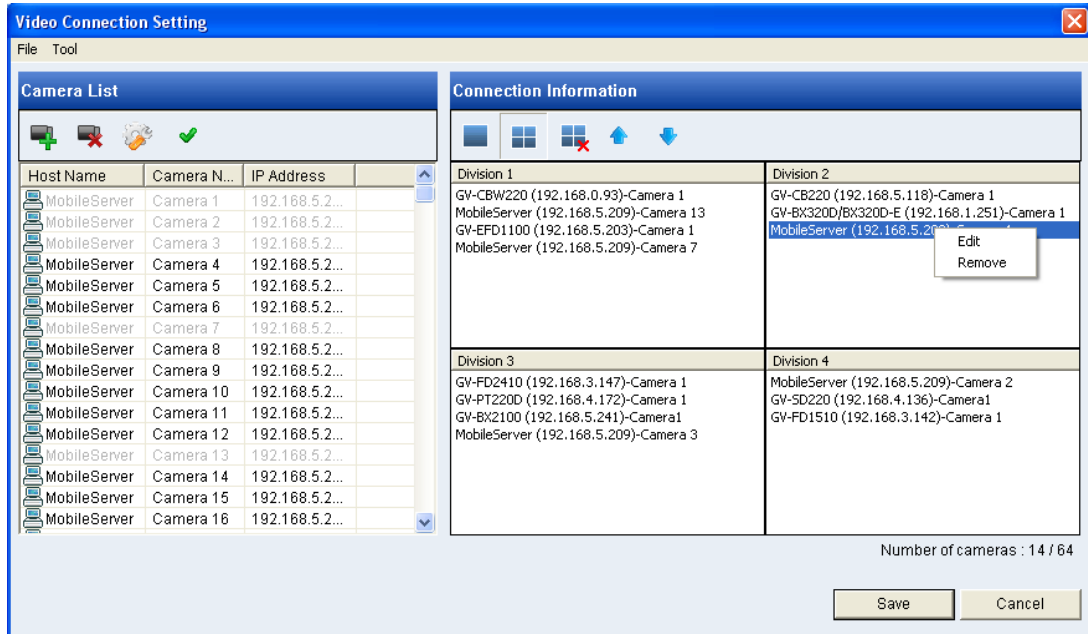



Figure 2-18

7. Click **Save**.

The cameras in the Connection Information column will be updated to the GV-IP Decoder Box and looped at a 30-second interval by default.

2.5.2 Adding a Third-party Device

1. Click the **Add Camera** button  on the Video Connection Setting window (Figure 2-17). This dialog box appears.

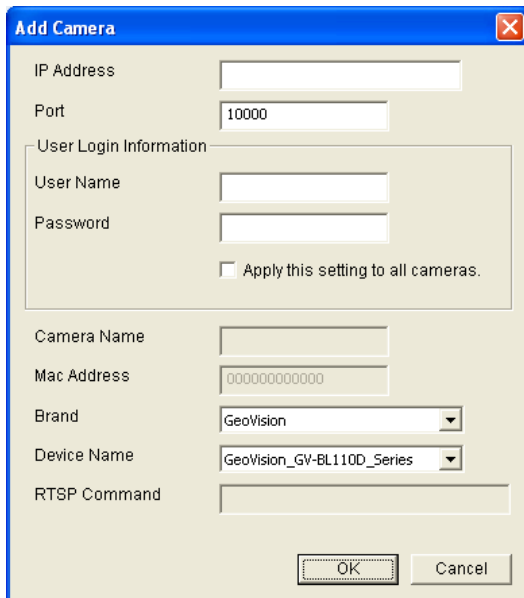


Figure 2-19

2. Type the IP address, user name and password of the device.
3. Select **Protocol** for Brand and one of the following protocols for Device Name. Type the RTSP command if required. Refer to your third-party IP camera's manual for this command.

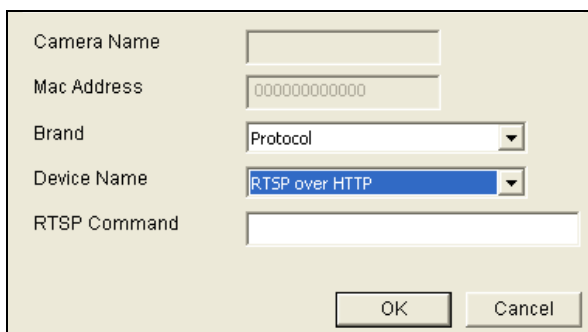


Figure 2-20

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



A screenshot of a web interface showing a configuration field. The field is a horizontal rectangle with a light beige background. On the left side, the word "Port" is written in a small, dark font. To the right of "Port" is a white input box with a thin black border, containing the number "80".

Figure 2-21

5. Click **OK**. The camera is added to the list.
6. Follow steps 5 and 6 in *2.5.1 Adding a GV-IP Device* to set up the play mode and display order for displaying channels. The channels will be displayed according to this order.
7. Click **Save**.

The cameras on the Connection Information column will be updated to the GV-IP Decoder Box and displayed on the monitor with the looping interval of 30 seconds by default.

2.6 Displaying Channels from GV-Mobile Server

The GV-Mobile Server is an application that encodes up to **32** video channels and subsequently allows the GV-IP Decoder Box to decode and display:

- analog cameras and IP cameras connected to GV-System
- IP channels connected to GV-Recording Server / GV-Video Gateway
- third-party IP cameras through ONVIF and PSIA
- 4 matrix views

For details, see *GV-Mobile Server User's Manual* on GV-Mobile Server Software CD.

1. Set up the GV-Mobile Server channels. For details, refer to *Chapter 4 Configuring the Channel* in *GV-Mobile Server User's Manual*.
2. To access GV-Mobile Server channels on GV-IP Decoder Box, follow the steps below.
 - A. Change the GV-Mobile Server's Command Port to **10000** to match the GV-IP Decoder Box's NVR Port.

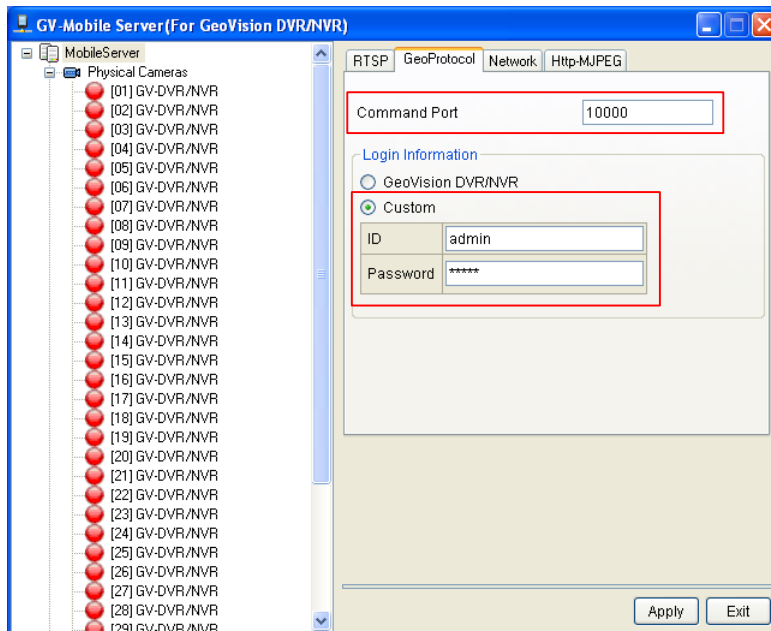



Figure 2-22

- B. By default, GV-Mobile Server has the same ID and password (admin / admin) with GV-IP Decoder Box. If you have changed the **CAM Login ID** and **Password** on the GV-IP Decoder Box (Figure 3-3), select **Custom** and type the new ID and password for GV-Mobile Server.
 - C. On your GV-IP Decoder Box, use the search function  to detect GV-Mobile Server and add the desired channels. For detailed steps, see *2.4 Displaying Channels on the Monitor*.
3. To access GV-Mobile Server channels through GV-IP Device Utility, see *2.5 Displaying Channels Using GV-IP Device Utility*.


Note: For GV-Mobile Server firmware V1.2 or earlier, modify the GV-Mobile Server's Command Port to **39000** (Figure 2-22) if you are accessing GV-Mobile Server channels through GV-IP Device Utility.

2.7 Taking Snapshots

The security administrators can take snapshots as events occur. These snapshots are automatically saved to the selected storage device (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 configured as FAT32 format.

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  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 2-23

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 switch to the previous or the next channel, press the **Page Up / Down** key. To resume to the looped view, press the  key again.



Figure 2-24 Play Mode: Single View

2.9 Controlling PTZ and Speed Dome Cameras

The GV-Joystick can be connected to the GV-IP Decoder Box to control GeoVision PT, PTZ and Speed Dome cameras, and also third-party PTZ and Speed Dome cameras. The supported functions include zoom in, zoom out, tilt (vertical movement), pan (horizontal movement), focus in, focus out and automatic focus. The functions corresponded to each button on GV-Joystick V2 is listed below:

Button	Function
F1	Focus In
F2	Focus Out
F3	Auto Focus
F4	Home
F5 / F6	No functions


Note:

1. For PTZ control, GV-SD200 and third-party cameras must be connected through ONVIF. GV-Joystick cannot control channels connected through GV-Mobile Server, RTSP or PSIA.
 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 2-25

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:

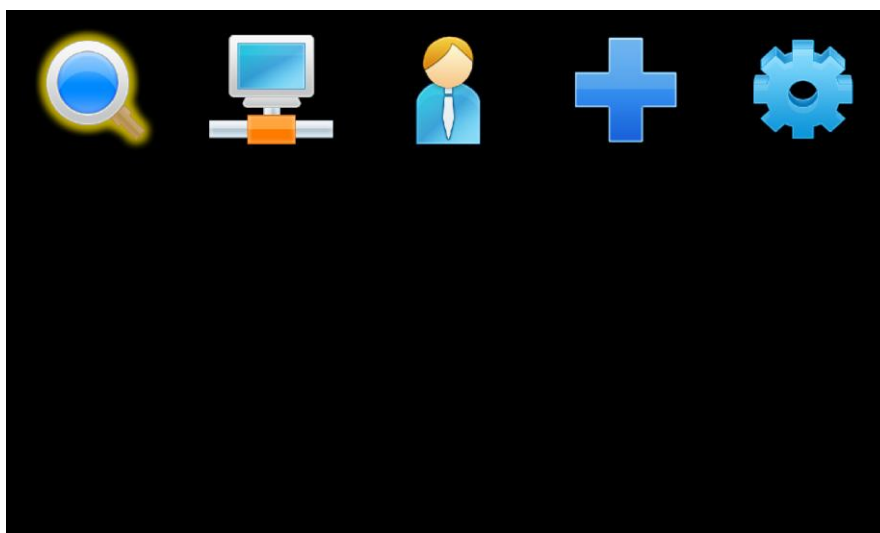








Figure 3-1

Icon	Main Functions
	Searches for GV-IP Devices, GV-Mobile Server channels and the third-party devices that adhere to ONVIF under the same LAN with the GV-IP Decoder Box and generates a Device List. For detail, see <i>3.1 Searching IP Devices</i> .
	Contains network settings of the GV-IP Decoder Box. For detail, see <i>2.3 Setting Up the Network</i> .
	Contains the settings for IP devices to be displayed on GV-IP Decoder Box. For detail, see <i>3.3 Configuring the Play Mode</i> .
	Adds an IP device to the GV-IP Decoder Box Device List and contains sorting options for the Device List. For detail, see <i>2.4 Displaying Channels on the Monitor</i> and <i>3.4 Configuring the Display of Device List</i> .
	Contains settings for account, storage, monitor type, resolution, and firmware upgrade. For detail, see <i>3.5 Configuring the Account, Storage and Output Type</i> .

3.1 Searching IP Devices

You can search the GV-IP Devices, GV-Mobile Server channels and the third-party devices that adhere to ONVIF 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.

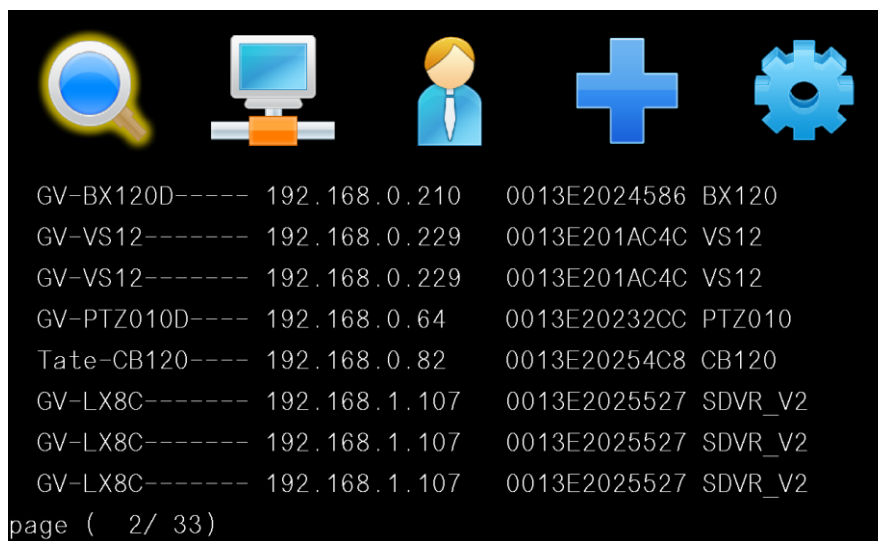



Figure 3-2

3. Use the  and the  keys to view the list.

3.2 Configuring the Network

To configure the network settings for the GV-IP Decoder Box, see 2.3 *Setting Up the Network*.

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.

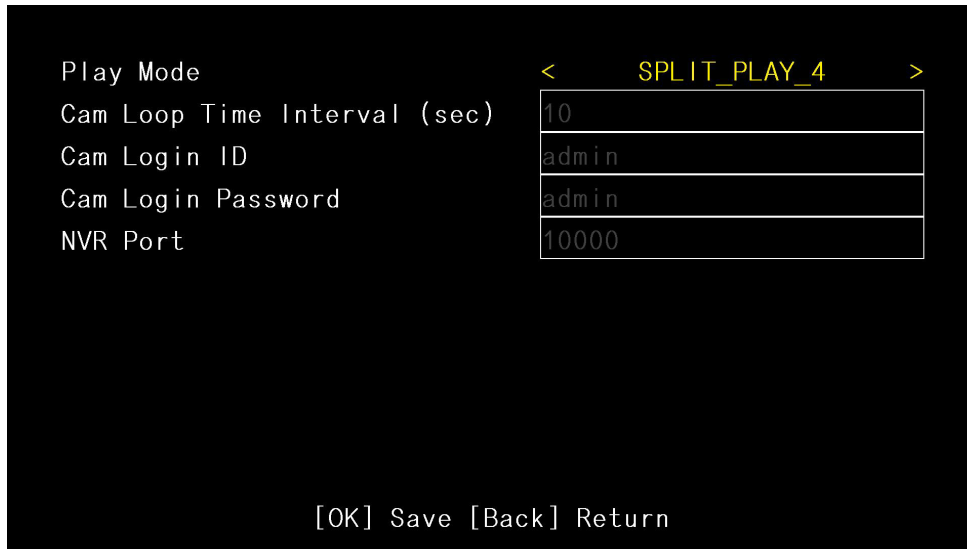



Figure 3-3

- **Play Mode:** For single view, select **LOOP PLAY**; for quad view, select **SPLIT PLAY 4**. By default, the play mode is single view.
- **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 login 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:

1. The channels added directly with GV-IP Decoder Box for display must also have the same ID and password established here.
 2. GV-IP Decoder Box supports a maximum resolution of 1280 x 720 for each channel under quad view, and 5 MP for single view. If the video resolution exceeds the division, stream 2 will be applied for better image quality. If dual streaming is not supported by the device, the error message “Resolution error” will be displayed on the monitor.
-

3.4 Configuring the Display of Device List

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.

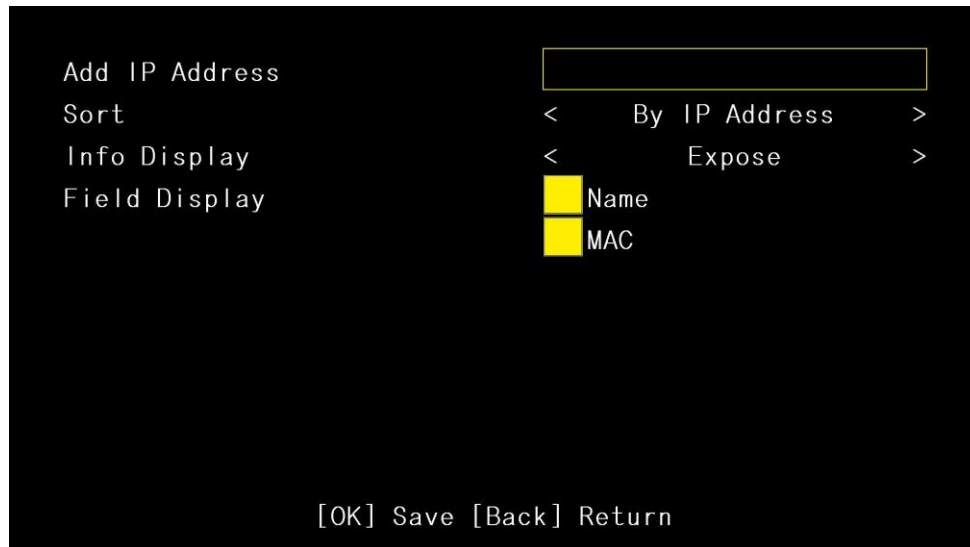



Figure 3-4

- **Add IP Address:** Type the IP address of the GV-IP Device.
- **Sort:** Sort the Device List (Figure 3-2) according to IP address, MAC address, camera name. Note that when **None** is selected, the IP devices will be listed in the order of search. The default is **By IP Address**.
- **Info Display:** Select **Expose** or **Hide** for the information display.
- **Field Display:** To control the channel information displayed on the Device List, select or unselect the device name and/or MAC address displayed on the Device List. The yellow block represents a selected option. 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.

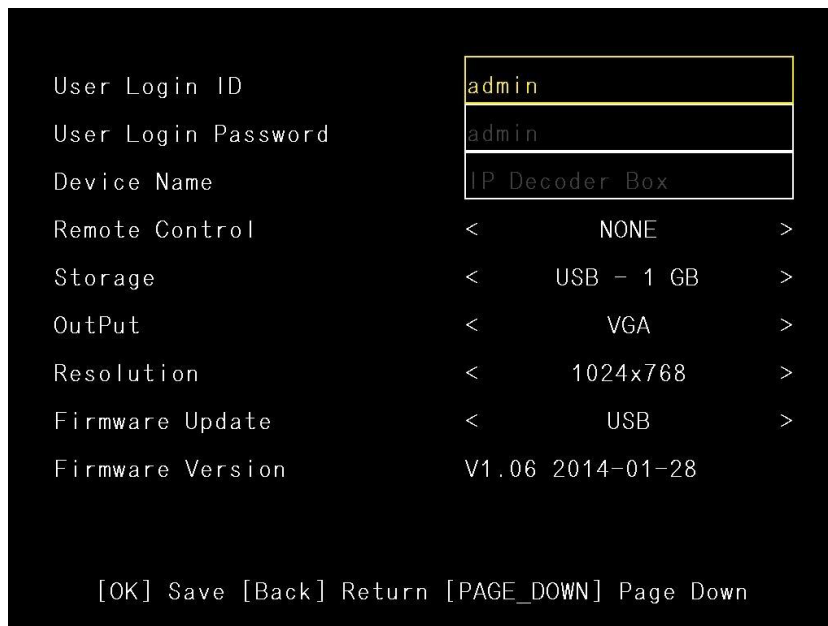


Figure 3-5

Press the **PAGE DOWN** key, this window appears.

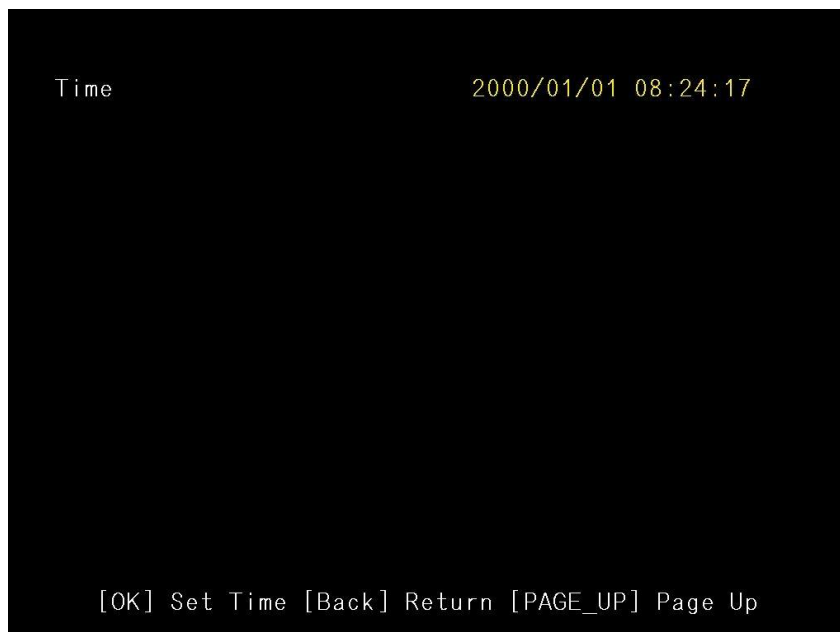


Figure 3-6

- **User Login ID:** Type the ID for logging in GV-IP Decoder Box. The default is **admin**. The maximum number of characters is 14.
- **User Login Password:** Type the password for logging in the GV-IP Decoder Box. The default is **admin**. The maximum number of characters is 14.
- **Device Name:** Name your GV-IP Decoder Box.
- **Remote Control:** Specify a letter (**A** to **D**) to the GV-IP Decoder Box. The GV-IP Decoder Boxes with the same letter will be controlled by a single and same Remote Control. The setting is **NONE** by default, in which every command you make to one GV-IP Decoder Box will be applied to all the nearby GV-IP Decoder Boxes.

To switch between the GV-IP Decoder Boxes, aim the Remote Control at the desired GV-IP Decoder Box and press the specified letter. By default, the green LED indicator is a constant light. When the GV-IP Decoder Box successfully receives the signal, the green LED indicator will start to flash.

- **Storage:** Select the inserted storage device (**USB** or **SD**). This column also displays the residual capacity of the storage device. The default setting is **SD**.
- **Output:** Select the output format between **VGA** and **HDMI**. 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 (**USB** or **SD**). For upgrading steps. See *3.6 Upgrading the Firmware*.
- **Firmware Version:** Displays the firmware version of the GV-IP Decoder Box.
- **Time:** Sets the device date and time. By default, the device time is set to **2000/01/01 00:00:00**. To configure the date and time, press **OK** and use the **ERASE** and numeric keys to revise the settings.

3.6 Upgrading the Firmware


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

Before you start:

- The USB drive or SD card must have at least 100 MB of free space.

3.6.1 Upgrading Firmware through a Storage Device

Before you start:

- Be sure you have inserted a storage device (USB drive or SD card) and it contains one firmware file only.
1. Copy the firmware file to the root folder of a USB drive or an 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.

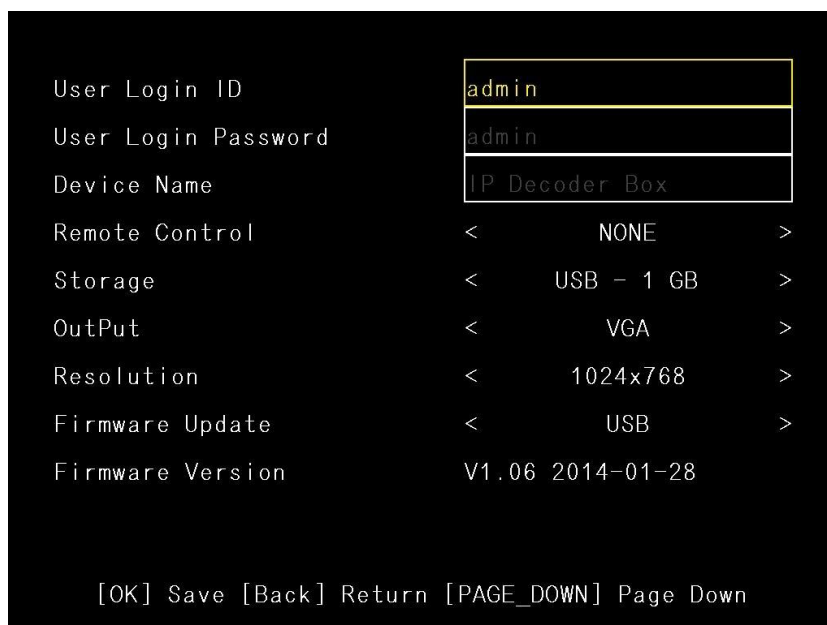


Figure 3-7

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 Upgrading Firmware through GV-IP Device Utility

Before you start:

- Be sure the **Storage** field matches the inserted device type (because the firmware file will be transmitted to the storage device for firmware upgrade). For details, see 3.5 *Configuring the Account, Storage and Output Type*.

1. Run the GV-IP Device Utility and all the GV-IP Devices under the same LAN are searched. This window appears.

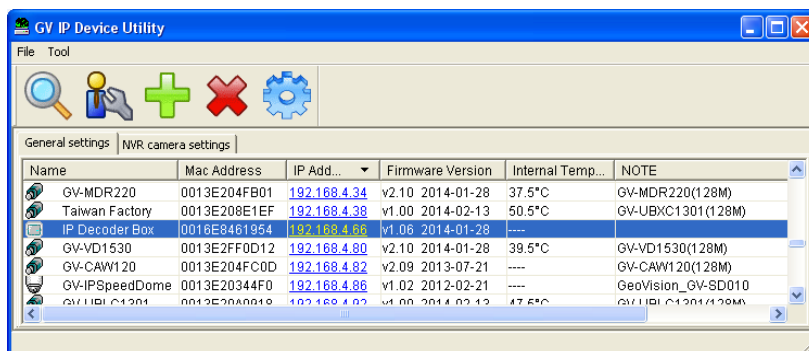


Figure 3-8

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

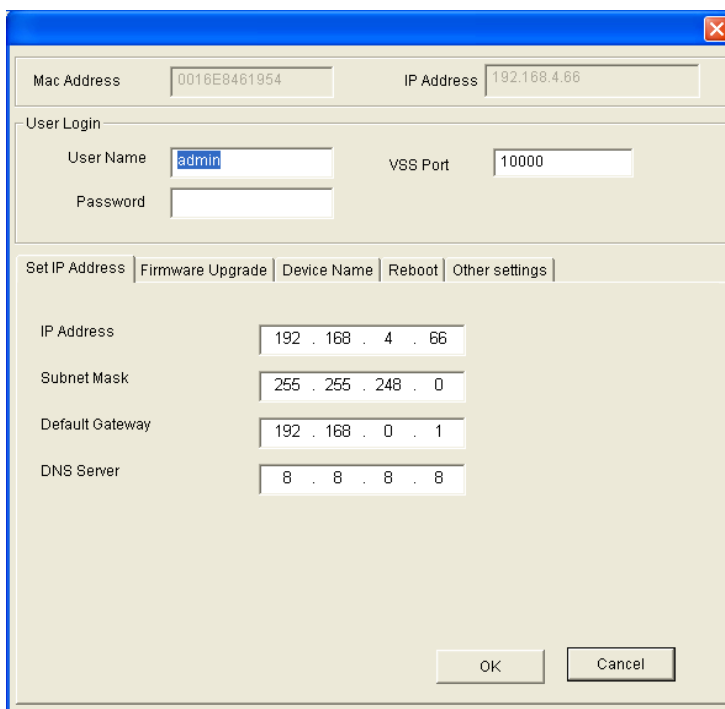


Figure 3-9

3. 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.

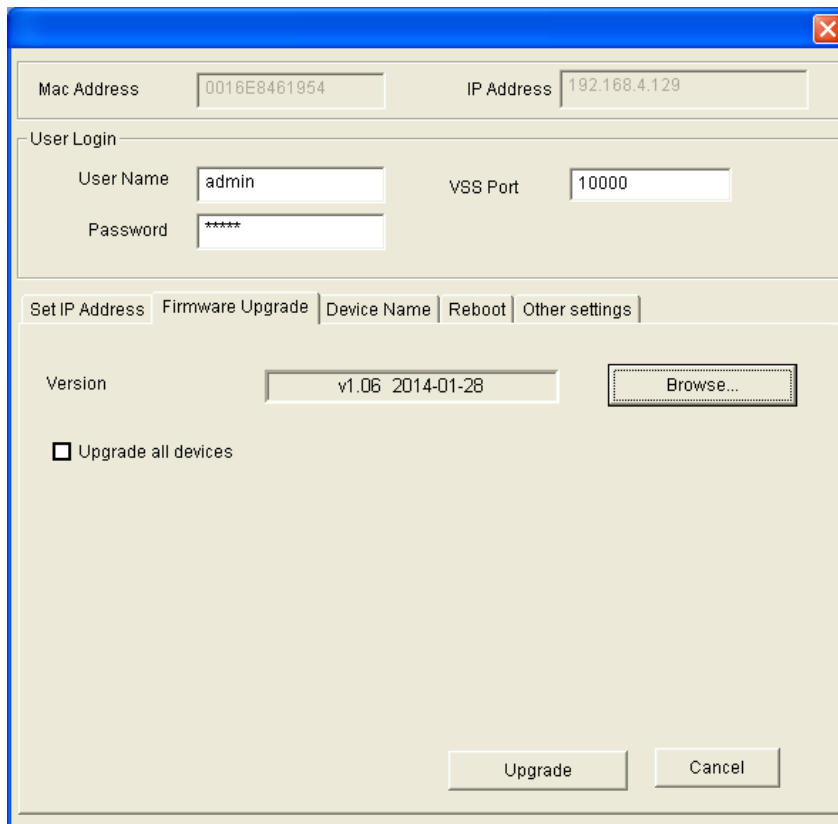


Figure 3-10

4. Click **Upgrade** to start upgrading. The system will restart itself when the upgrade is completed.

Tip: You can select, format and remove a firmware file from the storage using GV-IP Device Utility. Select the **Other Settings** tab and select an option from the drop-down list.

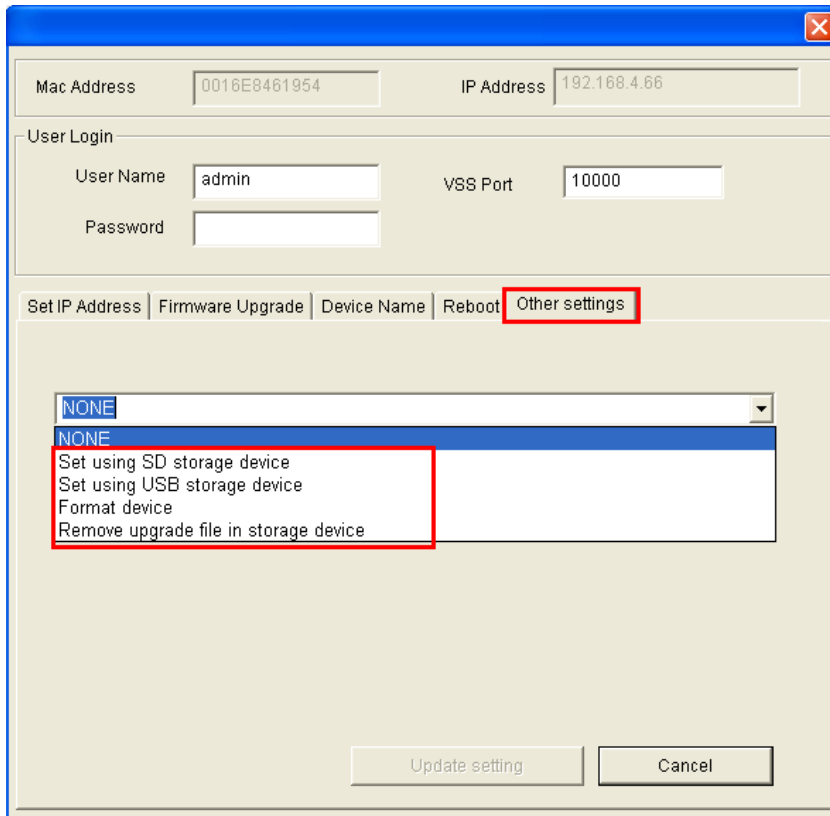


Figure 3-11

Appendix

A. Checking the Monitor Display from a Computer

The GV-IP Decoder Box takes a snapshot of its display (single view or quad view) every 60 seconds. To check the snapshot, type in this address <http://ip-address/tmp/snapshot.jpg> in a Web browser on a computer. For example, type in <http://192.168.4.66/tmp/snapshot.jpg>, a snapshot image appears.

Note: The computer must be under the same LAN with the GV-IP Decoder Box.

Specifications

Video

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

Network

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

Mechanical

IR Remote Control		Yes
Connectors	Power	12V DC Jack
	Ethernet	RJ-45
	Monitor Output	HDMI, VGA
	Local Storage & Firmware Upgrade	USB slot (2.0 backward compatible, FAT32 format) SD/SDHC 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)	182.3 x 28.9 x 131 mm (7.18" x 1.14" x 5.16")
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
Language	English

Note: Specifications are subject to change without notice.

GV-Pad



Chapter 4 Introduction

The GV-Pad is a panel device 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 is self equipped with a display screen and 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. The administrators can monitor channels, take snapshots of critical moments and pause at a specific channel when events occur, all through the supplied remote control. GV-Joystick can be installed to control GeoVision and third-party PT / PTZ / Speed Dome cameras.

The IP devices and GV-Software that can connect with GV-Pad

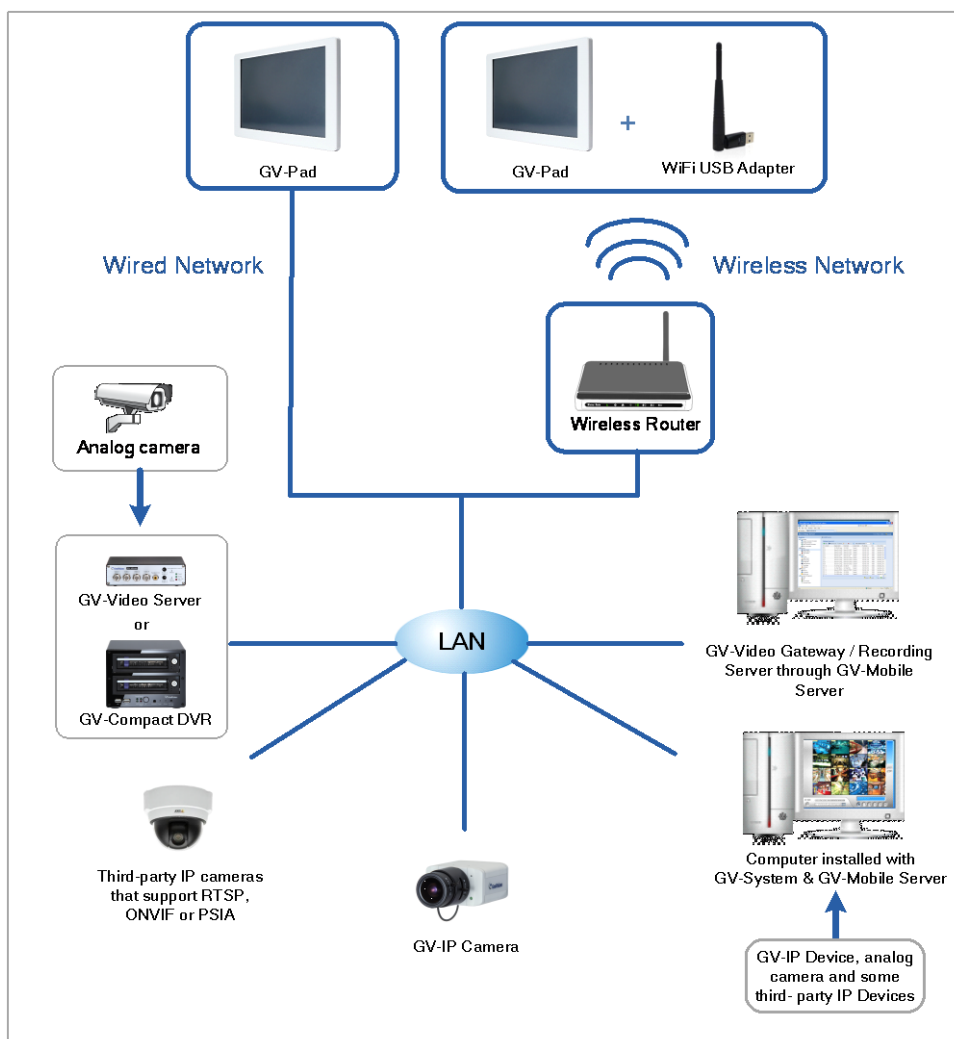


Figure 4-1

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
- Automatically search for ONVIF IP devices
- Support for third-party IP cameras that adhere to RTSP, ONVIF or PSIA
- Single View and Quad View in sequential display
- Display of Matrix view through GV-Mobile Server
- Support for 10/100 Ethernet over LAN
- Support for Wi-Fi
- IR remote control
- GV-Joystick control of PTZ and Speed Dome cameras
- Remote firmware upgrade, IP address configuration and addition of new channel
- 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
2. IR remote control
3. Magnetic hinge
4. Screw x 4
5. AC/DC adapter (12 V, 3 A, 36 W)
6. Power cord
7. Software DVD
8. SD card

4.4 Optional Accessories

Optional Accessories	Detail
<p data-bbox="395 405 564 439">GV-Joystick</p>  <p data-bbox="371 786 587 819">GV-Joystick V2</p> 	<p data-bbox="778 416 1407 544">The GV-Joystick facilitates focusing, zooming, panning, tilting of GeoVision and third-party PT, PTZ and Speed Dome cameras on GV-Pad.</p> <p data-bbox="778 584 956 618">GV-Joystick</p> <ul data-bbox="786 645 1222 790" style="list-style-type: none"> ● GV-Joystick ● USB Type A to Type B Cable ● GV-Joystick User's Manual <p data-bbox="778 875 999 909">GV-Joystick V2</p> <ul data-bbox="786 936 1222 1137" style="list-style-type: none"> ● GV-Joystick V2 ● USB Type A to Type B Cable ● RJ-45 Cable ● Software CD
<p data-bbox="328 1171 632 1205">GV-WiFi USB Adapter</p> 	<p data-bbox="778 1171 1394 1395">The GV-WiFi USB adapter is a plug-and-play device that provides wireless connectivity to GeoVision IP devices. The GV-WiFi USB Adapter complies with IEEE802.11 b/g/n (Draft 3.0) standards for wireless networking.</p>

4.5 Overview

This section identifies the components of the GV-Pad.

4.5.1 Right Panel View

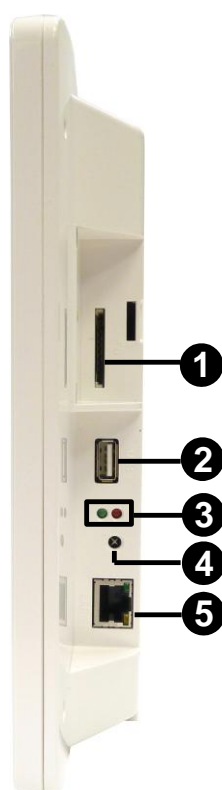


Figure 4-2

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 or a GV-WiFi USB Adapter.
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 4-3

No.	Name	Function
1.	MENU	<ul style="list-style-type: none"> ● Switch to the setup menu. ● Load default: Press for 10 seconds to load default settings.
2	ENTER	<ul style="list-style-type: none"> ● Save settings in the Setup Menu. ● Display selected channels.
3	UP	Move the cursor up.
4	DOWN	Move the cursor down.
5	LEFT	<ul style="list-style-type: none"> ● Move the cursor left. ● Unselect a channel on the Device List.

No.	Name	Function
6	RIGHT	<ul style="list-style-type: none">● 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:

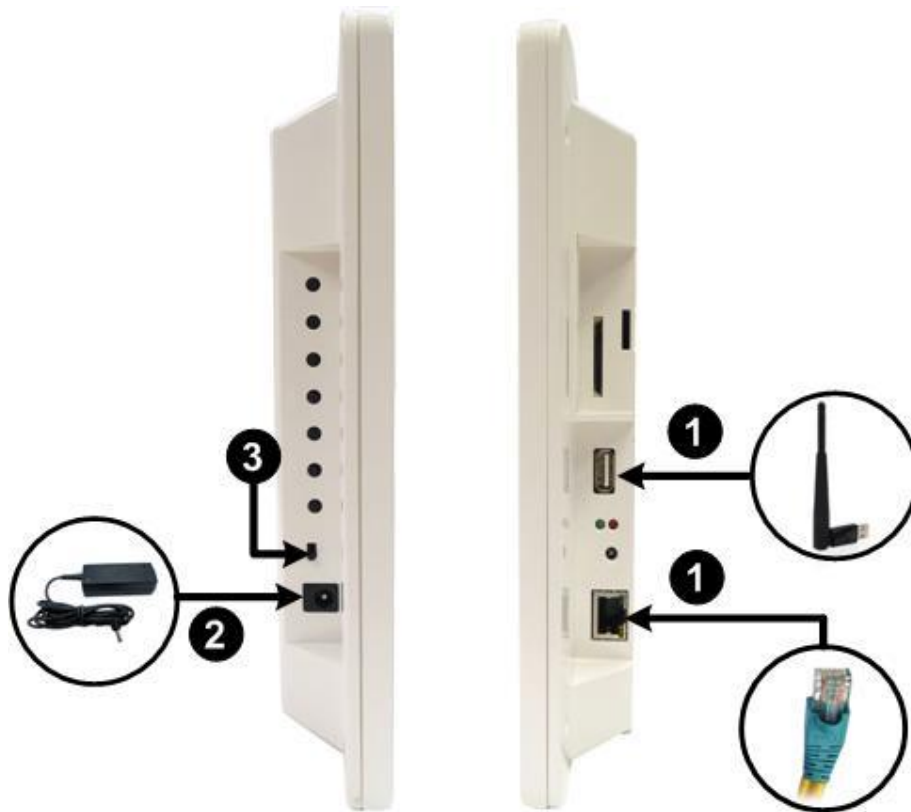


Figure 5-1

1. Connect the device to LAN.
 - A. For wired network, connect to a standard network cable.
 - B. For wireless network, insert a Wi-Fi USB adapter.
2. Connect to power using the supplied power adapter.
3. Turn the Power switch to ON.

5.3 Configuring the Basics

The default IP address, ID and password of GV-Pad are as below:

Default Settings	
IP Address	Randomly assigned by the DHCP server
ID & Password (for accessing GV-Pad through GV-IP Device Utility)	admin / admin
ID & Password (for connecting GV-Pad and GV-IP Devices)	admin / admin

Note: When connecting GV-IP Devices to GV-Pad (see [2.4 Displaying Channels on the Monitor](#)), the GV-IP Devices need to have the same ID and password set on the GV-IP Decoder Box.

5.3.1 Setting Up the Network

Establish a wired or wireless network. For detailed steps, see [2.3 Setting Up the Network](#).

5.3.2 Configuring the ID and Password

To configure the ID and password for logging in the GV-Pad, see [3.5 Configuring the Account, Storage and Output Type](#). To configure the ID and password for GV-IP Device connection, see [3.3 Configuring the Play Mode](#)

5.4 Displaying Channels and Using the GV-Pad

The GV-Pad can display up to 64 video 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 <i>2.4 Displaying Channels on the Monitor</i>
To display channels form Geovision and third-party IP devices	See <i>2.5 Displaying Channels Using GV-IP Device Utility</i>
To display GV-Mobile Server channels	See <i>2.6 Displaying Channels from GV-Mobile Server</i>

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

Functions	Reference
To take snapshots	See <i>2.7 Taking a Snapshot</i>
To pause at a channel	See <i>2.8 Pausing the Looped View</i>
To control GeoVision and third-party PT, PTZ and Speed Dome cameras	See <i>2.9 Controlling PTZ and Speed Dome Cameras</i>

Chapter 6 System Setup

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

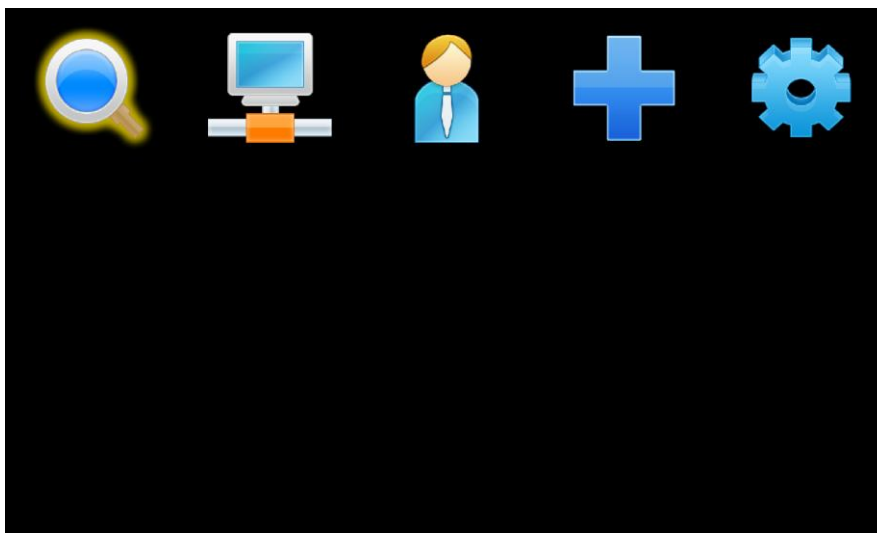







Figure 6-1

Icon	Main Functions
	Searches for GV-IP Devices, GV-Mobile Server channels and the third-party devices that adhere to ONVIF under the same LAN with the GV-Pad and generates a Device List. For detail, see <i>3.1 Searching IP Devices</i> .
	Contains network settings of the GV-Pad. For detail, see <i>2.3.1 Setting Up the Network</i> .
	Contains the settings for IP devices to be displayed on GV-Pad. For detail, see <i>3.3 Configuring the Play Mode</i> .
	Adds a GV-IP Device to the Device List and contains sorting options for the Device List. For detail, see <i>3.4 Configuring the Display of Device List</i> .
	Contains settings for account, storage, monitor type, resolution, and firmware upgrade. For detail, see <i>3.5 Configuring the Account, Storage and Output Type</i> .

Appendix

A. Checking the Monitor Display from a Computer

The GV-Pad takes a snapshot of its display (single view or quad view) every 60 seconds. To check the snapshot, type in this address <http://ip-address/tmp/snapshot.jpg> in a Web browser on a computer. For example, type in <http://192.168.4.66/tmp/snapshot.jpg>, a snapshot image appears.

Note: The computer must be under the same LAN with the GV-Pad.

Specifications

Video

Video Codec	H.264
Resolution	1280 x 800

Network

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

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/SDHC 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 x 220.3 x 38.3 mm (13.5" x 8.7" x 1.5")
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
Language	English

Note: Specifications are subject to change without notice.