

# GV-EBD4700 IR Eyeball IP Dome

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## *User's Manual*



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

EBDV10-A-EN



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**Note:** No memory card slot or local storage function for Argentina.

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# Preface

Welcome to the *GV-EBD4700 IR Eyeball IP Dome User's Manual*.

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

<b>Model</b>	<b>Model Number</b>	<b>Firmware Version</b>
IR Eyeball Dome	GV-EBD4700	V1.0

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## Naming Definition

<b>GV-System</b>	GeoVision Analog and Digital Video Recording Software. The GV-System also refers to <b>Multicam System</b> , <b>GV-NVR System</b> , <b>GV-DVR System</b> and <b>GV-Hybrid DVR System</b> at the same time
<b>GV-VMS</b>	GeoVision Video Management System for IP cameras.

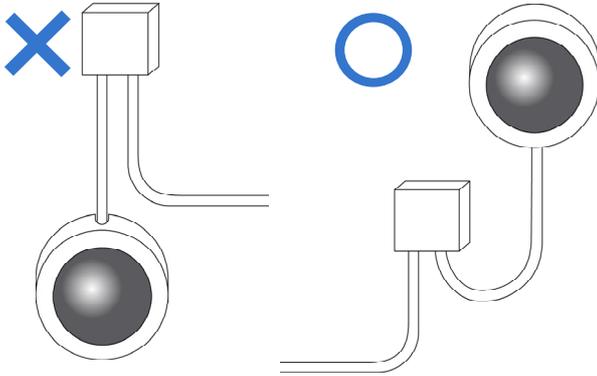
## **Note for Connecting to GV-VMS / DVR / NVR**

The H.265 Target Eyeball Dome is designed to work with and record on GV-VMS / DVR / NVR, a video management system. Once the camera is connected to the GV-VMS / DVR / NVR, the resolution set on the GV-VMS / DVR / NVR will override the resolution set on the camera's Web interface. You can only change the resolution settings through the Web interface when the connection to the GV-VMS / DVR / NVR is interrupted.

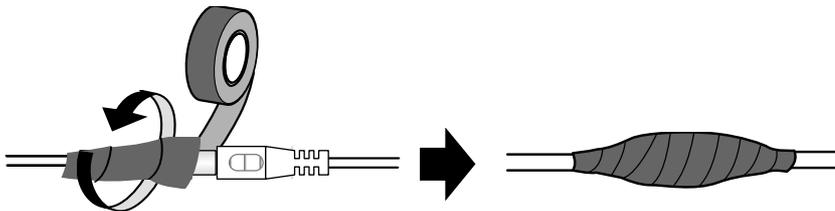
## Note for Installing Camera Outdoor

When installing the camera outdoor, be sure that:

1. The camera is set up above the junction box to prevent water from entering the camera along the cables.



2. Any power, audio and I/O cables are waterproofed using waterproof silicon rubber or the like.



3. The screws are tightened and the cover is in place after opening the camera cover.

# Chapter 1 Introduction

The H.265 Target Eyeball Dome is an outdoor, network camera equipped with an automatic IR-cut filter and an IR LED for day and night surveillance. The camera adheres to IP66 standards. The camera supports H.265 video codec to achieve better compression ratio while maintaining high quality pictures at reduced network bandwidths. With its WDR Pro, It can process scenes with contrasting intensity of lights and produce clear image.

## 1.1 Key Features

- 1/3" progressive scan low lux CMOS sensor
- Min. illumination at 0.03 lux (B/W) and 0.05 lux (color)
- Triple streams from H.265, H.264 and MJPEG
- Up to 20 fps at 2592 x 1520, 25 fps at 2560 x 1440, 30 fps at 2048 x 1520
- Intelligent IR
- IR distance up to 30 m (98.4 ft)
- Day and night function (with removable IR-cut filter)
- Wide Dynamic Range Pro (WDR Pro)
- Ingress protection (IP66)
- DC 12V / PoE (IEEE 802.3af)
- Defog
- 3D noise reduction
- Motion detection
- Text overlay
- Privacy mask

## 1.2 Packing List

- H.265 Target Eyeball Dome



- Screw x 3



- Screw Anchor x 3



- Waterproof Rubber Set



- Drill Template Paster



- Software Download Guide
- Warranty Card

## 1.3 System Requirements

<b>CPU</b>	Intel Core i5-4670, 3.40 GHz
<b>Memory</b>	DDR3 8 GB RAM
<b>On Board Graphics</b>	Intel HD Graphics 4600 (Versions of driver from year 2014 or later required)
<b>Web Browsers</b>	<ul style="list-style-type: none"><li>● Internet Explorer 11.0 or above</li><li>● Mozilla Firefox</li><li>● Safari</li></ul>
<b>Note:</b> Some functions are not available on non-IE browsers.	

## 1.4 Optional Accessories

Optional accessories can expand the capabilities and versatility of your GV-EBD4700. Contact your dealer for more information.

Model Number	Name	Details
GV-Mount211	Wall Mount Bracket 	Dimensions: 233 x 126 x 126 mm (9.2" x 5" x 5") Weight: 0.92 kg (2.0 lb)
GV-PA191	Power over Ethernet (PoE) Adapter 	The GV-PA191 is a Power over Ethernet (PoE) adapter designed to provide power to the IP device through a single Ethernet cable.
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	Contact your sales representative for the countries and areas supported.	

## 1.5 Overview

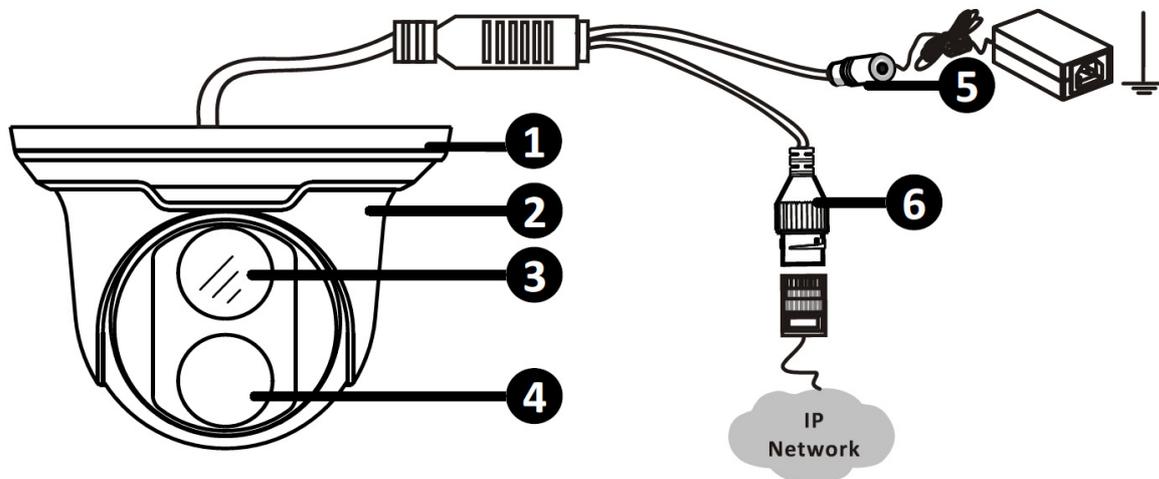


Figure 1-1

No.	Description
1	Bottom ring
2	Housing
3	Lens
4	Infrared indicator
5	Power connector (DC 12 V) An optional power adapter is required.
6	Ethernet connector / PoE

## 1.6 Installation

The Target Eyeball Dome is designed for outdoors. With the standard package, you can install the camera on the ceiling. Alternatively you can purchase optional mounting accessories to mount GV-EBD4700 on a wall.

### 1.6.1 Standard Installation

Below are the instructions for **Ceiling Mount**. There are two kinds of Ceiling Mount: **Concealed Installation** and **Open Installation**. In concealed installation, the cables are hidden in the ceiling. In open installation, the cables are led out from the open slot on the bottom ring.

#### For Concealed Installation

1. Stick the drill template paster to the ceiling, and then drill three holes according to the drill template.

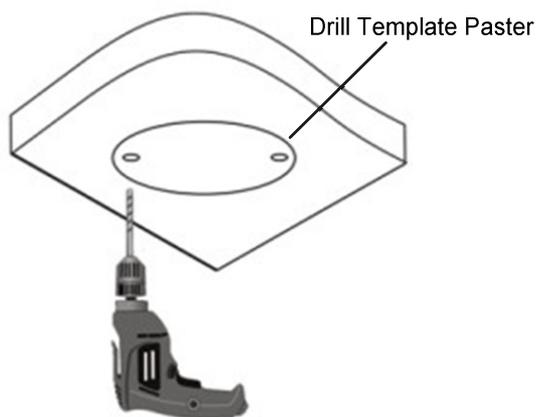


Figure 1-2

2. Insert the screw anchors.

Drill a hole to lead cables out of the ceiling

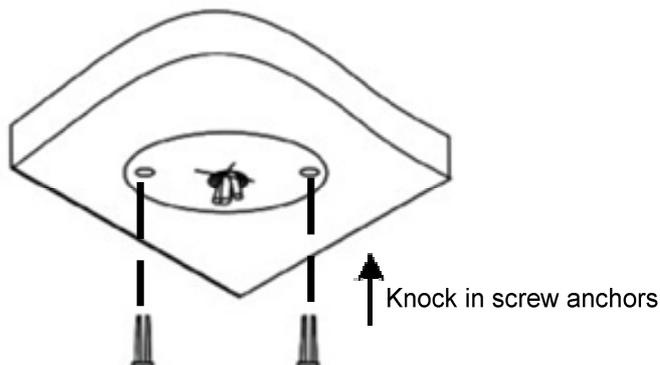


Figure 1-3

3. Remove the bottom ring by turning it anticlockwise.

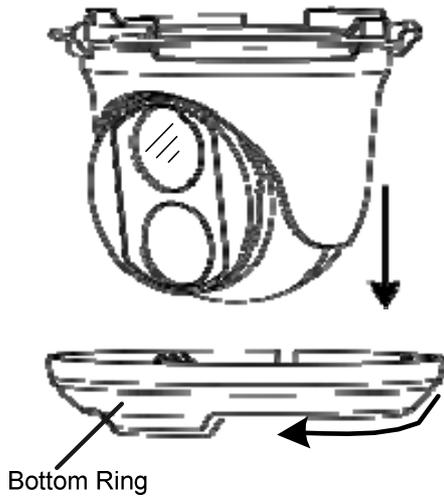


Figure 1-4

4. Connect the cables and then secure the camera.

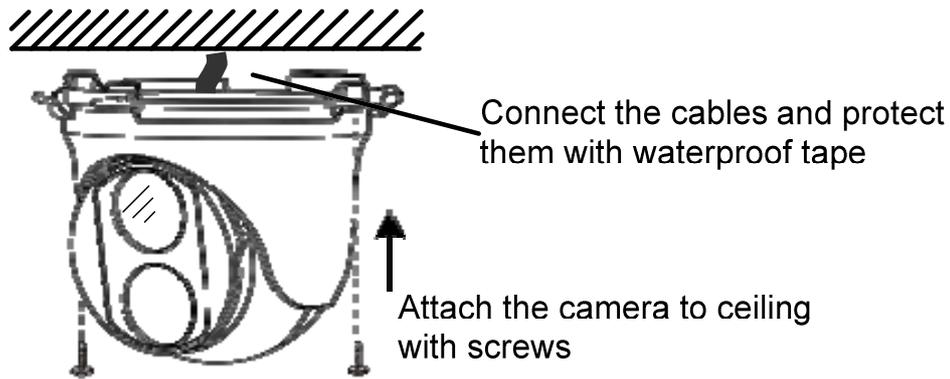


Figure 1-5

5. Adjust the monitoring direction.

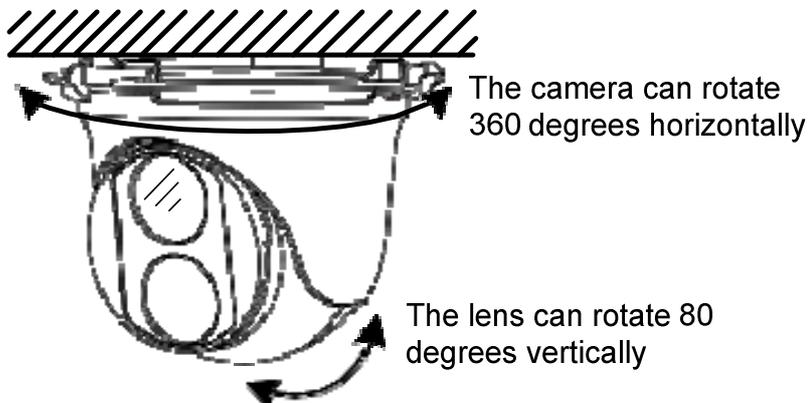
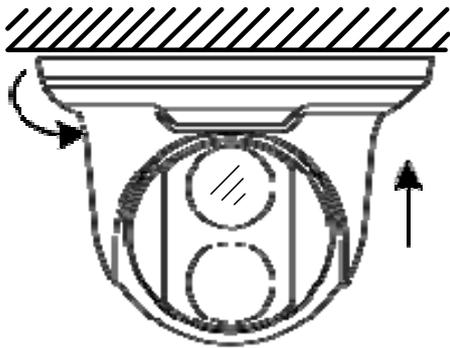


Figure 1-6

6. Mount the bottom ring.



Push the bottom ring back up and turn it clockwise to lock into position

Figure 1-7

**For Open Installation**

Lead the cables out from the open slot on the bottom ring before screwing the camera to the ceiling as shown in Figure 1-5.

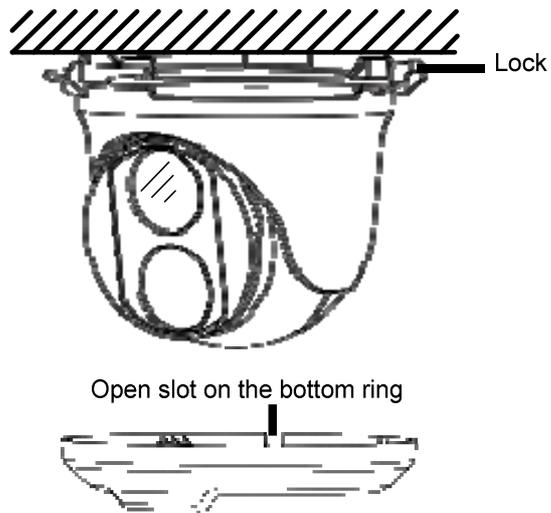


Figure 1-8

## 1.6.2 Optional Installation

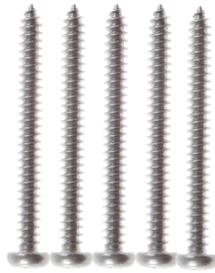
You can optionally purchase **GV-Mount211** for **Wall Bracket Mount**. Follow the instructions below.



*Figure 1-9*

**GV-Mount 211 Packing List**

- GV-Mount211 Wall Mount Bracket
- Long Screw x 5



- Short Screw x 4



- Screw Anchor x 5



- Plastic PG21 Conduit Connector



- Drill Template Paster



1. Unscrew the bracket.



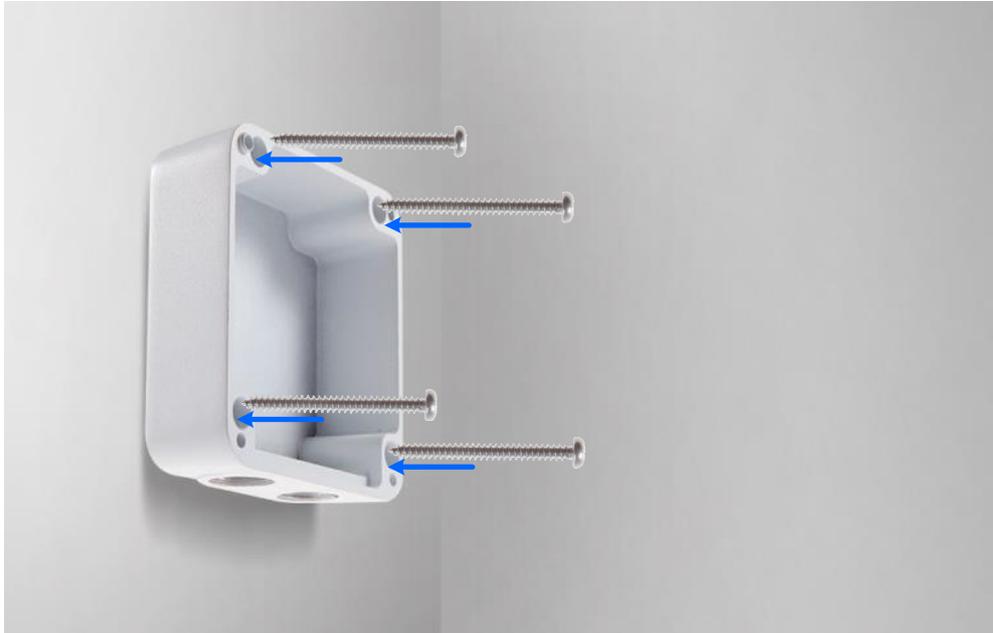
Figure 1-10

2. Loosen the indicated area by turning it anticlockwise.



*Figure 1-11*

3. Stick the drill template paster to the wall with the arrow pointing up.
4. Drill 4 holes according to the sticker and insert the 4 screw anchors to the 4 holes.
5. Secure the power box to the wall with four long screws.



*Figure 1-12*

6. Remove the bottom ring by turning it anticlockwise.

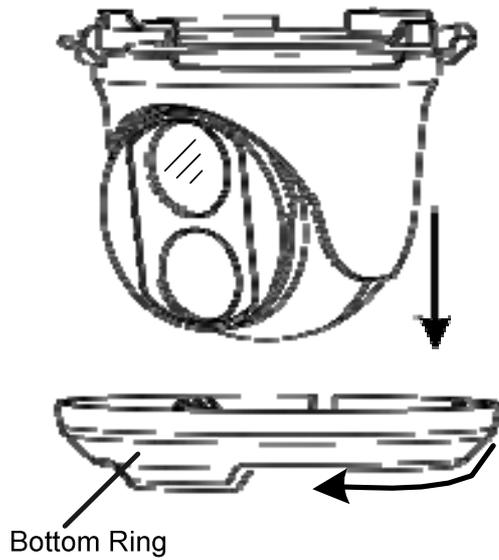


Figure 1-13

7. Thread the network and power wires through the wall mount bracket.
8. Secure the camera to the wall mount bracket with 3 short screws.

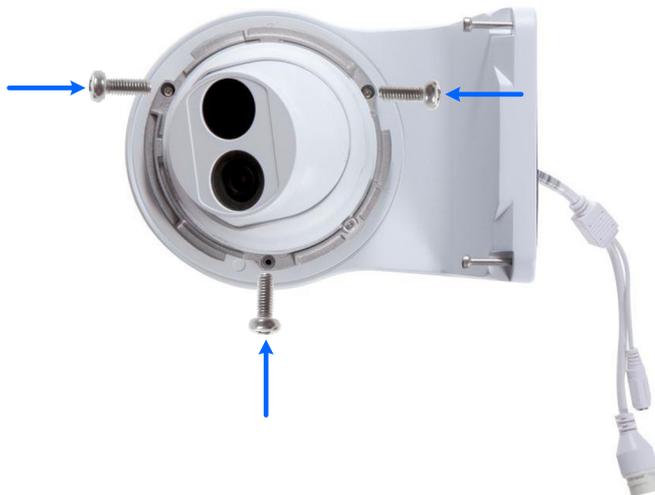
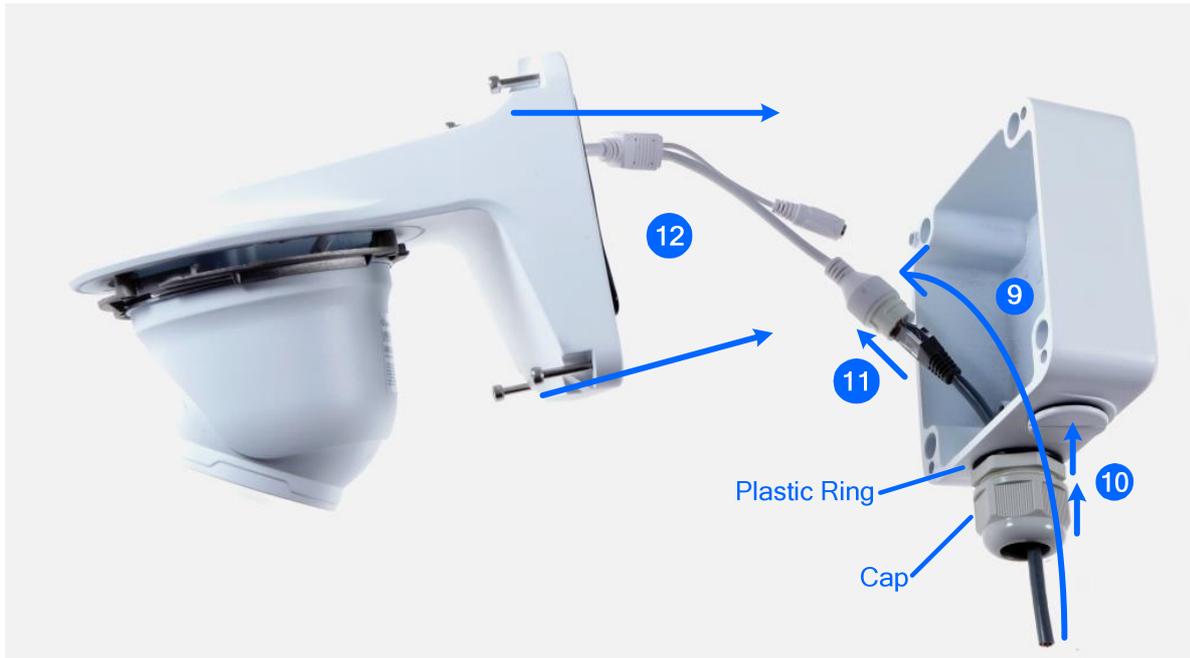


Figure 1-14

9. Thread the Ethernet cable through the PG21 conduit connector and the power box as shown in No. 9, Figure 1-15.
10. Rotate the plastic ring to secure the conduit connector to the power box. Screw in the cap as shown in No. 10, Figure 1-15.
11. Plug the Ethernet cable to the RJ-45 connector of the camera as shown in No. 11, Figure 1-15.
12. Screw the wall mount bracket to the power box as shown in No. 12, Figure 1-15.



*Figure 1-15*

13. After you adjust the lens, mount the bottom ring.



*Figure 1-16*

## 1.7 Waterproofing the Cable

Waterproof the Ethernet cable by using the supplied waterproof rubber set.

1. Attach the seal ring to the RJ-45 plug.

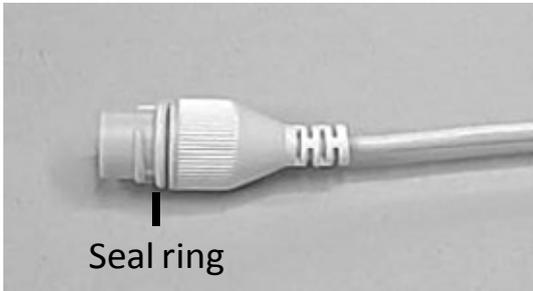


Figure 1-17

2. Insert the waterproof components through the Ethernet cable as shown below.

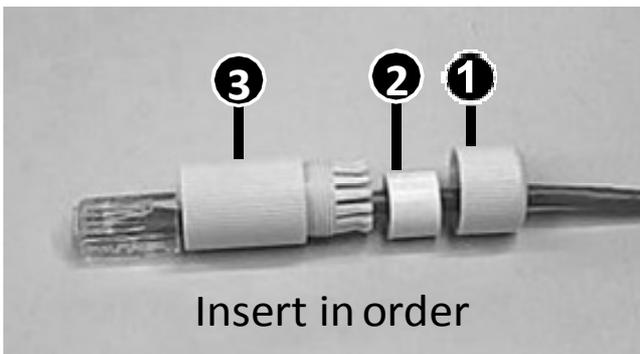


Figure 1-18

3. Insert the cylindrical waterproof ring into waterproof bolt.

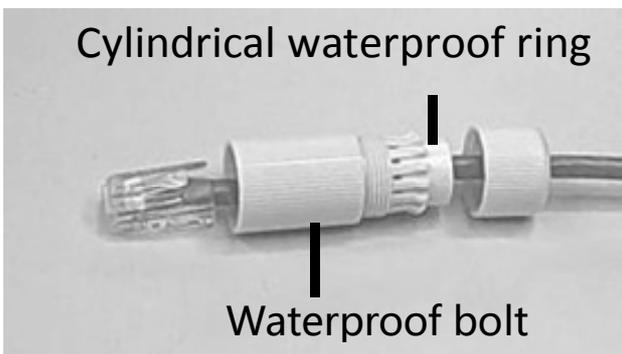
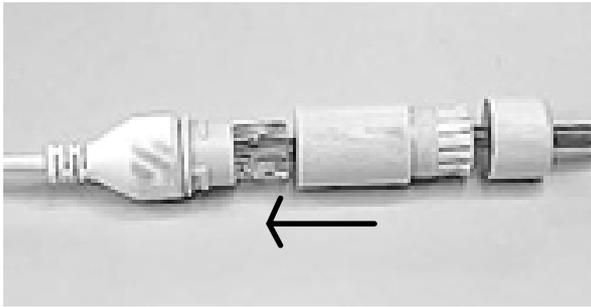


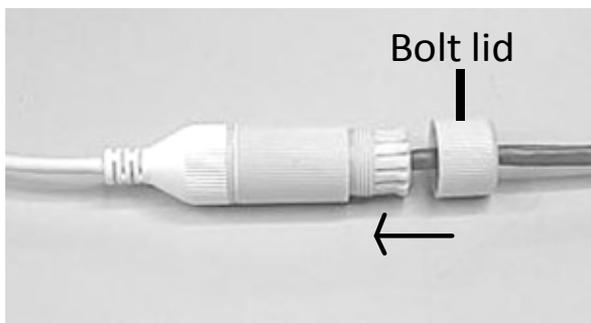
Figure 1-19

4. Insert the cable into the RJ-45 plug and screw the waterproof bolt in.



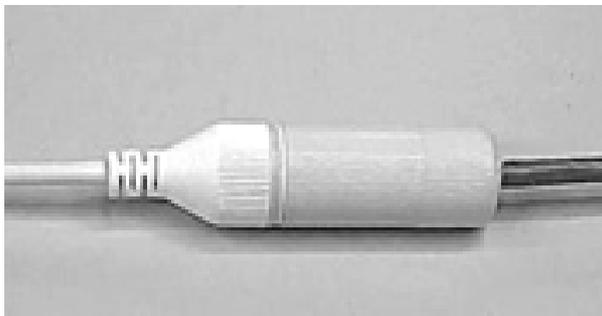
*Figure 1-20*

5. Screw in the waterproof bolt lid.



*Figure 1-21*

6. Finish the waterproof Installation.



*Figure 1-22*

## Chapter 2 Accessing the Camera

Once installed, the IP Eyeball Dome is accessible on a network. Follow these steps to configure the network settings and access your surveillance images.

### 2.1 Installing on a Network

These instructions describe the basic connections to install the camera on the network.

1. Using a standard network cable, connect the camera to your network.
2. Connect to power using one of the methods:
  - Using the optional power adapter to connect to power.
  - Using the Power over Ethernet (PoE) function. The power will be provided over the network cable.
3. You can now access the Web interface of the camera.
  - If the camera is installed in a LAN with the DHCP server, use GV-IP Device Utility to look up the camera's dynamic IP address. See *2.1.1 Checking the Dynamic IP Address*.
  - If the camera is installed in a LAN without the DHCP server, the default IP address **192.168.0.10** will be applied. To assign a different static IP address, see *2.1.2 Assigning an IP Address*.

---

**Note:** You must set your browser to allow ActiveX Controls and perform a one-time installation of the ActiveX component onto your computer at your first login.

---

## 2.1.1 Checking the Dynamic IP Address

Follow the steps below to look up the IP address and access the Web interface.

1. Download and install the GV-IP Device Utility program from [http://www.geovision.com.tw/english/5\\_8.asp](http://www.geovision.com.tw/english/5_8.asp)

---

**Note:** The PC installed with GV-IP Device Utility must be under the same LAN with the camera you wish to configure.

---

2. On the GV-IP Utility window, click the  button to search for the IP devices connected in the same LAN. Click the **Name** or **Mac Address** column to sort.

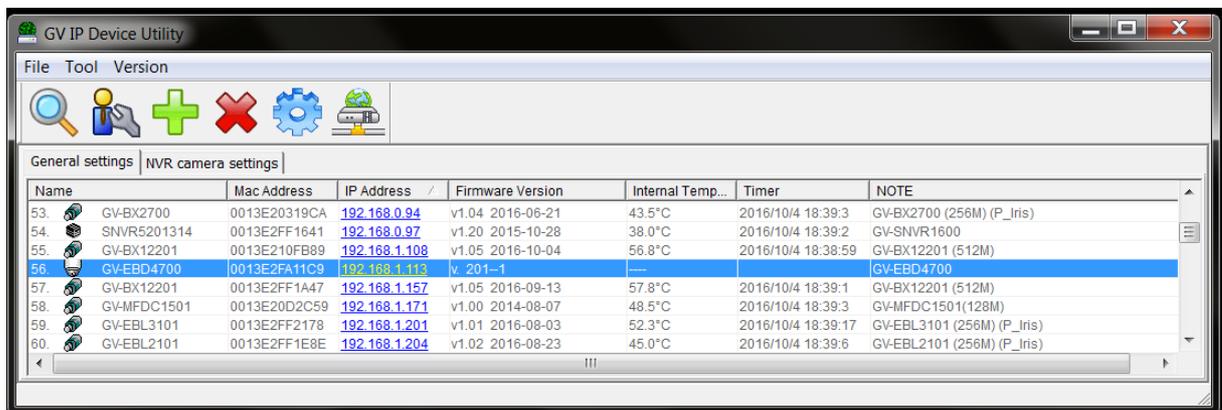


Figure 2-1

3. Find the camera with its Mac Address, click on its IP address and select **Web Page**.

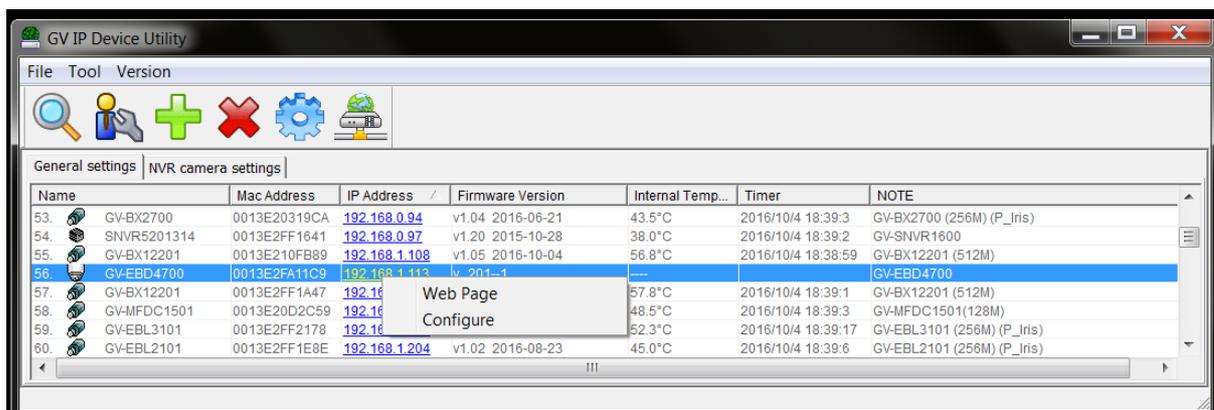


Figure 2-2

4. The login page appears.

Failed to load the plug-in. Click [Download](#) to install the latest plug-in.

Username

Password

Live View

Save Password

*Figure 2-3*

5. For the first time accessing the Web interface, download and install the plug-in.
6. Type the default ID and password **admin** and click **Apply** to login.

## 2.1.2 Assigning an IP Address

To assign a new static IP address, log in the Web interface to access the network setting page.

---

**Note:** If your router does not support DHCP, the default IP address will be **192.168.0.10**. In this case, it is strongly suggested that you modify the IP address to avoid the IP address conflict with other GV-IP devices on the same LAN.

---

1. Open your web browser, and type the default IP address <http://192.168.0.10>. A dialog box appears.
2. Type the default username and password **admin**. Click **Login**.
3. Click **Setup**, select **Network** in the left menu and select **TCP/IP**.

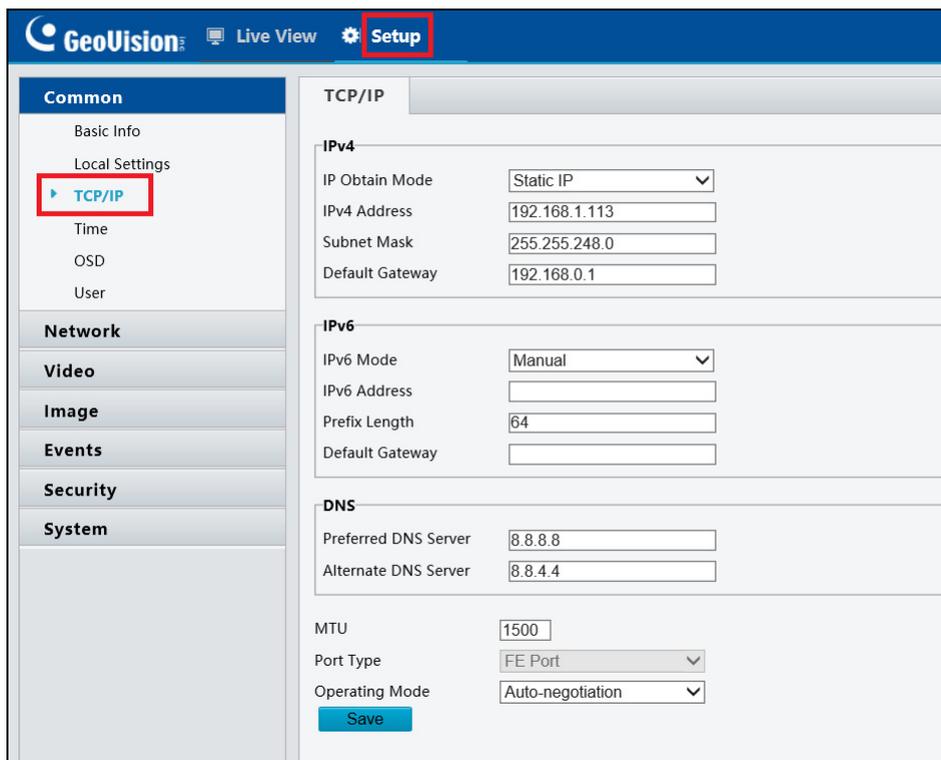


Figure 2-4

4. Select **Static IP** from the IP Obtain Mode drop-down list.
5. Enter the IP address, subnet mask, and default gateway address. Make sure that the IP address of the camera is unique in the network.
6. Click **Save**.

## 2.2 Accessing Live View

After logging in to the eyeball dome, you will see the Home page as shown below:

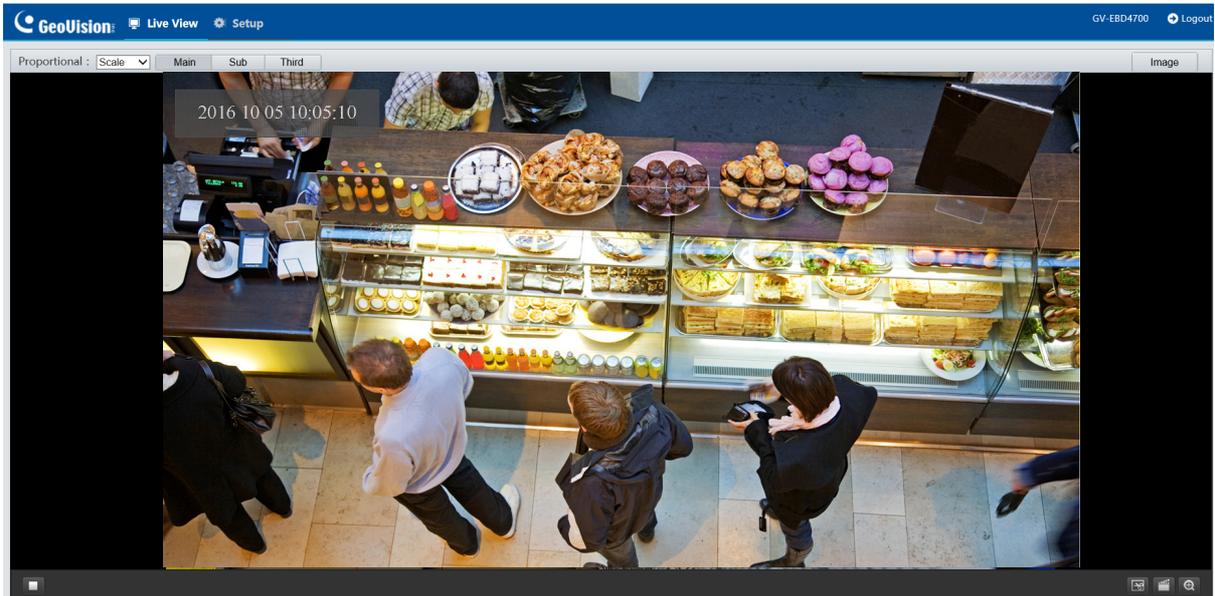


Figure 2-5

## 2.2.1 The Live View Window

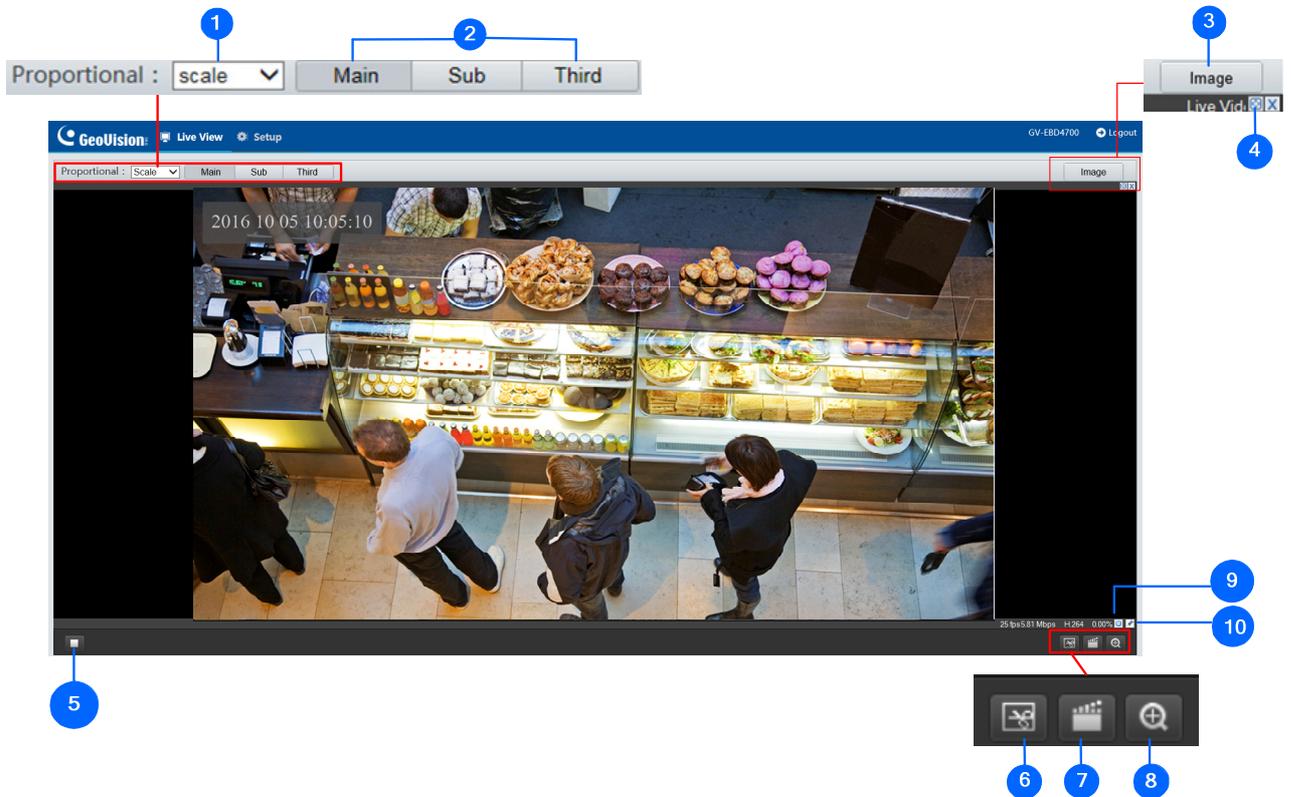


Figure 2-6

No.	Name	Function
1	Proportional	Set the display ratio of the image. <ul style="list-style-type: none"> <li>Scale: display images by 16:9.</li> <li>Stretch: display images by window size.</li> <li>Original: display images in its original size.</li> </ul>
2	Live Stream	Select a live video stream: main stream, sub stream or third stream.
3	Image	Open the image setting page. – See 3.4.1 <i>Image</i> .
4	Full Screen Mode	Display in full screen mode.
5	Play/Stop	Play or stop live video.
6	Snapshot	Take a snapshot of the current image displayed on the PC.
7	Local Recording	Start  or stop  local recording.
8	Digital Zoom	Start  or stop  digital zoom. -- See 2.2.1.1 <i>Digital Zoom</i> .
9		Reset the packet loss rate to zero.

10		Display packet loss rate and bit rate information in the bottom.
<p><b>Note:</b></p> <ol style="list-style-type: none"><li>1. The paths for saving snapshots and local recordings are set in System Configuration.</li><li>2. The buttons (No. 9 and No. 10) will appear on the floating toolbar after you move the mouse cursor on a live view window.</li><li>3. Click the button (No. 10) to display the bottom information. Click this button again, the bottom information is displayed if the mouse cursor is moved on a live view window or on the bottom information, and it hides automatically if the mouse cursor remains on a live view window for 3 seconds or leaves the window.</li></ol>		

### 2.2.1.1 Digital Zoom

To use the digital zoom function, follow these steps:

1. Click  (No. 8, Figure 2-6) on the toolbar.
2. Click and hold the mouse button, and then drag from the top down to specify an area.
3. To restore the original image size, click in the enlarged area, or drag from the bottom up.
4. To exit, click  (No. 8, Figure 2-6) on the toolbar.

# Chapter 3 Administrator Mode

The Administrator can access and configure GV-EBD4700 through the network. Click **Setup** at the top of the Web interface to access the following seven configuration tabs: **Common**, **Network**, **Video**, **Image**, **Events**, **Security** and **System**.

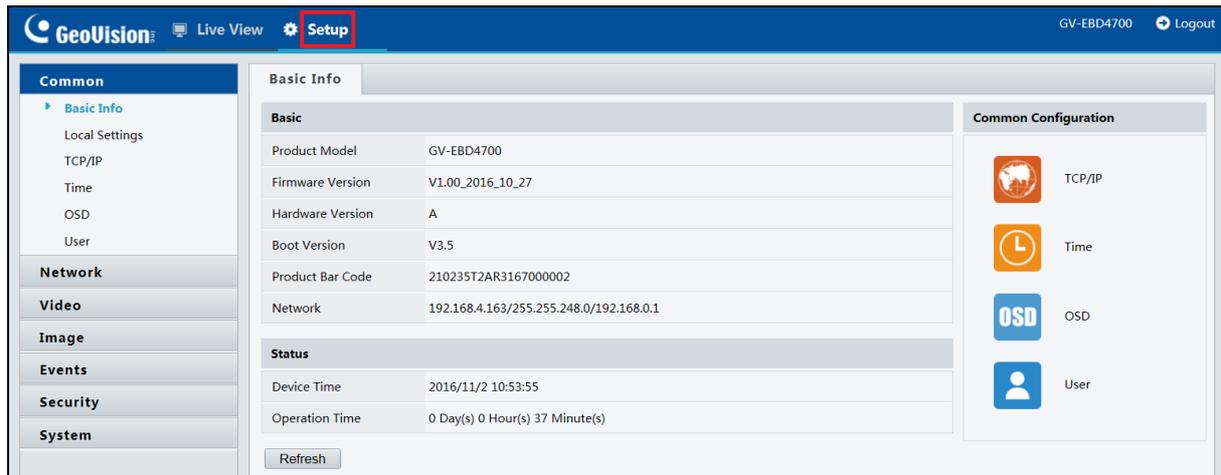


Figure 3-1

## List of Options

See the table below for the settings available on the Web interface. Find the topic of interest by referring to the section number prefixed to each option.

3.1 Common	3.1.1 Basic Info 3.1.2 Local Settings
3.2 Network	3.2.1 TCP/IP 3.2.2 Port 3.2.3 DDNS 3.2.4 FTP 3.2.5 E-mail 3.2.6 Port Mapping 3.2.7 802.1x
3.3 Video	3.3.1 Video 3.3.2 Capture 3.3.3 ROI 3.3.4 Media Stream
3.4 Image	3.4.1 Image 3.4.2 OSD 3.4.3 Privacy Mask
3.5 Events	3.5.1 Motion Detection
3.6 Security	3.6.1 User 3.6.2 Network Security
3.7 System	3.7.1 Time 3.7.2 Maintenance

## 3.1 Common

Under the Common tab, the Administrator can find the general settings for the camera, as well as shortcuts to the following setting pages.

- **TCP/IP:** See 3.2.1 *TCP/IP* for details.
- **Time:** See 3.7.1 *Time* for details.
- **OSD:** See 3.4.2 *OSD* for details
- **User:** See 3.6.1 *User* for details

### 3.1.1 Basic Info

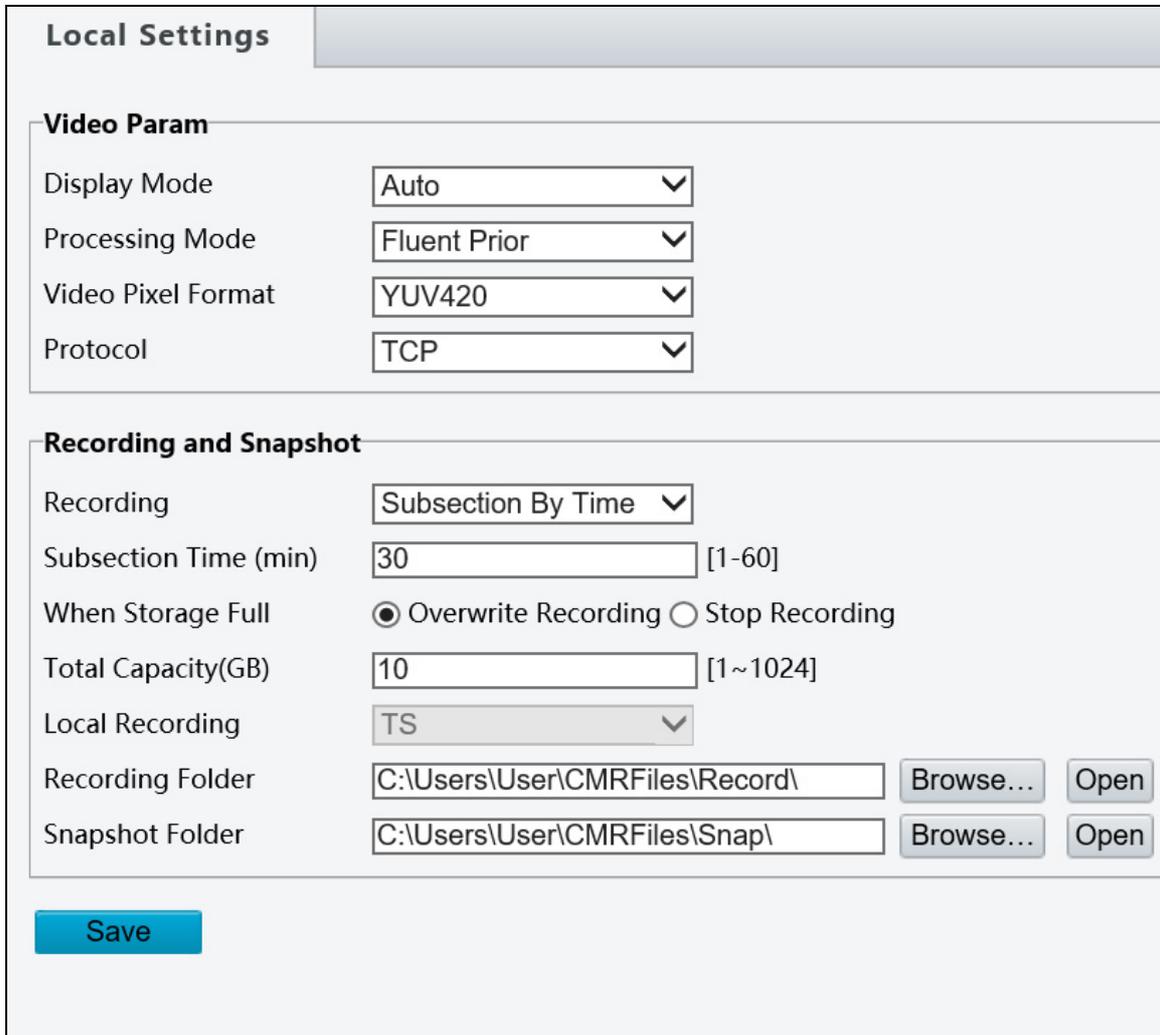
You can view the current status of your camera. Click **Refresh** for the latest status information. Under Common Configuration on the right, you can click on the icons to quickly access the configuration pages.

Basic Info		Common Configuration	
<b>Basic</b>			
Product Model	GV-EBD4700	 TCP/IP	
Firmware Version	V1.00_2016_10_27	 Time	
Hardware Version	A	 OSD	
Boot Version	V3.5	 User	
Product Bar Code	210235T2AR3167000002		
Network	192.168.4.163/255.255.248.0/192.168.0.1		
<b>Status</b>			
Device Time	2016/11/2 10:53:55		
Operation Time	0 Day(s) 0 Hour(s) 37 Minute(s)		
<input type="button" value="Refresh"/>			

Figure 3-2

### 3.1.2 Local Settings

You can set local parameters for your PCs.



The screenshot shows a 'Local Settings' window with two main sections: 'Video Param' and 'Recording and Snapshot'. The 'Video Param' section includes dropdown menus for Display Mode (Auto), Processing Mode (Fluent Prior), Video Pixel Format (YUV420), and Protocol (TCP). The 'Recording and Snapshot' section includes a Recording dropdown (Subsection By Time), a Subsection Time input (30), a radio button for 'When Storage Full' (Overwrite Recording), a Total Capacity input (10), a Local Recording dropdown (TS), and text boxes for Recording and Snapshot folders with 'Browse...' and 'Open' buttons. A 'Save' button is located at the bottom left.

Figure 3-3

#### [Video Param]

- **Processing Mode**

- ⊙ **Real Time Prior:** Select this if the network is in good condition.
- ⊙ **Fluent Prior:** Select this if you want short time lag for live video.
- ⊙ **Ultra-Low Delay:** Select this if you want the minimum time lag for live video.

- **Video Pixel Format:** Select the video format for images at your local computer. It is recommended to choose YUV420 if the graphic card of your PC supports it.

- **Protocol:** Select the protocol used to transmit media streams to be decoded by the PC.

**[Recording and Snapshot]****■ Recording**

- ⊙ **Subsection By Time:** Set a maximum time length of each recording file. If you select 5 minutes, a 30-minute event will be chopped into six 5-minute event files.
- ⊙ **Subsection by Size:** Set a maximum size limit of each recording file.

**■ When Storage Full**

- ⊙ **Overwrite Recording:** When the assigned storage space on the computer is used up, the camera deletes the existing recording files to make room for the new recording file.
- ⊙ **Stop Recording:** When the assigned storage space on the computer is full, recording stops automatically.

**■ Total Capacity:** Set a capacity limit to the assigned storage space on the computer.

**■ Recording Folder:** Click **Browse** to set a folder to store the recorded videos at your local computer.

**■ Snapshot Folder:** Click **Browse** to set a folder to store the captured snapshots at your local computer.

## 3.2 Network

The network section allows you to configure the network settings, modify ports, configure FTP server, and set up e-mail for notification.

### 3.2.1 TCP/IP

**TCP/IP**

**IPv4**

IP Obtain Mode:

IPv4 Address:

Subnet Mask:

Default Gateway:

**IPv6**

IPv6 Mode:

IPv6 Address:

Prefix Length:

Default Gateway:

**DNS**

Preferred DNS Server:

Alternate DNS Server:

MTU:

Port Type:

Operating Mode:

Figure 3-4

- **IPv4:** Select **Static IP** or **DHCP** according to your network environment.
- ⊙ **Static IP address:** Assign a static IP or fixed IP to the camera. Type the camera's IP address, Subnet Mask, Router/Gateway, Preferred DNS server and Alternate DNS server.

Parameters	Default
IP address	192.168.0.10
Subnet Mask	255.255.255.0
Router/Gateway	192.168.0.1
Preferred DNS server	8.8.8.8
Alternate DNS server	8.8.4.4

⊙ **DHCP:** The network environment has a DHCP server which will automatically assign a dynamic IP address to the camera. You can look up the current IP address using GV-IP Device Utility.

- **IPv6:** Type the camera's **IPv6 Address** and **Default Gateway**. Optionally change the **Prefix Length** according to your network settings.

---

**Note:** To enable **IPv6**, make sure your network environment and hardware specifications support IPv6.

---

- **Operating Mode:** Select a mode to control the bandwidth.

## 3.2.2 Port

You can modify the default **HTTP port**, **HTTPS port** and **RTSP port** if necessary.

Port	
HTTP Port	<input type="text" value="80"/>
HTTPS Port	<input type="text" value="443"/>
RTSP Port	<input type="text" value="554"/>
<b>Note:</b> Modifying the RTSP or server port number will cause the device to restart.	
<input type="button" value="Save"/>	

*Figure 3-5*

### 3.2.3 DDNS

DDNS (Dynamic Domain Name System) provides a convenient way of accessing the camera when using a dynamic IP. DDNS assigns a domain name to the camera, so that the Administrator does not need to go through the trouble of checking if the IP address assigned by DHCP Server or ISP (in xDSL connection) has changed.

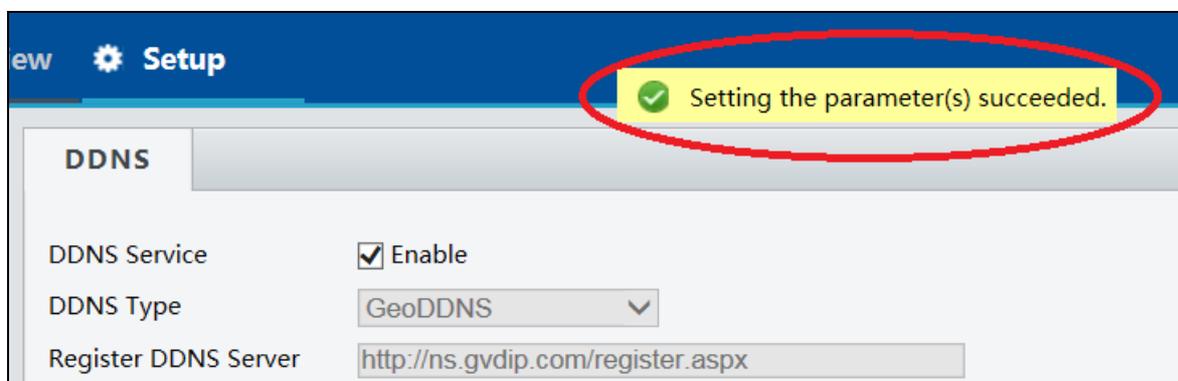
Figure 3-6

1. Enable **DDNS Service**.
2. Copy the website address <http://ns.gvdip.com/register.aspx> to a browser to access Geovision DDNS service.

Figure 3-7

3. In the Geovision DDNS Server page, type a desired **Hostname** and **Password**. Re-type Password and type the verification letters shown in the image. Click **Send**.
4. In the Web interface of your GV-EBD4700, type **Username**. The username is the hostname registered in DDNS Server.
5. Type **Password**, and **Confirm Password**.
6. Click **Save**.

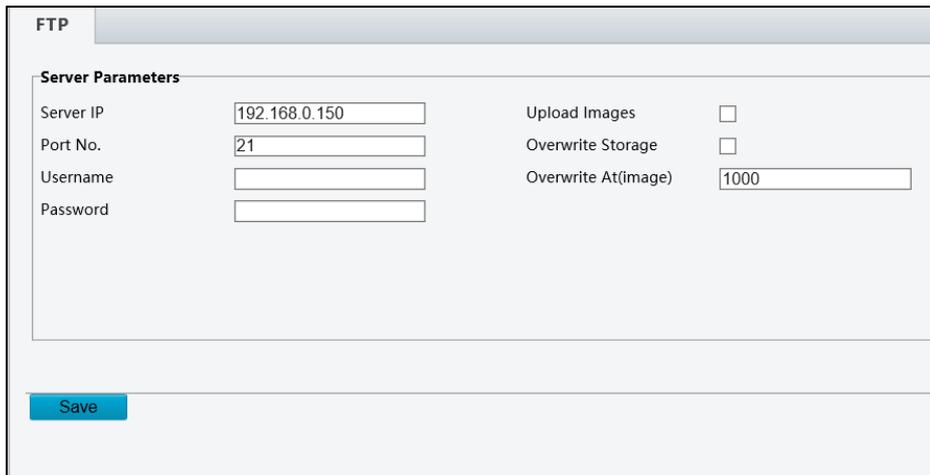
After the DDNS is successfully configured, a notification bar will be displayed as shown in *Figure 3-8*. Next time when you log in the camera, type the domain name like this: (hostname).gvdip.com; for example, geovision.gvdip.com.



*Figure 3-8*

### 3.2.4 FTP

After the configuration of FTP, you will be able to upload snapshots from the camera to the specified FTP server.



The screenshot shows a web-based configuration interface for FTP. The title bar reads "FTP". Below it, the "Server Parameters" section contains the following fields:

Server IP	<input type="text" value="192.168.0.150"/>	Upload Images	<input type="checkbox"/>
Port No.	<input type="text" value="21"/>	Overwrite Storage	<input type="checkbox"/>
Username	<input type="text"/>	Overwrite At(image)	<input type="text" value="1000"/>
Password	<input type="text"/>		

At the bottom left of the form is a blue "Save" button.

Figure 3-9

1. Type the **Server IP** address.
2. Change the **Port No.** of the FTP server if needed.
3. Type the **Username** and **Password** of the upload account.
4. Enable **Upload Pictures**.
5. Select **Overwrite Storage** to overwrite the oldest images when the storage is full. You can set the number of images in **Overwrite At (Image)**. When the defined image threshold is reached, the oldest images will be overwritten.
6. Click **Save**.

---

**Note:**

1. To upload snapshots, make sure to enable **Capture** in Video. For more detailed instructions, refer to [3.3.2 Capture](#).
  2. If **Overwrite Storage** is not selected and the storage is full, snapshots can no longer be taken.
-

### 3.2.5 E-mail

After the configuration of E-mail, you will be able to send messages to the specified E-mail address when alarms are triggered.

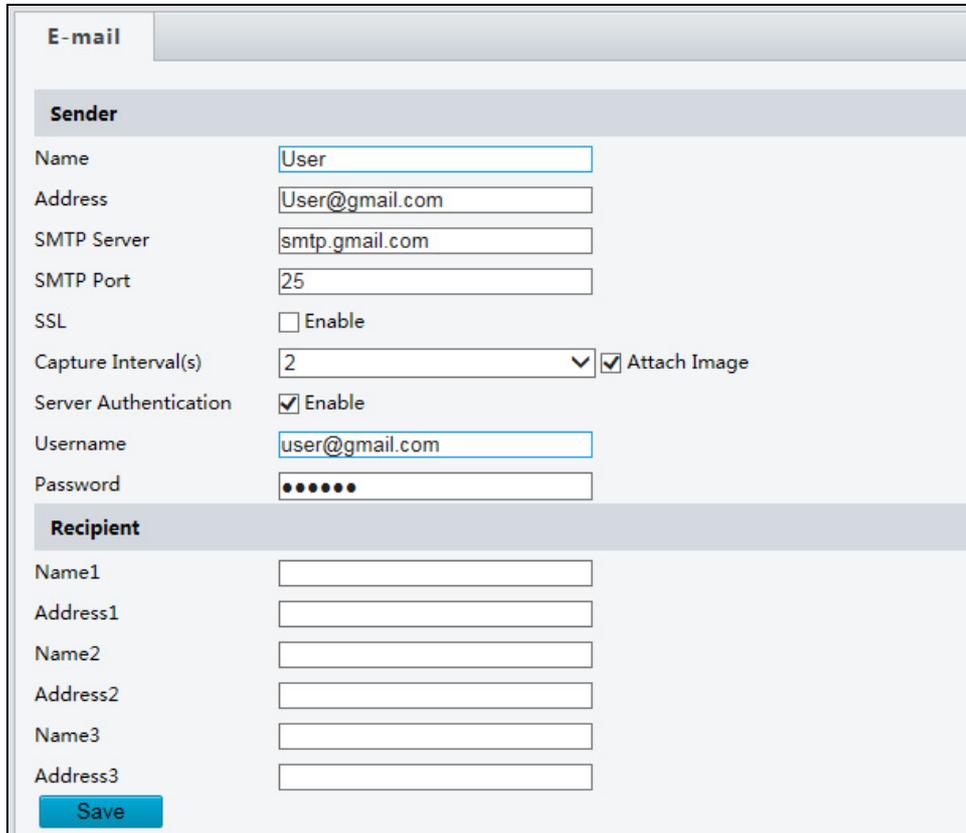


Figure 3-10

#### [Sender]

1. Type the **Name** and **Address** of the sender.
2. Type the **SMTP Server**.
3. Type the **SMTP Port** number.
4. To send the e-mail through SSL encryption, enable **SSL**.
5. Enable **Attach Image** to include 3 instant snapshots as attachment in the e-mail according to the **Capture Interval** specified.
6. If the SMTP Server needs authentication, enable **Server Authentication** and type a valid username and password to log in the SMTP server.

**[Recipient]** Type the name and e-mail address of the recipient.

---

**Note:** To send snapshots to the specified E-mail address, make sure to enable **Capture in Video**. For more detailed instructions, refer to [3.3.2 Capture](#).

---

### 3.2.6 Port Mapping

This function can automatically forward and open certain ports on your router, allowing connection to your camera from the Internet.

**Port Mapping**

Port Mapping  Enable  Disable

Mapping Type  ▼

Port Type	External Port	External IP	Status
HTTP	<input type="text" value="50080"/>	0.0.0.0	Inactive
RTSP	<input type="text" value="50554"/>	0.0.0.0	Inactive
Server	<input type="text" value="50081"/>	0.0.0.0	Inactive

Figure 3-11

1. Enable **Port Mapping**, and select **Mapping Type**.
2. If you select **Automatic**, external ports will be automatically configured by the router.
3. If you select **Manual**, configure external ports. External IP is applied to the camera automatically. If the configured port is occupied, the **Status** will show inactive.
4. Click **Save**.

---

**Note:** For this function, your router needs to support **port forwarding**.

---

### 3.2.7 802.1x

IEEE 802.1x is an IEEE standard for port-based Network Access Control. It provides an authentication mechanism to devices wishing to attach to a LAN or WLAN.

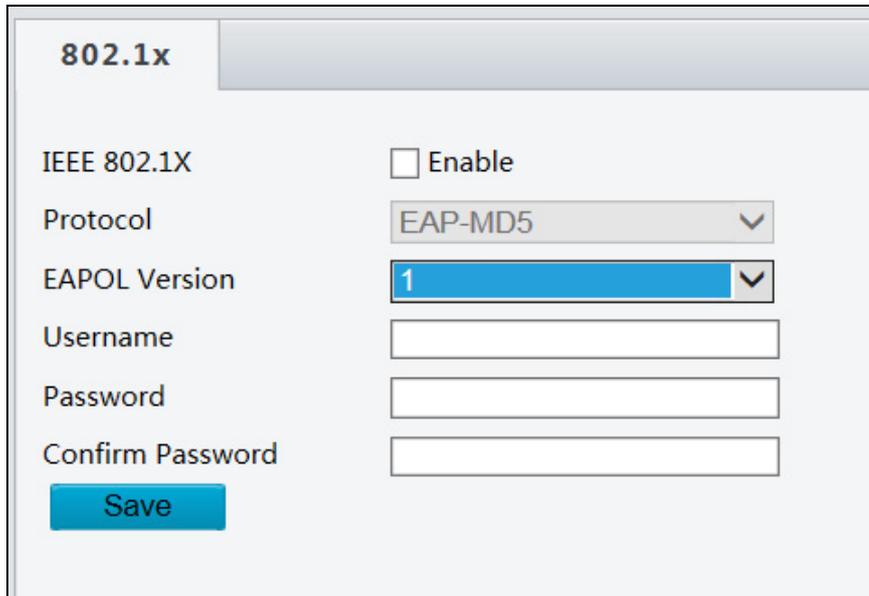


Figure 3-12

1. Enable **IEEE 802.1x**.
2. Type the **Username** and **Password**. Type the password again for confirmation.
3. Click **Save**.

---

**Note:** For this function, your network environment needs to support **802.1x**.

---

### 3.3 Video

This section allows you to configure the three video streams.

#### 3.3.1 Video

You can set video parameters that your camera supports. You may also enable the sub-stream and third stream as needed.

The screenshot shows a 'Video' configuration window with the following settings:

- Capture Collect Mode:** 2560\*1440\*25
- Main Stream:**
  - Video Compression: H.264
  - Resolution: 2560\*1440
  - Frame Rate: 25
  - Bit Rate(kbps): 6144 [128~16384]
  - Bitrate Type: CBR
  - Image Quality: Slider between Quality and Bit Rate
  - I Frame Interval: 50 [5 ~ 250]
  - GOP: IP
  - Smoothing: Slider between Clear and Smooth
  - SVC:  Enable
- Enable Sub:** 
  - Video Compression: H.264
  - Resolution: D1
  - Frame Rate: 25
  - Bit Rate(kbps): 1024 [128~16384]
  - Bitrate Type: CBR
  - Image Quality: Slider between Quality and Bit Rate
  - I Frame Interval: 50 [5 ~ 250]
  - GOP: IP
  - Smoothing: Slider between Clear and Smooth
  - SVC:  Enable
- Enable Third:** 
  - Video Compression: H.264
  - Resolution: CIF
  - Frame Rate: 25
  - Bit Rate(kbps): 128 [128~16384]
  - Bitrate Type: VBR
  - Image Quality: Slider between Quality and Bit Rate
  - I Frame Interval: 50 [5 ~ 250]
  - GOP: IP
  - Smoothing: Slider between Clear and Smooth
  - SVC:  Enable

A 'Save' button is located at the bottom left of the configuration window.

Figure 3-13

- **Capture Collect Mode:** Sets the maximum resolution and frame rate.

The following options are available for the main, sub and third streams.

- **Video Compression:** Set the codec type to **H.265**, **H.264** or **MJPEG**.

- **Resolution:** You may select the different resolutions for each stream.
- **Frame Rate:** Select a frame rate for encoding images. The unit is frame per second.
- **Bit Rate:**
  - ⊙ **CBR:** The camera transmits data at a constant data rate by varying the quality of the stream
  - ⊙ **VBR:** The quality of the video stream is kept as constant as possible at the cost of a varying bitrate.
- **Image Quality:** When VBR is selected for the encoding mode, you can move the slider to adjust quality level for images. Moving the slider toward **Bit Rate** decreases the bit rate and may affect image quality. Moving the slider toward **Quality** increases the bit rate and improves image quality.
- **I Frame Interval:** Set the number of frames between each I frame (key frame). This option is only available when H.265 or H.264 is selected for codec.
- **Smoothing:** Set the extent of smoothing. Choosing **Clear** means disabling **Smoothing**. Moving the slider toward **Smooth** increases the level of smoothing but will affect image quality.

### 3.3.2 Capture

Using the Capture function, when an alarm is triggered, the camera will automatically upload the captured snapshots to the FTP server or send snapshots to the specified e-mail address.

**Capture**

Capture  Enable

Resolution

Image Quality

Capture Interval(s)

Number to Capture

**Scheduled Snapshot**

Mode  Timed  Continued

Interval(s)

**Save**

Figure 3-14

1. Enable **Capture**.
2. Select **Resolution**.
3. Choose the **Image Quality**.
4. Choose the **Number** (of snapshot) **to Capture** upon alarm trigger.
5. Select **Timed Mode** or **Continued Mode** to set up the **Scheduled Snapshot**.
6. If you select **Timed mode**, click **+** to specify a time to take a snapshot.
7. If you select **Continued mode**, type the interval in seconds to take a snapshot.
8. Click **Save**.

---

**Note:** Capture Interval(s) is not functional.

---

### 3.3.3 ROI

When Region of Interest (ROI) is enabled, the system ensures image quality for ROI first if the bit rate is insufficient.

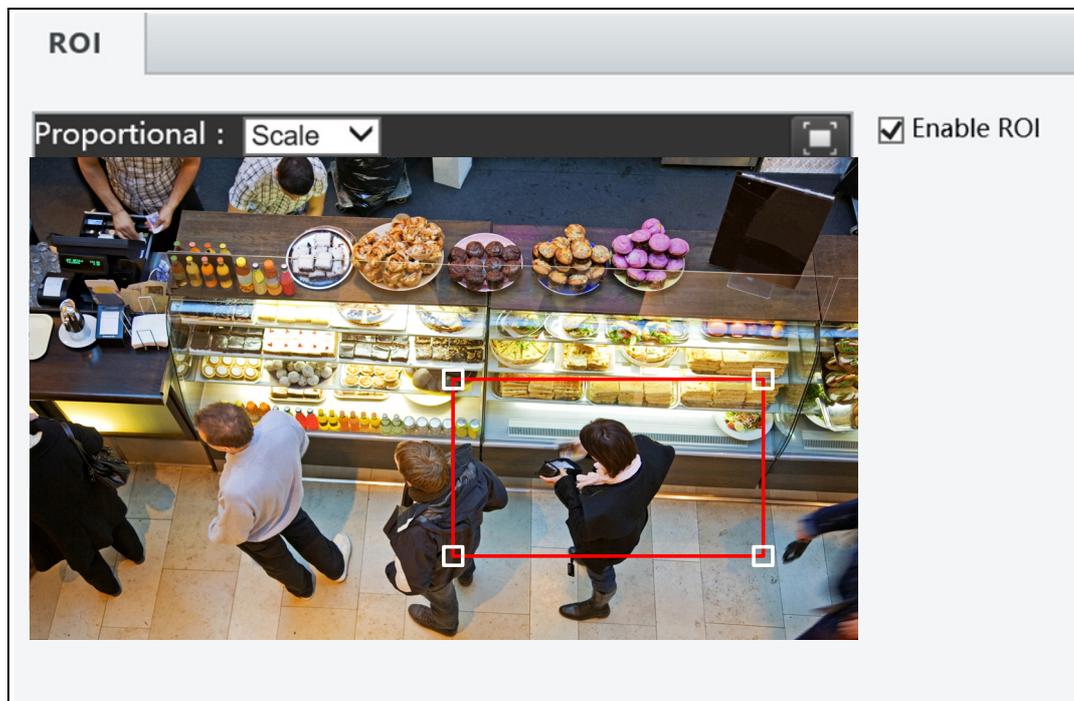


Figure 3-15

1. Enable **ROI**.
2. Click and hold the mouse button, and then drag from the top down to specify an area.

### 3.3.4 Media Stream

#### Media Stream

By configuring media stream, you can set the camera to transmit code streams by UDP or TCP protocol to a specified IP address and port number. The settings can be saved and take effects after the camera is restarted.

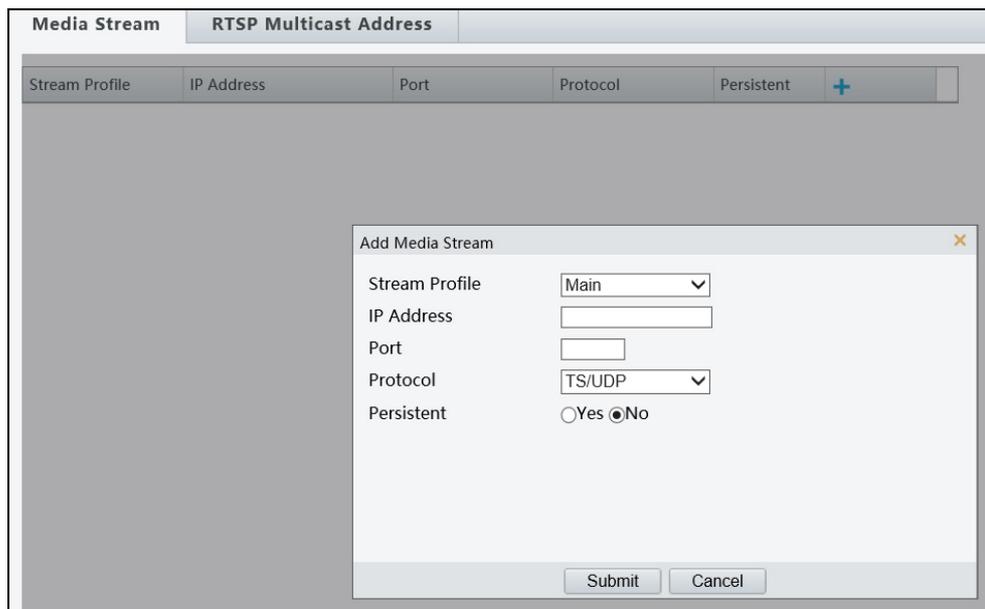


Figure 3-16

1. Click **+** and then select a type in the **Stream Profile**.
2. Type the **IP Address** and **Port** number of the unicast or multicast group for the decoding device that receives video streams from the camera.
3. If you want the device to establish the media stream that has been configured before automatically after the restart, select **Yes** for **Persistent**.
4. To delete a stream, click .
5. Click **Submit** to complete the settings.

### RTSP Multicast Address

After an RTSP multicast address is configured, the third-party player can request the RTSP multicast media stream from the camera through the RTP protocol.

Media Stream	RTSP Multicast Address
<b>Main</b>	
Multicast Address	<input type="text" value="238.254.254.254"/>
Port	<input type="text" value="65500"/>
<b>Sub</b>	
Multicast Address	<input type="text" value="0.0.0.0"/>
Port	<input type="text" value="0"/>
<b>Third</b>	
Multicast Address	<input type="text" value="0.0.0.0"/>
Port	<input type="text" value="0"/>
<input type="button" value="Save"/>	

Figure 3-17

1. Type the **Multicast Address** (224.0.0.0 to 239.255.255.255) and **Port** number (0 to 65535).
2. Click **Save**.

## 3.4 Image

This section introduces the Image Settings, On-screen Display, and Privacy Mask.

### 3.4.1 Image

This page allows you to adjust image settings such as brightness, exposure, IR illumination and white balance.

▼ **Scenes**

No.	Current	Scene Name	Auto Switching	Setup
1	<input checked="" type="radio"/>	<Indoor> ▼		Default Scene
2	<input type="radio"/>	<Indoor> ▼	<input type="checkbox"/>	
3	<input type="radio"/>	<Indoor> ▼	<input type="checkbox"/>	
4	<input type="radio"/>	<Indoor> ▼	<input type="checkbox"/>	
5	<input type="radio"/>	<Indoor> ▼	<input type="checkbox"/>	

Current Illumination: 49

Enable Auto Switching

Figure 3-18

#### [Scene]

- **Current:** Indicates the scene that is being used.
- **Screen Name:** When you select a scene, the corresponding image parameters are displayed. You can adjust image settings according to actual needs.
- **Auto Switching:** Indicates whether to add a scene to the auto-switching list.
- **Setup:**
  - ⊙ Click to set a schedule for illumination.
  - ⊙ Click to set a scene as the default scene.
- **Enable Auto Switching:** Allow the camera to switch to the scene automatically when the condition for switching to a non-default scene is met.

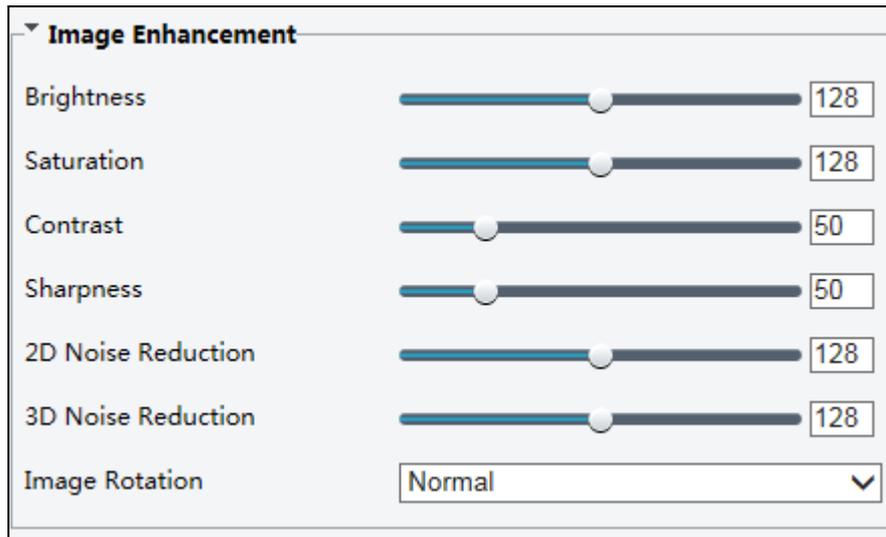


Figure 3-19

#### [Image Enhancement]

- **Brightness:** Adjust the degree of brightness of the image.
- **Saturation:** Adjust the amount of a hue contained in a color.
- **Contrast:** Set the degree of difference between the blackest pixel and the whitest pixel.
- **Sharpness:** Adjust the sharpness of the image.
- **2D / 3D Noise Reduction:** Reduce the noise of the image.
- **Image Rotation:** Change the rotation of the image.

The screenshot shows the 'Exposure' settings panel with the following configurations:

- Exposure Mode: Indoor 50Hz
- Shutter (s): 1/50
- Gain: 0
- Slow Shutter:  Off  On
- Slowest Shutter: 1/25
- Compensation: 0
- Metering Control: Center-Weighted Average Metering
- Day/Night Mode:  Automatic  Day  Night
- Day/Night Sensitivity: Medium
- Day/Night Switching(s): 3
- WDR: Off
- WDR Level: 5
- WDR Open Sensitivity: 5
- WDR Close Sensitivity: 5

Figure 3-20

**[Exposure]**

- **Exposure Mode:** Select the correct exposure mode to achieve the desired exposure effect. The default setting is Outdoor.
- **Shutter (s):** The length of time that allows light to enter into the lens. You can set a shutter speed when **Exposure Mode** is set to **Manual**.

---

**Note:** If **Slow Shutter** is set to **Off**, the reciprocal of the shutter speed must be greater than the frame rate.

---

- **Gain:** Control image signals so that the camera outputs standard video signals according to the light condition. You can set this parameter only when **Exposure Mode** is set to **Manual**.
- **Slow Shutter:** Improve image brightness in low light conditions.

- **Slowest Shutter:** Set the slowest shutter speed that the camera can use during exposure.
- **Compensation:** Adjust the compensation value as required to achieve the desired effects. You can set this parameter only when **Exposure Mode** is not set to **Manual**.
- **Metering Control:** Set the way the camera measures the intensity of light. You can only set this parameter when **Exposure Mode** is not set to **Manual**.
  - ⊙ **Center-Weighted Average Metering:** Measure light mainly in the central part of images.
  - ⊙ **Evaluative Metering:** Measure light in the customized area of images.
- **Day/Night Mode:** Select **Automatic** for automatic switch between day mode and night mode depending on the amount of light detected. Select **Night** to produce high-quality black and white images using the existing light. Select **Day** to produce high-quality color images using the existing light.
- **Day/Night Sensitivity:** Set the light threshold for switching between day mode and night mode. A higher sensitivity means that the camera is more sensitive to the change of light and becomes more easily to switch between day mode and night mode.
- **Day/Night Switching(s):** Set the length of time before the camera switches between day mode and night mode after the conditions for switching are met.
- **WDR:** Enable WDR to distinguish the bright and dark areas in the same image.
- **WDR Level:** After enabling the WDR function, you can improve the image by adjusting the WDR level.

Smart Illumination

Smart Illumination  Enable  Off

Lighting Type  ▼

Control Mode  ▼

Illumination Level

Figure 3-21

**[Smart Illumination]**

- **Smart Illumination:** Select **Enable** to adjust the IR illumination settings.
- **Control Mode:**
  - ⊙ **Global Mode:** Adjust IR illumination and exposure to achieve balanced image effects. Some areas might be overexposed if you select this option. This option is recommended if monitored range and image brightness are your first priority.
  - ⊙ **Overexposure Restrain:** Adjust IR illumination and exposure to avoid regional overexposure. Some areas might be dark if you select this option. This option is recommended if clarity of the central part of the image and overexposure control are your first priority.
  - ⊙ **Manual:** Allow you to manually control the intensity of IR illumination.
- **Illumination Level:** Set the intensity level of the IR light. The greater the value, the higher the intensity. 0 means that the IR light is turned off. When **Control Mode** is set to **Manual**, you can set the intensity level of the IR light.

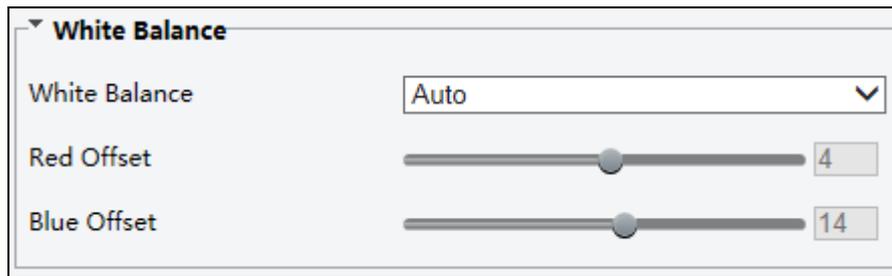


Figure 3-22

### [White Balance]

- **White Balance:** Adjust the red or blue offset of the image.
  - **Auto:** Adjust the red and blue offset automatically according to the light condition (the color tends to be blue).
  - **Outdoor:** It is recommended for the outdoor scenes with a wide range of the color temperature variation.
  - **Fine tune:** Allow you to adjust the red and blue offset manually.
  - **Sodium:** Adjust the red and blue offset automatically according to the light condition (the color tends to be red).
  - **Locked:** Lock the current color temperature settings without adjustment.

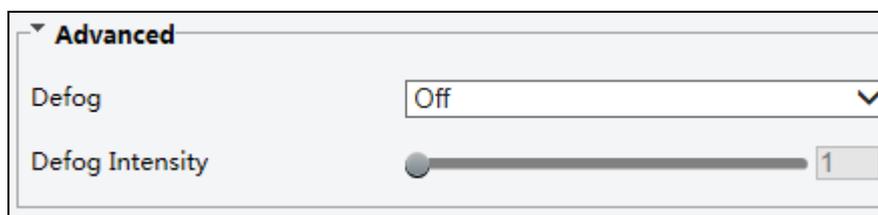


Figure 3-23

### [Advanced]

- **Defog:** Select **ON** to activate the slider for adjusting the **defog intensity** for images.

### 3.4.2 OSD

On Screen Display (OSD) is the text displayed on the screen with video images and may include time and other customized contents.

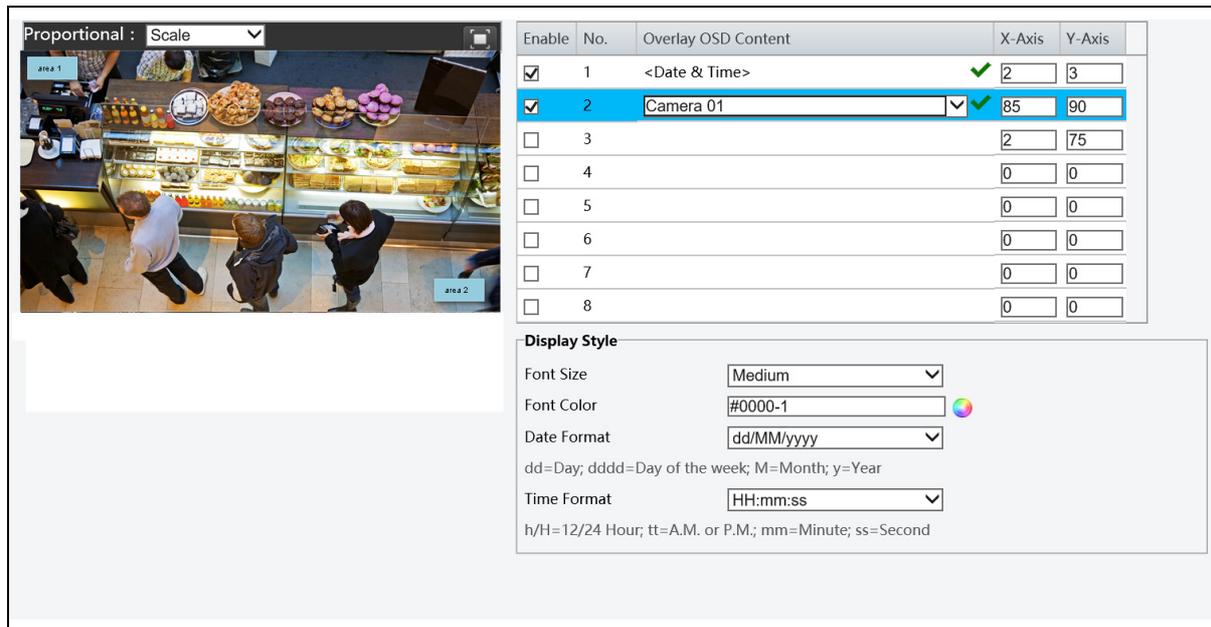


Figure 3-24

1. Enable a **No.** to select an area #, and then click **Overlay OSD Content** to select the content to display on screen.
2. Adjust the position of the Area 1/2/3 boxes on the live view either by dragging directly or by specifying the coordinates under **X-Axis / Y-Axis** column.
3. Under **Display Style**, customize the text style and date/time format.

After you have set the position and OSD content, the  symbol appears in the **Status** column, which means that the OSD is set successfully.

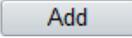
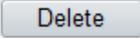
### 3.4.3 Privacy Mask

On certain occasions, you may need to set a mask area to block out parts of the camera image to protect privacy, for example, the keyboard of an ATM machine. When PTZ changes its position or zooms, the Privacy Mask will be adjusted accordingly to protect the area all along.



No.	Name
1	Mask1

Figure 3-25

1. Click  to add a privacy mask.
2. Click the box (with **Mask** displayed on it) to activate the mask.
3. Drag the box to the intended position and adjust the size of the box. Alternatively, you can also use the mouse to draw a box on the area you want to mask.
4. To delete a mask, click .

## 3.5 Events

You can set the camera to generate an alarm upon motion detection.

### 3.5.1 Motion Detection

Motion detection is used to generate an alarm whenever movement occurs in the specified area.

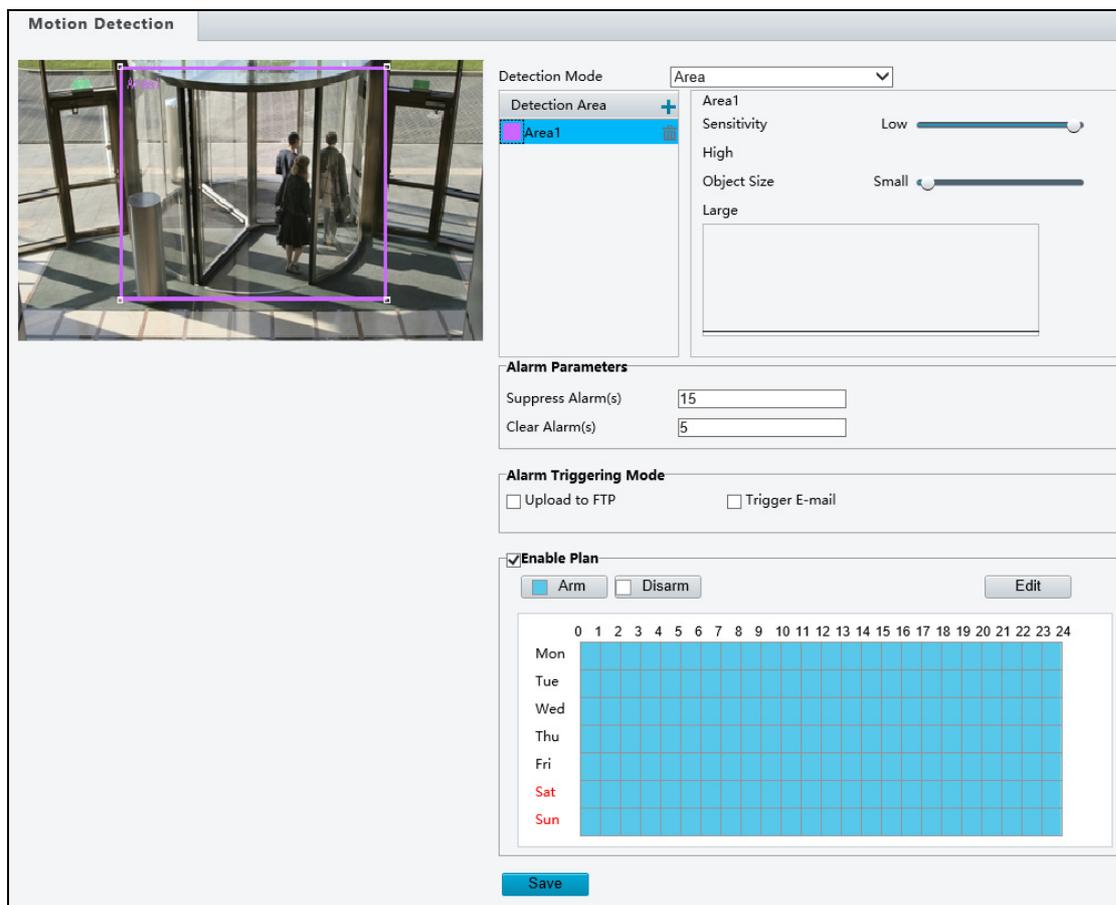


Figure 3-26

1. In the **Detection Area**, click **+** to add a new detection area.
2. Click and drag the detection area to a desired location.
3. You can use the following functions to reduce false alarm.
  - **Sensitivity:** Move the slider to the right increases detection sensitivity.
  - **Object Size:** When the extent of motion within the detection area exceeds the set object size, motion detection alarm will be triggered.

### [Alarm Parameters]

- **Suppress alarm:** After an alarm is triggered, the same alarm will not be reported within the set time.
- **Clear alarm:** After an alarm is triggered,
  - If the same alarm is not triggered within the set time, the alarm will be cleared and the same alarm can be reported again.
  - If the same alarm is triggered within the set time, the alarm will not be cleared until the suppress alarm time expires. Then the same alarm can be reported again.

### [Alarm Triggering Mode]

- **Upload to FTP:** Select to automatically upload snapshots to the specified FTP server upon motion detection.
- **Trigger e-mail:** Select to automatically send snapshots to the specified E-mail address upon motion detection.

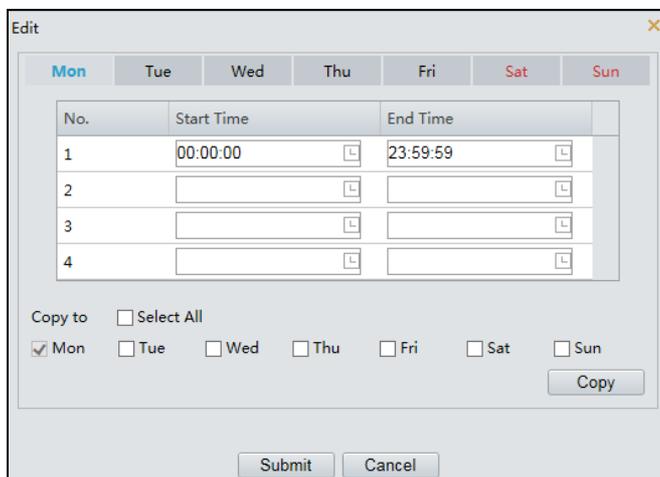
---

#### Note:

1. For the **Upload to FTP** function, make sure to configure the settings in [3.2.4 FTP](#) and [3.3.2 Capture](#) first.
  2. For the **Trigger e-mail** function, make sure to configure the settings in [3.2.5 E-mail](#) and [3.3.2 Capture](#) first.
- 

### [Enable Plan]

Select this option to set the start and end times during which motion detection alarm is enabled. You can directly drag the mouse to draw a plan or click **Edit** to edit time periods in the table. You can set up to four periods for each day, and the time periods cannot overlap. The camera reports alarms during the specified period(s) only.



No.	Start Time	End Time
1	00:00:00	23:59:59
2		
3		
4		

Copy to  Select All  
 Mon  Tue  Wed  Thu  Fri  Sat  Sun

Submit Cancel

Figure 3-27

## 3.6 Security

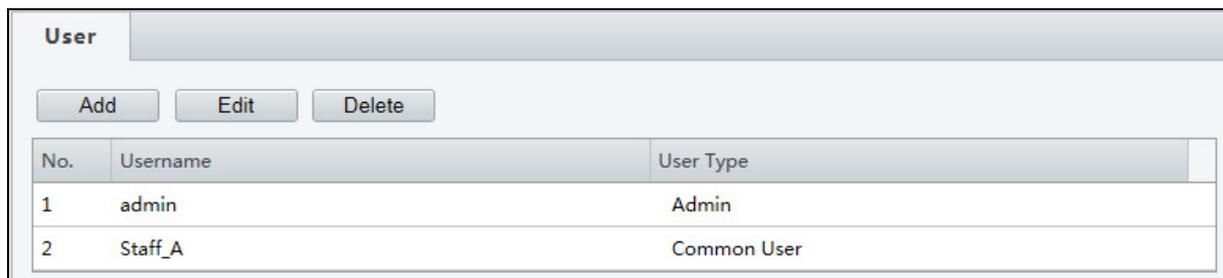
This section allows you to create user accounts and set the network security settings.

### 3.6.1 User

There are two types of accounts: **Administrator** and **Common User**.

- **Administrator:** The default name of the administrator is admin, which cannot be modified. Admin has full permission and can manage all users and devices. Only one admin account is allowed in the system.
- **Common Users:** The user only has permission to play live and recorded video. Up to 31 common users are allowed in the system.

The administrator can create new account for a common user. After the user is added successfully, the administrator can change the password by entering the new password or delete the user by clearing the username.



No.	Username	User Type
1	admin	Admin
2	Staff_A	Common User

*Figure 3-28*

---

**Note:** Changing the username or password for a user when the user is still logged in will force the user to log out. The user must use a new username or password to log in.

---

## 3.6.2 Network Security

There are four types of network security settings: **HTTPS**, **RTSP Authentication**, **ARP Binding** and **IP Address Filtering**.

### HTTPS

You can enable the Hypertext Transfer Protocol Secure (HTTPS) settings to access the camera through a secure protocol. Click **Enable** and click **Save**.

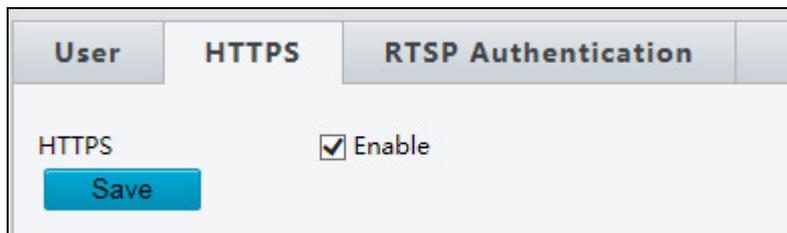


Figure 3-29

### RTSP Authentication

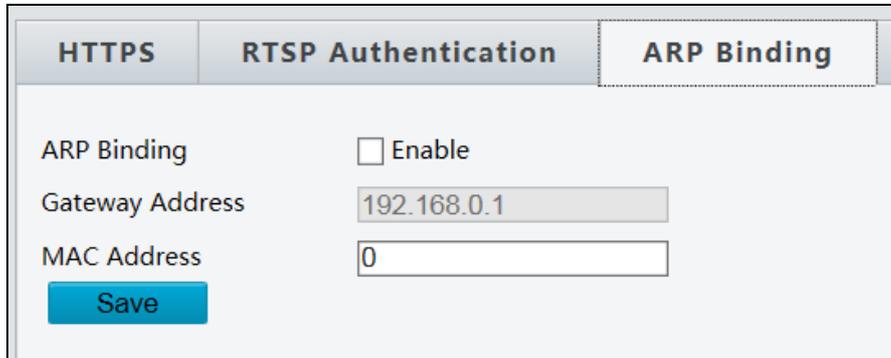
RTSP (Real Time Streaming Protocol) is an application layer protocol for transmitting video. Set the **Authentication** mode for RTSP streaming.



Figure 3-30

### ARP Binding

This function can protect the camera from ARP attacks. When the camera visits an IP of another network segment via a gateway, it can only communicate with the MAC address binding to the gateway address in the same segment.

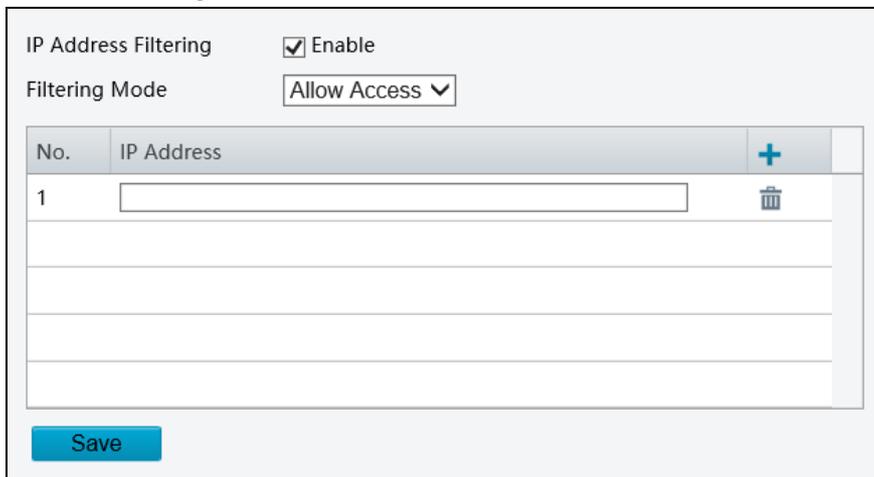


HTTPS	RTSP Authentication	ARP Binding
ARP Binding <input type="checkbox"/> Enable		
Gateway Address		192.168.0.1
MAC Address		0
<a href="#">Save</a>		

Figure 3-31

1. Enable **ARP Binding**.
2. Type **MAC Address**.
3. Click **Save**.

### IP Address Filtering



IP Address Filtering	<input checked="" type="checkbox"/> Enable	
Filtering Mode	Allow Access ▼	
No.	IP Address	+
1	<input type="text"/>	🗑️
<a href="#">Save</a>		

Figure 3-32

1. **Enable** IP Address Filtering.
2. Choose a Filtering Mode: **Allow Access** or **Deny Access**.
3. Click **+** to add an IP address.
4. Click **Save**.

## 3.7 System

This section allows you to set the camera time, and update the firmware.

### 3.7.1 Time

You can use the following methods to adjust the system time of your camera.

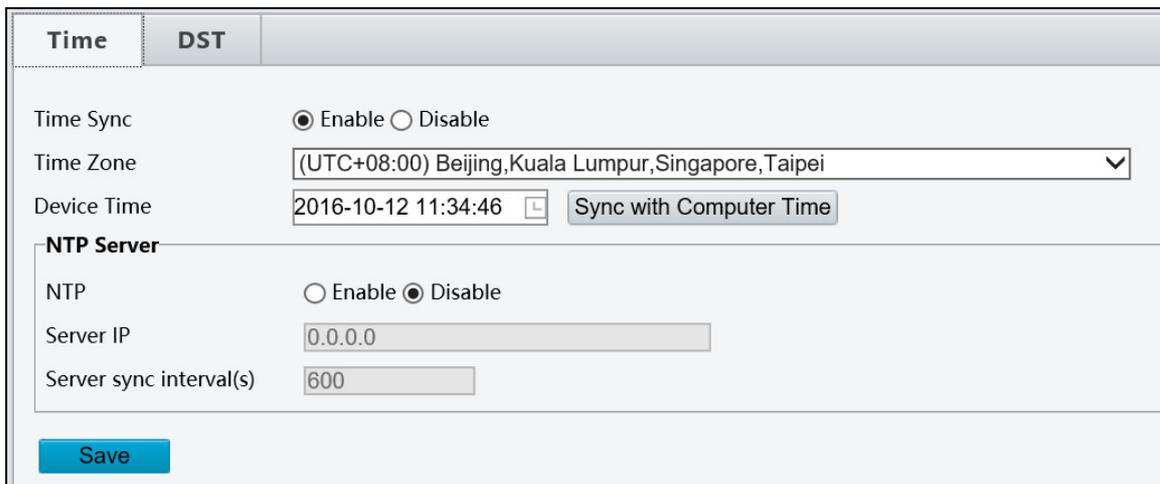


Figure 3-33

To manually set a time or synchronize with the computer time:

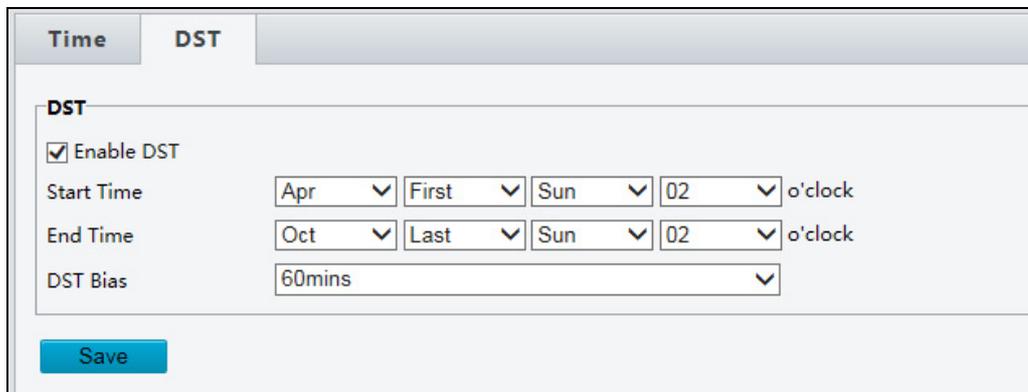
1. Enable **Time Sync**.
2. Next to Device Time, manually set the camera's time or click **Sync with Computer Time** to synchronize with the time of your PC.
3. Select a **Time Zone**.
4. Click **Save**.

To synchronize with a network time server:

1. Enable **NTP**.
2. Type the IP address of the network time server next to **Server IP**.
3. Click **Save**.

To adjust the camera's time for daylight saving time:

1. Click the **DST** tab at the top.



The screenshot shows a web interface with two tabs: 'Time' and 'DST'. The 'DST' tab is selected. Below the tabs, there is a section titled 'DST' containing the following controls:

- Enable DST
- Start Time: Apr (dropdown), First (dropdown), Sun (dropdown), 02 (dropdown), o'clock
- End Time: Oct (dropdown), Last (dropdown), Sun (dropdown), 02 (dropdown), o'clock
- DST Bias: 60mins (dropdown)

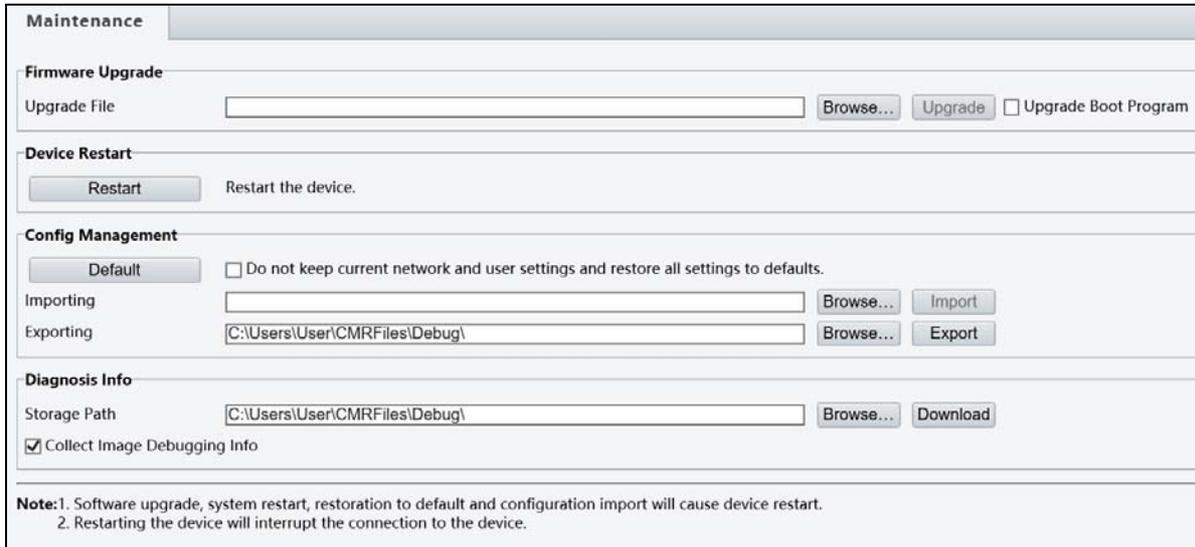
A blue 'Save' button is located at the bottom left of the form.

*Figure 3-34*

2. Select **Enable DST**.
3. Set a **Start Time** and **End Time** for the daylight saving time.
4. Select a time period for **DST Bias**.
5. Click **Save**.

## 3.7.2 Maintenance

This section allows you to upgrade firmware, restart the camera, and backup/import camera configurations.



The screenshot shows a web interface titled "Maintenance" with four main sections:

- Firmware Upgrade:** Includes an "Upgrade File" input field, a "Browse..." button, an "Upgrade" button, and a checkbox for "Upgrade Boot Program".
- Device Restart:** Features a "Restart" button and the text "Restart the device."
- Config Management:** Contains a "Default" button, a checkbox "Do not keep current network and user settings and restore all settings to defaults.", an "Importing" input field with a "Browse..." button and an "Import" button, and an "Exporting" input field with a "Browse..." button and an "Export" button.
- Diagnosis Info:** Includes a "Storage Path" input field with a "Browse..." button and a "Download" button, and a checked checkbox for "Collect Image Debugging Info".

**Note:** 1. Software upgrade, system restart, restoration to default and configuration import will cause device restart.  
2. Restarting the device will interrupt the connection to the device.

Figure 3-35

### [Firmware Upgrade]

For detailed instructions, refer to *4.1 Upgrading System Firmware* and *4.1.1 Using the Web Interface*.

**[Device Restart]** Click **Restart** to restart the device after you confirm the operation.

**[Config Management]** Export the current configurations of the camera and save them to the PC or an external storage medium. You can also quickly restore configurations by importing backup configurations stored on the PC or an external storage medium back to the camera.

**[Diagnosis Info]** Includes logs and system configurations. You can export diagnostic information to your PC. Click **Browse** to select the destination folder, and then click **Download** to save the diagnostic information to the specified folder.

# Chapter 4 Advanced Applications

This chapter introduces more advanced applications.

## 4.1 Upgrading System Firmware

GeoVision periodically releases the updated firmware on the [website](#). The new firmware can be simply loaded into the camera using the Web interface or the **IP Device Utility**.

### Important Notes before You Start

Before you start updating the firmware, please read these important notes:

1. If you use the IP Device Utility for firmware upgrade, the computer used to upgrade firmware must be under the same network of the camera.
2. Stop monitoring of the camera.
3. Stop the connection to GV-VMS / DVR / NVR and all remote connections.
4. While the firmware is being updated, the power supply must not be interrupted.

---

**WARNING:** The interruption of power supply during updating causes not only update failures but also damages to your camera. In this case, please contact your sales representative and send your device back to GeoVision for repair.

---

5. Do not turn the power off within 10 minutes after the firmware is updated.
6. If firmware upgrade fails, you will need to restore the camera to the default settings. For details, see *4.2 Restoring to Factory Default Settings* in the User's Manual.

## 4.1.1 Using the Web Interface

Log into the Web interface and follow the steps below to update the firmware.

1. At the top, click **Setup**.
2. In the left menu, select **System** and select **Maintenance**. This page appears.

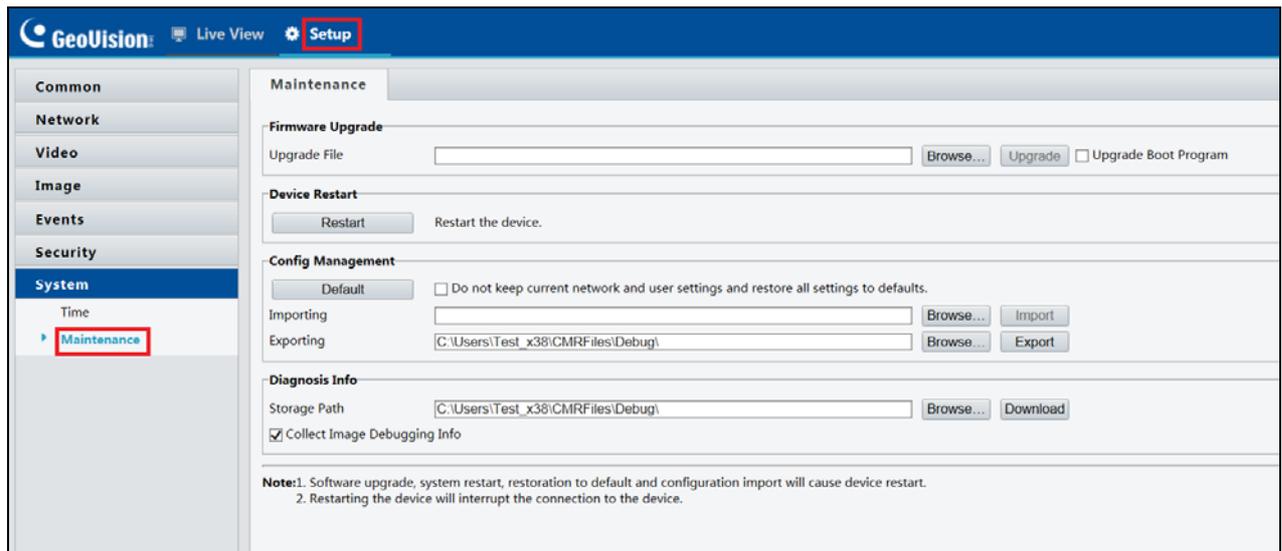


Figure 4-1

3. Click the **Browse** button to locate the firmware file (.zip) saved at your local computer.
4. Optionally select **Upgrade Boot Program** to reboot the camera after a successful upgrade.
5. Click the **Upgrade** button to process the upgrade.

### 4.1.2 Using the GV-IP Device Utility

You can upgrade the camera firmware using the GV-IP Device Utility. Note the computer used to upgrade firmware must be under the same network of the camera.

1. Download **IP Device Utility** from [http://www.geovision.com.tw/english/5\\_8.asp](http://www.geovision.com.tw/english/5_8.asp) Then follow the onscreen instructions to install the program.
2. Double-click the **GV IP Device Utility** icon created on your desktop.
3. Click the camera in the list and select **Configure**.

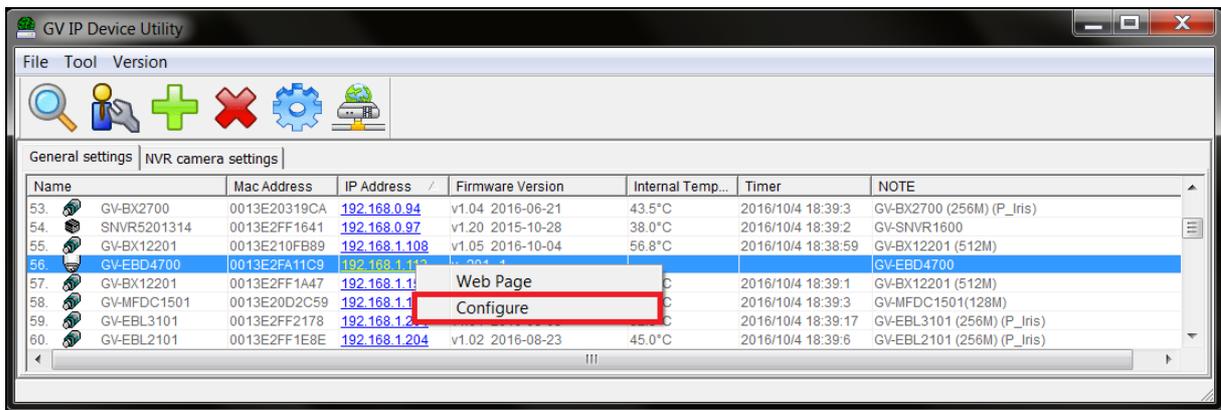


Figure 4-2

5. Type the camera's user name and password to log in.
6. Click the **Firmware Upgrade** tab. This dialog box appears.

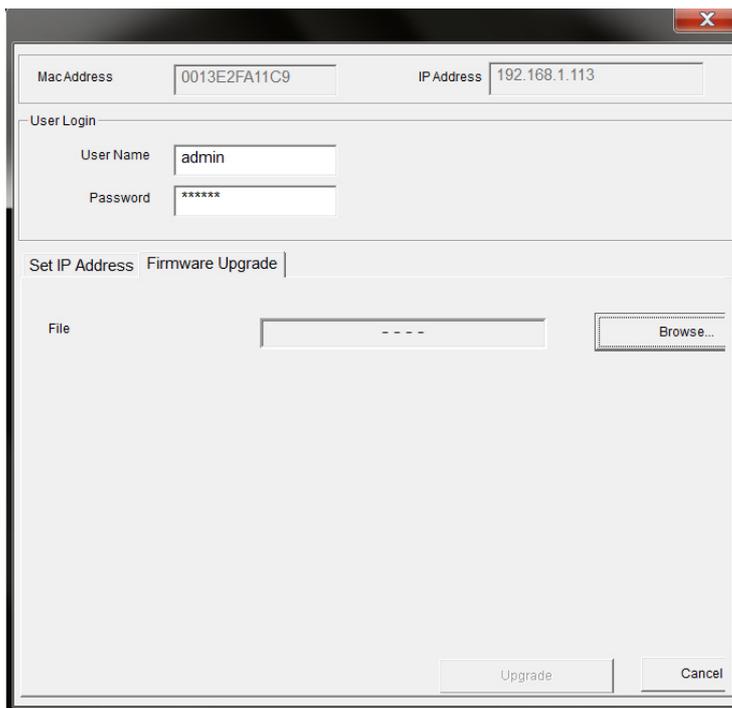


Figure 4-3

7. Click the **Browse** button to locate the firmware file (.zip) saved at your local computer.
8. Click **Upgrade** to start upgrading the firmware.

## 4.2 Restoring to Factory Default Settings

You can restore the camera to factory default settings using the Web interface.

1. At the top, click **Setup**.
2. In the left menu, select **System** and select **Maintenance**.
3. Under the **Config Management** section, click the **Default** button.

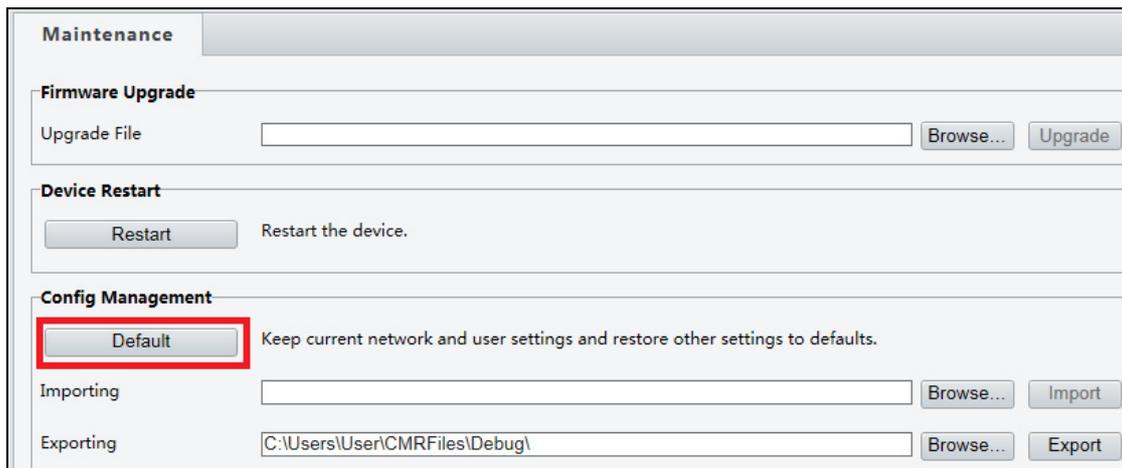


Figure 4-4

---

**Note:** There is no default button on the camera.

---

## Chapter 5 DVR Configurations

The GV-VMS / DVR / NVR provides complete video management, such as video viewing, recording, playback, alert settings, and almost every feature of the system. The integration specifications are listed below:

- The compatible GV-VMS / DVR / NVR versions are listed below:

Camera Model	Compatible GV-System	Compatible GV-VMS
GV-EBD4700	V8.7.1.0 with patch files or later	V15.11.1.0 with patch files or later

- The maximum number of streams supported by GV-EBD4700 is 8.
- When a GV-EBD4700 is connected to IE browser or any other applications, it takes up 1 stream; when it is connected to GV-VMS / DVR / NVR, it takes up 2 streams.

## 5.1 Setting Up IP Cameras on GV-System

To set up the camera on the GV-System, follow these steps:

1. On the main screen, click the **Configure** button, select **System Configure**, select **Camera Install** and click **IP Camera Install**. This dialog box appears.

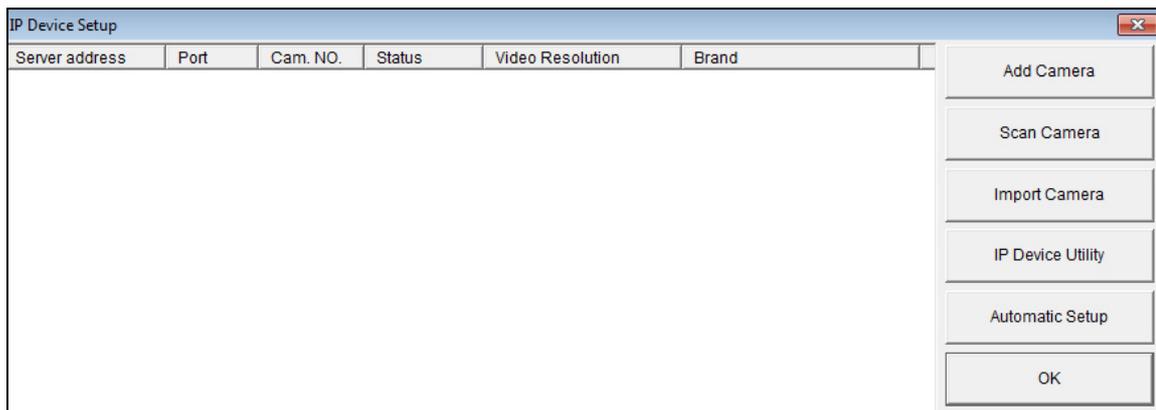


Figure 5-1

2. To automatically set up the camera, click **Scan Camera** to detect any GV IP devices on the LAN.
3. Double-click the GV-EBD4700 and type the user name and password of the camera.

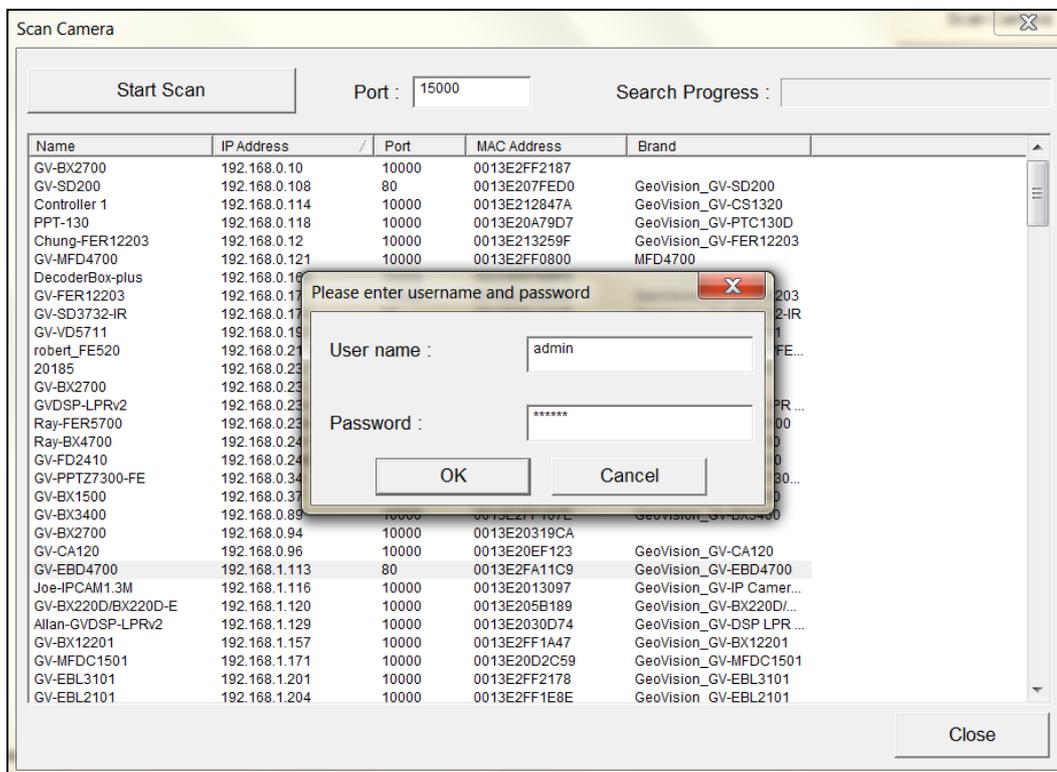
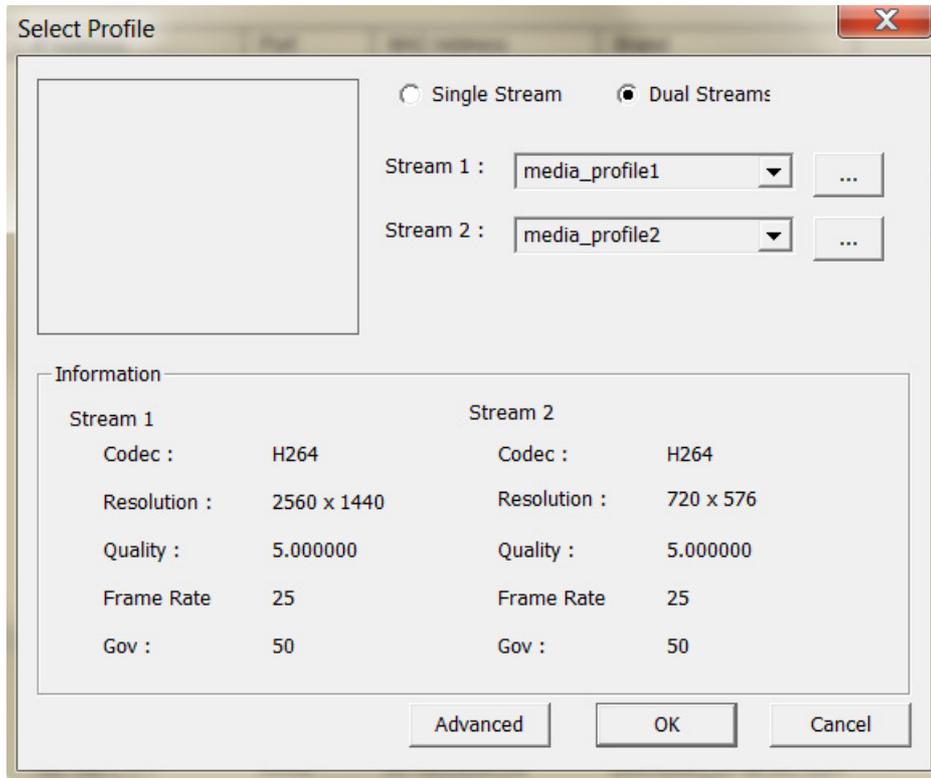


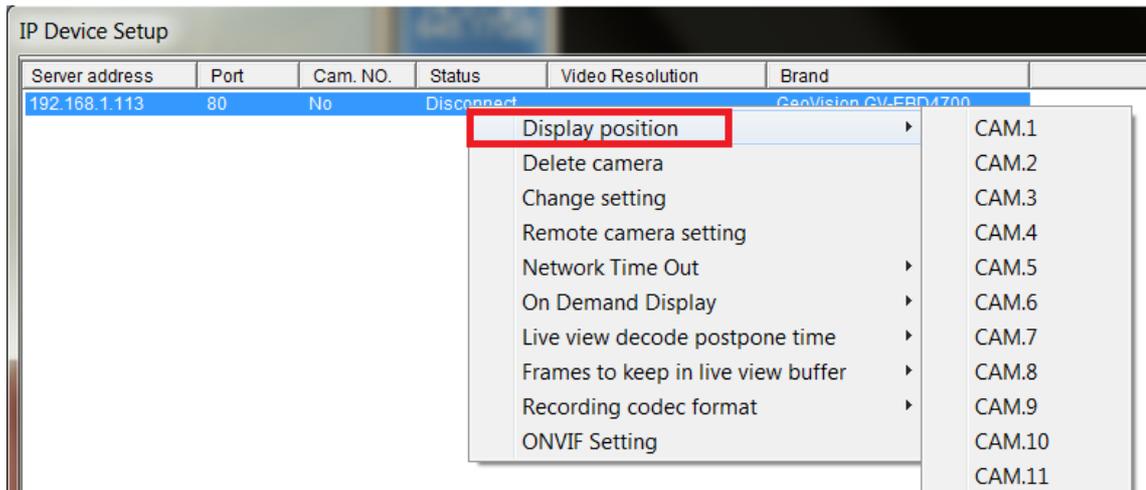
Figure 5-2

- Click **OK**. This dialog box appears.



*Figure 5-3*

- Click **OK**. The IP camera is added to the connection list.
- Click the listed camera and select **Display position** to map the IP camera to a channel on the GV-System.



*Figure 5-4*

- The Status column should display "Connected". Click **OK**.

### 5.1.1 Customizing the Basic Settings on GV-System

After the camera is connected and assigned with a display position, you can configure the camera's settings such as frame rate, codec type and resolution. Right-click the desired camera to see the following list of options:

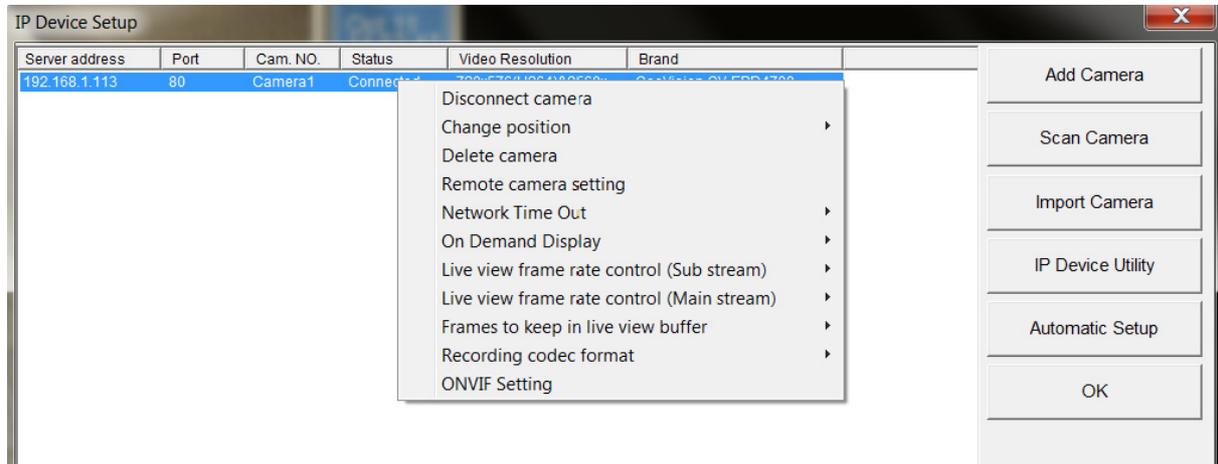


Figure 5-5

- **Network Time Out:** When network disconnection exceeds the specified time period, the camera status will be displayed as Connection Lost.
- **On-Demand Display:** Enables automatic switching between main stream and sub stream based on the size of camera image on screen.
- **Live-view frame rate control (Sub / Main):** Sets the frame rate of the stream to help reduce the CPU usage. If you have set the codec to be MJPEG, select the number of frames to allow in a second. If the codec selected is H.265 or H.264, select one of the following options:
  - ⊙ **Maximum Live-view Frame Rate:** View the video at the maximum frame rate possible.
  - ⊙ **Live-view Key Frame only:** You can choose to view the key frames of the videos only instead of all frames on the live view. This option is related to the GOP setting of the IP camera. For example, if the GOP value is set to 30, there is only one key frame among 30 frames.
- **Frames to keep in live view buffer:** Specifies the number of frames to keep in the live view buffer.
- **Recording Codec Format:** Select the codec to record in.

## 5.2 Setting Up IP Cameras on GV-VMS

Follow the steps below to manually connect your camera to GV-VMS.

1. To access the IP Device Setup page, click **Home** , select **Toolbar** , click **Configure**  and select **Camera Install**.

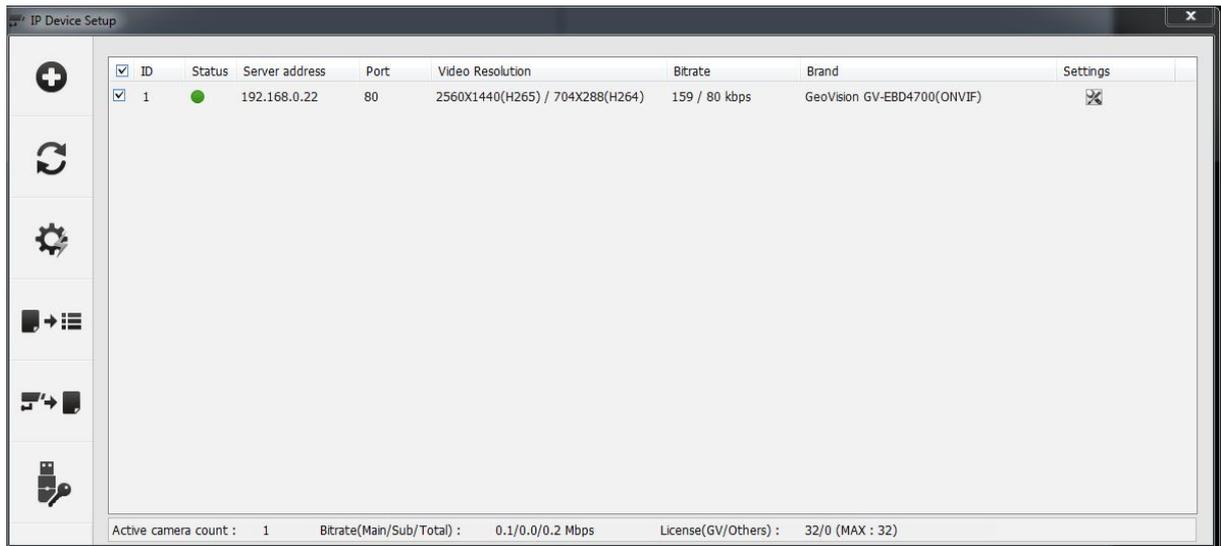


Figure5 -6

2. Click **Automatic Setup** .
3. Double-click the GV-EBD4700 and type the user name and password of the camera.

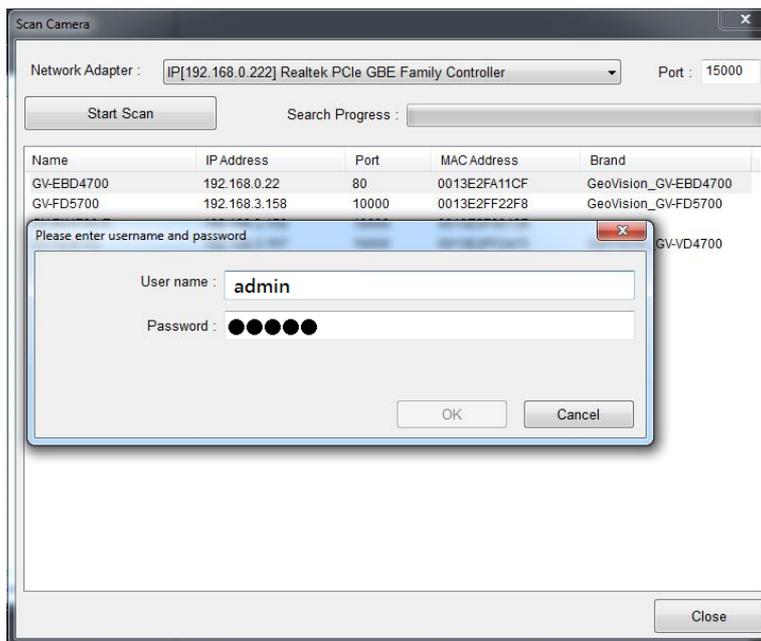


Figure 5-7

4. Click **OK**. This dialog box appears.

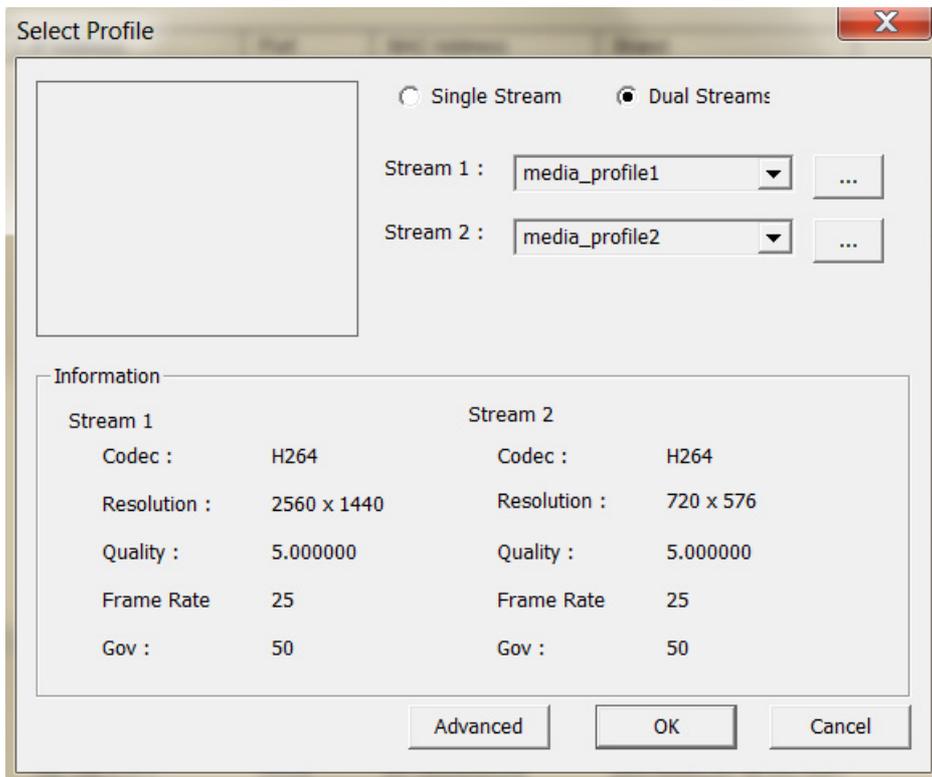


Figure 5-8

5. Click **OK** to add the camera to the list.
6. To connect the added camera, click the box besides the **ID** column. Upon successful connection, the **Status** icon shows green, with the video resolution and bitrate being displayed in the correspondent columns.

<input checked="" type="checkbox"/>	ID	Status	Server address	Port	Video Resolution	Bitrate	Brand	Settings
<input checked="" type="checkbox"/>	1		192.168.0.22	80	2560X1440(H265) / 704X288(H264)	159 / 80 kbps	GeoVision GV-EBD4700(ONVIF)	

Figure 5-9

# Appendix

## A. RTSP Protocol Support

The camera can support RTSP protocol for both video and audio streaming.

If you are using Quick Time player, use the following RTSP command:

```
rtsp://<IP of the camera>:554/<CH No.>.sdp
```

For example, `rtsp://192.168.3.111:554/CH001.sdp`

If you are using VLC player, use the following RTSP command:

```
rtsp://<ID>:<Password>@<IP of the camera>:554/<CH No.>.sdp
```

For example, `rtsp://admin:admin@192.168.3.111:554/CH001.sdp`

If you use the VLC, and if authentication is *not* required, enter:

```
rtsp://@<IP of the camera>:554/<CH No.>.sdp
```

For example, `rtsp://@192.168.3.111:554/CH001.sdp`

---

### Note:

1. See 3.6.2 *Security* for RTSP related settings on the Web interface.
  2. Only VLC and QuickTime players are supported for streaming video via RTSP protocol.
-