

Quick Start Guide

GV-IP Decoder Box Series and Display



- GV-IP Decoder Box Series
- GV-Pad Mini
- GV-IP Display 101 / 116

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



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GeoVision, Inc.
9F, No. 246, Sec. 1, Neihu Rd.,
Neihu District, Taipei, Taiwan
Tel: +886-2-8797-8377
Fax: +886-2-8797-8335
<http://www.geovision.com.tw>

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1. Introduction

Welcome to the *GV-IP Decoder Box Series and Display Quick Start Guide*. In the following sections, you will learn about the basic installations and configurations of GV-IP Decoder Box Series / GV-Pad Mini / GV-IP Display 101. For details, see [GV-IP Decoder Box Series and Display User's Manual](#).

Note: The user interfaces are different by models. Find the relevant settings corresponding to your device. Here we use **GV-IP Decoder Box Ultra** as an example.

1.1 Compatible Devices

GV-IP Decoder Box Optimal / Ultra / GV-IP Display 101 / 116

1. GV-IP Camera and GV-Video Server using H.264 / H.265 codec
2. Third-party IP devices that support H.264 / H.265 and adhere to RTSP or ONVIF
3. GV-Mobile Server

To decode and display **non-H.264 / H.265** IP channels, **analog** channels or **GV-FER12203 / 12700**, connect the devices to GV-DVR / NVR / VMS and access them through GV-Mobile Server.

GV-IP Decoder Box Plus / GV-Pad Mini

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

To decode and display **non-H.264** IP channels or **analog** channels, connect the devices to GV-DVR / NVR / VMS and access them through GV-Mobile Server.

GV-IP Decoder Box Lite

1. GV-IP Camera and GV-Video Server using H.264 codec
2. Third-party IP devices that support H.264 and adhere ONVIF

To decode and display **analog** channels, connect the analog cameras to GV-IP Decoder Box Lite through GV-Video Server.

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

1.2 Packing List

GV-IP Decoder Box Optimal

1. GV-IP Decoder Box Optimal
2. GV-IR Remote Control
3. Download Guide
4. Warranty Card

GV-Pad Mini

1. GV-Pad Mini
 2. AC/DC Adapter (12 V, 3 A, 36 W)
 3. Power Cord
 4. USB Mouse
 5. Download Guide
- Warranty Card

GV-IP Decoder Box Ultra

5. GV-IP Decoder Box Ultra
6. GV-IR Remote Control
7. Download Guide
8. Warranty Card

GV-IP Display 116

1. GV-IP Display 116
2. AC/DC Adapter (12 V, 3 A, 36 W)
3. Power Cord
4. Download Guide
5. Warranty Card

GV-IP Decoder Box Plus

1. GV-IP Decoder Box Plus
2. AC/DC Adapter (12 V, 3 A, 36 W)
3. Power Cord
4. USB Mouse
5. Download Guide
6. Warranty Card

GV-IP Display 101

1. GV-IP Display 101
2. AC/DC Adapter (12 V, 3 A, 36 W)
3. Power Cord
4. Download Guide
5. Warranty Card

GV-IP Decoder Box Lite

1. GV-IP Decoder Box Lite
2. AC/DC Adapter (12 V, 3 A, 36 W)
3. Power Cord
4. USB Mouse
5. Download Guide
6. Warranty Card

1.3 Optional Accessories

Optional devices can expand your device’s capabilities and versatility. Contact your dealer for more information.

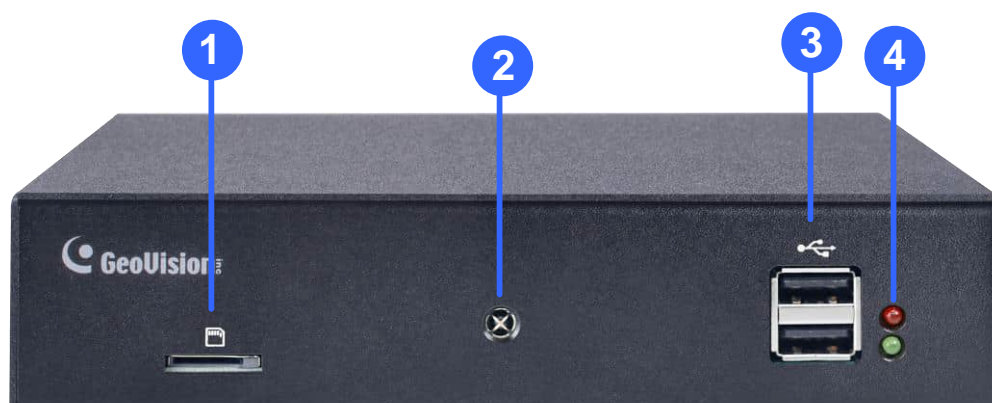
Options	Description
GV-Joystick V2	GV-Joystick V2 facilitates focusing, zooming, panning, tilting of GeoVision and third-party PT, PTZ and Speed Dome cameras on GV-IP Decoder Box Series / GV-Pad Mini / GV-IP Display 101 / 116.
GV-PoE Switch	GV-PoE Switch is designed to provide power along with network connection for IP devices. GV-POE Switch is available in various models with different numbers and types of ports.
HDMI Cable	Only available for GV-IP Decoder Box Ultra. Use the HDMI cable to connect GV-IP Decoder Box Ultra with a HDMI monitor for high-quality display of images. Length: 150 cm (4.92 ft) Version: 1.4a
Power Adapter	For GV-IP Decoder Box Ultra, contact our sales representatives for the countries and areas supported.
Wall Mount Kit	The kit is used to mount the GV-IP Decoder Box Series to the wall.

2. Overview

2.1 GV-IP Decoder Box Series

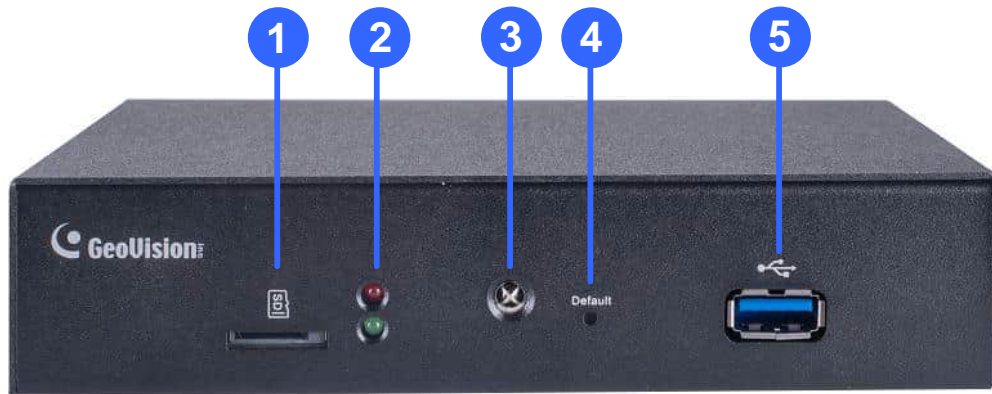
2.1.1 Front View

GV-IP Decoder Box Optimal



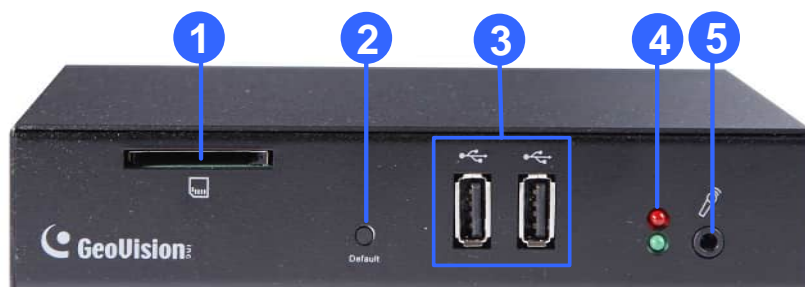
No.	Name	Function
1	Micro SD Card Slot	Connect to a micro SD card for local storage of snapshots and firmware upgrade.
2	IR sensor	Receive signal from GV-IR Remote Control for controlling the user interface at the maximum operation distance of 7 m (22.97 ft).
3	USB 2.0	Connect to a GV-Joystick V2, USB mouse, or USB storage device
4	LED Indicators	The red LED indicates the power is supplied. The green LED indicates the system is ready for use.

GV-IP Decoder Box Ultra

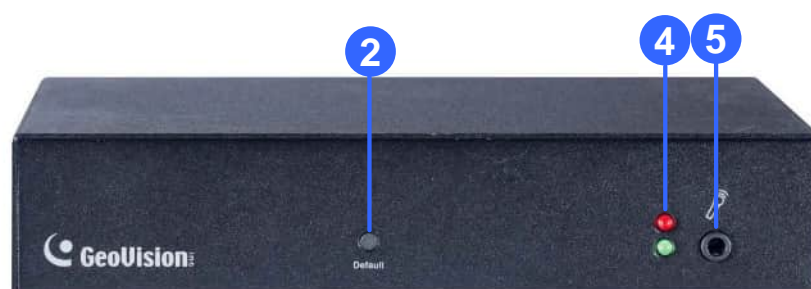


No.	Name	Function
1	Micro SD Card Slot	Connect to a micro SD card for local storage of snapshots and firmware upgrade.
2	LED Indicators	The red LED indicates the power is supplied. The green LED indicates the system is ready for use.
3	IR sensor	Receive signal from GV-IR Remote Control for controlling the user interface at the maximum operation distance of 7 m (22.97 ft).
4	Default	Reset the device to the default factory settings. Use a pin to press the default button for about 10 seconds. The system will then reset and reboot itself shortly. See 5.2 <i>Restoring Default Settings</i> in <i>GV-IP Decoder Box Series and Display User's Manual</i> .
5	USB 3.0	Connect to a GV-Joystick V2, USB mouse, or USB storage device.

GV-IP Decoder Box Plus



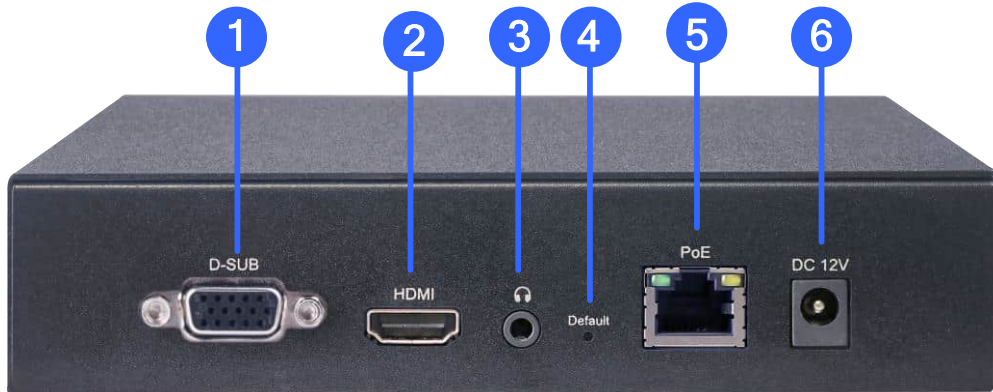
GV-IP Decoder Box Lite



No.	Name	Function
1	SD Card Slot	Connect to an SD card for local storage of snapshot and firmware upgrade. Only supported by GV-IP Decoder Box Plus.
2	Default	Reset the device to the default factory settings. Use a pin to press the default button for about 10 seconds. The system will then reset and reboot itself shortly.
3	USB	Connect to a GV-Joystick V2, USB mouse, or USB storage device. Only supported by GV-IP Decoder Box Plus,
4	LED Indicators	The red LED indicates the power is supplied. The green LED indicates the system is ready for use.
5	Audio In	Not functional.

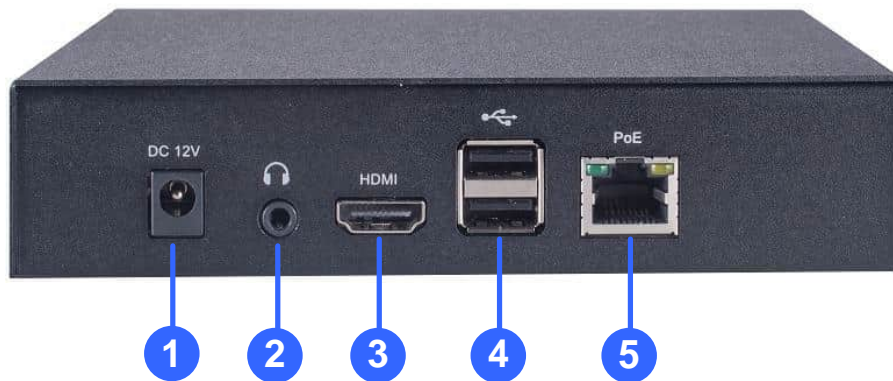
2.1.2 Rear View

GV-IP Decoder Box Optimal



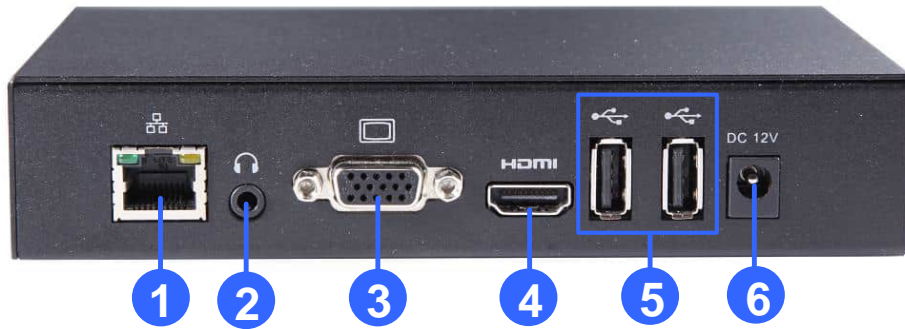
No.	Name	Function
1	VGA	Connect to a VGA monitor.
2	HDMI	Connect to an HDMI-compliant display device.
3	Audio Out	Connect to a speaker.
4	Default	Reset the device to the default factory settings. Use a pin to press the default button for about 10 seconds. The system will then reset and reboot itself shortly. See <i>5.2 Restoring Default Settings in GV-IP Decoder Box Series and Display User's Manual</i> .
5	Network / PoE	Connect to the network or a PoE adaptor.
6	DC 12V	Connect to power by using the supplied power adapter.

GV-IP Decoder Box Ultra



No.	Name	Function
1	DC 12V	Connect to power by using the supplied power adapter.
2	Audio Out	Connect to a speaker.
3	HDMI	Connect to an HDMI-compliant display device.
4	USB 2.0	Connect to a GV-Joystick V2, USB mouse, or USB storage device.
5	Network / PoE	Connect to the network or a PoE adaptor.

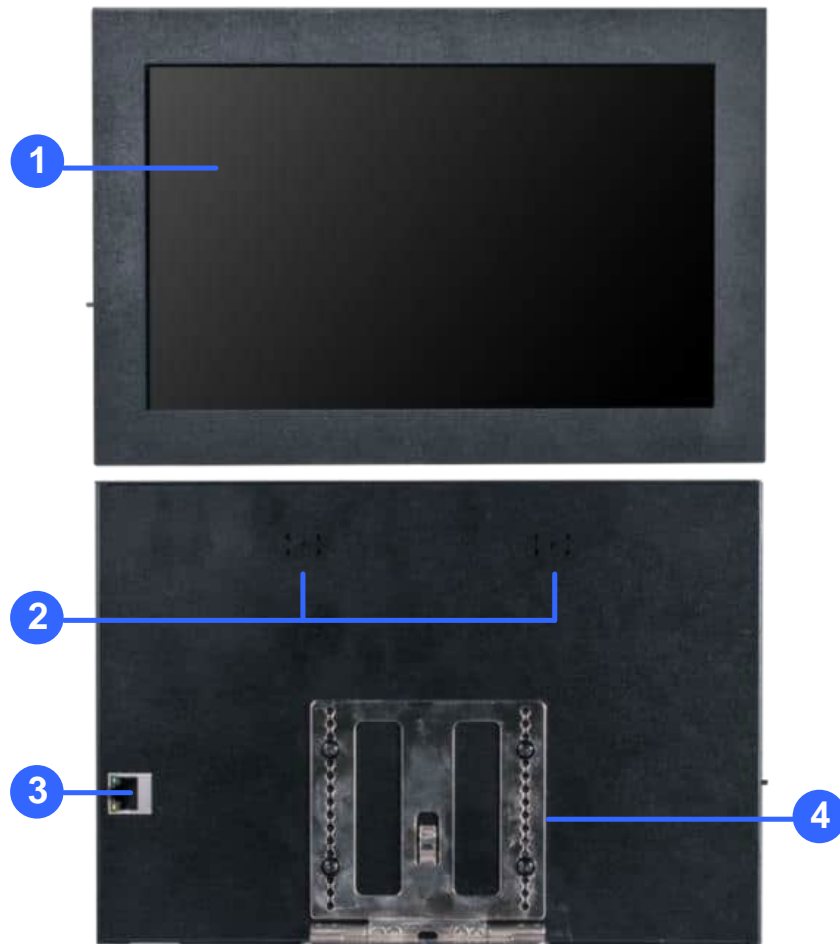
GV-IP Decoder Box Plus / Lite



No.	Name	Function
1	Network	Connect to the network.
2	Audio Out	Connects to a speaker.
3	VGA	Connect to a VGA monitor.
4	HDMI	Connect to an HDMI-compliant display device.
5	USB	Connect to a GV-Joystick V2, USB mouse, or USB storage device.
6	DC 12V	Connect to power by using the supplied power adapter.

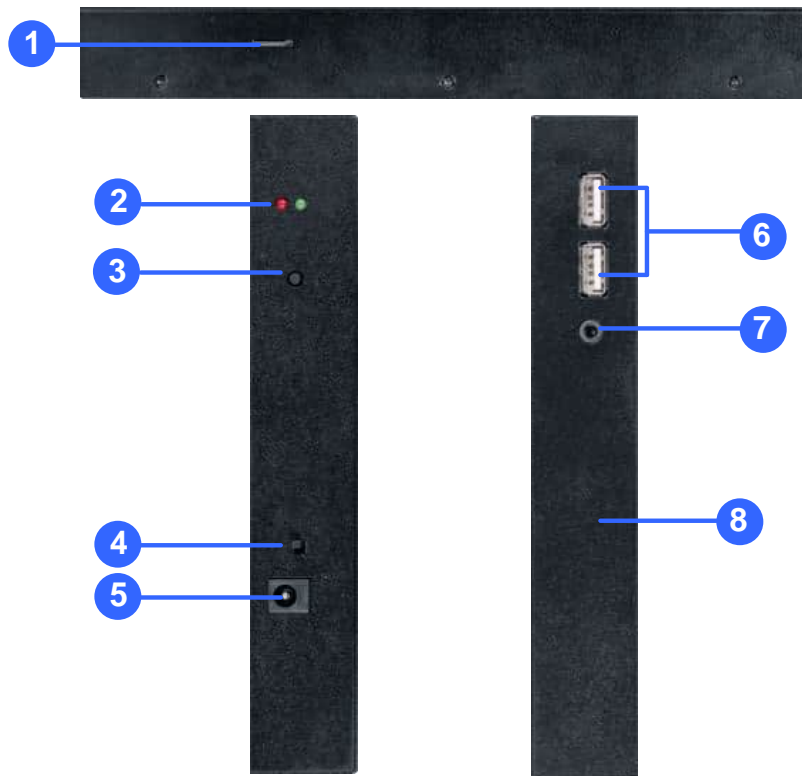
2.2 GV-Pad Mini / GV-IP Display 101 / 116

2.2.1 Front and Rear Views



No.	Name	Function
1	LCD screen	Display the system settings of the device.
2	Speaker	Listen to the audio around the connected IP device.
3	Ethernet Port	Connect to network.
4	Stand	Position the GV-Pad Mini / GV-IP Display 101 / 116. to your preference.

2.2.2 Top, Left-Side and Right-Side Views



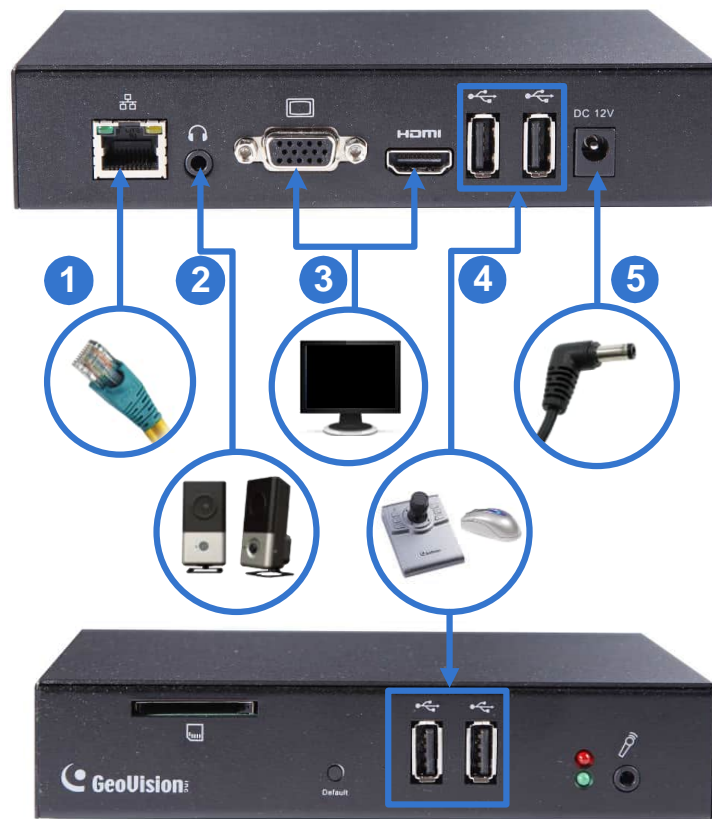
No.	Name	Function
1	Micro SD Card Slot	Connect to a micro SD card for local storage of content and firmware upgrade.
2	LED Indicators	The red LED indicates the power is supplied. The green LED indicates the system is ready.
3	Stand By	Press to enter the Standby/Sleep mode. In the standby mode, the screen turns off to minimize power consumption. Press the key again to enter the ON mode.
4	Power Off/On	Switch the power on or off.
5	DC 12V	Connect to power using the supplied power adapter.

No.	Name	Function
6	USB	Connect to a GV-Joystick V2, USB mouse, or USB storage device for local storage of content and firmware upgrade.
7	Line Out Port	Connect to a headphone or speaker.
8	Default	Reset the device to the default settings. Use a pin to press the default button for about 5 to 10 seconds. The system will then reset and reboot itself shortly. See <i>5.2 Restoring Default Settings in GV-IP Decoder Box Series and Display User's Manual</i> .

3. Connection

3.1 GV-IP Decoder Box Series

Follow the steps below to connect the GV-IP Decoder Box Series. Here we use **GV-IP Decoder Box Plus** as an example.



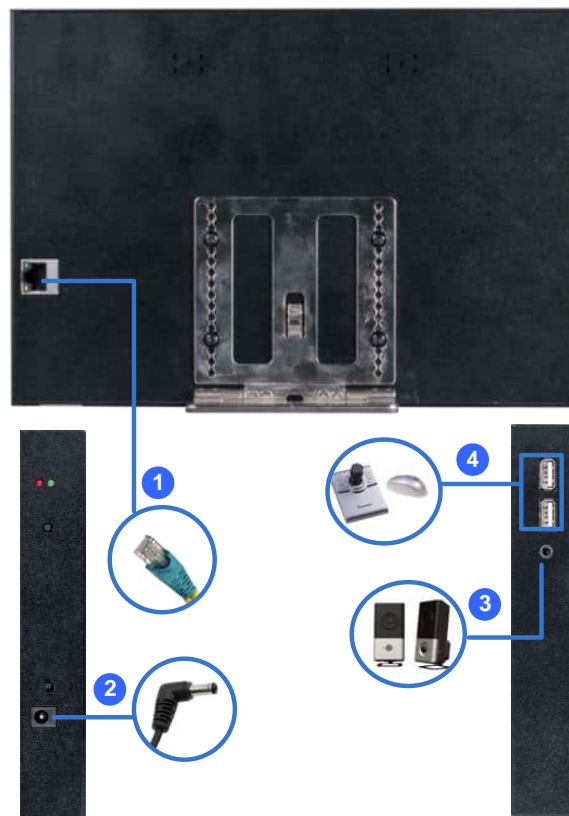
1. Connect the device to the LAN port using an RJ-45 cable.
2. Connect a speaker to the audio line out port if needed.
3. Connect a display device to VGA or HDMI connector for video output.
4. Connect a mouse and / or GV-Joystick V2 to the USB ports.
5. Connect to power using the supplied power adapter.

Note:

1. You can only connect the GV-IP Decoder Box Ultra / Plus / Lite to one display device through either the HDMI or VGA connector at a time. Dual monitor display is only available for GV-IP Decoder Box Optimal.
2. The default video output resolution is set to 1080P for GV-IP Decoder Box Optimal and HD 720P for GV-IP Decoder Box Ultra / Plus / Lite. If you use a VGA monitor, be sure to change the output resolution to VGA 1920 x 1080. If you want to configure your GV-IP Decoder Box Optimal / Ultra to 4K resolution, make sure your monitor is 4K-capable and change the resolution to 3840 x 2160. To change the output resolution, see *4.1 System in GV-IP Decoder Box Series and Display User's Manual*.

3.2 GV-Pad Mini / GV-IP Display 101 / 116

Follow the steps below to connect GV-Pad Mini / GV-IP Display 101 / 116.



1. Connect the device to the LAN port using an Ethernet cable.
2. Connect to power using the supplied power adapter.

3. Connect a speaker / headphone to the line out port if needed.
4. Connect a mouse and / or GV-Joystick V2 to the USB ports.

3.3 The Main Screen



After you have connected the necessary wires and cables, GV-IP Decoder Box Series / GV-Pad Mini / GV-IP Display 101 / 116 will power on and the main screen will display on the monitor.

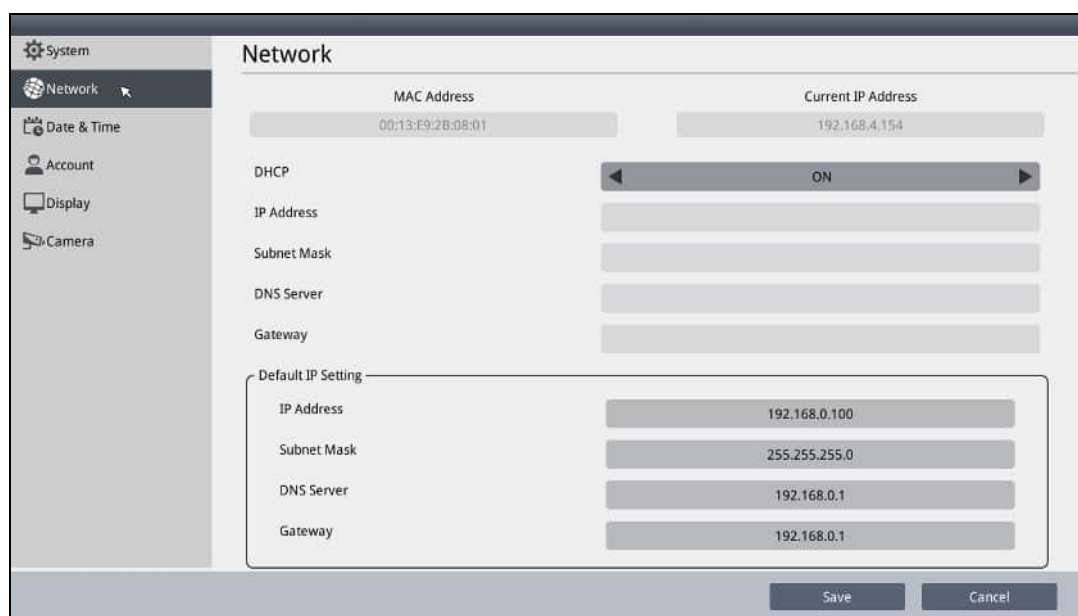


4. Setting up the Network

By default, GV-IP Decoder Box Series / GV-Pad Mini / GV-IP Display 101 / 116 will be automatically assigned an IP address by the DHCP server without requiring additional settings. To change the IP address to a fixed one, follow the steps below.

Note: By default, if GV-IP Decoder Box Series / GV-Pad Mini / GV-IP Display 101 / 116 is connected to LAN without the DHCP server, it will be assigned a static IP address: 192.168.0.100.

1. Click the **System Settings** icon  or  at the bottom of the main screen, and select **Network**. This window appears.







2. To configure the static IP address,
 - For GV-IP Decoder Box Optimal / Ultra / GV-IP Display 101 / 116, switch the DHCP option to **OFF**.
 - For GV-IP Decoder Box Plus / Lite / GV-Pad Mini, select **Static IP Address**.
3. Double-click the fields to fill out the **IP Address**, **Subnet Mask**, **DNS Server**, and **Default Gateway**.
4. Click **Save**. When the device is connected to the network, the IP address will be shown in the Connected IP Address field.

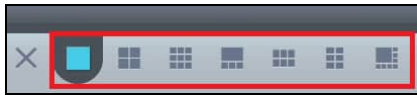
5. Adding IP Devices to Live View Grid

Before you start, make sure all IP devices or GV-Mobile Server are under the same LAN with GV-IP Decoder Box Series / GV-Pad Mini / GV-IP Display 101 / 116.

5.1 Adding IP Devices through Automatic Search

1. Click the **Camera Search** icon  /  on the main page.
2. Search for GV-IP Devices, GV-Mobile Server, or the third-party devices that adhere to ONVIF under the same LAN by clicking the **Search Camera** icon  / .
3. Select a live view layout.

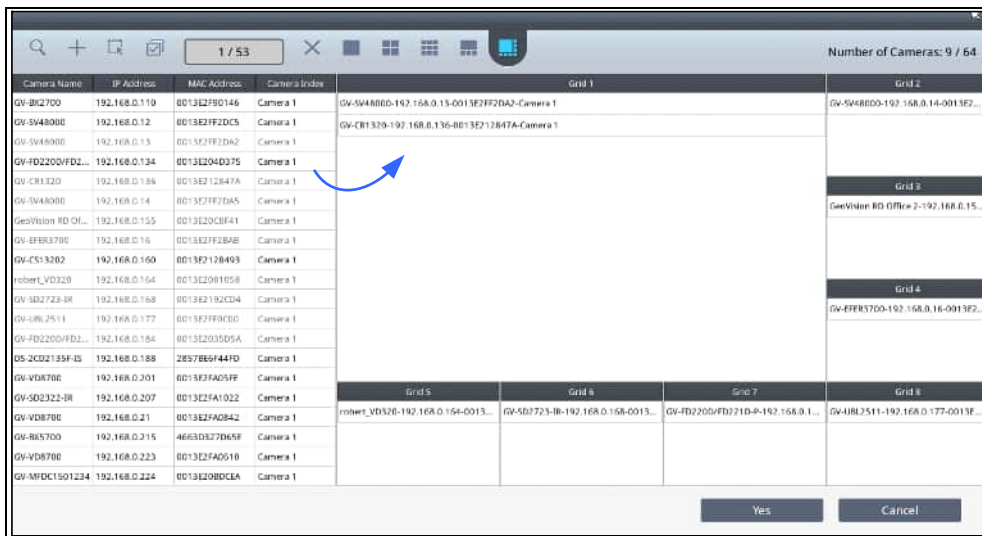
For GV-IP Decoder Box Optimal / Ultra / GV-IP Display 101 / 116:





For GV-IP Decoder Box Plus / Lite / GV-Pad Mini:



4. Drag and drop an IP device from the camera list to the grid. To select multiple cameras at a time, click **Select Multiple Cameras** at the top and select more than one camera from the camera list.



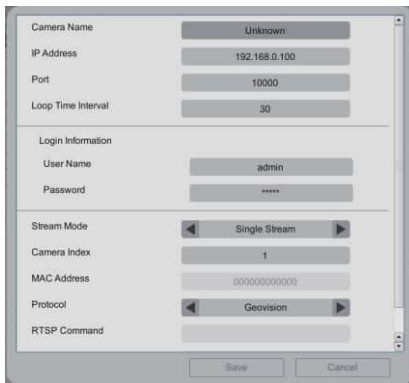
5. To change the device settings, hold for right-clicking on a desired device in the grid and select **Edit** to modify the following settings:
 - **Custom Name:** Type a customized name for the IP device.
 - **Port:** Change the port number if needed.
 - **Loop Time Interval:** Specify a time interval, ranging from 10 ~ 600 seconds, for the device to display before switching to the next one. The default value is 30 seconds.
 - **Login Information:** Change the login user name and password of the device if necessary.
 - **Stream Mode:** Only for GV-IP Decoder Box Optimal / Ultra / GV-IP Display 116, select one of the following modes.
 - ⊙ **Single Stream:** Select this option for the highest image quality.
 - ⊙ **Single Stream (Save bandwidth):** Select this option for the lowest bandwidth.
 - ⊙ **Dual Stream:** Select this option to automatically optimize the image quality when displaying multiple channels.
6. To adjust the display order of the cameras, hold for right-clicking on a camera and click **Move Up** or **Move Down**.
7. To remove a camera, hold for right-clicking on a camera and click the **Delete** button.
8. To delete all the added devices at once, click the **Delete All** button  / .
9. Click **Yes** or **Save** to apply the settings.

The selected channels will be displayed on the monitor and be looped at an interval of 30 seconds by default. To change the looping interval, hold for right-clicking on a camera and click **Edit**.

5.2 Adding IP Devices Manually

If you are unable to detect the IP device using the search function, you can add the device manually.

1. Click the **Camera Search** icon  /  at the bottom of the main page.
2. Click the **Add Camera** icon  / . This dialog box appears.



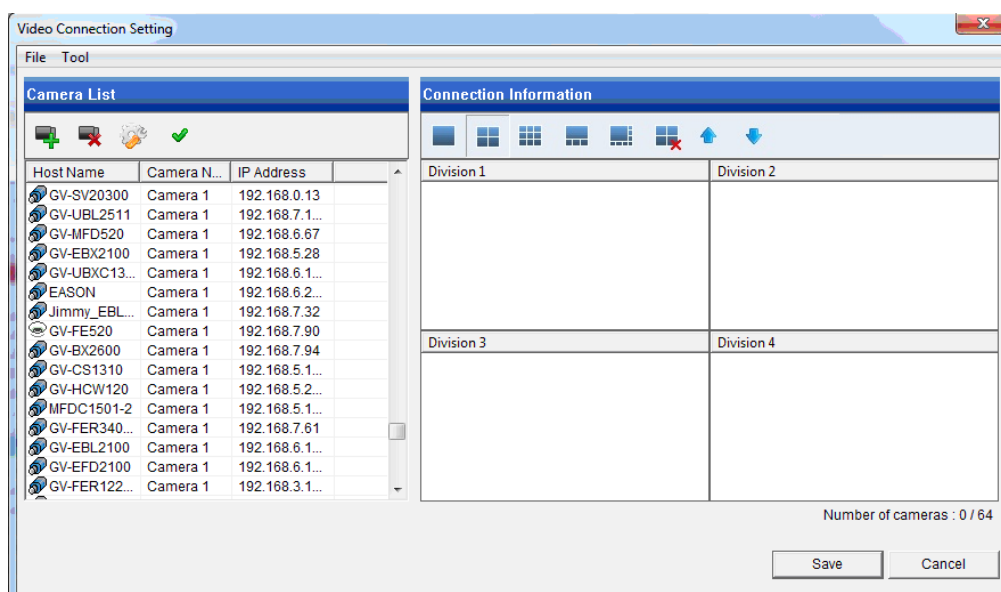
3. Fill out the following camera information. Double-click the fields to type.
 - **Custom Name:** Type a personalized name for the device.
 - **IP Address:** Type the IP address of the device.
 - **Port:** Change the port number if needed. The default port is 10000.
 - **Loop Time Interval:** Specify a time interval, ranging from 10 ~ 600 seconds, for the device to display before switching to the next one. The default time interval is 30 seconds.
 - **Login Information:** Type the ID and password of the IP device if needed. The default ID and Passwords are **admin**.
 - **Stream Mode:** Only for GV-IP Decoder Box Ultra / Optimal / GV-IP Display 116, select one of the following modes.
 - Ⓐ **Single Stream:** Select this option for the highest image quality.
 - Ⓑ **Single Stream (Save bandwidth):** Select this option for the lowest bandwidth.
 - Ⓒ **Dual Stream:** Select this option to automatically optimize the image quality when displaying multiple channels.
 - **Camera Index:** Number the IP device for searching convenience.
 - **Protocol:** For GV-IP Devices, select **Geovision** as the protocol. For third-party devices, select **ONVIF** or one of the **RTSP** protocols.
 - **RTSP Command:** Type the RTSP link if you are connecting to the device through RTSP protocols.
4. Click **Save**. The IP device is now added to the camera list.

6. Adding Devices Using GV-IP Device Utility




You can utilize the GV-IP Device Utility to add channels.

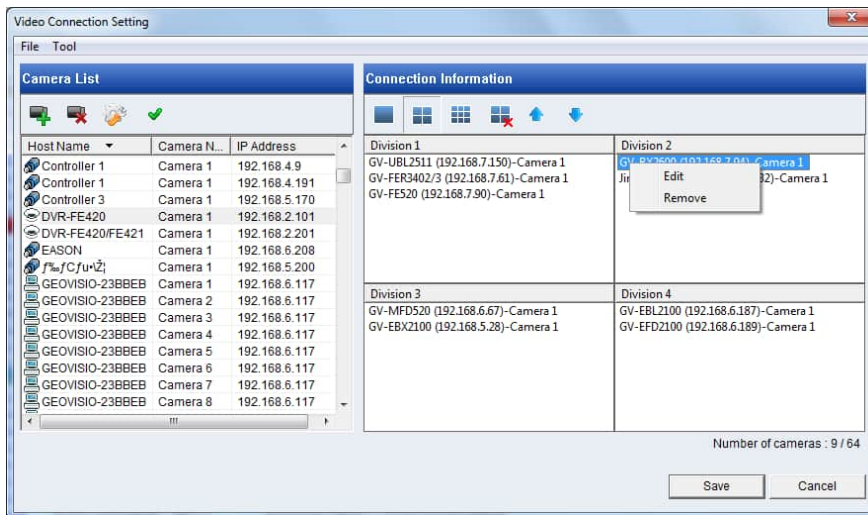
Before you start, make sure that IP devices / software must be under the same LAN as the GV-IP Decoder Box Series / GV-Pad Mini / GV-IP Display 101 / 116.

1. Run **GV-IP Device Utility** downloaded [GeoVision's website](#). Once started, the utility will automatically search for all GV devices under the same LAN.
2. Click on the IP address of GV-IP Decoder Box Series / GV-Pad Mini / GV-IP Display 101 / 116, and select **Connect Setting**. A login window appears.
3. Type the username and password of the device, and click **OK**. This window appears. By default, the username and password both are **admin**.



4. Use the Camera List toolbar to add, remove, or configure a camera in the Camera List.
5. Under Connection Information, select a live view layout.

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**.



Note: Only for GV-IP Decoder Box Optimal / Ultra, you are also allowed to configure the stream mode and loop time interval for a specific or all IP devices connected on the **Edit** page.

7. Click **Save**.

The cameras in the Connection Information column will be updated to the GV-IP Decoder Box Series / GV-Pad Mini / GV-IP Display 101 / 116 and looped at a 30-second interval by default.

Note: Fisheye dewarping is only supported by GV-IP Decoder Box Plus. To dewarp the fisheye view, you will need to choose 1-division layout or assign the camera to Grid 1 of the 4-division view.

For details on adding a third-party device that adhere to ONVIF or RTSP, see 2.7.2 *Adding a Third-party Device* in *GV-IP Decoder Box Series and Display User's Manual*.

7. Accessing Live View

After adding and assigning IP devices to live view grid, the camera live views are displayed in the main screen.



Note the following live view specifications

- The resolution of the added device must be lower than the maximum resolution listed below for each screen division. When the device resolution exceeds the maximum resolution supported, GV-IP Decoder Box Series / GV-Pad Mini / GV-IP Display 101 / 116 will connect to stream 2 of the device instead. If stream 2 is unavailable, the message “Resolution Error” appears on the screen.
- For a smooth operation for the GV-IP Decoder Box Series, the bitrate of each channel should be below 6 Mbps.
- Fisheye dewarping is only supported by GV-IP Decoder Box Plus in Single View and Grid 1 of Quad View.

For details on the live view controls, see *3.1 Live View* in *GV-IP Decoder Box Series and Display User’s Manual*.

GV-IP Decoder Box Optimal / Ultra			
Screen Division	Maximum Resolution	Fisheye Dewarping	
1-Division (Single View)	3840 x 2160	Not supported	
4-Division (Quad View)	Grid 1		2560 x 1920
	Other 3 Grids		1920 x 1080
6-Division	1280 x 720		
8-Division	1280 x 720		
9-Division	1280 x 720		

GV-IP Decoder Box Plus		
Screen Division	Maximum Resolution	Fisheye Dewarping
1-Division (Single View)	2048 x 1944	Supported
4-Division (Quad View)	Grid 1	2048 x 1944
	Other 3 Grids	1920 x 1080
9-Division	1280 x 720	Not supported

GV-IP Decoder Box Lite		
Screen Division	Maximum Resolution	Fisheye Dewarping
1-Division (Single View)	1920 x 1080	Not supported
4-Division (Quad View)		

GV-Pad Mini			
Screen Division	Maximum Resolution	Fisheye Dewarping	
1-Division (Single View)	2048 x 1944	Not supported	
4-Division (Quad View)	Grid 1		2048 x 1944
	Other 3 Grids		1920 x 1080
9-Division	1280 x 720		


GV-IP Display 101 / 116			
Screen Division	Maximum Resolution	Fisheye Dewarping	
1-Division (Single View)	3840 x 2160	Not supported	
4-Division (Quad View)	Grid 1		2560 x 1920
	Other 3 Grids		1920 x 1080
6-Division	1280 x 720		
8-Division	1280 x 720		
9-Division	1280 x 720		



7.1 Capturing Snapshots

You can take snapshots of the live view and the snapshots will be 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 (or as NTFS format for GV-IP Decoder Box Ultra).
- You have assigned a storage device in the System Setting page (see below)

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

1. On the main menu, click the **System Setting** icon  or  and select **System** on the left.
2. Under **Storage Device**, select a storage device to store the captured screenshots, and click **Save**.
3. If the live view grid is still under looping mode, right-click the live view grid, select **Camera Switch / Play Mode**, and select the device number to stop the looping.
4. Right-click the live view grid again, and select **Capture Snapshot**.



When captured successfully, a snapshot icon  or  will appear at the top right corner of the screen.

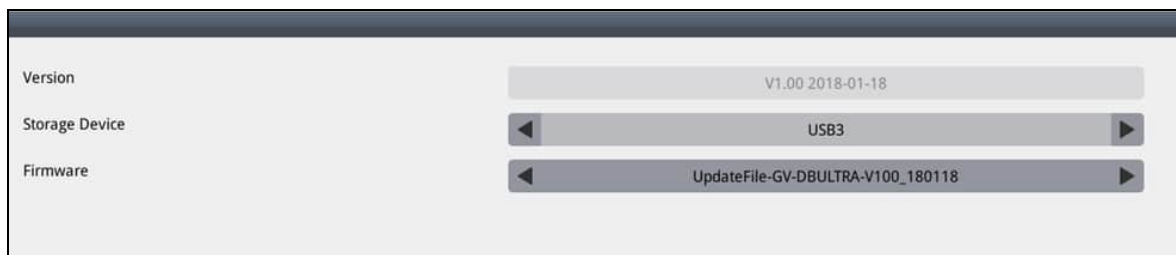
Note: Capturing snapshots is not supported by GV-IP Decoder Box Lite.

8. Upgrading the Firmware

GeoVision will periodically release firmware updates on the website. You can upgrade firmware locally using a USB drive or SD card.

Note: SD card is not supported by GV-IP Decoder Box Lite.

1. Copy the firmware file to the root folder of a USB drive or an SD card.
2. Insert the storage device to the GV-IP Decoder Box Series / GV-Pad Mini / GV-IP Display 101 / 116.
3. On the main screen, click the **Firmware Update**  /  icon.
4. Select the storage device and select the firmware file.



5. Click **Update** to begin upgrading the firmware. The GV-IP Decoder Box Series / GV-Pad Mini / GV-IP Display 101 / 116 will restart after the firmware upgrade is completed.

Note: To upgrade the firmware remotely through GV-IP Device Utility, see [5.1.2 Upgrading Firmware through GV-IP Device Utility](#) in *GV-IP Decoder Box Series and Display User's Manual*.
