GeoVision inc
The Vision of Security

GV-IP Decoder Box Series and GV-Pad Mini

User's Manual

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

DB-Pad-UM-B

© 2018 GeoVision, Inc. All rights reserved.
Under the copyright laws, this manual may not be copied, in whole or in part, without the written consent of GeoVision.

Every effort has been made to ensure that the information in this manual is accurate. GeoVision, Inc. makes no expressed or implied warranty of any kind and assumes no responsibility for errors or omissions. No liability is assumed for incidental or consequential damages arising from the use of the information or products contained herein. Features and specifications are subject to change without notice.

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

Trademarks used in this manual: *GeoVision*, the *GeoVision* logo and GV series products are trademarks of GeoVision, Inc.

May 2018

Preface

Welcome to the *GV-IP Decoder Box and GV-Pad Mini User's Manual*.

This Manual is designed for the following models and firmware versions:

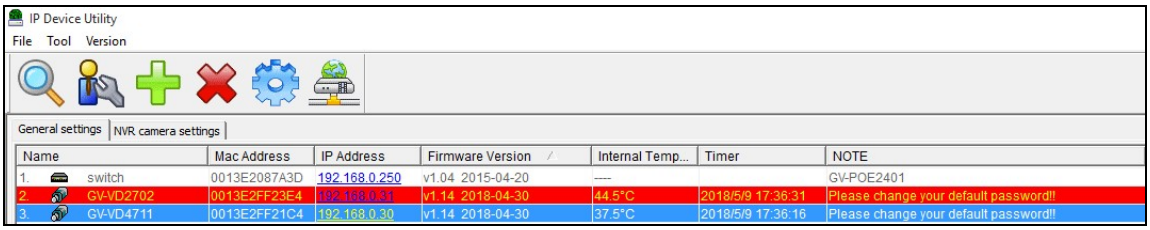
Model	Firmware Version
GV-IP Decoder Box Lite	V1.0
GV-IP Decoder Box Plus	V1.02
GV-IP Decoder Box Ultra	V1.0
GV-Pad Mini	V1.01

Creating GV-IP Camera's Login Credentials

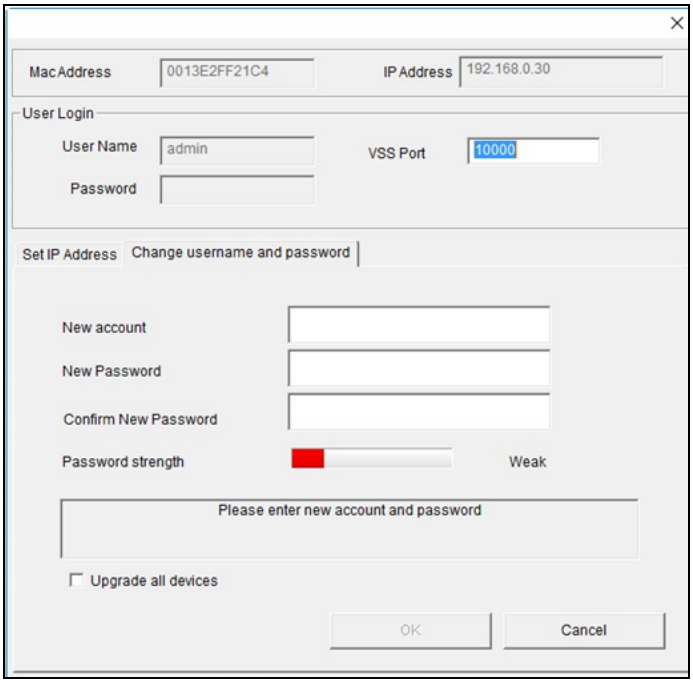
After purchasing a new GV-IP camera or factory resetting your GV-IP camera, you need to set up a login username and password for that camera.

1. Download and install GV-IP Device Utility from GeoVision's website.

2. On the GV-IP Device Utility window, click **Search** to search for your GV-IP cameras.



3. Double-click a GV-IP camera in the GV-IP Device Utility list. This dialog box appears.



4. Click the **Change Username and Password** tab to type a new username and password.

5. Optionally click **Upgrade all devices** to use the same username and password on all other cameras.

Contents

Creating GV-IP Camera's Credentials ii

Chapter 1 Introduction 1

1.1 GV-IP Decoder Box Ultra 1

1.1.1 Features 2

1.2 GV-IP Decoder Box Plus 3

1.2.1 Features 4

1.3 GV-IP Decoder Box Lite 5

1.3.1 Features 6

1.4 GV-Pad Mini 7

1.5 Compatible Devices 9

1.6 Packing List 11

1.7 Optional Accessories 12

1.8 Overview 13

1.8.1 GV-IP Decoder Box Series 13

1.8.2 GV-Pad Mini 17

1.9 GV-IR Remote Control 20

Chapter 2 Getting Started 22

2.1 Installing the GV-IP Decoder Box Series 22

2.2 Connecting the GV-IP Decoder Box Series 23

2.3 Connecting the GV-Pad Mini 25

2.4 The Main Screen 26

2.5 Setting Up the Network 27

2.6 Adding IP Devices to Live View Grid 29

2.6.1 Adding IP Devices through Automatic Search 29

2.6.2 Adding IP Devices Manually 32

2.7 Adding Devices Using GV-IP Device Utility 34

2.7.1 Adding a GV-IP Device 35

2.7.2 Adding a Third-party Device 38

Chapter 3 Accessing Live View 40

3.1 Live View 40

3.2 Capturing Snapshots 44

3.3 Fisheye Dewarping 45

3.4 Controlling PTZ and Speed Dome Cameras with GV-Joystick V2 46

Chapter 4 System Settings 47

4.1 System 48

4.2 Network 50

4.3 Date & Time 50
4.4 Account 51
4.5 Display 53
4.6 Camera 54
Chapter 5 Advanced Applications 55
5.1 Upgrading the Firmware 55
5.1.1 Upgrading Firmware through a Storage Device 55
5.1.2 Upgrading Firmware through GV-IP Device Utility 56
5.2 Restoring Default Settings 58

Chapter 1 Introduction

1.1 GV-IP Decoder Box Ultra

GV-IP Decoder Box Ultra is designed to decode incoming IP streams from GeoVision and third-party IP devices. It serves as a medium for connecting the cameras and the monitor for video display in Single, 4-Division, 8-Division, and 9-Division View. It supports third-party IP cameras that adhere to RTSP or ONVIF and is able to automatically search for ONVIF-compliant third-party IP devices under the same LAN. To be used with only a monitor, GV-IP Decoder Box Ultra 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. GV-Joystick V2 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-IP Decoder Box Ultra

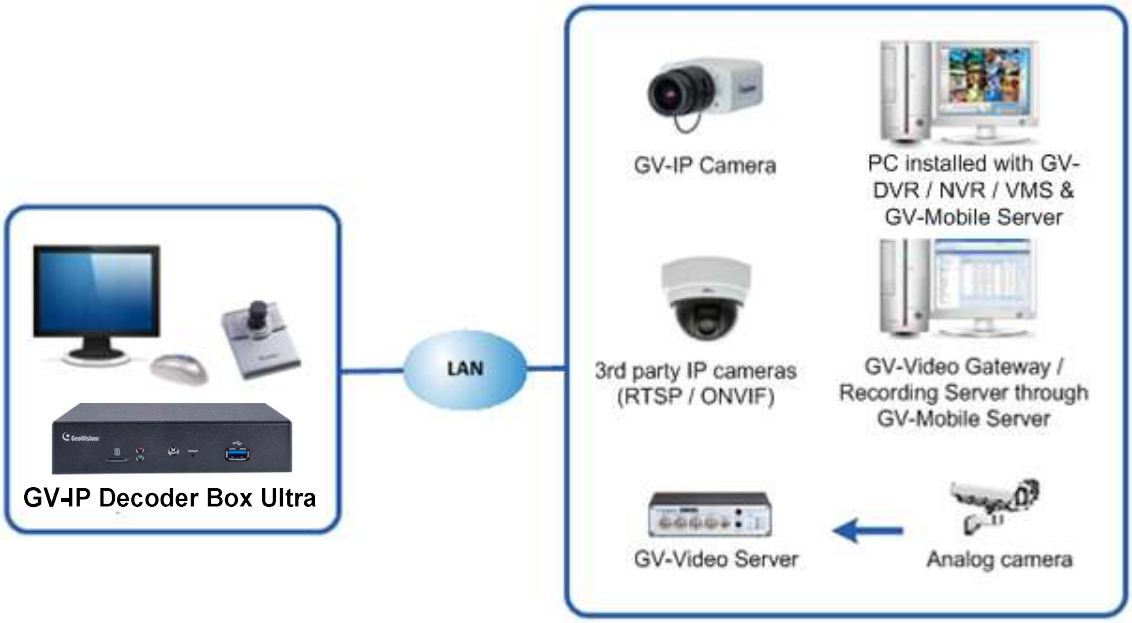


Figure 1-1

1.1.1 Features

- Decode video streams in H.264 / H.265 codec up to 30 fps
- Decode up to 8 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 or ONVIF
- Support for Single, 4-Divsion, 8-Division, and 9-Division View
- Display of Matrix view through GV-Mobile Server
- Support for 10/100 Ethernet over LAN
- DC 12V / PoE (IEEE 802.3af)
- HDMI video output resolutions up to 4K
- Control the user interface using GV-IR Remote Control
- Control PTZ and Speed Dome cameras using GV-Joystick V2
- Remote firmware upgrade, IP address configuration, and addition of new channel
- Micro SD card and USB drive for snapshot storage and firmware upgrade

1.2 GV-IP Decoder Box Plus

GV-IP Decoder Box Plus is designed to decode incoming IP streams from GeoVision and third-party IP devices. It serves as a medium for connecting the cameras and the monitor for video display in Single View, Quad View, and 9-Division View. It supports third-party IP cameras that adhere to RTSP or ONVIF and is able to automatically search for ONVIF-compliant third-party IP devices under the same LAN. To be used with only a monitor, the GV-IP Decoder Box Plus 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. GV-Joystick V2 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-IP Decoder Box Plus

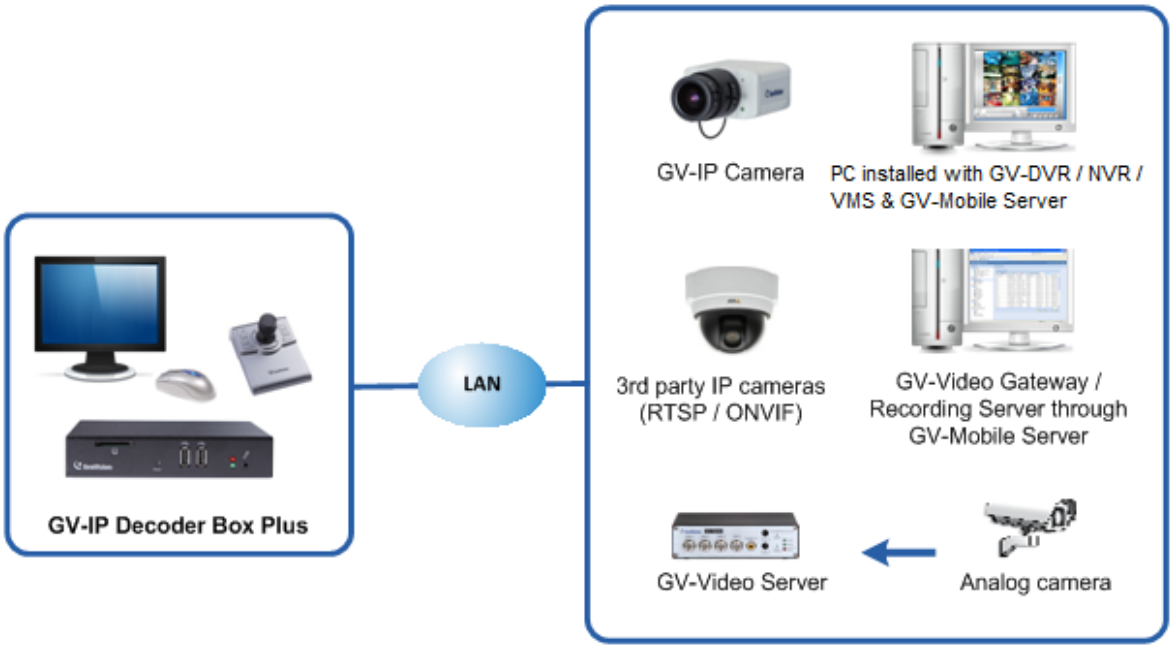


Figure 1-2

1.2.1 Features

- Decode video streams in H.264 codec at up to 30 fps
- Decode up to 4 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 or ONVIF
- Support for fisheye dewarping in Single View and Grid 1 of Quad View
- Single View, Quad View, and 9-Division View in sequential display
- Display of Matrix view through GV-Mobile Server
- Support for 10/100/1000 Ethernet over LAN
- VGA or HDMI video output resolutions up to 1080p
- Control PTZ and Speed Dome cameras using GV-Joystick V2
- Remote firmware upgrade, IP address configuration, and addition of new channel
- SD card slot and USB drive for snapshot storage and firmware upgrade

1.3 GV-IP Decoder Box Lite

GV-IP Decoder Box Lite is designed to decode incoming IP streams from GeoVision and third-party IP devices. It serves as a medium for connecting the cameras and the monitor for video display in Single View and Quad View. It supports third-party IP cameras that adhere to ONVIF and is able to automatically search for these third-party IP devices under the same LAN. To be used with only a monitor, the GV-IP Decoder Box Lite provides a cost-effective solution for video surveillance as opposed to the traditional DVR and PC setup. The security administrator can monitor channels and pause at a channel when events occur. GV-Joystick V2 can be installed to control GeoVision and third-party PT / PTZ / Speed Dome cameras.

The IP Devices that Can Connect with GV-IP Decoder Box Lite

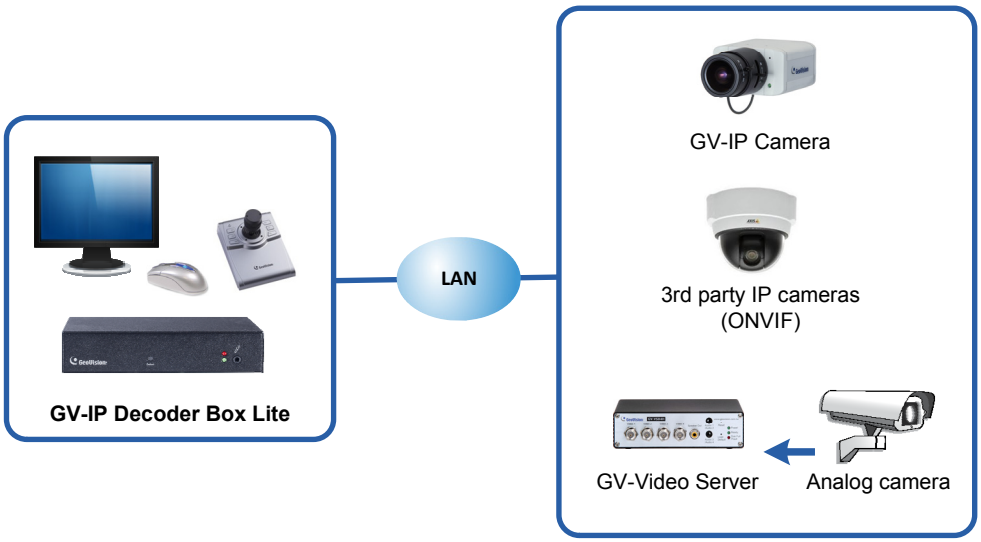


Figure 1-3

1.3.1 Features

- Decode video streams in H.264 codec at up to 30 fps
- Decode up to 2 megapixel IP cameras
- Decode up to 16 IP streams
- Automatically search for ONVIF IP devices
- Support for third-party IP cameras that adhere to ONVIF
- Single View and Quad View in sequential display
- Support for 10/100/1000 Ethernet over LAN
- VGA or HDMI video output resolutions up to 1080p
- Control PTZ and Speed Dome cameras using GV-Joystick V2
- Remote firmware upgrade, IP address configuration, and addition of new channel
- USB drive for firmware upgrade

1.4 GV-Pad Mini

The GV-Pad Mini is designed to decode and display up to 64 IP videos in Single View, Quad View, and 9-Division View. It supports third-party IP cameras that adhere to RTSP or ONVIF and is able to automatically search for ONVIF-compliant third-party IP devices under the same LAN. With the built-in monitor, the GV-Pad Mini 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. GV-Joystick V2 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 Mini

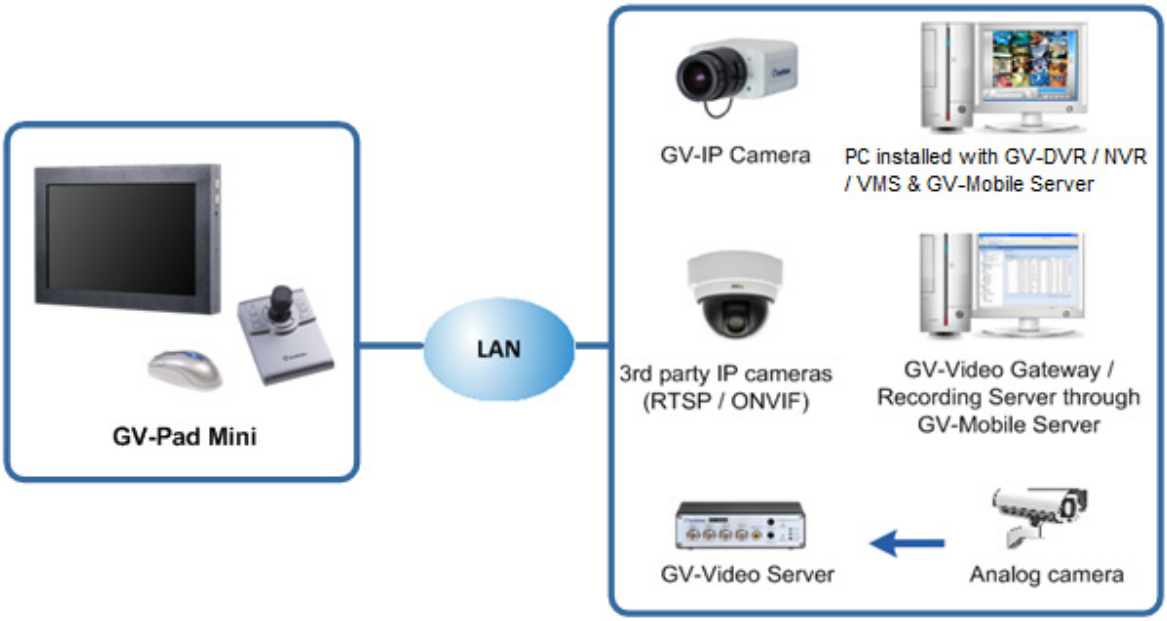


Figure 1-4

1.4.1 Features

- Decode video streams in H.264 codec at up to 30 fps
- Decode up to 4 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 or ONVIF
- Single View, Quad View, and 9-Division View in sequential display
- Display of Matrix view through GV-Mobile Server
- Support for 10/100/1000 Ethernet over LAN
- Control PTZ and Speed Dome cameras using GV-Joystick V2
- Micro SD card slot and USB drive for snapshot storage and firmware upgrade

1.5 Compatible Devices

The compatible devices for GV-IP Decoder Box Series and GV-Pad Mini vary according to different models.

GV-IP Decoder Box Ultra

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 or **analog** channels, 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:

1. GV-Mobile Server is an application that encodes up to **64** video channels and subsequently allows the GV-IP Decoder Box Ultra / Plus / GV-Pad Mini to decode and display:
   - analog cameras and IP cameras connected to GV-DVR / NVR / VMS
   - IP channels connected to GV-Recording Server / GV-Video Gateway
   - third-party IP cameras through ONVIF
   - 4 matrix views

   For details, see *GV-Mobile Server User's Manual*.
2. Upgrade your GV-IP devices to the latest firmware version if you encounter any connection problems.

1.6 Packing List

GV-IP Decoder Box Ultra

1. GV-IP Decoder Box Ultra
2. GV-IR Remote Control
3. Download Guide
4. 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 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

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
6. Warranty card

1.7 Optional Accessories

Optional Accessory	Detail
Wall Mount Kit	The Wall Mount Kit is used to mount the GV-IP Decoder Box Series to the wall.
	● L-type brackets x 2 ● Small screws x 4
GV-Joystick V2	GV-Joystick V2 facilitates focusing, zooming, panning, and tilting of GeoVision and third-party PT, PTZ, and Speed Dome cameras on GV-IP Decoder Box Series / GV-Pad Mini.
	● GV-Joystick V2 ● USB Type A to Type B Cable ● RJ-45 Cable ● Download Guide
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
GV-POE Switch	The GV-POE Switch is designed to provide power along with network connection for IP devices. The GV-POE Switch is available in various models with different numbers and types of ports.
Power Adapter	For GV-IP Decoder Box Ultra, contact our sales representatives for the countries and areas supported.

1.8 Overview

1.8.1 GV-IP Decoder Box Series

1.8.1.1 Front View

GV-IP Decoder Box Ultra

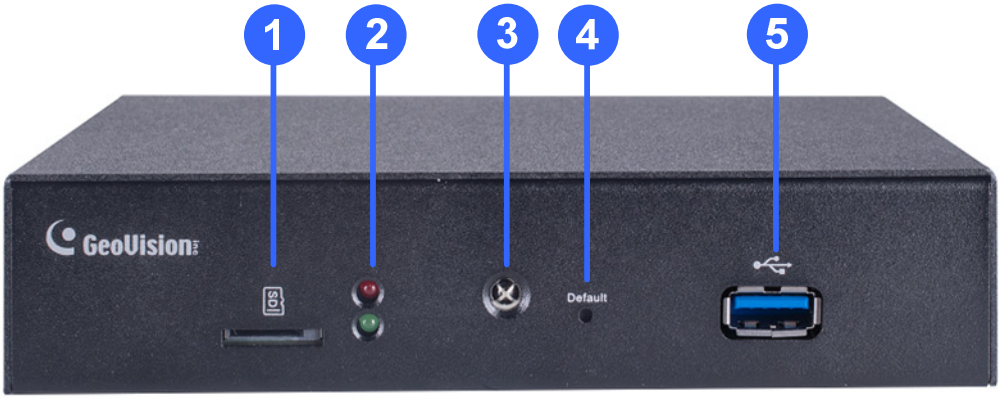


Figure 1-5

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 Restoring Default Settings*.
5	USB 3.0	Connect to a GV-Joystick V2, USB mouse, or USB storage device

GV-IP Decoder Box Plus

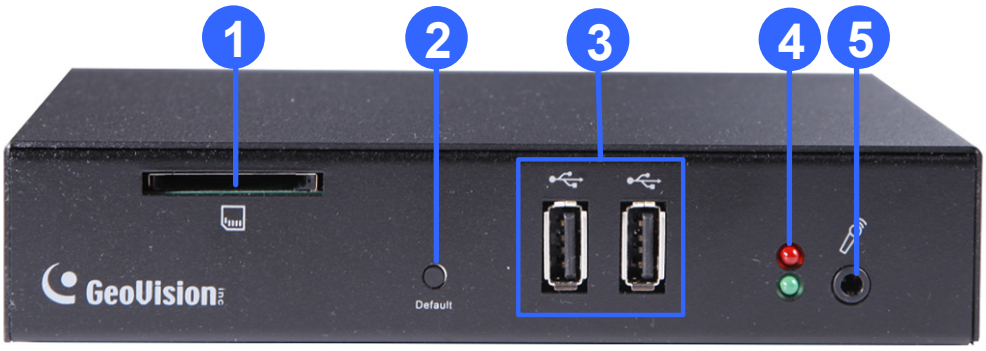


Figure 1-6

GV-IP Decoder Box Lite

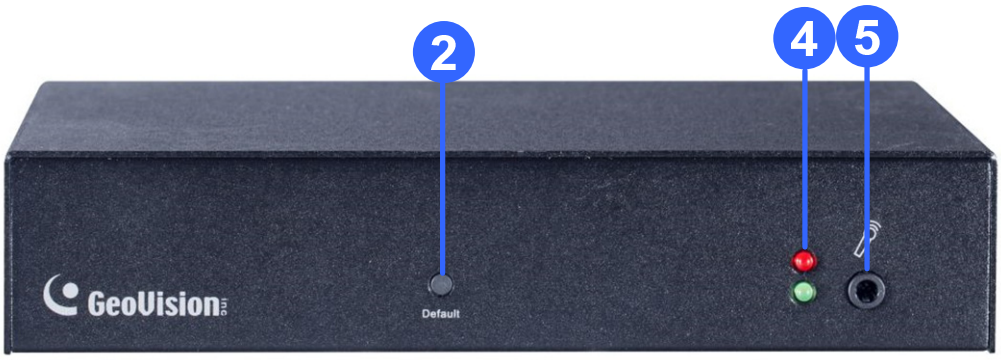


Figure 1-7

No.	Name	Function
1	SD Card Slot	Connect to a SD card for local storage of snapshots 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. See *5.2 Restoring Default Settings*.
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.

1.8.1.2 Rear View

GV-IP Decoder Box Ultra

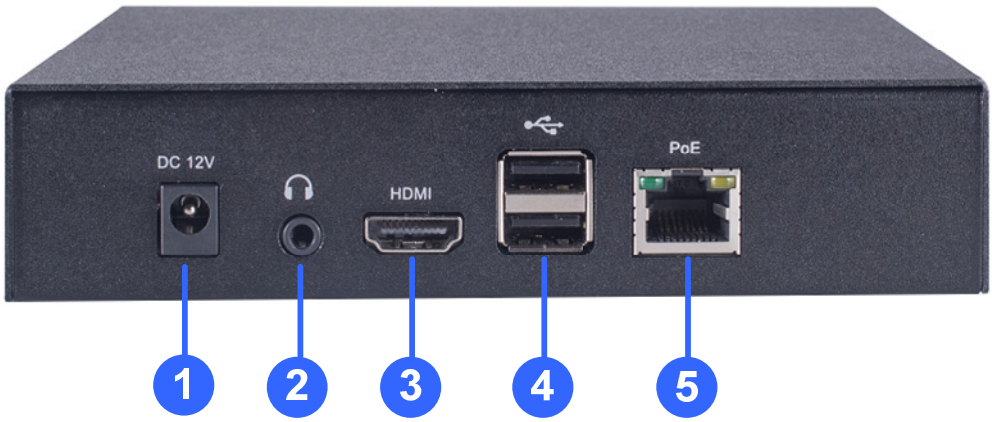


Figure 1-8

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

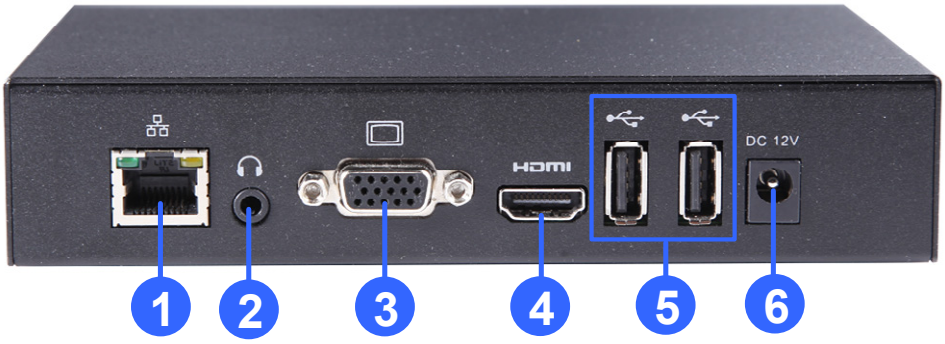


Figure 1-9

No.	Name	Function
1	Network	Connect to the network.
2	Audio Out	Connect 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.

1.8.2 GV-Pad Mini

1.8.2.1 Front and Rear Views

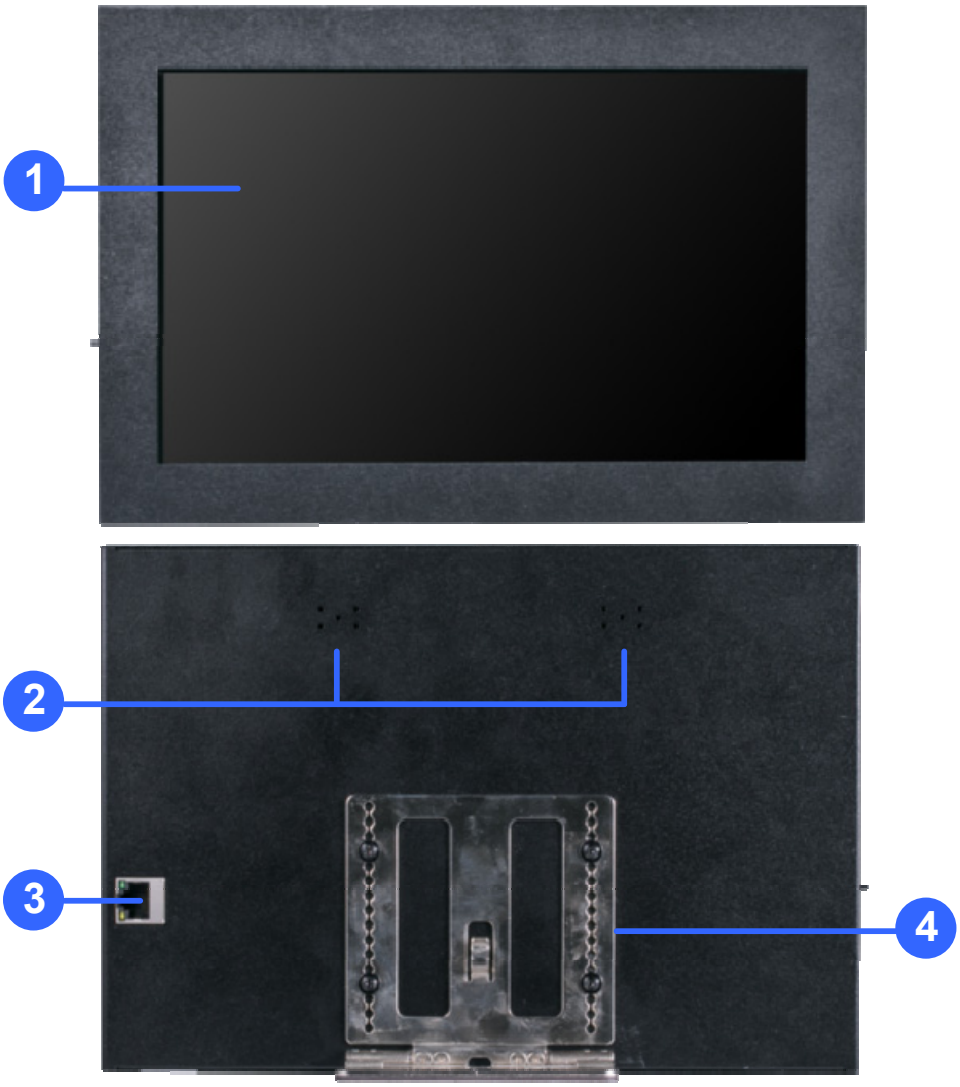


Figure 1-10

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 the network.
4	Stand	Position the GV-Pad Mini to your preference.

1.8.2.2 Top, Left-Side and Right-Side Views

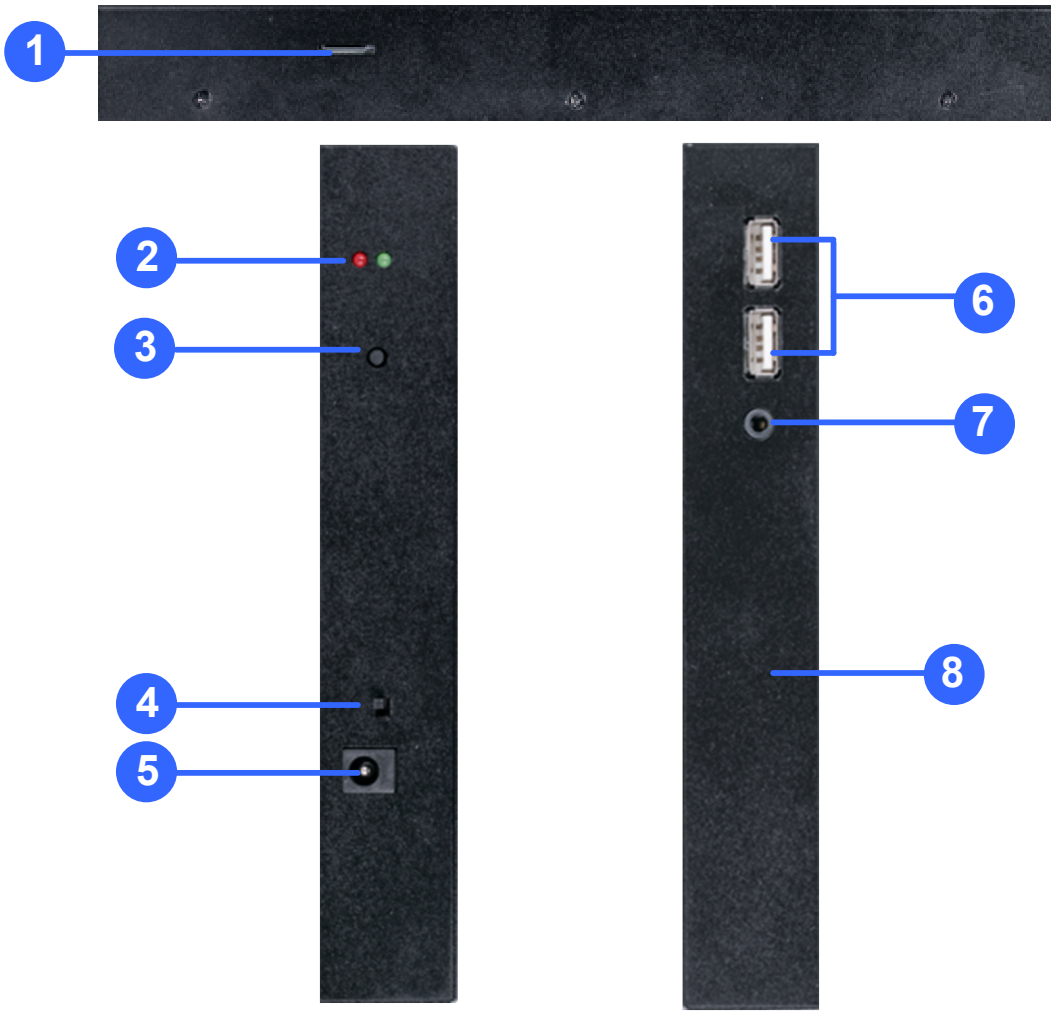


Figure 1-11

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.

No.	Name	Function
5	DC 12V	Connect to power using the supplied power adapter.
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 *5.2 Restoring Default Settings*.

1.9 GV-IR Remote Control

The GV-IR Remote Control is only supported by GV-IP Decoder Box Ultra.

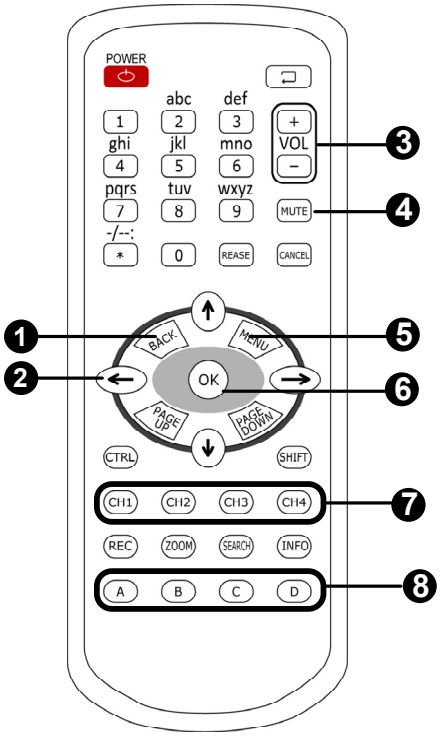


Figure 1-12

No.	Name	Function
1	Back	Return to the previous page in the Main Screen.
2	Menu Control	Move up, down, right and left in the Main Screen.
3	Volume Control	Increase or decrease the volume.
4	Mute	Mute the volume.
5	Menu	Switch to the Main Screen.
6	OK	Enter the setup options or save the settings in the Main Screen.

No.	Name	Function
7	Hotkeys	Use the following hotkeys to execute commands when a camera live view is selected in the main screen. CH1: Take a screenshot CH2: Activate the PTZ function. CH3: Enter in full screen mode. CH4: Activate the audio out function.

PTZ Controls

No.	Name	Function
2	Menu Control	Control PTZ movements (pan and tilt) on live view display when the PTZ function is enabled.
6	OK	Bring the camera to a home position when the PTZ function is enabled.

Press an alphabet key to adjust the zoom / focus.

No.	Alphabet Key	Function
8	A	Zoom In
	B	Zoom Out
	C	Focus In
	D	Focus Out

Chapter 2 Getting Started

2.1 Installing the GV-IP Decoder Box Series

You can install the GV-IP Decoder Box Series on the wall 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 Series.

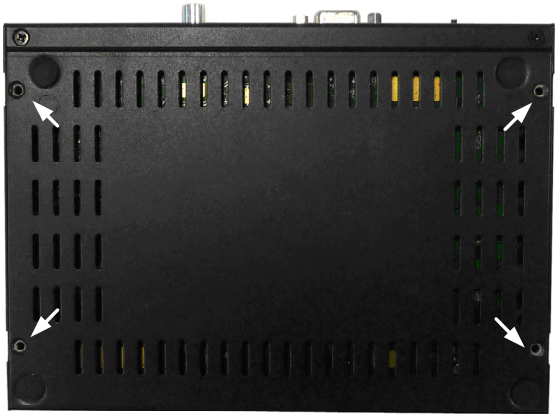


Figure 2-1

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

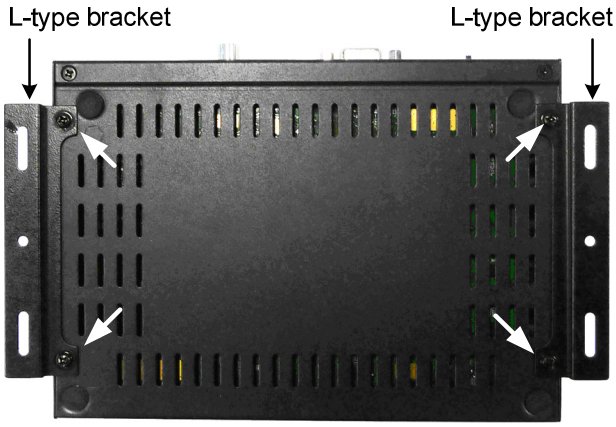


Figure 2-2

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

2.2 Connecting the 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.

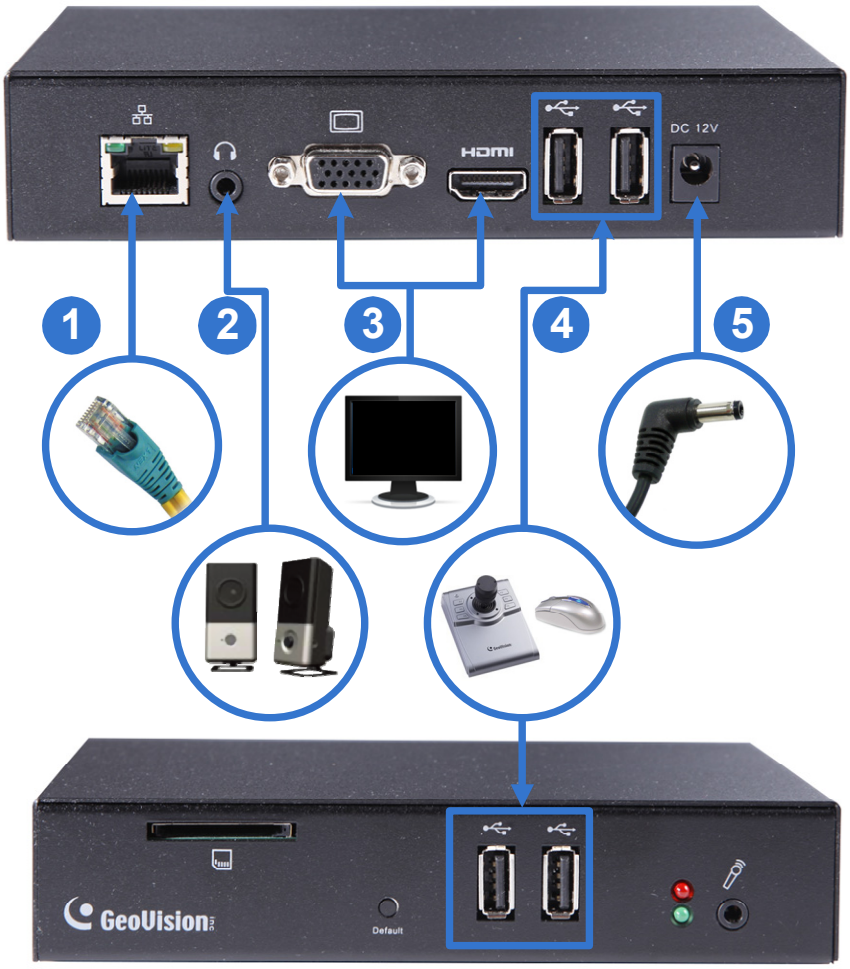


Figure 2-3

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 Series to one display device through either the HDMI or VGA connector.
2. The default video output is set to HD 720P resolution. If you use a VGA monitor, be sure to change the output resolution to VGA 1024 x 768. If you want to configure your GV-IP Decoder Box 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*.
3. Optionally configure the date and time for the device. For details, see *4.3 Date & Time*.

2.3 Connecting the GV-Pad Mini

Follow the steps below to connect GV-Pad Mini.

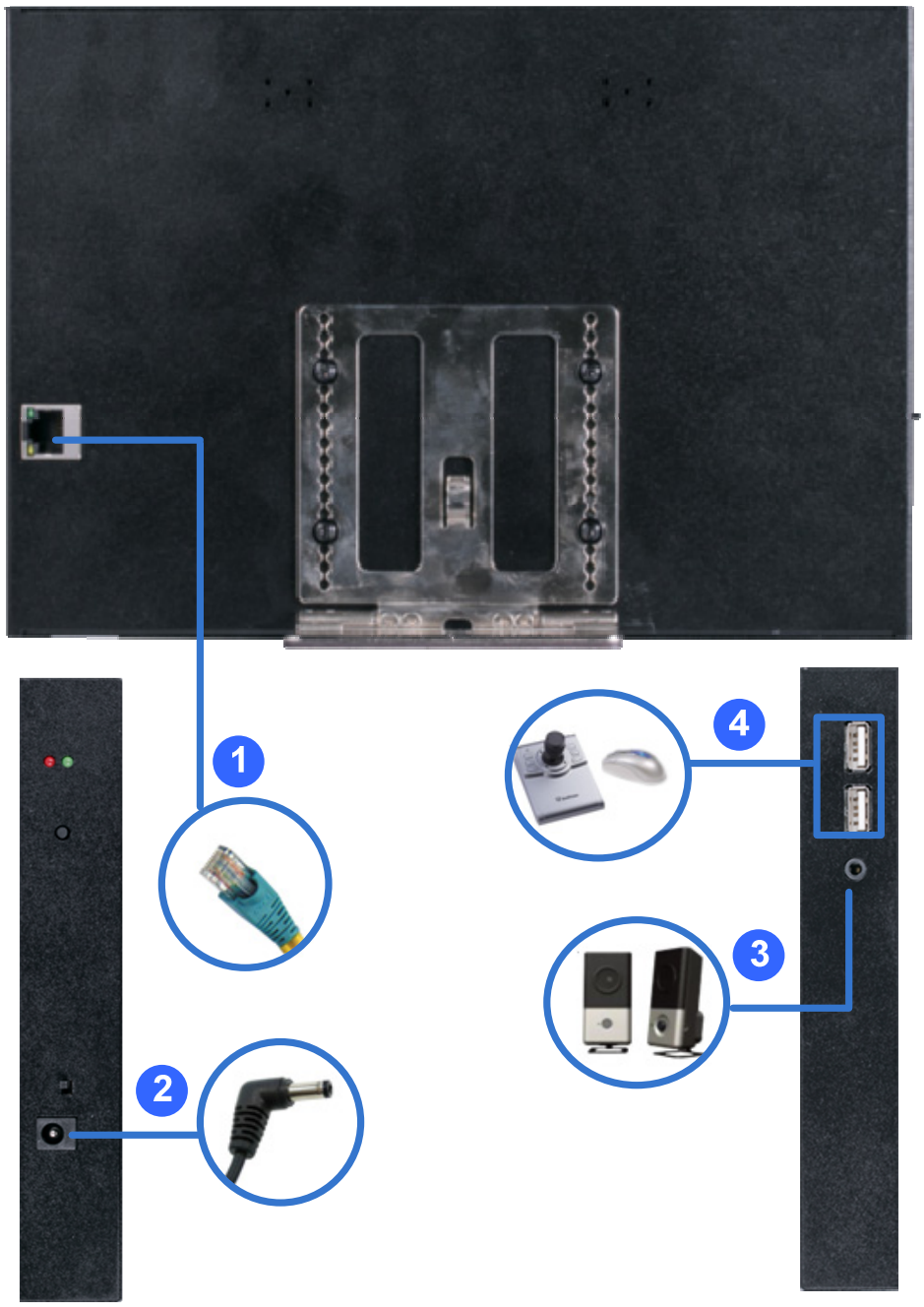


Figure 2-4

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.

2.4 The Main Screen

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

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.

Figure 2-5

2.5 Setting Up the Network

By default, GV-IP Decoder Box Series / GV-Pad Mini 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.

Note: By default, if GV-IP Decoder Box Series / GV-Pad Mini 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 on the main screen, and select **Network**. You will see the following window.

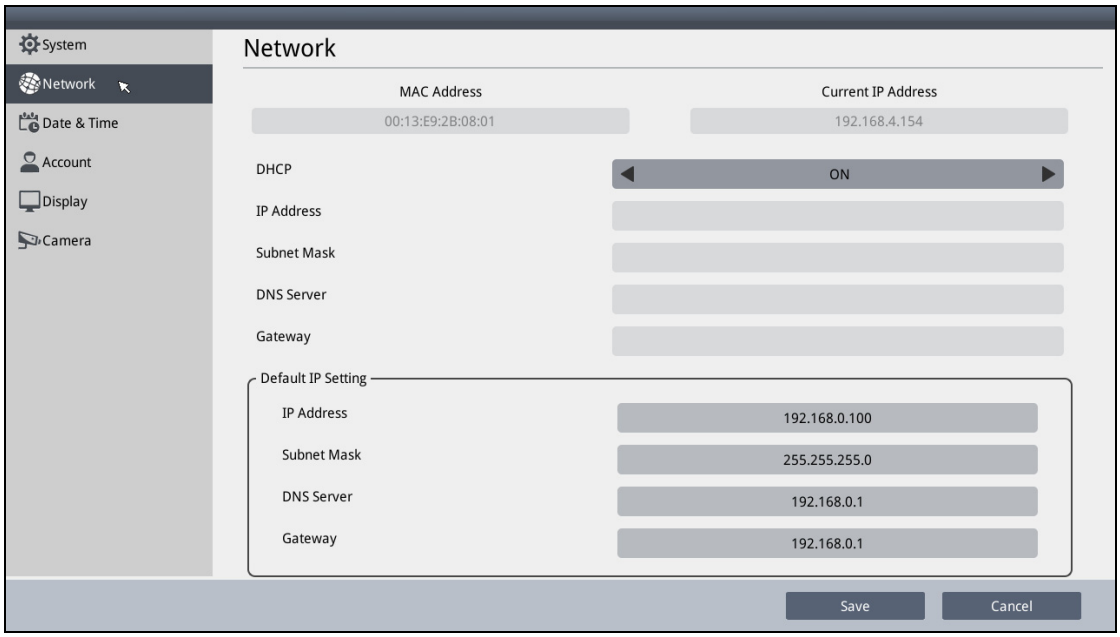


Figure 2-6

2. To configure the static IP address,
   - For GV-IP Decoder Box Ultra, switch the DHCP option to **OFF**.
   - For GV-IP Decoder Box Plus / Lite / GV-Pad Mini, select **Static IP Address**.
3. Fill out the fields of **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.

Tip: You can also use GV-IP Device Utility downloaded from GeoVision's website. to modify the IP address by clicking the GV-IP Decoder Box Series / GV-Pad Mini and selecting **Configure**. Note the compatible versions of GV-IP Device Utility for the following products:

- GV-Pad Mini: GV-IP Device Utility V8.6.6.0 or later.
- GV-IP Decoder Box Ultra: GV-IP Device Utility V8.7.2.0 or later.

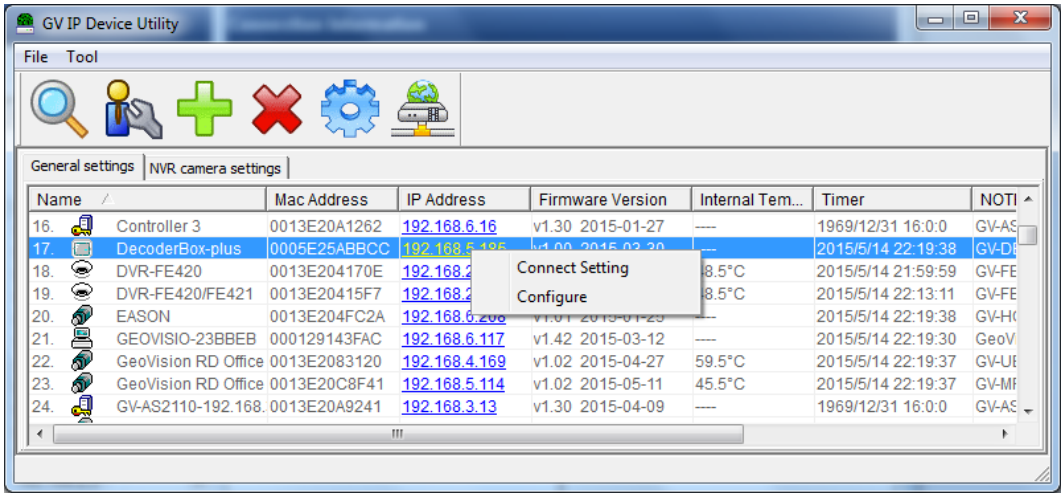


Figure 2-7

2.6 Adding IP Devices to Live View Grid

Before you start, make sure all the IP devices or GV-Mobile Server is under the same LAN as GV-IP Decoder Box Series / GV-Pad Mini.

2.6.1 Adding IP Devices through Automatic Search

1. Click the **Camera** / **IPCam Search** icon / on the main page.
2. For GV-IP Decoder Box Ultra, click the **Search Camera** icon to search for GV-IP Devices, GV-Mobile Server, or the third-party devices that adhere to ONVIF under the same LAN.

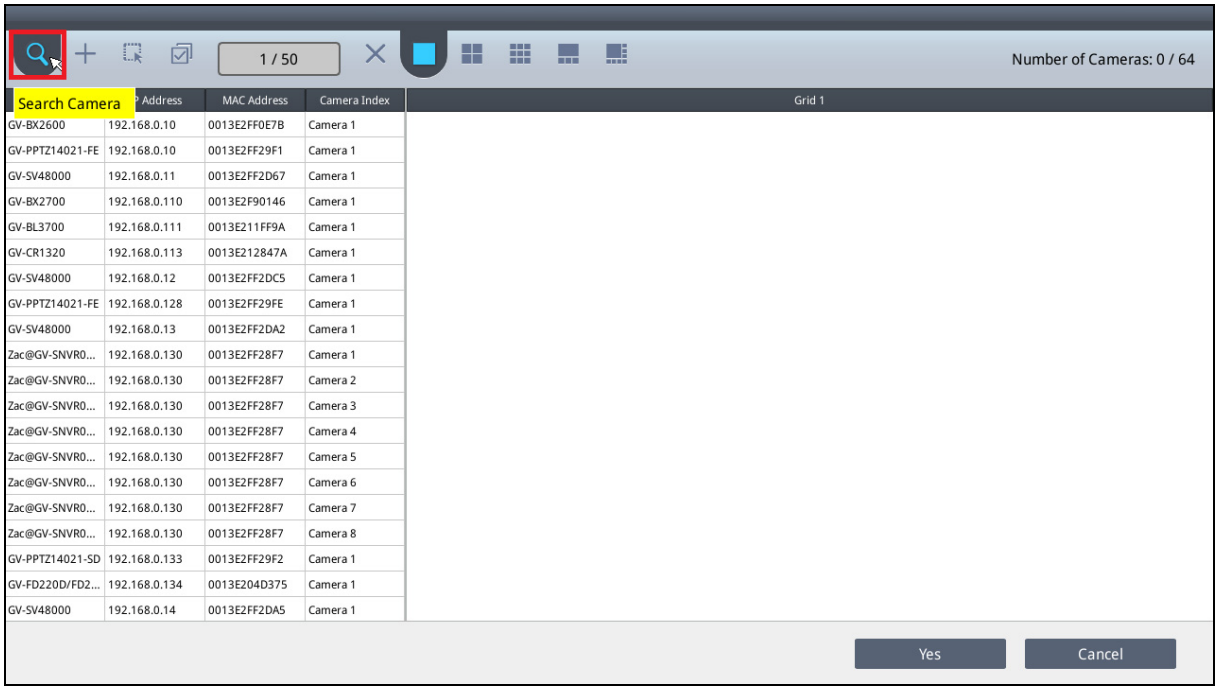


Figure 2-8

3. To change the device settings, right-click the device 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. 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 value is 30 seconds.
   - **Login Information:** The default user name and password are both **admin**.

4. Click **Save** to apply.

Note: All the GeoVision IP devices have the default user name and password of **admin**. If you want to change the default settings, you may change the user name and password under **Camera** in System Settings (see *4.6 Camera)*.

---

5. Select a live view layout.

For GV-IP Decoder Box Ultra:

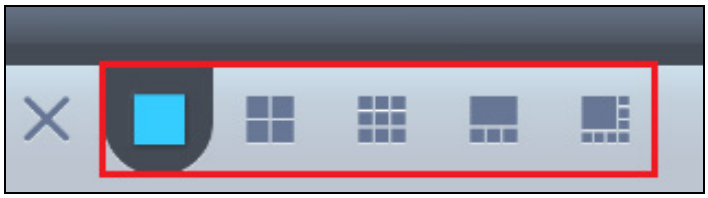


Figure 2-9

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

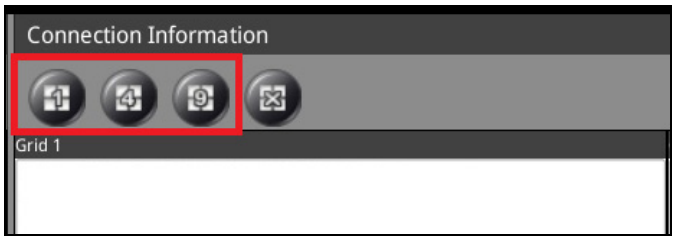


Figure 2-10

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

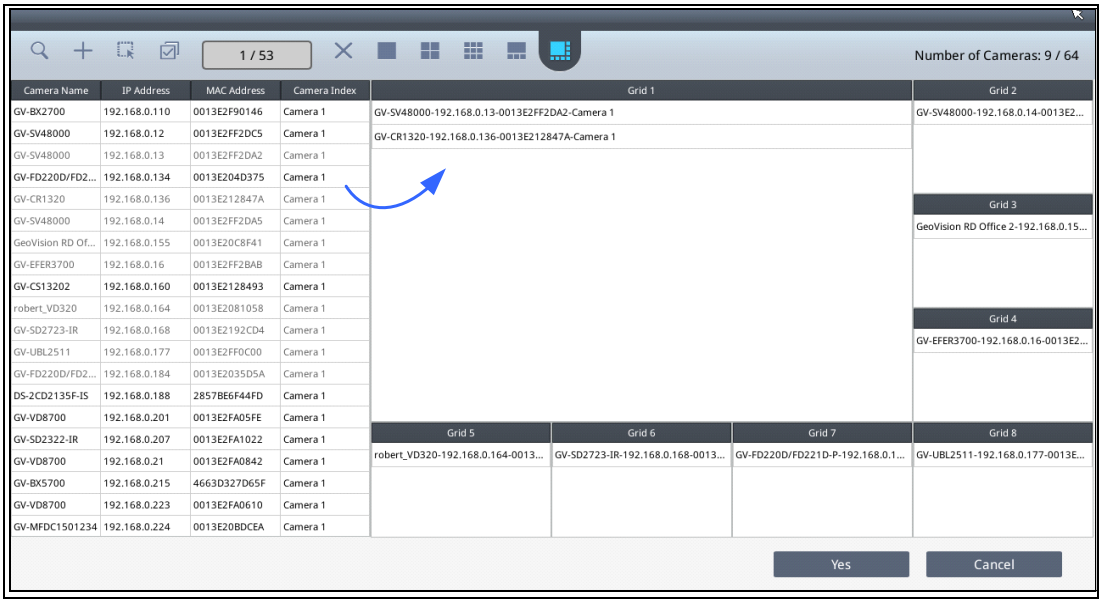


Figure 2-11

7. To adjust the display order of the cameras, right-click the camera and click **Move Up** or **Move Down**.

8. To remove a camera, right-click the camera and click the **Delete** button.

9. To delete all the added devices at once and change the layout to the single division, click the **Delete All** button / .

10. 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, right-click the camera and click **Edit**.

Note:

1. Refer to *3.1 Live View* for the maximum resolution supported in different live view layout.
2. Fisheye dewarping is only supported by GV-IP Decoder Box Plus. To dewarp the fisheye view, you need to choose 1-division layout or assign the camera to Grid 1 of the 4-division view.

2.6.2 Adding IP Devices Manually

If the GV-IP Decoder Box Series / GV-Pad Mini is unable to detect the IP device using the search function, you can search for the device manually.

1. Click the **Camera / IPCam Search** icon / on the main page.

2. Click the **Add Camera / IPCam** icon / . This dialog box appears.

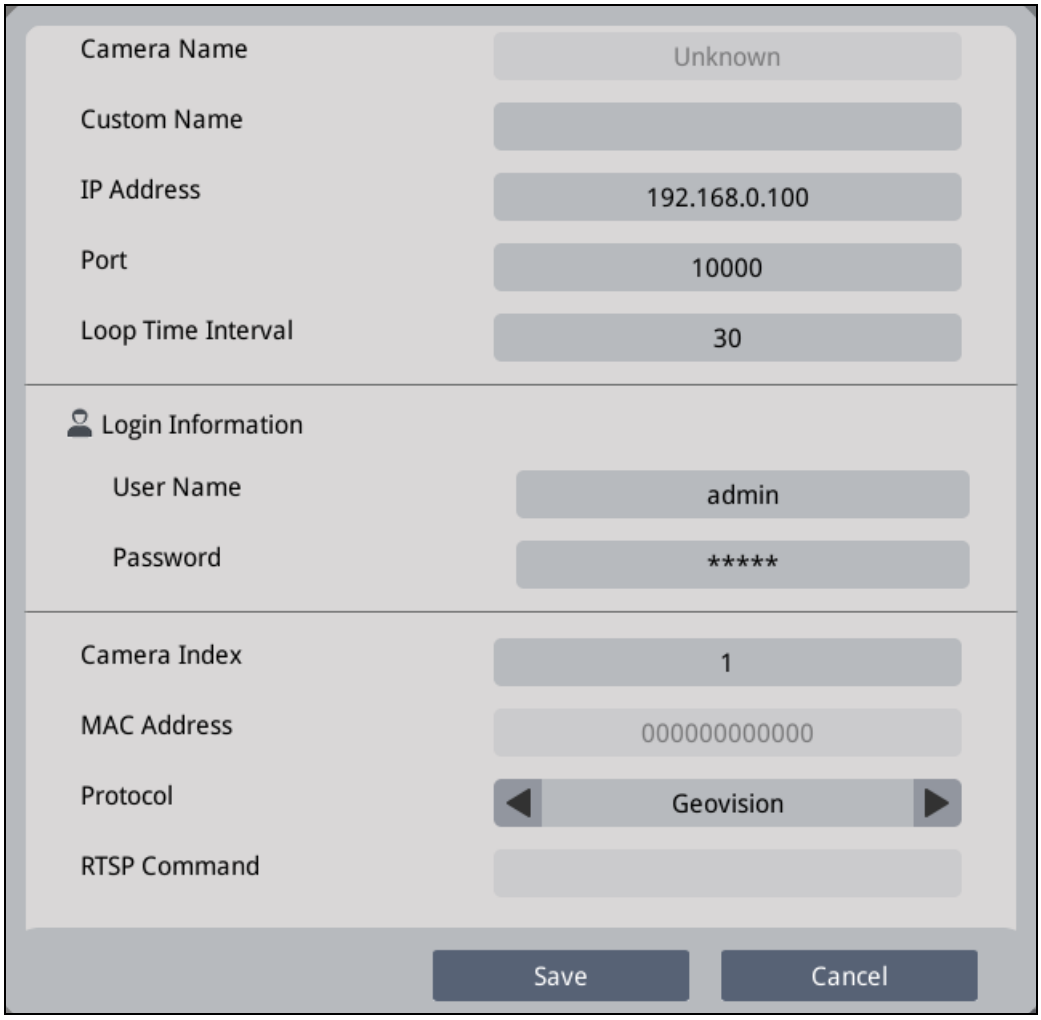


Figure 2-12

3. Fill out the following camera information.
   - **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 value is 30 seconds.
   - **Login Information:** Type the ID and password of the IP device if needed. The default ID and Passwords are **admin**.
   - **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.

Note: All the GeoVision IP devices have the default user name and password of **admin**. If you want to change the default settings, you may change the user name and password under **Camera** in System Settings (see *4.6 Camera)*.

2.7 Adding Devices Using GV-IP Device Utility

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

Note: The compatible version of GV-IP Device Utility must be V8.6.6.0 or later for GV-Pad Mini and V8.7.2.0 or later for GV-IP Decoder Box Ultra.

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

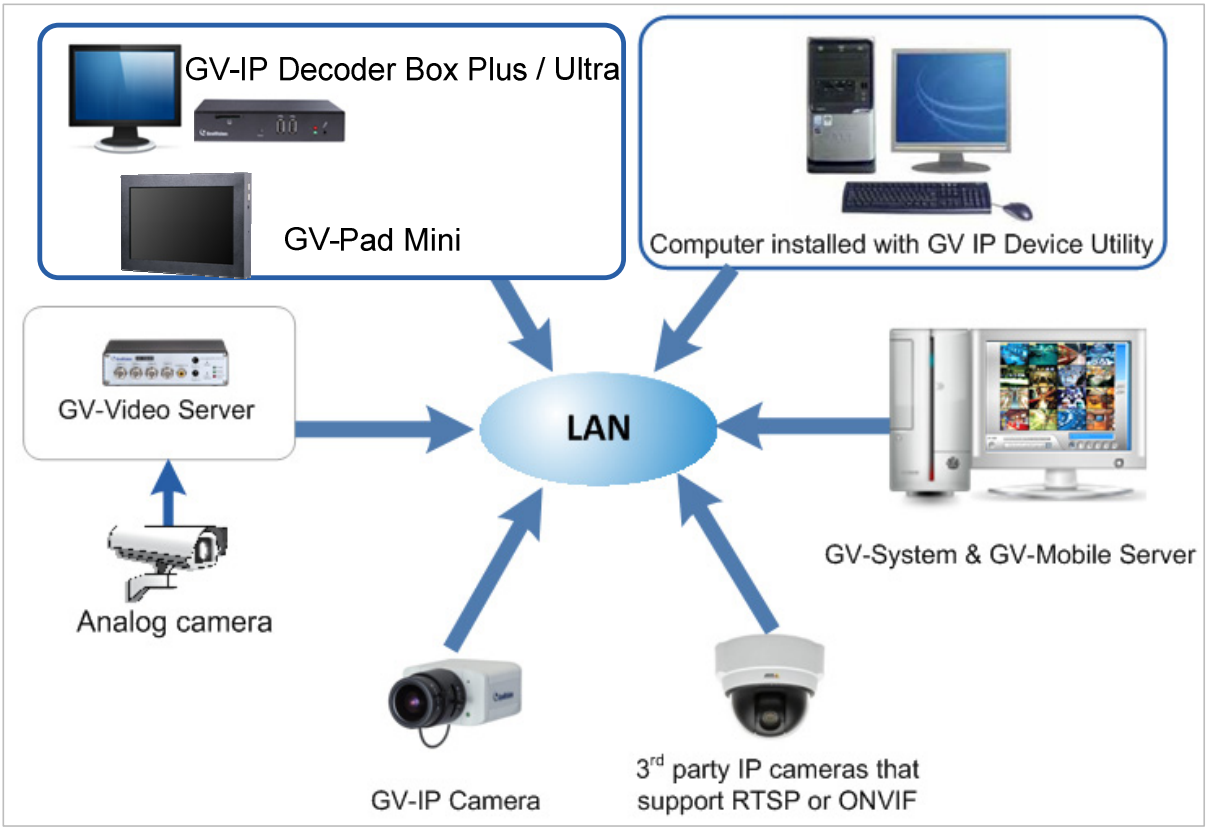


Figure 2-13

2.7.1 Adding a GV-IP Device

1. Run the **GV-IP Device Utility** downloaded from GeoVision's Website. When the GV-IP Device Utility window appears, it will automatically search for all the GV-IP Devices under the same LAN.

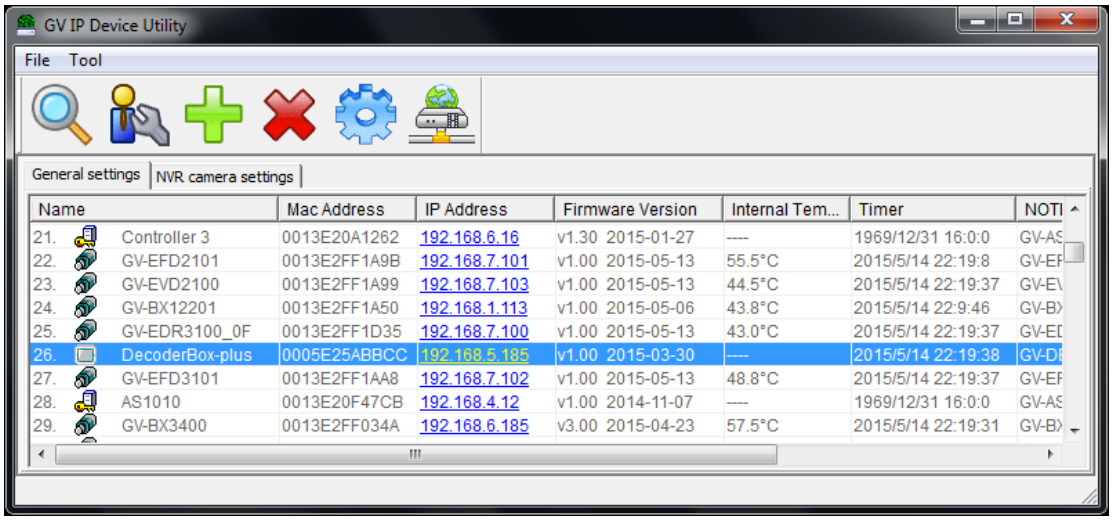


Figure 2-14

2. Click the IP address of your GV-IP Decoder Box Series / GV-Pad Mini and select **Connect Setting**. This dialog box appears.

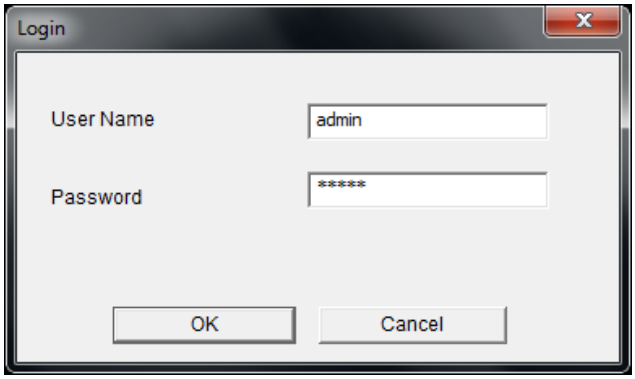


Figure 2-15

3. Type the ID and password of your GV-IP Decoder Box Series / GV-Pad Mini and click **OK**. The default ID and password are **admin**. This window appears.

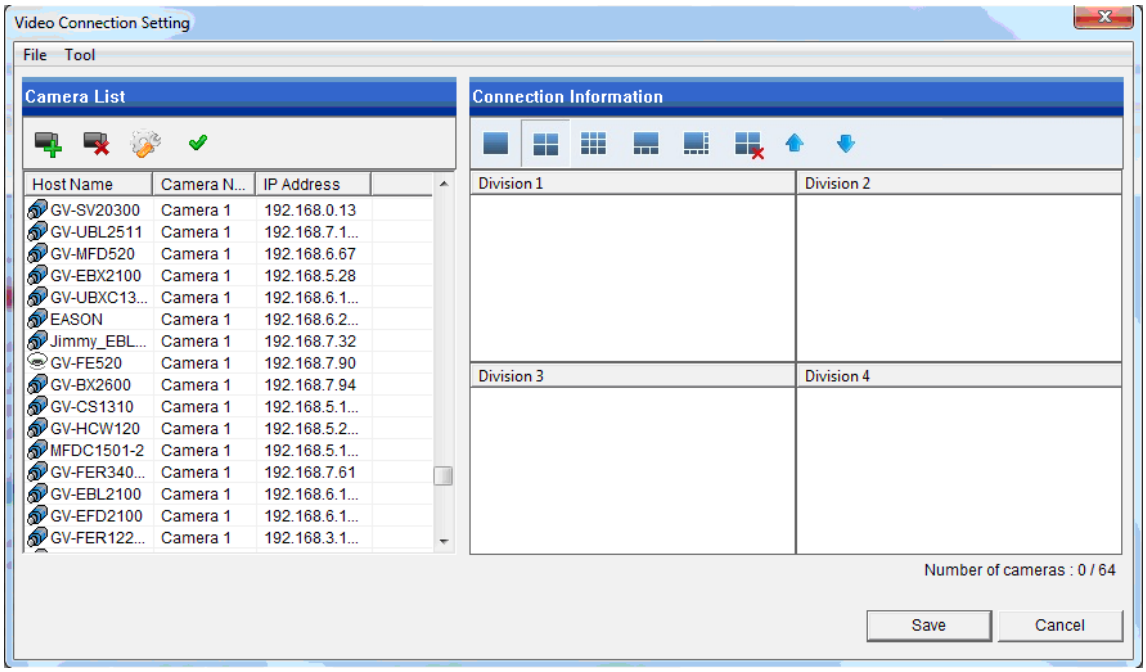


Figure 2-16

4. Use the Camera List toolbar to add, remove, or configure a selected 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 / 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**.

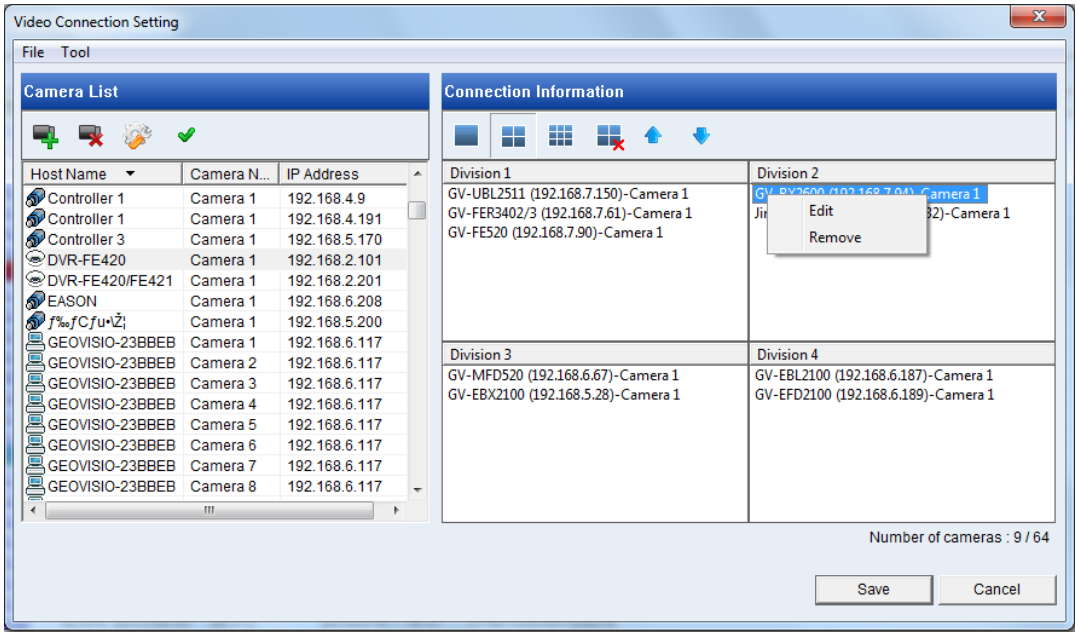


Figure 2-17

7. Click **Save**.

The cameras in the Connection Information column will be updated to the GV-IP Decoder Box Series / GV-Pad Mini 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 need to choose 1-division layout or assign the camera to Grid 1 of the 4-division view.

2.7.2 Adding a Third-party Device

1. Click the **Add Camera** button on the Video Connection Setting window (Figure 2-16). This dialog box appears.

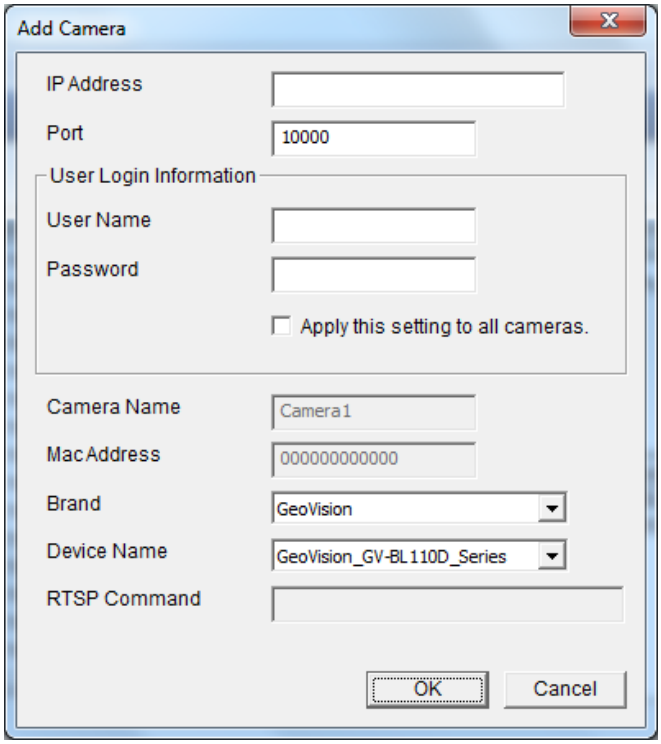


Figure 2-18

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.

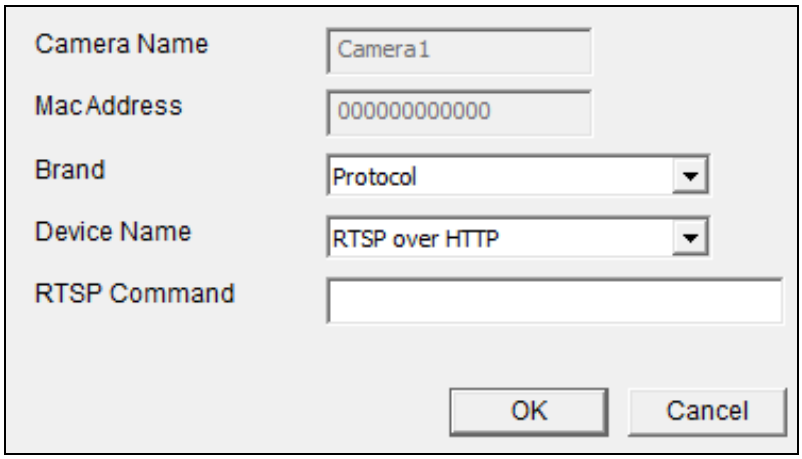


Figure 2-19

- **ONVIF:** Select this protocol if your camera adheres to ONVIF.
- **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.

Note: GV-IP Decoder Box Light does not support RTSP connection.

---

4. Click **OK**. The camera is added to the list.
5. Add channels to the Connection Information column. See Step 6, *2.7.1 Adding a GV-IP Device*.
6. Click **Save**.

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

Chapter 3 Accessing Live View

3.1 Live View

After adding and assigning IP devices to the live view grid, the camera live views are displayed on the main screen. Right-click a live view grid to access the following options:

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.

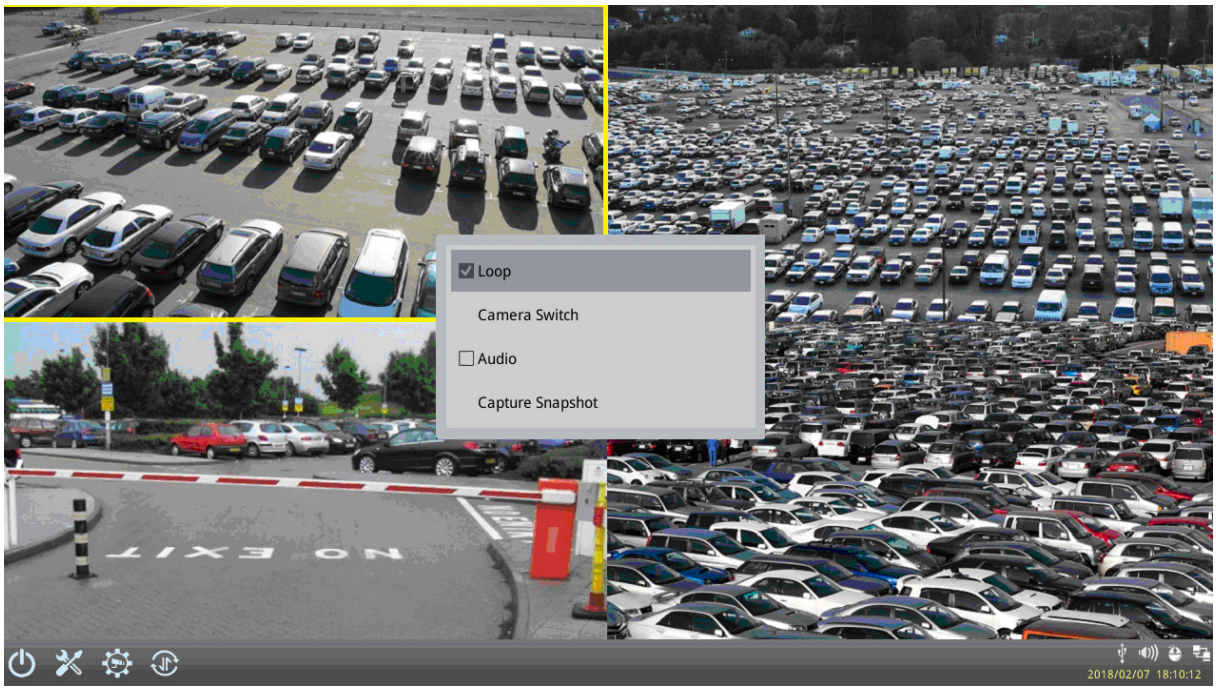


Figure 3-1

- **Capture Snapshot:** Only supported by GV-IP Decoder Box Ultra / Plus / GV-Pad Mini, capture a snapshot of the live view. This option is only available when the live view grid is not looping. See *3.2 Capturing Snapshots.*
- **Play Mode:** When more than one device is added to a grid, select **Loop** to start looping through the devices or select a device number to fix the live view grid to the selected device. A looping icon or will appear on the live view grid if you select **Loop**.

  Note: To fix the live view grid to a selected device for GV-IP Decoder Box Ultra, click **Camera Switch** and click the desired camera number.
- **PTZ:** Select to allow GV-Joystick V2 / your mouse / GV-IR Remote Control to control the PTZ device. To pan and tilt the live view, click and hold the arrow on the image. This function is only available for devices with PTZ function and only one PTZ device can be enabled at a time.

- **Visual PTZ Button:** Only for GV-IP Decoder Box Ultra / Plus / GV-Pad Mini, select to activate the PTZ control buttons. This function is only available for devices with PTZ function.

Figure 3-2

  - **Default Setting**: Selects to return to the camera's home position.
  - **Auto Focus**: Automatically adjusts the sharpness of the camera view.
  - **Focus In / Out**: Adjusts the sharpness of the camera view.

- **Audio:** Enables or disables the audio out function. You can only enable the audio out function of one device at a time.

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 will connect to stream 2 of the device instead. If stream 2 is unavailable, the message "Resolution Error" will appear on the screen.
- Fisheye dewarping is only supported by GV-IP Decoder Box Plus in Single View and the Grid 1 of Quad View.

GV-IP Decoder Box 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	
8-Division		1280 x 720 for each grid	
9-Division		1280 x 720 for each grid	

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	Supported
	Other 3 Grids	1920 x 1080	Not supported
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	

Note: The camera view will display the message "Connection Lost" if the login ID and password are incorrect.

3.2 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 or 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. Select a storage device from the **Storage Device** option 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.

3.3 Fisheye Dewarping

You can enable fisheye dewarping if the fisheye camera is in Single View or Grid 1 of the Quad View. Right-click the live view of the fisheye camera and select **Fisheye** to enable fisheye dewarping.

Note: Fisheye dewarping is only supported by GV-IP Decoder Box Plus.

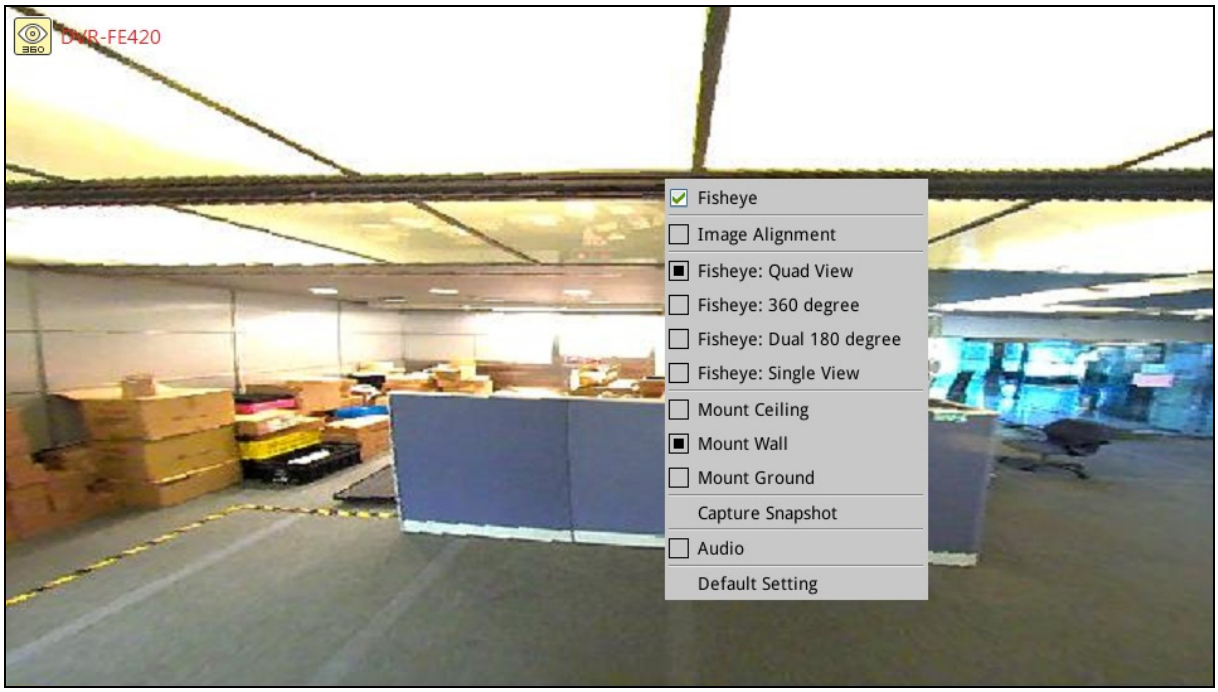


Figure 3-3

The following fisheye settings are available:

- **Image Alignment:** Align the red circle with the inner edge of the camera image if needed. You can adjust the red circle by dragging and by scrolling the mouse.
- **Camera Modes:**
  - **Fisheye: Quad view:** Composed of 3 PTZ views and a circular source image.
  - **Fisheye: 360 degree:** Composed of two PTZ views and one 360º panoramic view.
  - **Fisheye: Dual 180 degree:** Composed of two 180º views.
  - **Fisheye: Single view:** Composed of one PTZ view.
- **Mount Ceiling** / **Mount Wall** / **Mount Ground:** Select according to where the camera is mounted.

3.4 Controlling PTZ and Speed Dome Cameras with GV-Joystick V2

The GV-Joystick V2 can be connected to the GV-IP Decoder Box Series / GV-Pad Mini 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 are listed below:

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

Note: For PTZ control, GV-SD200 and third-party cameras must be connected through ONVIF. GV-Joystick V2 cannot control channels connected through GV-Mobile Server or RTSP.

1. Connect a GV-Joystick V2 to the USB port.
2. Right-click the live view of the PTZ device and select **PTZ**.
3. You can start to control the camera using the GV-Joystick V2.

Note: For **GV-IP Decoder Box Ultra**, you can also use GV-IR Remote Control to control PTZ movements. See *1.9 GV-IR Remote Control.*

Chapter 4 System Settings

On the main screen, click the **System Settings** icon or to access the following setting pages: System, Network, Date & Time, Account, Display, and Camera.

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.

Figure 4-1

4.1 System

On the System page, you can change the device name, interface language, resolution, or the designated storage device for storing snapshots.

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

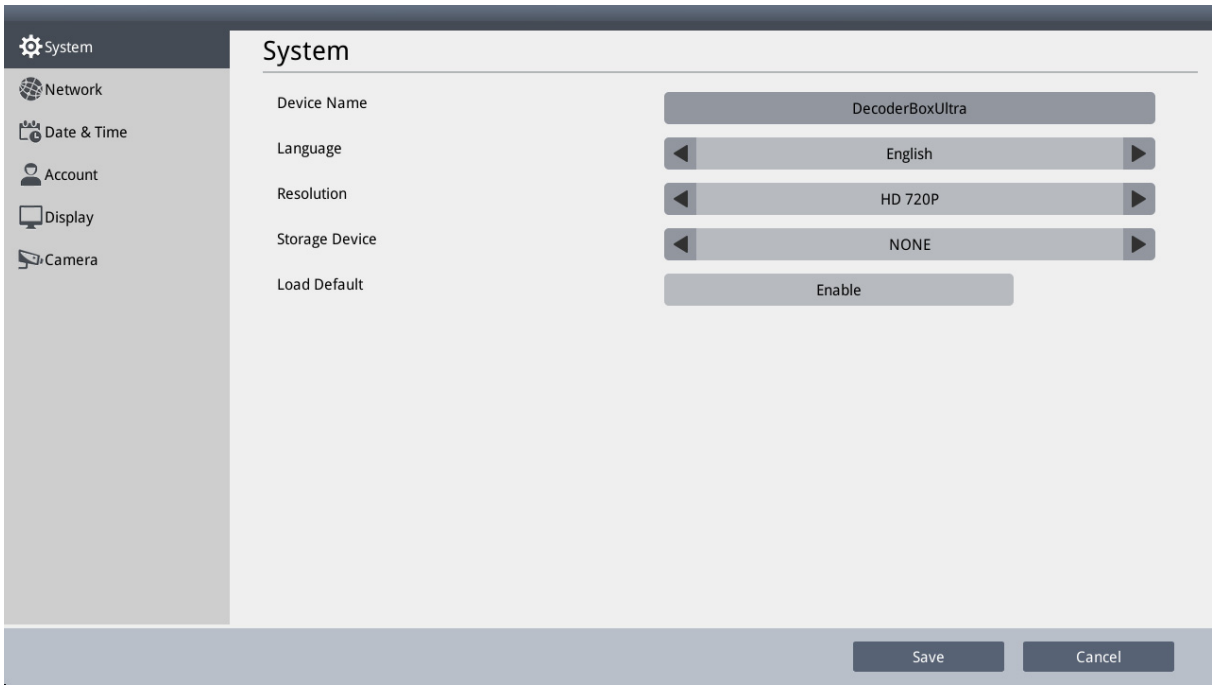


Figure 4-2

- **Device Name:** Double-click to change the device name.
- **Language:** Select a language for the user interface.
- **Resolution:** Only for GV-IP Decoder Box Series, select a resolution for your monitor. The default is HD 720P. If you are using a VGA monitor, select **VGA 1024 x 768**.
- **Storage Device:** Select the storage device you want to use for storing captured snapshots.
- **Load Default:** Only for GV-IP Decoder Box Ultra, click **Enable** to restore the device to default settings. For details, see *5.2 Restoring Default Settings.*

Click **Save** to apply the settings.

4.2 Network

To configure the network settings for the GV-IP Decoder Box Series / GV-Pad Mini, see *2.5 Setting Up the Network*.

4.3 Date & Time

On the Date & Time page, you can configure the date and time of the GV-IP Decoder Box Series / GV-Pad Mini.

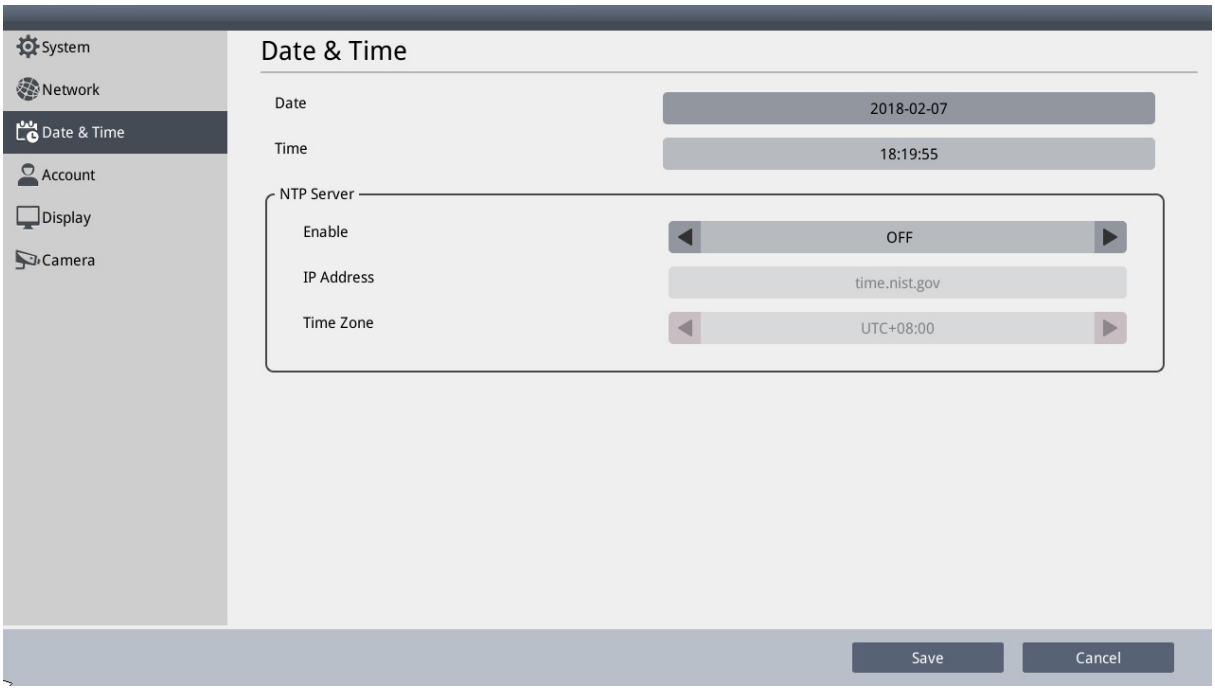


Figure 4-3

- **Date & Time:** Click to adjust the date and time.
- **NTP Server:** Switch the Enable option to **ON** or Select **Enable NTP** and type the URL of a network time server to synchronize the clock with the network time server.
- **Time Zone:** Select a time zone for your location.

Click **Save** to apply the settings.

4.4 Account

On the Account page, you can configure the login account of the GV-IP Decoder Box Series / GV-Pad Mini. The default user name and password are both **admin**. You will need the login information if you want to access the GV-IP Decoder Box Series / GV-Pad Mini through GV-IP Device Utility.

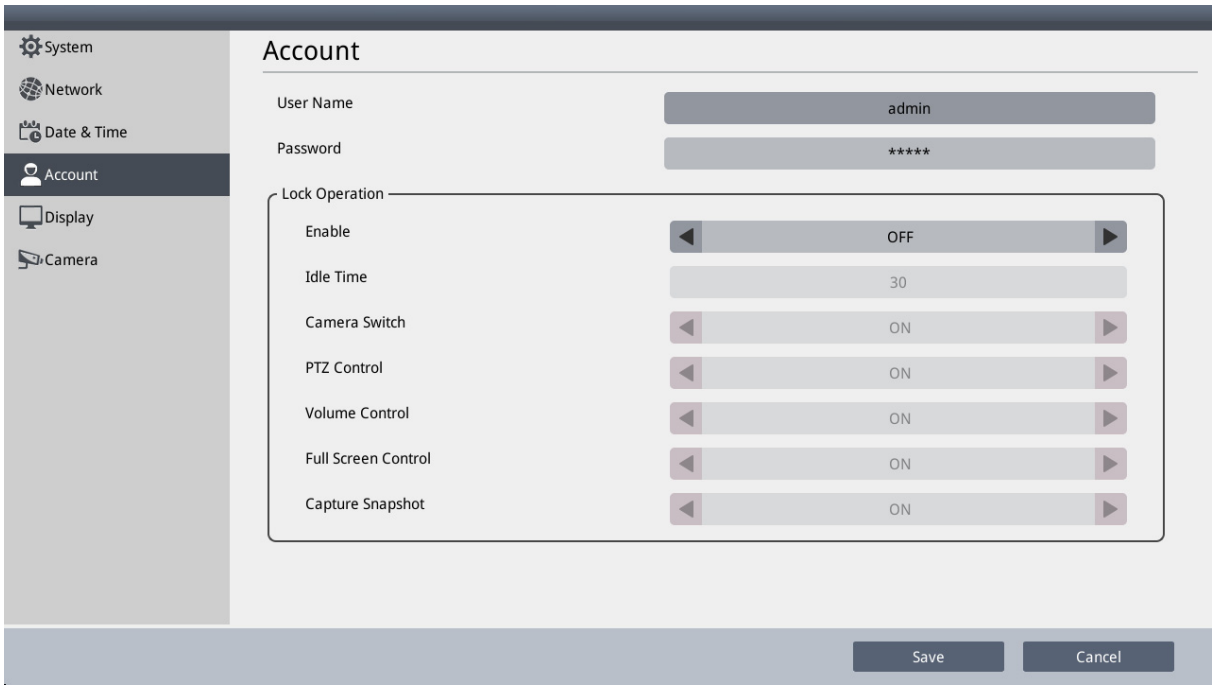


Figure 4-4

Configure the lock function by enabling **Lock Operation** (for GV-IP Decoder Box Ultra) / **Login window** (for GV-IP Decoder Box Plus / Lite / GV-Pad Mini) to manage users' accessibility. Once you enable the function, you must enter the User Name and Password if you have been idle for a specified time period.

- **Idle** / **Wait Time**: Specify an idle time from 30 to 300 seconds.

Only for GV-IP Decoder Box Ultra / Plus / GV-Pad Mini, you can specify the following functions to be locked or unlocked after the specified time period. Enter the User Name and Password again to unlock the functions.

- **Camera Switch** / **Lock Play Control**
- **PTZ Control** / **Lock PTZ Control**
- **Volume Control** / **Lock Audio Control**
- **Full Screen Control** / **Lock Full screen**
- **Capture Snapshot** / **Lock Capture Snapshot**
- **Lock Dewarp Control**

  Note: Fisheye dewarping is only supported by GV-IP Decoder Box Plus.
  *combine the note with the explanation of lock dewarp control, e.g. the function is only available for xxx.

Click **Save** to apply the settings.

4.5 Display

On the Display page, you can specify what information to overlay on the live view.

Figure 4-5

- **Font Color:** Change the font color of the text overlay.
- **Device Name** / **Display Name:** Select to display the device name of the camera.
  - ⊙ **Camera Name**: Select to display the camera name.
  - ⊙ **Custom Name:** Select to display the personalized camera name.
- **IP Address** / **Display IP Address:** Select to display the IP address of the camera on the live view.
- **Camera Count** / **Display Camera Count:** Select to display the camera count of the live view grid. For example, 7/8 indicates that there are 8 cameras assigned to the live view grid, and live view of the 7th camera is currently being displayed.
- **PTZ Icon** / **Display PTZ Icon:** Select to display PTZ icon when the camera supports PTZ functions.

Click **Save** to apply the settings.

4.6 Camera

On the Camera page, you can change the ID and password of the IP device, which automatically applies to all IP devices. The default ID and Passwords are **admin**.

Click **Save** to apply the settings.

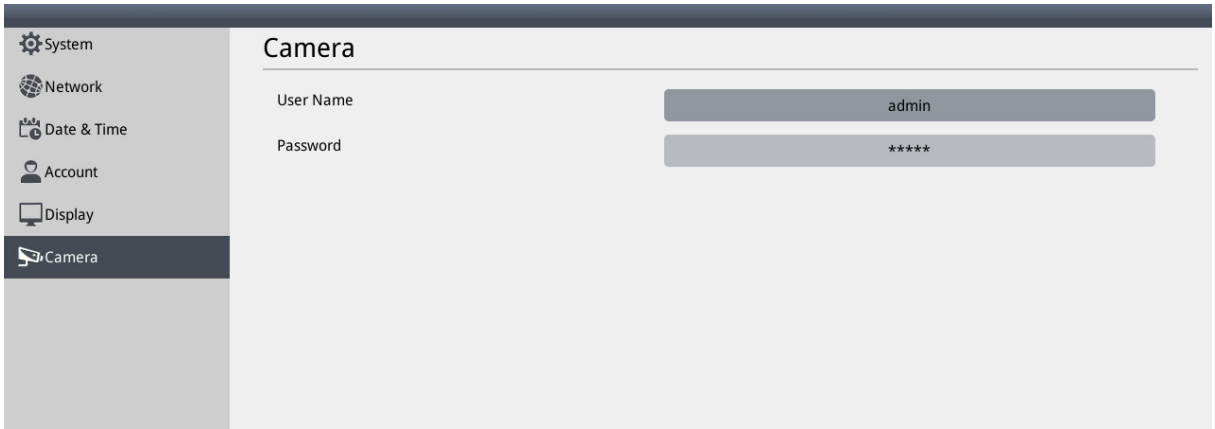


Figure 4-6

Chapter 5 Advanced Applications

5.1 Upgrading the Firmware

GeoVision will periodically release firmware updates on the website. You can upgrade firmware locally using a USB drive or SD card or remotely through the GV-IP Device Utility.

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

5.1.1 Upgrading Firmware through a Storage Device

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.
3. On the main screen, click the **Firmware Update** / icon.
4. Select the storage device and select the firmware file.

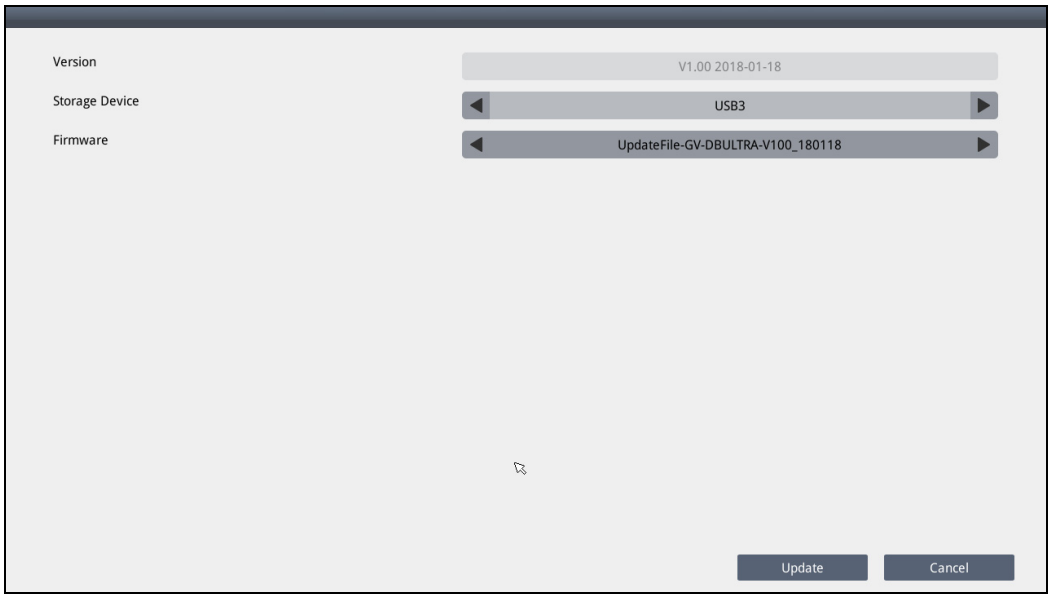


Figure 5-1

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

5.1.2 Upgrading Firmware through GV-IP Device Utility

1. Run the GV-IP Device Utility. All GV-IP Devices under the same LAN are searched.

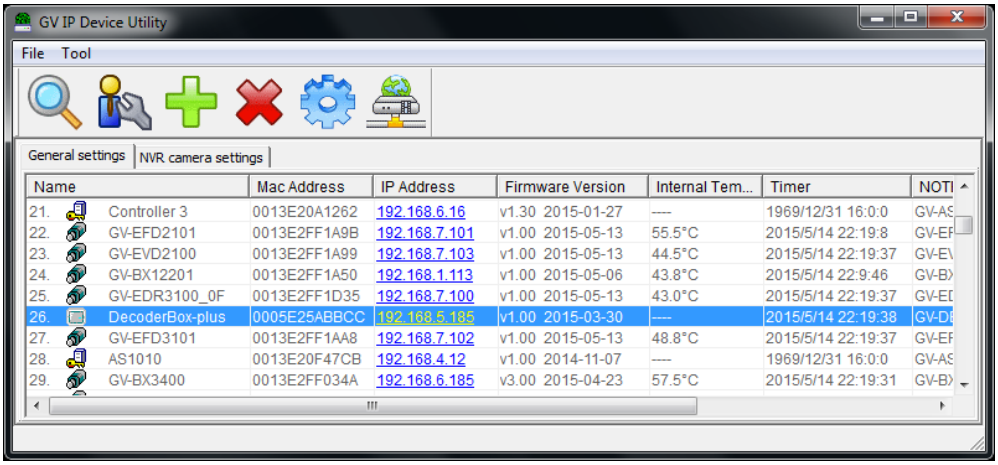


Figure 5-2

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

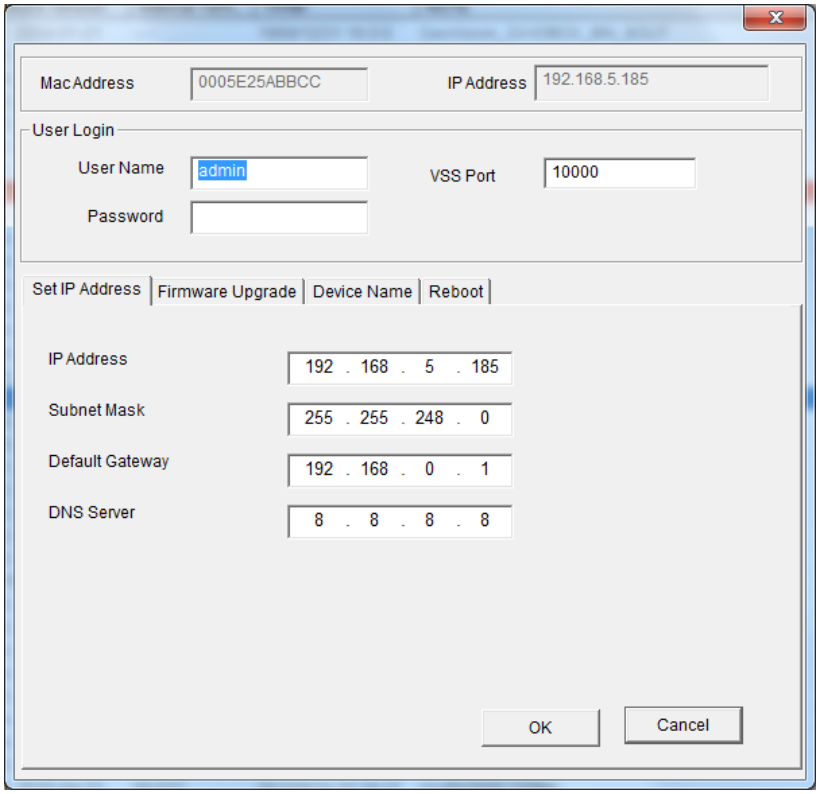


Figure 5-3

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.

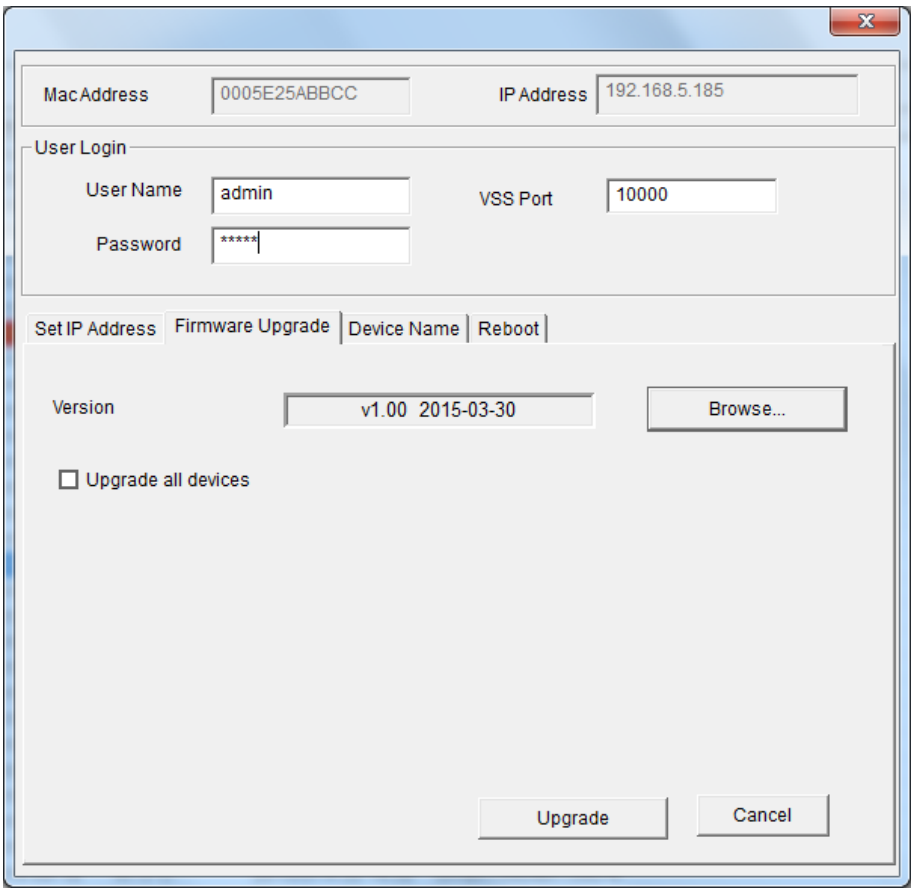


Figure 5-4

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

Note: The default user name and password are both **admin**. To see how to change the login information of GV-IP Decoder Box Series / GV-Pad Mini, refer to *4.4 Account*.

5.2 Restoring Default Settings

If for any reason the GV-IP Decoder Box Series / GV-Pad mini is not responding correctly, there are two ways to restore the device to default settings.

1. Use the pin to press the load default button on the front / side panel for about 10 seconds.
2. Use Web interface to configure the setting.

- For GV-IP Decoder Box Ultra, click the **System Settings** icon on the main page, click **System**, and enable **Load Default**.

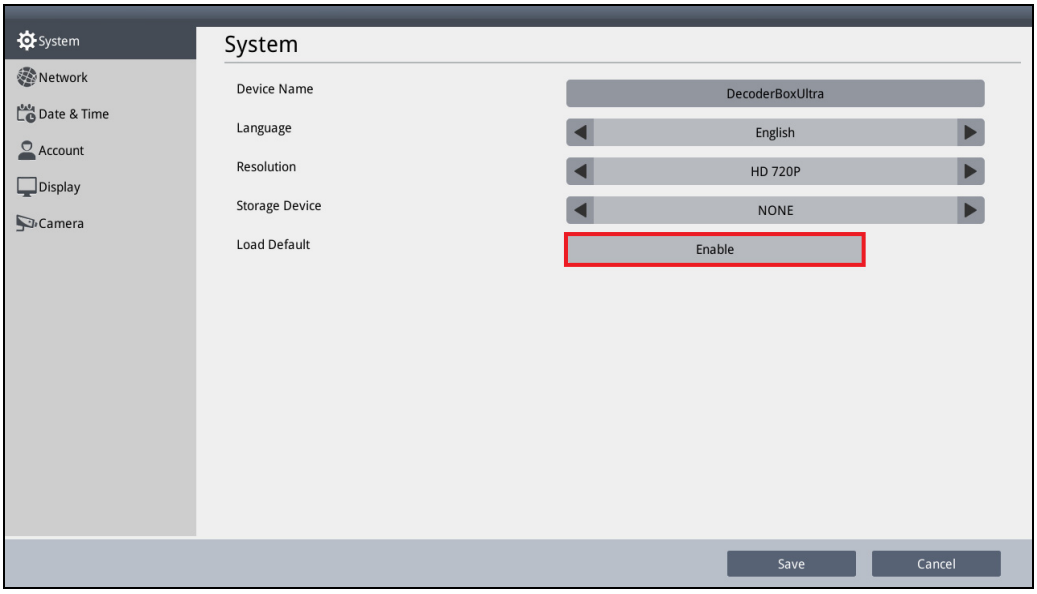


Figure 5-5

- For GV-IP Decoder Box Plus / Lite / GV-Pad Mini, click the **System Settings** icon on the main screen and click the **Load Default** button on the bottom of any of the setting pages.

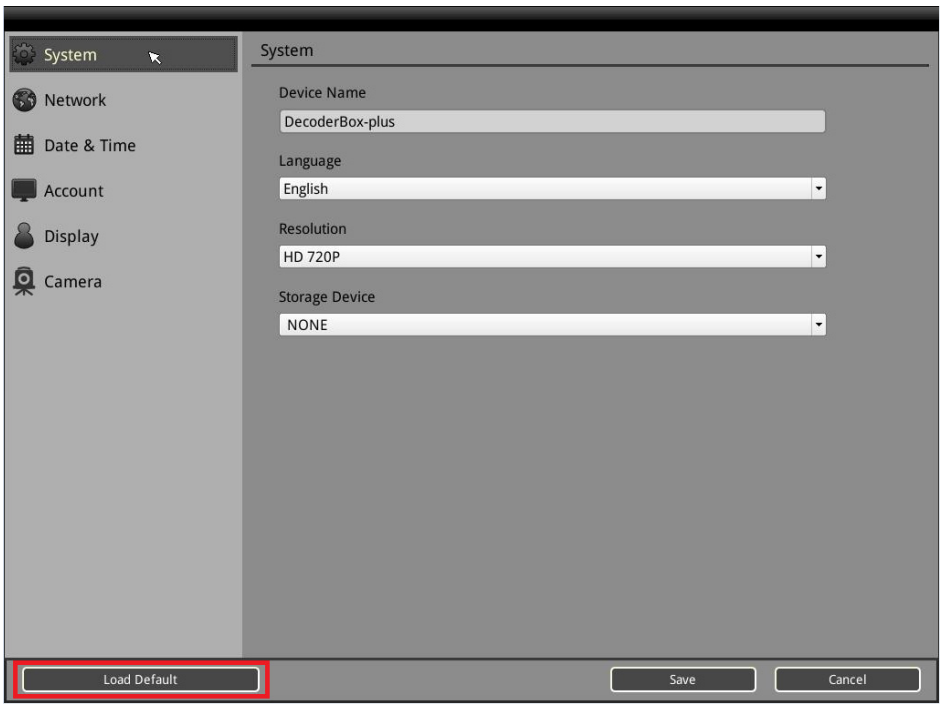


Figure 5-6

The system will restore default settings and reboot itself.