GeoVision inc
The Vision of Security

# GV-CR1320 Camera Reader

## User's Manual


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

CR1320V110-UM-A

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**Scan the following QR codes for product warranty and technical support policy:**

**[Warranty]**

**[Technical Support Policy]**

# Contents

# Naming and Definition

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

# Installation Considerations

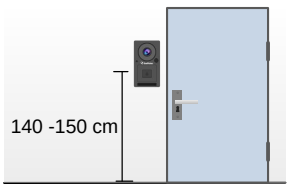
To make sure the finger and face of the cardholder can be detected, follow the instructions below to set up GV-CR1320.

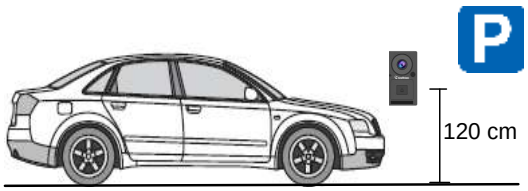
**Touchpad Recognition:**

- The touchpad cannot be activated with gloves on.

**Installation Height:**

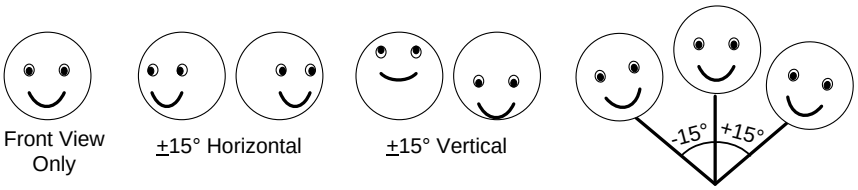
- When placed at a building gate, GV-CR1320 should be about 1.4-1.5 meters above the ground.
- When placed at a parking lot gate, GV-CR1320 should be about 1.2 meters above the ground to match the height of vehicles.




**Face Detection Limitations**

- GV-CR1320 cannot detect the face of cardholders wearing facial masks or sunglasses.
- GV-CR1320 is designed to detect front-view faces only. If the face is slightly tilted horizontally or vertically, the tilt angle cannot exceed 15°.




**Lighting Conditions**

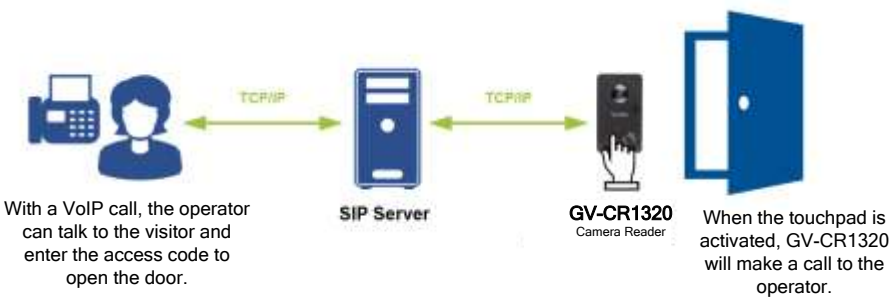
- Avoid placing GV-CR1320 where the light source is directly behind the subject.
- Prevent light from directing onto the GV-CR1320's camera lens.

# Chapter 1 Introduction


GV-CR1320 is a 13.56 MHz card reader with a built-in 2 MP camera. GV-CR1320 recognizes identification cards and grants access as regulated by the connected controller. Its camera captures the live view of entrance and transmits it to the access control system GV-ASManager through network connection, without the need of installing and maintaining a separate camera in addition to the card reader.

**VoIP Calls:**

When its touchpad is activated, GV-CR1320 will place a call to the operator through VoIP. The operator can then communicate with the visitor and enter an access code to open the door.



## 1.1 Key Features

**Camera**

- 2 MP progressive scan super low lux CMOS
- Minimum illumination at 0.02 lux
- Dual streams from H.264 and MJPEG
- Up to 15 fps at 1920 x 1080
- Day and night function (with removable IR-cut filter)
- Built-in IR with effective distance up to 3 m (9.84 ft)
- Ingress protection (IP66)
- 12V DC, 2.5A / PoE+ (IEEE 802.3at)
- Built-in microphone and speaker
- Wide Dynamic Range (WDR)
- Built-in micro SD card slot
- Provides 180° panorama view

**Reader**

- 13.56 MHz reader (Mifare DESFire, Mifare Plus and Mifare Classic)
- Support for GV-Proximity Cards with GID (GeoVision identifier) to enhance security
- Access by card plus face detection
- Network interface for connecting to and access control by controllers
- Support for GV-WTR for connecting to and access control by 3rd-party Wiegand controllers

**Access Control**

- 2 inputs, dry contact
- 1 relay output (30V DC, 0.5A)
- Touchpad to activate two-way communication between the operator and visitors
- Snapshots captured upon card presented and touchpad activated
- SIP/VoIP calling support
- Different access control modes enabled according to the Authentication Schedule: Card only mode (default), Card andw Face Mode
- GV-Access app for push notifications

## 1.2 System Requirements

To access the functions and settings of GV-CR1320 on the Web interface, ensure your PC has good network connection and use one of the following web browsers:

- Internet Explorer 9 x or later
- Microsoft Edge
- Google Chrome
- Firefox

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**Note:** For users of non-IE browsers, download **GV-Web Viewer** to access full functioning user interface. See *3.1 Accessing Your Surveillance Images.*

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**Compatible GV-AS Controller**

- **GV-AS210** / **2110** / **2120:** V2.20 or later
- **GV-AS410** / **4110** / **4111:** V2.20 or later
- **GV-AS810** / **8110** / **8111:** V2.20 or later
- **GV-AS1520:** V2.20 or later
- **GV-AS1620:** V1.00 or later
- **GV-CS1320:** V3.00 or later

**Compatible GV-Software**

- **GV-ASManager:** V5.1.0 or later
- **GV-VMS:** V17.1.0.100 or later
- **GV-DVR / NVR:** V8.7.6 or later
- **GV-Control Center:** V3.5.1 or later
- **GV-Center V2:** V17.1.0 or later
- **GV-Vital Sign Monitor:** V17.1.0 or later
- **GV-Recording Server:** V1.4.2 or later

## 1.3 Packing List

- GV-CR1320

- Mounting Plate

- Standard Screw x 2

- Plastic Screw Anchor x 2

- Security Screw

- Torx Wrench

- Silica Gel Bag
- Download Guide
- Micro SD Card 2 GB (inserted and formatted)
- Warranty Card

## 1.4 Optional Accessories

Optional devices can expand the capabilities and versatilities of your GV-CR1320. Consult our sales representatives for more information.

| | |
|---|---|
| **GV-AS2120 / 4110 / 4111 / 8110 / 8111** | GV-AS series are controllers used to manage up to 4/8 doors via connected readers and have the capability of storing and granting / restricting access for up to 100,000 cards. |
| **GV-AS1520** | GV-AS1520 is a controller with built-in Radio Frequency Identification (RFID) reader designed for parking lot management and stores up to 100,000 cards. |
| **GV-AS1620** | GV-AS1620 is a single door controller with three types of interfaces, Wiegand, RS-485, TCP/IP, to accommodate various readers for entry and exit management. |
| **GV-AS ID Card & GV-AS ID Tag** | 125 KHz and 13.56 MHz cards / key fobs are available. |
| **GV-CS1320** | GV-CS1320 is an access controller with a built-in 2 MP camera and 13.56 MHz reader that can manage up to 40,000 access cards and be connected to a maximum of 2 extended readers. |
| **GV-IB25 / 65 / 85 Infrared Button** | GV-IB25 / 65 / 85 Infrared Button detects infrared movement within 3 to 12 cm and allows you to open the door with a wave of hand. |
| **GV-WTR** | GV-WTR is a converter designed for converting Wiegand interface to RS-485 interface, and vice versa. It enables 3rd party readers to be connected to RS-485 GV-Controllers, as well as allowing GV-AI FR (software) and GV-CR1320 (RS-485 camera reader) to be connected to 3rd-party Wiegand controllers. |
| **Electric Lock** | Three types of electric locks are available: electromagnetic lock, electric bolt and electric strike. |
| **Power Adapter** | Contact our sales representative for the countries and areas supported. |
| **Push Button Switch** | The push button switch can be integrated with access control system, allowing door exit by momentarily activating or deactivating the electric locking device. Both American standard and European standard push buttons are available. |

## 1.5 Overview

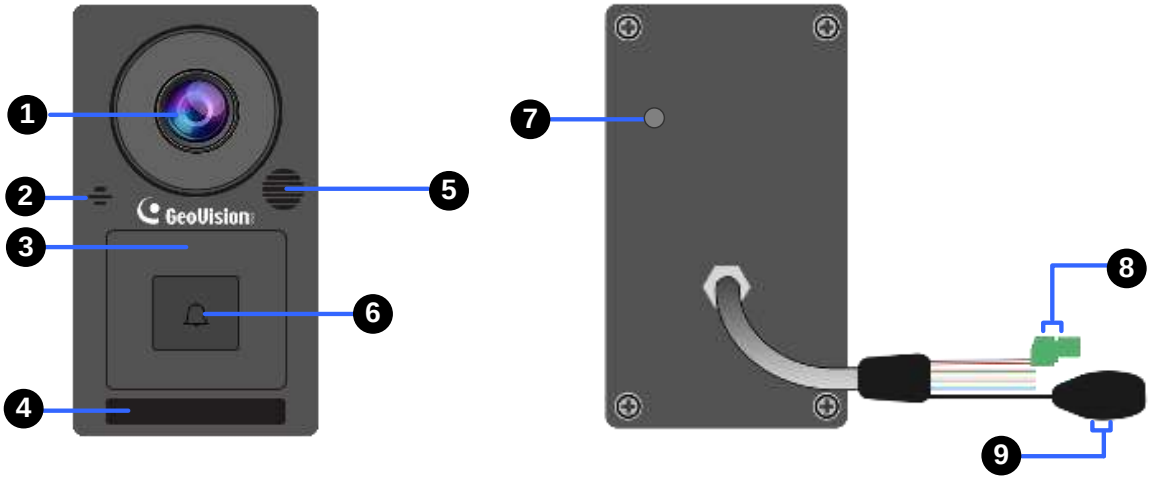


*Figure 1-1*

| No. | Name | Function |
|---|---|---|
| 1 | Lens | Receives image. |
| 2 | Microphone | Receives sound from GV-CR1320. |
| 3 | Card Reader | Reads ID cards or ID tags. |
| 4 | IR LEDs | Automatically illuminates for night time use. |
| 5 | Speaker | Talks to the surveillance area from the local computer. |
| 6 | Touchpad and LED status | Touch to activate the talk mode. See *1.8.1 LED Status and Beeper*. |
| 7 | Default Button | Resets all configurations to default factory settings. See *5.3 Restoring to Factory Default Settings.* |
| 8 | Power Cable | Connects to power supply. See *1.8 Powering on GV-CR1320*. |
| 9 | Ethernet Port | Connects to network and power supply. See *1.7 Connecting GV-CR1320*. |

## 1.6 Installation

### 1.6.1 Wire Definition

The wire definitions of GV-CR1320 are illustrated below.

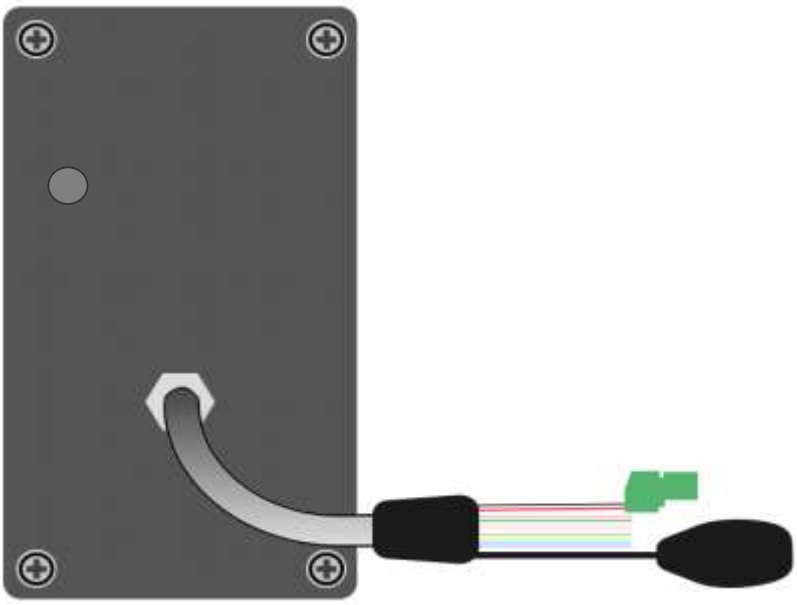

*Figure 1-2*

| Wire | Definition | Wire | Definition |
|---|---|---|---|
| RJ-45 | Ethernet | Blue | RS-485 + |
| Red | 12V DC | Light Blue | RS-485 - |
| Black | GND | Gray | Output NO |
| Yellow | Input 1 | Purple | Output COM |
| Brown | Input COM | Orange | Output NC |
| Light Red | Input 2 | Green | Not functional |
| White | Not functional | | |

## 1.6.2 Installing GV-CR1320

After the location of GV-CR1320 is decided, follow the steps below to install the camera reader.

**Note:** You will need to prepare a single gang power box for wall mount installation.

1. Attach the single gang power box to the wall.
2. Place the mounting plate on the single gang power box and secure with the 2 standard screws provided.
3. Place GV-CR1320 on the mounting plate together with the single gang power box and thread the cables through the holes.
4. Secure the security screw on the bottom with the mounting plate.

**Step 2**

**Step 3**

**Step 4**

*Figure 1-3*

### 1.6.3 Replacing the Silica Gel Bag

If you opened the compartment cover at the back of your GV-CR1320 to change a new Micro SD card, you must follow the steps below to replace the original silica gel bag with a new one.

1. Open the compartment cover at the back of your GV-CR1320 with a screwdriver.

*Figure 1-4*

2. To replace the silica gel bag, remove the original one and put in a new one in its place.

*Figure 1-5*

3. Fasten the compartment cover.

**IMPORTANT:**

1. The silica gel loses its effectiveness when the dry camera reader is opened. To prevent the lens from fogging up, replace the silica gel bag every time when you open the camera reader and conceal the gel bag in the camera reader within two minutes of exposing to the open air.
2. For each newly replaced silica gel bag, allow it to absorb moisture for at least 30 minutes before operating the camera.

## 1.7 Connecting GV-CR1320

There are two ways to connect GV-CR1320 to a GV-AS Controller, as illustrated below:

- **Network**

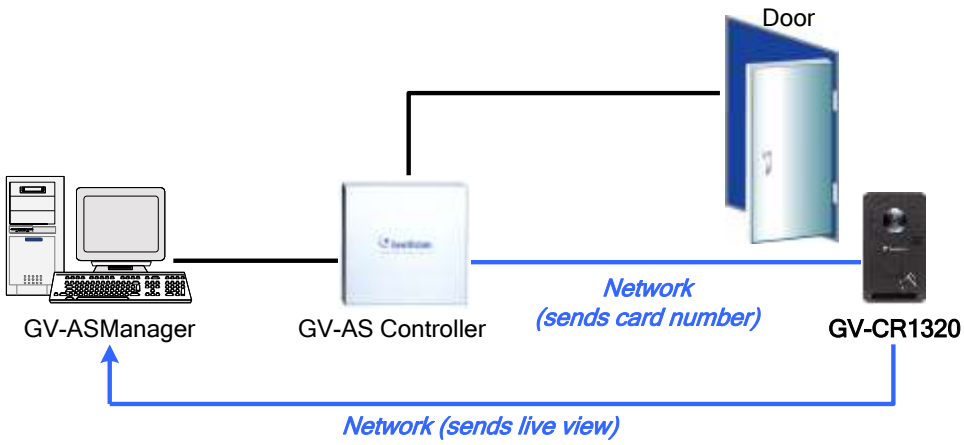


*Figure 1-6*

- **via GV-WTR**

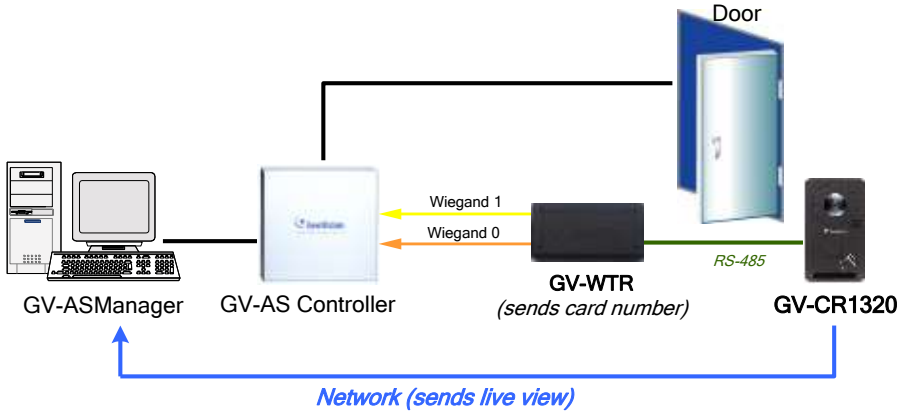


*Figure 1-7*

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**Note:**

1. When connected via GV-WTR, snapshots by GV-CR1320, will not be sent to GV-ASManager upon access.
2. Make sure the GV-WTR is connected to the GV-AS Controller using the Wiegand Data 1 (Output) and Wiegand Data 0 (Output) wires, respectively yellow and orange. For the wire definition of GV-WTR, see *GV-WTR Wiegand Converter Installation Guide* from our website.

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### 1.7.1 Connecting Input Devices

All inputs are **dry contact** and can be configured as normally open (NO) or normally closed (NC) through the GV-CR1320 Web interface. The default value is **NO**. To change the input status, see *4.2.1 Input Setting*

The table below shows the wire assignments of input connectors on GV-CR1320.

| Wire color | Definition |
|---|---|
| Yellow | Input 1 |
| Light Red | Input 2 |
| Brown | Input COM |

### 1.7.2 Connecting Output Devices

GV-CR1320 supports 1 type of output: Door outputs, e.g. electronic lock.

The table below shows the wire assignments of output connectors on GV-CR1320.

| Wire color | Definition |
|---|---|
| Purple | Output COM |
| Orange | Output NC |
| Gray | Output NO |

Check if your output device meets the following absolute maximum ratings before connecting it to the Door outputs.

| | |
|---|---|
| **Breakdown Voltage** | 250V AC, 220V DC |
| **Continuous Load Current** | 1A (30V DC), 0.3A (125V AC) |

**Note:** Absolute Maximum Ratings are those values beyond which damage to GV-CR1320 circuit board may occur. Continuous operation of GV-CR1320 at the absolute rating level may affect GV-CR1320's reliability.

**To connect an output device:**

The example below illustrates the connection of a locking device to GV-CR1320. Connect the (+) point on the locking device to the Output COM wire on GV-CR1320, connect the two (-) points of the locking device and the external power supply together, and connect the (+) point on the external power supply to the Output NO or Output NC wire on GV-CR1320 based on the state of the locking device.

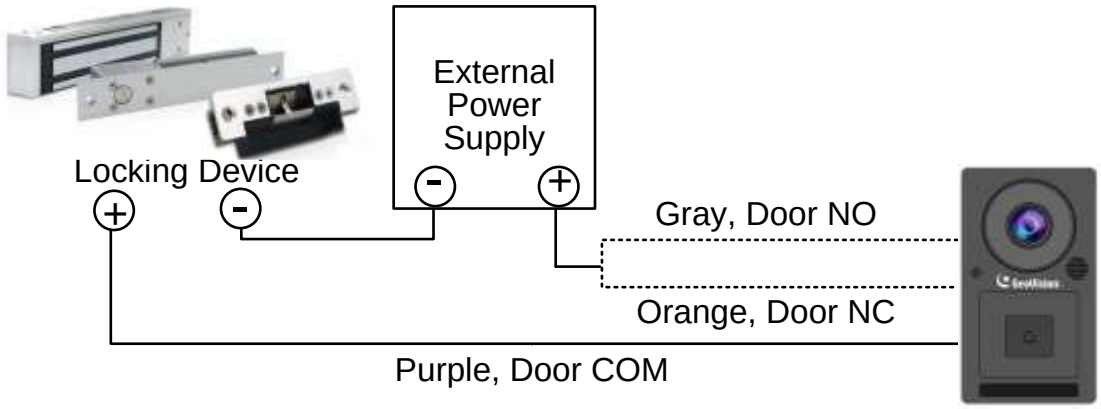


*Figure 1-8*

## 1.8 Powering on GV-CR1320

You can choose to supply power using a power or PoE adapter.

- When using a Power Adaptor, connect 12V and GND wires to a 12V, 3A power adapter and then connect the power adapter to a power source.

The table below shows the pin assignments of the power connectors on GV-CR1320.

| Wire color | GV-CR1320 Definition |
|---|---|
| Red | 12V DC |
| Black | GND |

- When using PoE adapter, power is provided to the device through the Ethernet cable.

**Note:**

1. Power should only be applied to the unit when all connections are completed and tested.
2. GV-CR1320 produces an output voltage of 12V, thus an external power supply is required if the total power consumptions of connected input / output devices exceed 12V.

### 1.8.1 LED Status & Beeper

Normally, the LED on GV-CR1320 is blue during standby mode and the LED flashes green when a card is granted access. The LED status and beeper under different conditions are listed below.

| Condition | LED | Beeper |
|---|---|---|
| Ready | Blue (Connected to GV-ASManager)<br>Purple (Disconnected from GV-ASManager) | N/A |
| Access Denied | Displays red LED momentarily | Two short beeps |
| Access Granted | Displays green LED momentarily | One long beep |
| Touchpad activated | Flashes blue momentarily | One short beep |
| Touchpad ignored | Returns to blue/purple LED | Three short beeps after 30 seconds |
| Talk mode enabled | Constant yellow | N/A |

# Chapter 2 Getting Started

This chapter provides basic information to set GV-CR1320 onto the network.

Follow the steps below to get GV-CR1320 working on the network:

1. Use a standard network cable to connect the GV-CR1320 to your network.
2. Connect power using one of the two methods described in *1.8 Powering on GV-CR1320*:
3. You can now access the Web interface of GV-CR1320.
   - If GV-CR1320 is installed in a LAN with DHCP server, use GV-IP Device Utility to look up its dynamic IP address. See *2.2 Checking the Dynamic IP Address*.
   - If GV-CR1320 is installed in a LAN without DHCP server, the default IP address 192.168.0.10 will be applied. You also can assign a different static IP. See *2.3 Assigning an IP Address*.

Once GV-CR1320 is properly installed, refer to the sections below for some of the important features that can be configured through its Web interface:

- **Date and time adjustment:** see *4.7.1 Date and Time*.
- **Login and privileged passwords:** see *4.7.3 User Account*.
- **Network gateway:** see *4.6 Network*.
- **Camera image adjustment:** see *3.2.2 The Control Panel of the Live View Window*.
- **Video format, resolution and frame rate:** see *4.1.1 Video Settings*.

## 2.1 Creating Login Credentials

When purchasing a new GV-CR1320 or after loading default, you need to set up a login username and password for the GV-CS1320.

1. Download and install GV-IP Device Utility from our website.
2. On the GV-IP Device Utility window, click to search for your GV-CR1320.
3. Double-click your GV-CR1320 in the GV-IP Device Utility list. This dialog box appears.

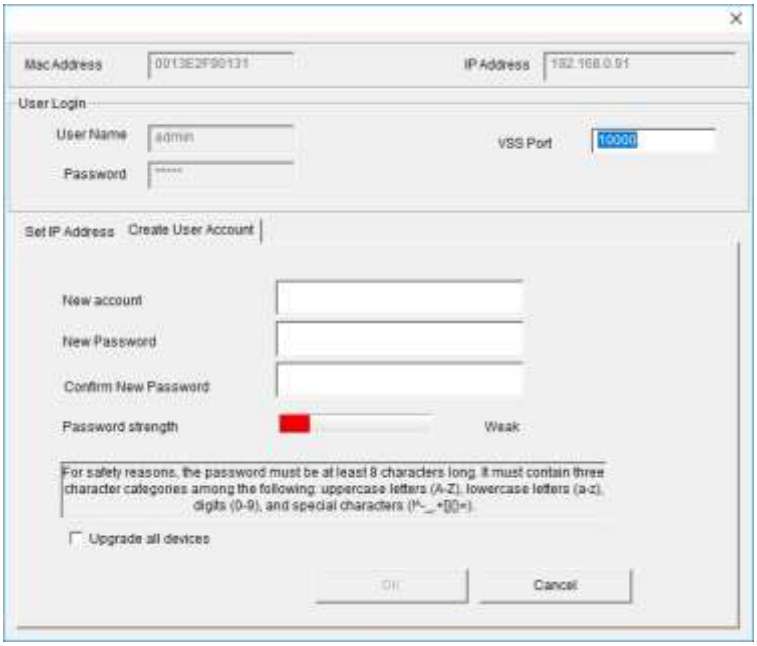


*Figure 2-1*

4. Click the **Create User Account** tab to type a new username and password. Note that the new password must meet the password strength requirements.
5. Optionally, click **Upgrade all devices** to use the same username and password on all other devices of the same model.

## 2.2 Checking the Dynamic IP Address

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

---

**Note**: The PC installed with GV-IP Device Utility must be under the same LAN as GV-CR1320.

---

1. Install the GV-IP Device Utility program from our website.
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.
3. Find the GV-CR1320, click on its IP address and select **Web Page**.

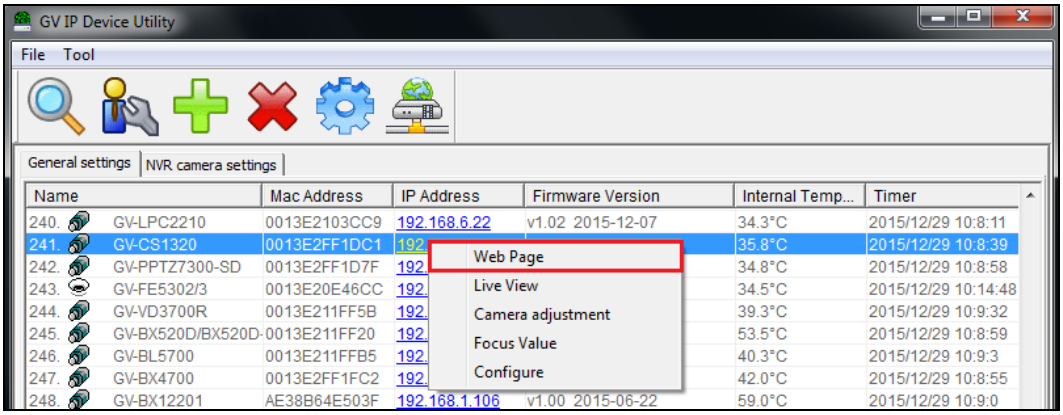


*Figure 2-2*

4. On the login page, enter your username and password to login. See *2.1 Creating Login Credentials.*

## 2.3 Assigning an IP Address

Follow the steps below to assign a static IP address.

---

**Note:**

1. GV-CR1320 has a default IP address of 192.168.0.10. The computer used to set the IP address must be under the same LAN as the device.
2. If your router supports DHCP server, GV-CR1320 will obtain a dynamic IP address from the DHCP server each time it connects to the LAN, instead of using 192.168.0.10.

---

1. Open your web browser and type the default IP address http://192.168.0.10
2. In both Login and Password fields, enter your username and password and click **Apply**.
3. In the left menu, select **Network** > **LAN**.

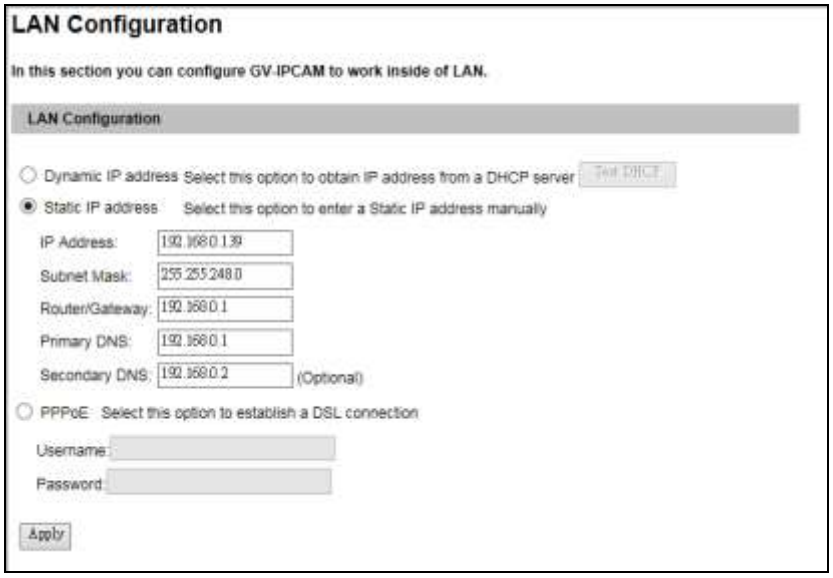


*Figure 2-3*

4. Select **Static IP address** and type the desired IP Address, Subnet Mask, Router/Gateway, Primary DNS and Secondary DNS.
5. Click **Apply**. GV-CR1320 is now accessible by entering the assigned IP address on the web browser.

---

**IMPORTANT:**

1. If **Dynamic IP Address** or **PPPoE** is enabled, you need to know which IP address GV-CR1320 will get from the DHCP server or ISP to log in. If your GV-CR1320 is installed under a LAN, use the GV-IP Device Utility to look up its current dynamic address. See *2.2 Checking the Dynamic IP Address*.
   If your GV-CR1320 uses a public dynamic IP address, via PPPoE, use the Dynamic DNS service to obtain a domain name to be linked to the device's changing IP address first. For details on Dynamic DNS Server settings, see *4.6.3 Advanced TCP/IP.*
2. If **Dynamic IP Address** and **PPPoE** is enabled and you cannot access the unit, you may have to reset it to the factory default settings and perform the network settings again.

   To restore the factory settings, see *5.3 Restoring to Factory Default Settings*.

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# Chapter 3 Accessing the Camera Reader

Two types of user levels are allowed to log in GV-CR1320: **Administrator** and **Guest**. The Administrator has full access to all system configurations while the Guest can only access the live view and network status.

## 3.1 Accessing Your Surveillance Images

1. Start the Internet Explorer browser.
2. Type the IP address or domain name of GV-CR1320 in the **Location / Address** field of your browser.


*Figure 3-1*

3. Enter your username and password.
4. The live web page is now displayed on your browser.
   - For Mozilla Firefox, Google Chrome or Microsoft Edge, click **Run** to execute GV-Web Viewer when prompted by your web browser, type in the IP address of GV-CR1320, and click **Connect** to access the full functioning user interface.

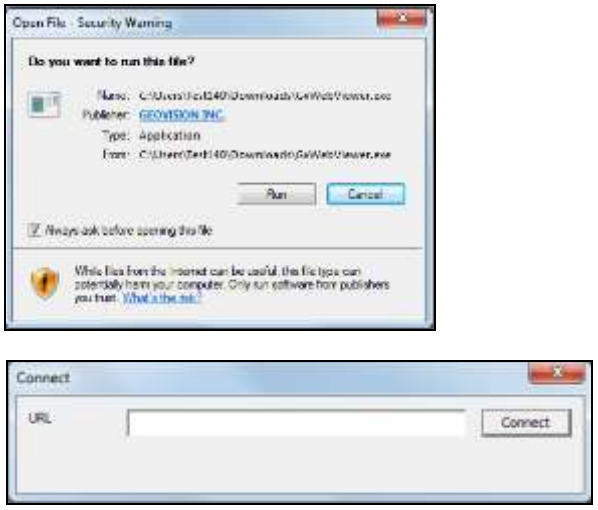


*Figure 3-2*

**Note:** To enable the updating of images in Microsoft Internet Explorer, you must set your browser to allow ActiveX Controls and perform a one-time installation of GeoVision's ActiveX component onto your computer.

## 3.2 Functions Featured on the Main Page

This section introduces the features of the **Live View** window on the main page.

### 3.2.1 The Live View Window

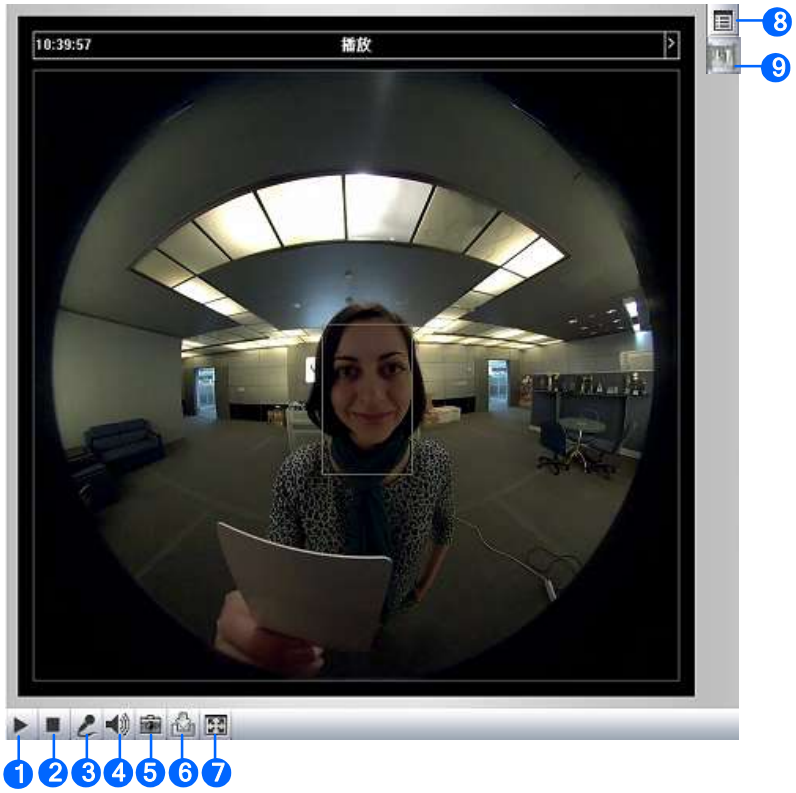


*Figure 3-3*

| No. | Name | Function |
|---|---|---|
| 1 | Play | Plays live video. |
| 2 | Stop | Stops playing video. |

| No. | Name | Function |
|---|---|---|
| 3 | Microphone | Talks to the surveillance area from the local computer. |
| 4 | Speaker | Listens to the audio around GV-CR1320. |
| 5 | Snapshot | Takes a snapshot of the live video.<br>--- See *3.2.3 Snapshot of a Live Video*. |
| 6 | File Save | Records live video to the local computer.<br>--- See *3.2.4 Video Recording*. |
| 7 | Full Screen | Switches to full screen view. Right-click the image to have these options: **Snapshot**, **Full Screen**, **Digital PTZ**, **Wide Angle Lens Dewarping**, **Wide Angle Setting**, **Fisheye Setting**, **PIP** and **PAP**.<br>- See *3.2.5 Digital PTZ*<br>- See *3.2.6 Wide Angle Lens Dewarping*<br>- See *3.2.7 Picture-in-Picture and Picture-and-Picture View* |
| 8 | Show System Menu | Brings up these functions: **Video and Audio Configuration**, **Remote Config**, **Show Camera Name** and **Image Enhance**.<br>- See *3.2.8 Video and Audio Configuration*<br>- See *3.2.9 Remote Configuration*<br>- See *3.2.10 Camera Name Display*<br>- See *3.2.11 Image Enhancement*. |
| 9 | I/O Control | Enables the **I/O Control** and **Visual Automation** Panel.<br>--- See *3.2.12 I/O Control* and *3.2.13 Visual Automation*, respectively. |

### 3.2.2 The Control Panel of the Live View Window

To open the control panel of the Live View window, click the control icon on top of the viewer. You can access the following functions by using the left and right arrow buttons on the control panel.

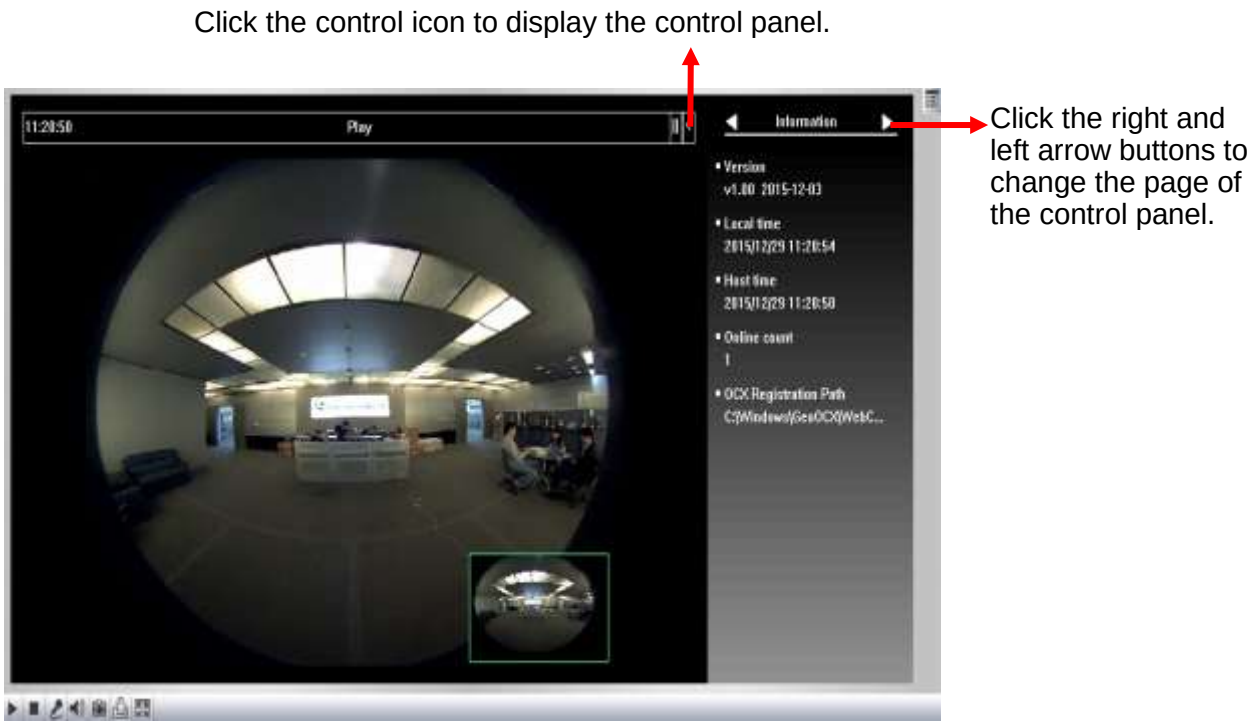


*Figure 3-4*

**[Information]** Displays the version of GV-CR1320, local time of the local computer, host time of GV-CR1320, and the number of users logging in to GV-CR1320.

**[Video]** Displays the current video codec, resolution and data rates.

**[Audio]** Displays the audio data rates when the microphone and speaker devices are enabled.

**[I/O Control]** Provides a real-time graphic display of the input and output status. You can force the output to be triggered by double-clicking its icon.

**[Camera Adjustment]** Allows you to adjust the image quality.


*Figure 3-5*

- **Brightness**: Adjusts the brightness of the image.
- **Contrast**: Adjusts the relative differences between one pixel and the next.
- **Saturation**: Adjusts the saturation of the image.
- **Sharpness**: Adjusts the sharpness of the image
- **Gamma**: Adjusts the relative proportions of bright and dark areas
- **White balance**: GV-CR1320 automatically adjusts the color to be closest to the image you are viewing. You can choose one of the four presets: **Auto**, **Outdoor**, **Indoor**, and **Fluorescent**. You can also choose **Manual** to adjust the white balance manually.

- **Flicker less**: GV-CR1320 automatically matches the frequency of your camera reader's image to the frequency of indoor light sources, e.g. fluorescent lighting. You can also select 50 Hz or 60 Hz manually. If these don't match, faint light and dark bars may appear in your images. Check the power utility to determine which frequency is used.
- **Image Orientation**: Changes the image orientation on the Live View window.
- **Slowest Shutter Speed**: Shutter speed controls the amount of the lights enters the image sensor and directly impacts the quality of image presentation. A slow shutter speed allows higher light exposure that creates a brighter overall image by blurring moving objects and bringing out background details, and a faster shutter speed lowers color and image clarity in order to capture motions.
- **D/N:** Select **Auto** for automatic switch between day mode and night mode depending on the amount of light detected. Select **Black and white** to switch the camera reader to night mode. Select **Color** to switch the camera reader to day mode. The value 10 is the most light-sensitive. Select **Trigger by Input** for the externally installed infrared illuminator to turn on under low light and turn off under sufficient light.
- **Denoise**: Reduces image noise especially under low-light conditions. The higher the denoise value, the stronger the effect.
- **Wide Dynamic Range**: adjusts and generates clear live view when the scene contains very bright and very dark areas at the same time. Select **Auto (Strong)** to bring out details in the darks areas of the scene, select **Auto (Weak)** to bring out less detail in the dark area and at the same time keep the bright areas from overexposure, or select **Auto (Normal)** for a balanced effect. Select **Close** to disable the function.
- **Defog**: Select **Auto** to automatically enhance the visibility of images. Select **Close** to disable the function.
- **Super Low Lux**: Select **Auto** for GV-CR1320 to automatically enhance the live view under insufficient light. Select **Close** to disable the function. The default setting is Auto.
- **Metering**: Controls the camera reader's exposure. Select **Normal** for GV-CR1320 to adjust exposure based on the full live view. Select **Regional Metering** for GV-CR1320 to adjust exposure of specified zones. Draw directly on the live view and a block marked with "AE (automatic exposure)" appears. You can establish up to 4 zones. To remove the block, right-click the block and select **Delete**.
- **Back Light Suppression**: Reduces back light under backlit conditions. Select Face Enhanced for FD Scene Mode to access this option (see *4.1.1 Video Settings*). The higher the value, the stronger the effect.

**[Temperature Status]** Displays the current chipset temperature within the device.

### 3.2.3 Snapshot of a Live Video

To take a snapshot of live video, follow these steps:

1. Right-click on the live view image and click **Snapshot**. The Save As dialog box appears.
2. Specify **Save in**, type the **File name**, and select **JPEG** or **BMP** as **Save as Type**. You may also choose whether to display the name and date stamps on the image.
3. Click the **Save** button to save the image in the local computer.

### 3.2.4 Video Recording

You can record live video for a certain period of time to your local computer.

1. Click the **File Save** button (No. 6, *3.2.1 The Live View Window*). The Save As dialog box appears.
2. Specify **Save in**, type the **File name**, and move the **Time period** scroll bar to specify the time length of each video clip from 1 to 5 minutes.
3. Click the **Save** button to start recording.
4. To stop recording, click the **Stop** button (No. 2, *3.2.1 The Live View Window*).

### 3.2.5 Digital PTZ

The Digital PTZ (DPTZ) function of GV-CR1320 allows you to simulate the PTZ movement on the screen.

1. Right-click on the live view to display a drop-down list.
2. Select **Digital PTZ**. The PTZ control panel appears.

*Figure 3-6*

3. Click the **Zoom In** / **Out** buttons to adjust the digital zoom ratio of the camera.
4. When zoomed in, you can change the direction of view by clicking the **Arrow** buttons
5. To bring the live view back to its default image, click **Home**.

### 3.2.6 Wide Angle Lens Dewarping

Use the Wide Angle Lens Dewarping function to reduce the warping of live view.

1. Right-click on the live view to display a drop-down list.
2. Select **Wide Angle Setting**. The Wide Angle Dewarping Setting window appears.


*Figure 3-7*

3. Slide the slider at the bottom to correct the degree of warping. The adjusted view is shown on the right. Click **OK** to close this window.
4. To enable this configuration, right-click on the live view, select **Wide Angle Lens Dewarping**.

### 3.2.7 Picture-in-Picture and Picture-and-Picture View

Two types of close-up views are available to provide clear and detailed images of the surveillance area: **Picture-in-Picture (PIP)** and **Picture-and Picture (PAP)**. After entering the live view window, the image is displayed in PIP mode by default.

#### Picture-in-Picture View

With the Picture in Picture (PIP) view, you can crop the video to get a close-up view or zoom in on the video.

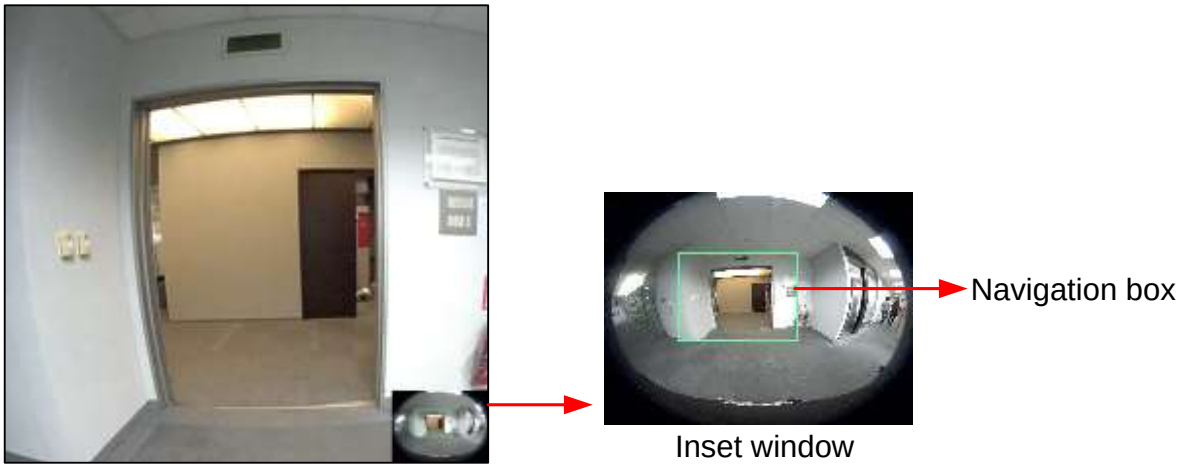


*Figure 3-8*

1. Right-click the live view and select **PIP**. An inset window appears.
2. Click the inset window. A navigation box appears.
3. Move the navigation box around in the inset window to have a close-up view of the selected area.
4. To adjust the navigation box size, move the cursor to any of the box corners, and enlarge or diminish the box.
5. To exit the PIP view, right-click the image and click **PIP** again.

## Picture-and-Picture View

With the Picture and Picture (PAP) view, you can create a split video effect with multiple close-up views on the image. A total of 7 close-up views can be defined.

*Figure 3-9*

1. Right-click the live view and select **PAP**. Three inset windows appear at the bottom.
2. Draw a navigation box on the image, and this selected area is immediately reflected in one inset window. Up to seven navigation boxes can be drawn on the image.
3. To adjust a navigation box size, move the cursor to any of the box corners, and enlarge or diminish the box.
4. To move a navigation box to another area on the image, drag it to that area.
5. To change the frame color of the navigation box or hide the box, right-click the image, select **Mega Pixel Setting** and click one of these options:
   - **Display Focus Area of PAP Mode:** Displays or hides the navigation boxes on the image.
   - **Set Color of Focus Area:** Changes the color of the box frames.
6. To delete a navigation box, right-click the desired box, select **Focus Area of PAP Mode** and click **Delete**.
7. To exit the PAP view, right-click the image and click **PAP** again.

## 3.2.8 Video and Audio Configuration

You can enable the microphone and speaker for two-way audio communication and set the number of frames to keep for live view buffer. Click the **Show System Menu** button (No. 9, *3.2.1 The Live View Window*), and select **Video and Audio Configuration**.

- **Camera:** Sets the number of frames to keep in live view buffer. Keeping more frames for live view buffer can ensure a smooth live view, but the live view will be delayed for the number of frames specified.


*Figure 3-11*

- **Audio Configure:** You can enable the microphone and speaker and adjust the audio volume.

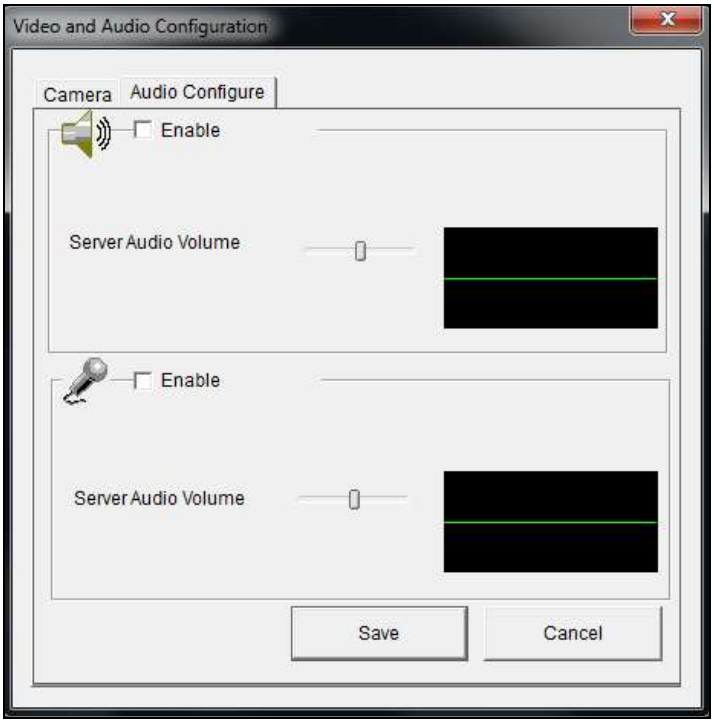


*Figure 3-12*

### 3.2.9 Remote Configuration

You can upgrade firmware over the network. Click the **Show System Menu** button (No. 9, *3.2.1 The Live View Window*), and select **Remote Config**. For details, see *5.1.1 Using the Web Interface*.

### 3.2.10 Camera Name Display

To display the camera reader's name on the image, click the **Show System Menu** button (No. 9, *3.2.1 The Live View Window*), and select **Show Camera Name**.

### 3.2.11 Image Enhancement

To enhance the image quality of live video, click the **Show System Menu** button (No. 9, *3.2.1 The Live View Window*), and select **Image Enhance**. This dialog box appears.

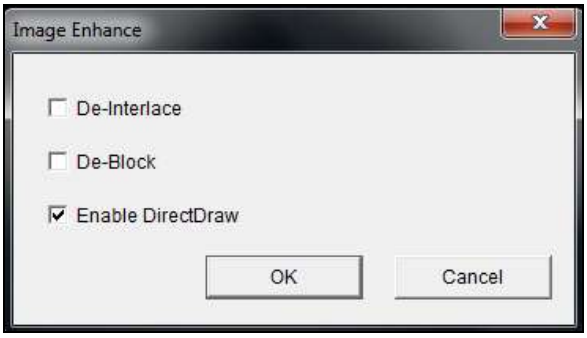


*Figure 3-13*

- **De-Interlace**: Converts the interlaced video into non-interlaced video.
- **De-Block**: Removes the block-like artifacts from low-quality and highly compressed video.
- **Enable DirectDraw:** Activates the DirectDraw function.

## 3.2.12 I/O Control

Click the **I/O Control** button (No. 9, *3.2.1 The Live View Window*) and select **I/O Control**. The I/O Control window appears.

The I/O Control window provides a real-time graphic display of the device status, I/O status and alarm events. Additionally, you can remotely force output(s) to be triggered. For details on I/O configurations, see *4.2.1 Input Setting* and *4.2.2 Output Setting*.

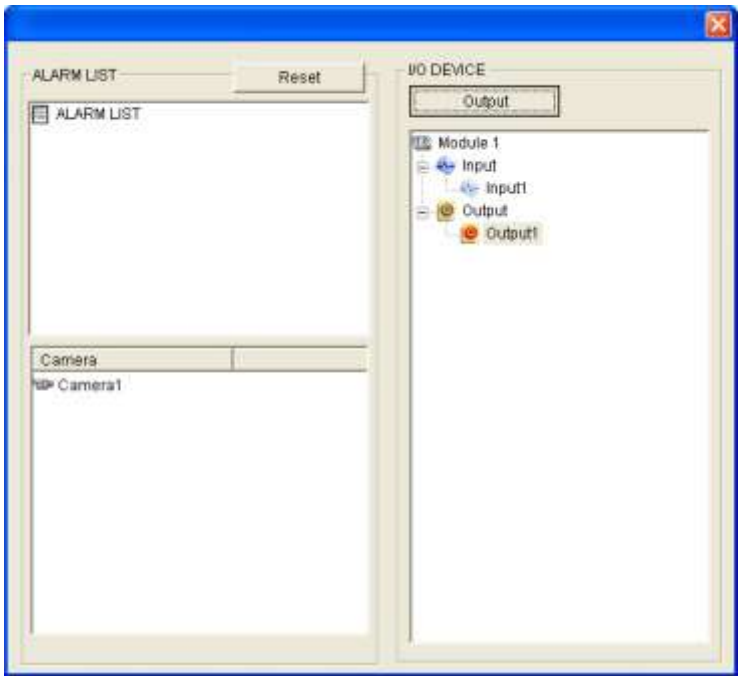


*Figure 3-14*

- The **Alarm List** is displayed in three levels. The first level indicates date, the second indicates time, and the third indicates alarm ID. Clicking the **Reset** button will clear the list.
- To trigger an output device, choose an output by highlighting and click the **Output** button.

### 3.2.13 Visual Automation

The Visual Automation allows you to change the current state of the electronic device by simply clicking on its image, e.g. turning the light ON. This feature is only available when the Visual Automation is set ahead by the Administrator. For details, see *4.1.6 Visual Automation*.


*Figure 3-15*

- To access this feature, click the **I/O Control** button (No. 9, *3.2.1 The Live View Window*) and select **Visual Automation**.
- To change the style of the set areas, click the green **I/O** button on the top left corner. You will have these options:
  - **Show All:** Displays all set areas.
  - **Rect Float:** Embosses all set areas.
  - **Set Color:** Changes the frame color of all set areas

# Chapter 4 Administrator Mode

The Administrator can access system configuration of GV-CR1320 through the network. The following configuration categories are available: **Video and Motion**, **I/O Control**, **Events and Alerts**, **Monitoring**, **Recording Schedule**, **Network, Management**, **SIP** and **Access Control**.

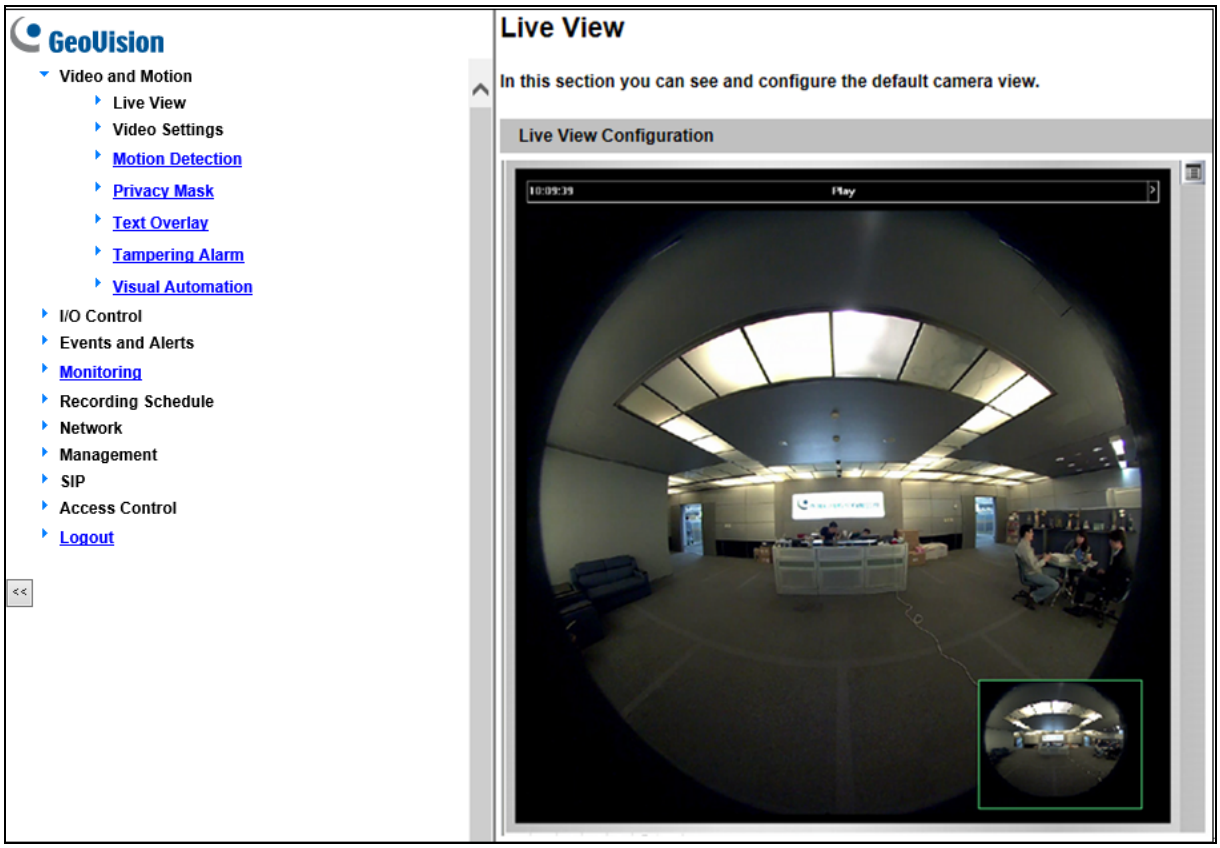


*Figure 4-1*

## List of Menu Options

Find the topic of interest by referring to the section number prefixed to each option.

| | |
|---|---|
| 4.1 Video and Motion | 4.1.1 Video Settings<br>4.1.2 Motion Detection<br>4.1.3 Privacy Mask<br>4.1.4 Text Overlay<br>4.1.5 Tampering Alarm<br>4.1.6 Visual Automation |
| 4.2 I/O Control | 4.2.1 Input Setting<br>4.2.2 Output Setting |
| 4.3 Events and Alerts | 4.3.1 Email<br>4.3.2 FTP<br>4.3.3 Center V2<br>4.3.4 Vital Sign Monitor<br>4.3.5 Video Gateway / Recording Server<br>4.3.6 RTSP/ONVIF |
| 4.4 Monitoring | |
| 4.5 Recording Schedule | 4.5.1 I/O Monitor |
| 4.6 Network | 4.6.1 Status<br>4.6.2 LAN<br>4.6.3 Advanced TCP/IP<br>4.6.4 IP Filtering<br>4.6.5 SNMP Settings |
| 4.7 Management | 4.7.1 Date and Time<br>4.7.2 Storage Settings<br>4.7.3 User Account<br>4.7.4 Log Information<br>4.7.5 Tools<br>4.7.6 Language |
| 4.8 SIP | 4.8.1 SIP Setting |
| 4.9 Access Control | 4.9.1 Basic Setting |

## 4.1 Video

GV-CR1320 supports dual streams, Streaming 1 and Streaming 2, which allow separate codec and resolutions settings for a single video transmission. In a bandwidth-limited network, such as mobile phone surveillance, this dual-stream feature allows you to view live video in lower resolution (Streaming 2) while recording in a higher resolution (Streaming 1) at the same time.

Comparison between Stream 1 and Stream 2:

<table>
<tr><th>Video Setting Options</th><th>Stream 1</th><th>Stream 2</th></tr>
<tr><td>Video Signal Type</td><td colspan="2">Different codec, resolutions and frame rates can be applied to Streaming 1 and 2.</td></tr>
<tr><td>Watermark Setting</td><td rowspan="2">Yes</td><td rowspan="2">Not configurable. Settings in Stream 1 will be automatically applied to Stream 2.</td></tr>
<tr><td>Special View Setting</td></tr>
</table>

### 4.1.1 Video Settings

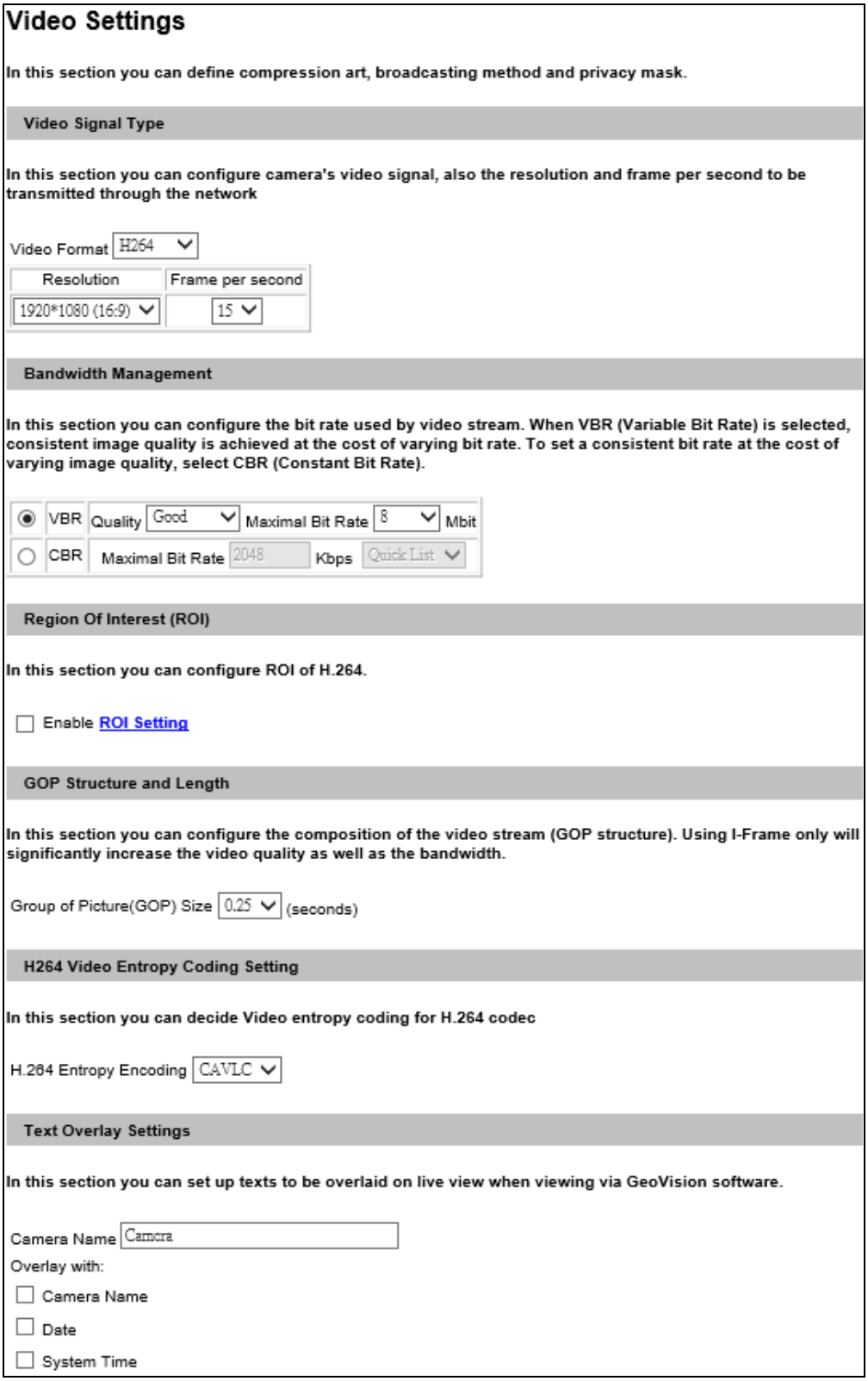


*Figure 4-2*

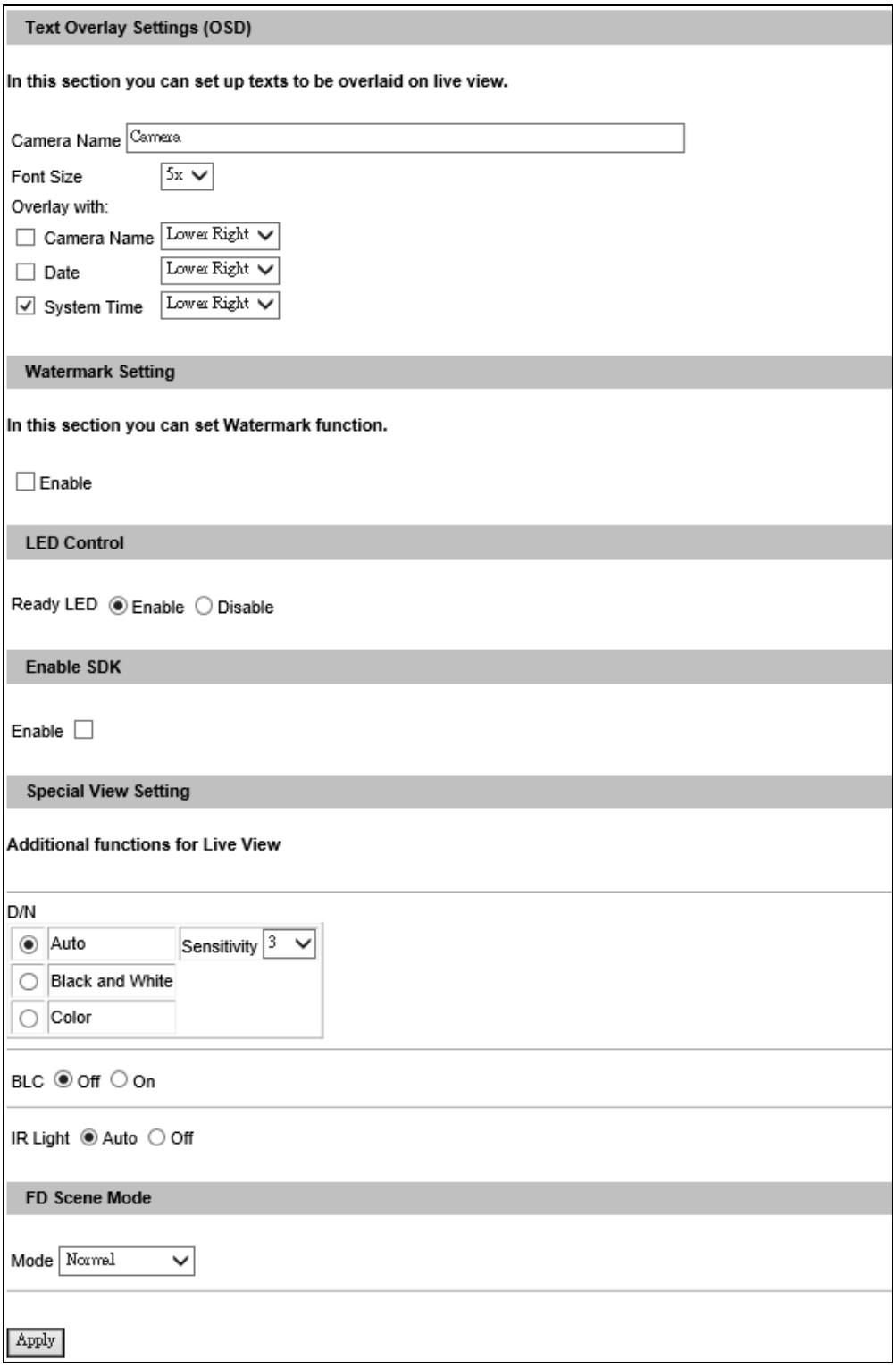
Text Overlay Settings (OSD)
In this section you can set up texts to be overlaid on live view.
Camera Name
Camera
Font Size
5x
Overlay with:
Camera Name
Lower Right
Date
Lower Right
System Time
Lower Right
Watermark Setting
In this section you can set Watermark function.
Enable
LED Control
Ready LED
Enable
Disable
Enable SDK
Enable
Special View Setting
Additional functions for Live View
D/N
Auto
Sensitivity
3
Black and White
Color
BLC
Off
On
IR Light
Auto
Off
FD Scene Mode
Mode
Normal
Apply

*Figure 4-3*

**[Video Signal Type]** Configure the codec type, signal format, resolution and frame rate from the options listed below.

| Streams | Codec Options | Image Resolution | | Maximum Frame Rate |
|---|---|---|---|---|
| **Stream 1** | H.264, MJPEG | 4:3 | 1600 x 1200,<br>1280 x 960 | 15 fps |
| | | 16:9 | 1920 x 1080,<br>1280 x 720 | |
| **Stream 2** | H.264, MJPEG | 640 x 360 | | 15 fps |

**[Bandwidth Management]** When using the H.264 code, you can select constant bitrate or variable bitrate to control the bandwidth usage.

- **VBR (Variable Bitrate):** The quality of the video stream is kept as constant as possible at the cost of a varying bitrate. The bandwidth is used much more efficiently than a comparable CBR. You can set a limit to the bit rate by specifying a **Maximal Bit Rate**. Set the image quality to one of the 5 standards: **Standard, Fair, Good**, **Great**, and **Excellent.**
- **CBR (Constant Bitrate):** CBR is used to achieve a specific bitrate by varying the quality of the stream. Select a bitrate from the **Maximal Bit Rate** drop-down list.

**[Region of Interest (ROI)]** Enhance image clarity to your defined regions with level High to Low. A total of 5 ROI can be set.

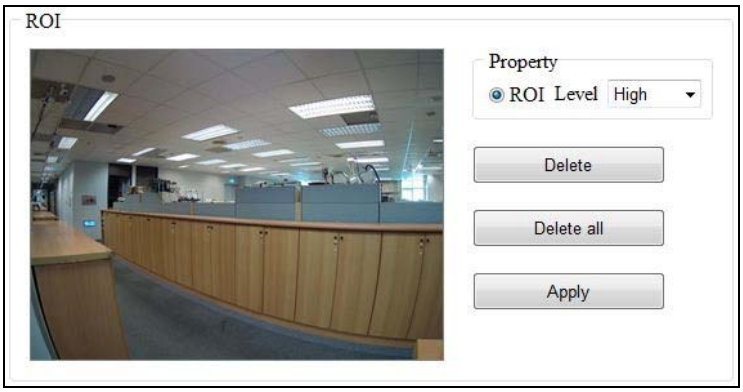


*Figure 4-4*

**[GOP Structure and Length]** Set the maximum number of seconds between every key frame. This option is only available when H.264 is selected for codec.

**[H.264 Video Entropy Coding Setting]** By default, the entropy coding is set to CAVLC. To change it to **CABAC**, click and select from the drop-down list.

**[Text Overlay Settings (OSD)]** Displays device name, date, and/or time on the live view and recorded videos when viewing through GeoVision software and third-party software through RTSP.

- **Camera Name:** Type a desired name.
- **Font Size:** Select the font size from 1x to 5x using the drop-down list.

- **Overlay with:** Select one or more of the options below to be overlaid on the live view and recorded videos. Use the drop-down list to select the display position of Camera Name, Date and System Time.

**[Watermark Setting]** Enable this option to watermark all recordings. The watermark allows you to verify whether the recorded video has been tampered with. See *5.4 Verifying Watermark*.

**[LED Control]**

- **Ready LED:** Select **Disable** if you do not want to use the Status LED.

**[Enable SDK]**

Select **Enable** to stream and record the built-in SDK data of the camera image, which can be used for advanced customization purposes. Contact our sales representatives for more details.

**[Special View Setting]**

- **D/N:** Sets the Day/Night mode of GV-CR1320.
  - ⊙ **Auto:** Select **Auto** for the GV-CR1320 to detect the amount of light present and automatically switch to monochrome in a poorly-lit scene. Use the drop-down list to adjust the sensitivity level of light sensor from 0 to 10.
  - ⊙ **Black and White:** Select this option for the live view to be in monochrome.
  - ⊙ **Color:** Select this option for the live view to be in color.
  - ⊙ **Triggered by Input:** Select to switch between day mode and night mode upon input trigger.

**[BLC]** Enable the backlight compensation to adjust the exposure when the subject is positioned in front of a bright light source.

**[FD Scene Mode]:** When connected to GV-AI FR Server, face detection accuracy may be reduced under backlit conditions. To improve accuracy, select **Face Enhanced** to enable **Back Light Suppression** in the control panel of the Live View window (see Figure 3-5).

---

**Note:** Selecting “Face Enhanced” for FD Scene Mode will reset all settings under Camera adjustment.

---

## 4.1.2 Motion Detection

Motion detection is used to generate an alarm whenever motion is detected in the video image. You can configure up to 8 areas with different sensitivity values for motion detection. Set up at least one area to enable this function, which is disabled by default.

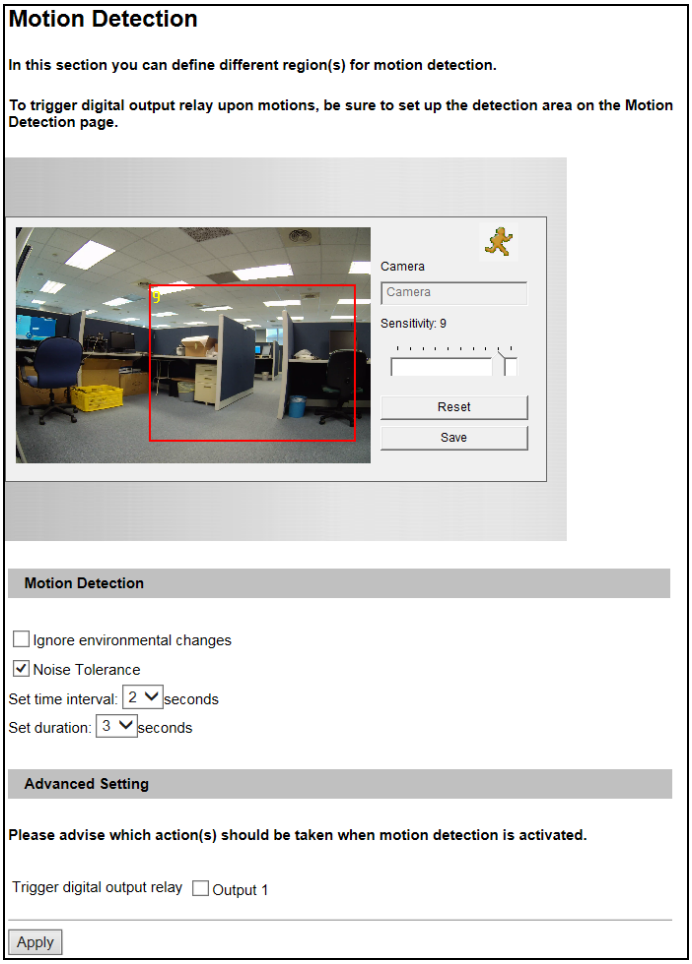


*Figure 4-5*

1. Select the desired sensitivity by moving the slider. The higher the value, the more sensitive the camera is to motion.
2. Drag an area on the image and click **Add** when you are prompted to confirm the setting.
3. Optionally repeat the above steps to create multiple motion detection areas.
4. To delete a detection area, drag on the image to highlight that area and click **Delete**.
5. Click **Save** to save the above settings.
6. Click **Reset** to delete all detection areas.
7. Optionally enable **Ignore environmental changes** and **Noise Tolerance** to ignore environmental changes, such as rain and snow, and light changes, respectively.
8. Select **Set time** interval to set the minimum amount of time the motion must last for to

trigger motion detection.

9. If you want to trigger an output upon motion detection, select **Output 1**. To activate the output settings based on a schedule, see *4.5.1 I/O Monitor*.
10. Click **Apply** to save the settings.
11. Start monitoring to enable the function, See *4.4 Monitoring*.

### 4.1.3 Privacy Mask

The Privacy Mask function is used to block out sensitive areas on live view and recorded clips for cameras connecting to GeoVision software. This feature is ideal for locations with displays, keyboard sequences (e.g. passwords), and for anywhere else you don't want sensitive information visible.

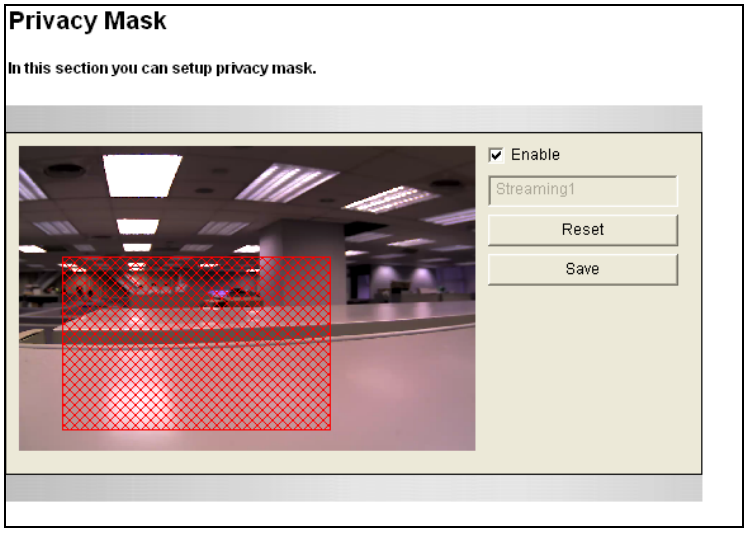


*Figure 4-6*

1. Select the **Enable** option.
2. Drag the area(s) where you want to block out on the image. Click **Add** when you are prompted to confirm the setting.
3. Click the **Save** button to save all the settings.
4. Click **Reset** to delete all mask areas.

### 4.1.4 Text Overlay

The Text Overlay allows you to overlay any text in any place on the camera view. Up to 16 text messages can be created on one camera view. The overlaid text will be saved in the recordings.

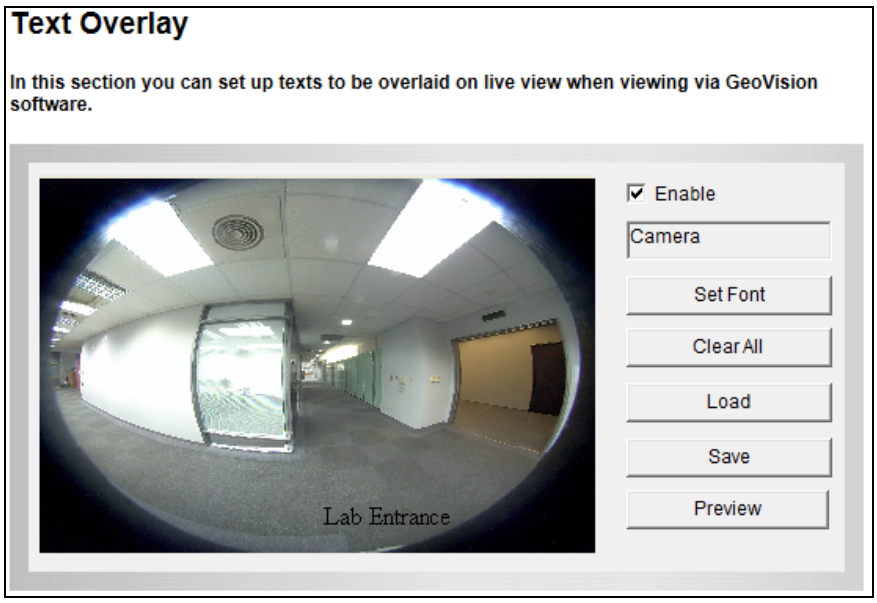


*Figure 4-7*

1. Select the **Enable** option.
2. Click **Set Font** to set up the font, font style and font size in a pop-up window.
3. Click any place on the image. This dialog box appears.

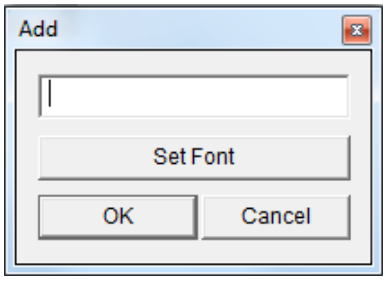


*Figure 4-8*

4. Type the desired text, and click **OK**. The text is overlaid on the image.
5. Drag the overlaid text to a desired place on the image.
6. Click **Set Font** to modify the font settings.
7. Click **Save** to apply the settings, or click **Load** (Undo) to revert to the last saved setting.
8. Click **Preview** to see how the text will appear on the image. Click **Close** to end the preview.

### 4.1.5 Tampering Alarm

Tampering Alarm is used to detect whether a camera is being physically tampered. An alarm can be generated when the camera is moved, covered up, or out of focus. The alarm types include triggering of the connected output device, e-mail alert and notifying the connected GV-Center V2, GV-Vital Sign Monitor and GV-DVR / NVR / VMS.

To establish tampering alarm, set up at least one alarm type:

- To trigger the output device when a tampering event occurs, enable the output setting and select **Tampering Alarm**. See *4.2.2 Output Setting*.
- To trigger e-mail alerts when a tampering event occurs, enable the e-mail setting and select **Tampering Alarm**. See *4.3.1 E-Mail*.
- To notify GV-Center V2, GV-Vital Sign Monitor and GV-DVR / NVR / VMS when a tampering event occurs, enable the connection to these systems. See *4.3.3 Center V2*, *4.3.4 Vital Sign Monitor*, *6.1 Setting up GV-CR1320 on GV-DVR / NVR*, and *6.2 Setting up GV-CR1320 on GV-VMS*.

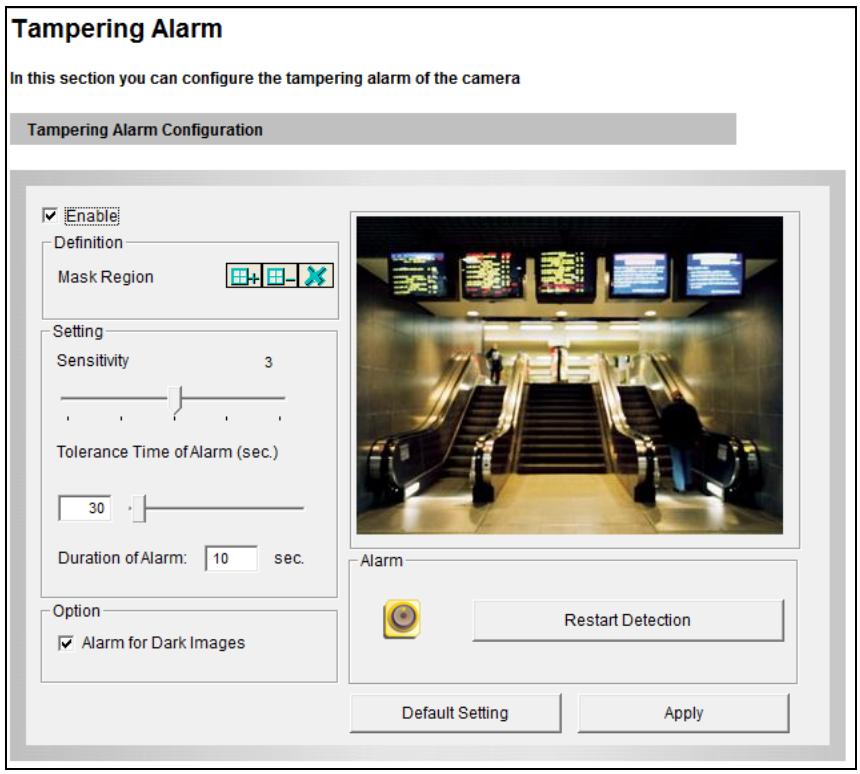


*Figure 4-9*

1. Select **Enable**.
2. If you want the camera to ignore any movement or scene change in certain areas, click the button to drag areas on the camera view.

3. Select the desired detection sensitivity by moving the slider. The higher the value, the more sensitive the camera is to scene changes.
4. In the **Tolerance Time of Alarm** field, specify the time length allowed for scene changes before an alarm is generated.
5. In the **Duration of Alarm** field, specify the duration of the alarm after which the triggered output device will be turned off.
6. To trigger an alarm when the scene turns dark, e.g. when the lens of camera is covered, make sure the **Alarm for Dark Images** option is enabled. By default, this function is enabled.
7. Click **Apply** to save the settings.
8. Start monitoring to enable the function, See *4.4 Monitoring*.

When the camera is tampered with, the connected output device can be activated. To turn off the output device immediately, return to this setting page, and click **Restart Detection**.

### 4.1.6 Visual Automation

This intuitive feature helps you automate any electronic device by triggering the connected output device. You can change the current state of the electronic device, e.g. light on, by simply clicking on its image.

**Note:** Before using the Visual Automation function, make sure the connected output device is properly configured, see *4.2.2 Output Setting.*

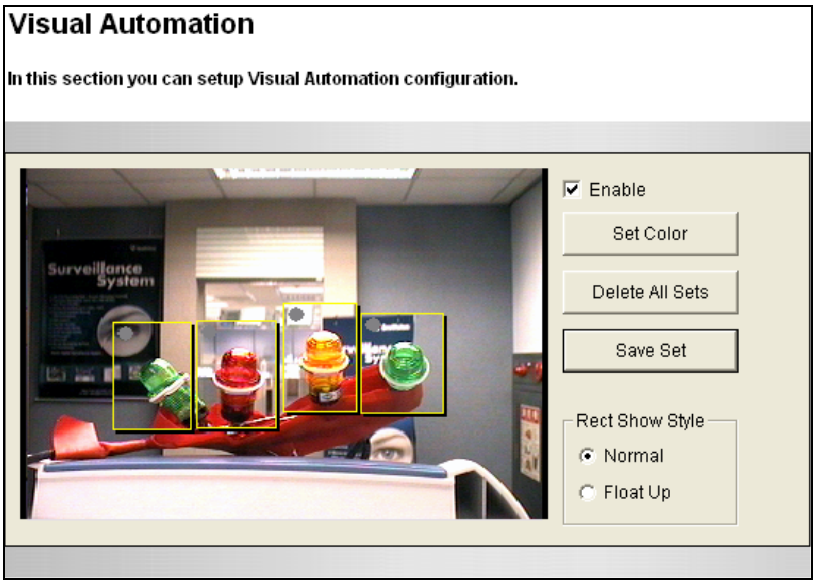


*Figure 4-10*

1. Select **Enable**.
2. Drag an area on the image of the electronic device. This dialog box appears.
3. Assign the connected module and output device. In the Note field, type a note to help you manage the device. Click **OK** to save the settings.
4. To change the frame color of the set area, click **Set Color**.
5. To emboss the set area, select **Float Up**; or keep it flat by selecting **Normal**.
6. Click the **Save Set** button to apply the settings.
7. To perform the function, see *3.2.13 Visual Automation*.

## 4.2 I/O Control

After installing the I/O device, you need to enable the I/O settings on the device.

### 4.2.1 Input Setting

To activate the sensor input, select **Enable**.

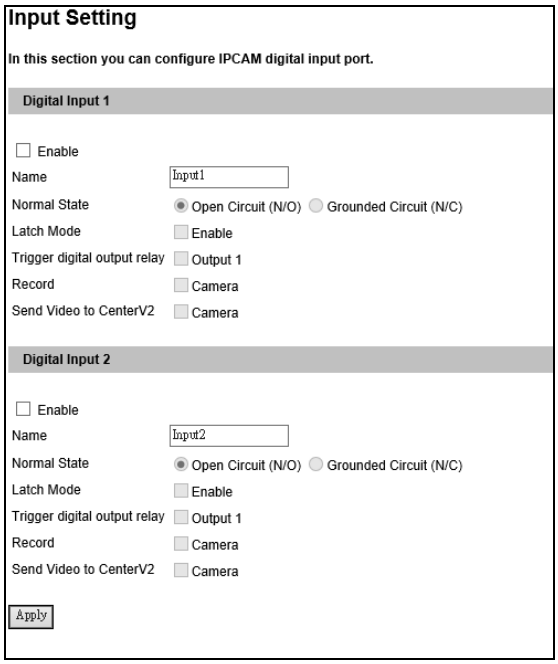


*Figure 4-11*

- **Normal State:** You can set the input state to trigger actions by selecting **Open Circuit (N/O)** or **Grounded Circuit (N/C)**.
- **Latch Mode:** Enable this option to have a momentary output alarm.
- **Trigger digital output relay:** When this option is enabled, the output will be triggered once the input is activated.
- **Record:** Enable this option to start recording when the input is triggered.
- **Send Video to Center V2:** Enable this option to send the images to Center V2 when the input is triggered.

Click **Apply** to save the settings. Start monitoring for the function to take effect, see *4.4. Monitoring*.

**Note:** To activate the input settings based on a schedule, see *4.5.1 I/O Monitor*.

### 4.2.2 Output Setting

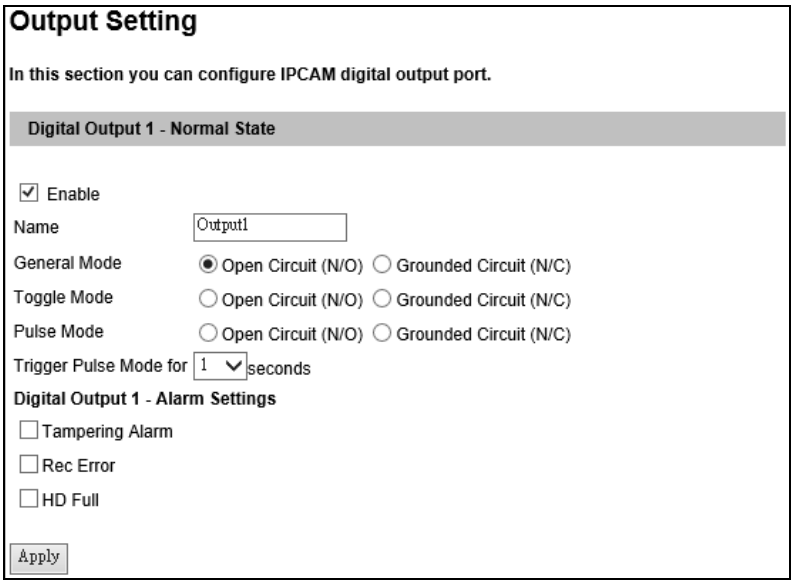


*Figure 4-12*

Select **Enable** to start the output device. Choose the output signal that mostly suits the device you are using: N/O (Open Circuit), N/C (Grounded Circuit), N/O Toggle, N/C Toggle, N/O Pulse or N/C Pulse. For **Toggle** output type, the output continues to be triggered until a new input trigger ends the output. For **Pulse** output type, the output is triggered for the amount of time you specify in the **Trigger Pulse Mode for x Seconds** field.

**[Alarm Settings]** You can choose to automatically trigger the digital output under these conditions: **Tampering Alarm**, **Rec Error** (disk write error) and **HD Full** (full memory card).

Click **Apply** to save the settings. Start monitoring for the function to take effect, see *4.4. Monitoring*.

---

**Note:** To activate the input settings based on a schedule, see *4.5.1 I/O Monitor*.

---

## 4.3 Events and Alerts

For the events of motion detection or I/O trigger, the Administrator can set up three trigger actions:

1. Send a captured still image by E-mail or FTP.
2. Notify Center Monitoring Station, Center V2 or Vital Sign Monitor, by video or text alerts.
3. Trigger the connected output device, e.g. an emergency alarm.

To have the above trigger actions, you must set the following functions in advance:

- Motion Detection (See *4.1.2 Motion Detection*)
- Tampering Alarm (See *4.1.5. Tampering Alarm*)
- Input Setting (See *4.2.1 Input Setting*)
- Output Setting (See *4.2.2 Output Setting*)
- For all events and alerts to take effect, it is required to start monitoring (See *4.4 Monitoring*).

### 4.3.1 Email

After a trigger event, the camera can send the e-mail to a remote user containing a captured still image.

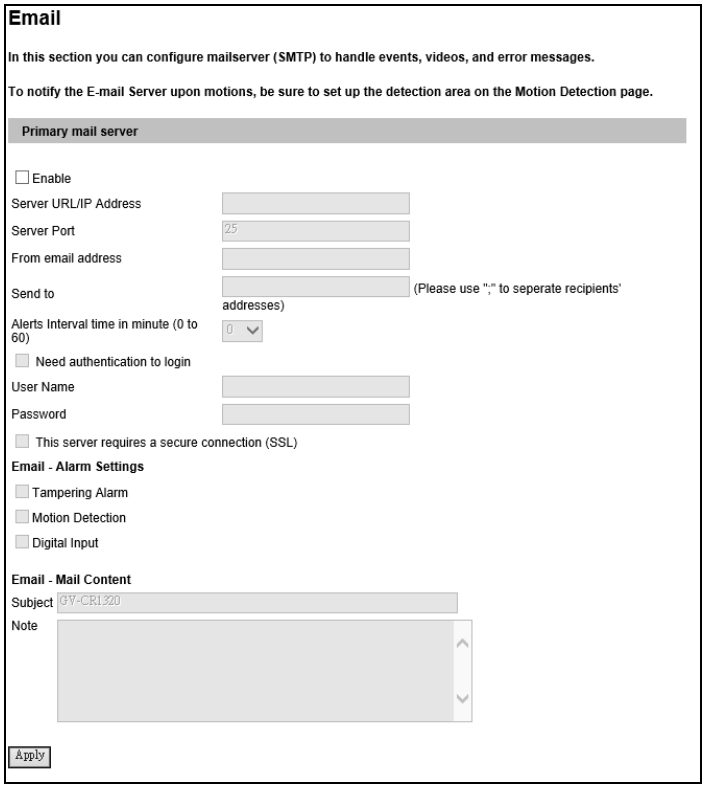


*Figure 4-13*

**[Enable]**

Select **Enable** to set up e-mail notifications.

- **Sever URL/IP Address:** Type the SMTP Server's URL address or IP address.
- **Server Port:** Type the SMTP Server's port number or keep the default value 25.
- **From email address:** Type the sender's e-mail address.
- **Send to:** Type the e-mail address(s) you want to send alerts to.
- **Alerts interval time in minute:** Specify the interval between e-mail alerts. The interval can be between 0 and 60 minutes. The option is useful for frequent event occurrence. Any event triggers during the interval period will be ignored.

**[Need authentication to login]**

If the SMTP Server needs authentication, select this option and type a valid **Username** and **Password** to log in the SMTP server.

**[This server requires a secure connection]**

If the SMTP Server needs a secure connection (SSL), select this option.

**[E-Mail Alarm Settings]** You can choose to automatically send an e-mail alert under these conditions: tampering alarm, disk write error (Rec Error), full memory card (HD Full), motion detection and input trigger.

**[E-Mail Mail Content]** You can type the mail subject and mail content in the **Subject** and **Note** columns.

Click **Apply** to save the settings. Start monitoring for the function to take effect, see *4.4. Monitoring*.

---

**Note:** For the related settings to send e-mail alerts, see *4.1.2 Motion Detection*, *4.1.5 Tampering Alarm*, and *4.2.1 Input Setting*.

---

## 4.3.2 FTP

You can also send the captured images to a remote FTP server as alerts.

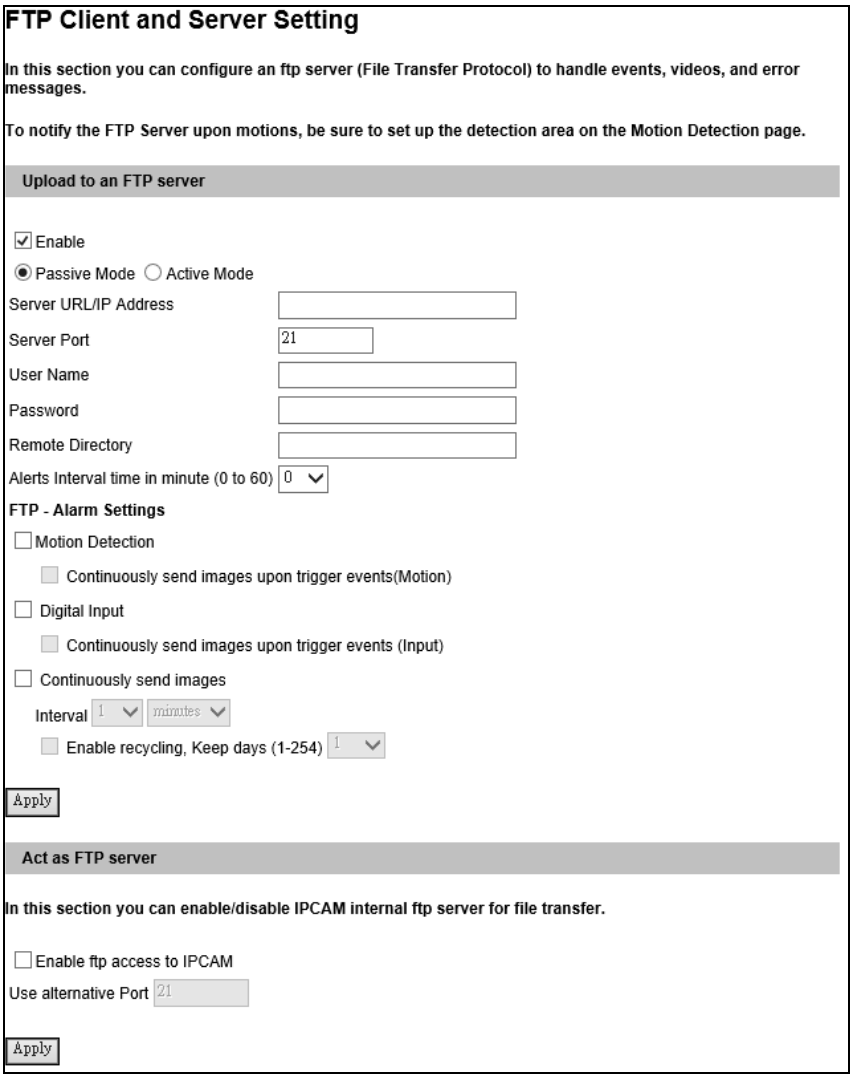


*Figure 4-14*

**[Upload to an FTP Server]**

- **Enable:** Select to enable the FTP function and then select **Active Mode** or **Passive Mode**, depending on the setting of your FTP server.
- **Server URL/IP Address:** Type the URL address or IP address of the FTP Server.
- **Server Port:** Type the port number of the FTP Server. Or keep the default value 21.
- **User Name:** Type a valid username to log into the FTP Server.
- **Password:** Type a valid password to log into the FTP Server.
- **Remote Directory:** Type the name of the storage folder on the FTP Server.

- **Alerts Interval time in minute:** Specify the interval between FTP alerts. The interval can be between 0 and 60 minutes. The option is useful for the frequent event occurrence by which any event triggers during the interval period will be ignored.

**[FTP – Alarm Settings]**

- **Motion Detection:** When a motion is detected, a still image will be sent to the FTP Server.
  - ⊙ **Continuously send images upon trigger events (motion):** A sequence of snapshots is uploaded to the FTP Server when a motion is detected. This stops as soon as no motion is detected.
- **Digital Input:** Once the input is triggered, a still image will be sent to the FTP Server.
  - ⊙ **Continuously send images upon trigger events (input):** A sequence of snapshots is uploaded to the FTP Server when the input is triggered.
- **Continuously send images:** Sends images to the FTP server at the specified interval.
  - ⊙ **Interval:** Use the drop-down list to specify how frequent the images are sent to the FTP server.
  - ⊙ **Enable Recycling:** Select this option to recycle the FTP storage at the specified Keep Day.

Click **Apply** to save the settings. Start monitoring for the function to take effect, see *4.4. Monitoring*.

---

**Note:**

1. To change login information of the internal FTP server, see *4.7.3 User Account*.
2. For related settings to send FTP alerts, see *4.1.2 Motion Detection*, and *4.2.1 Input Setting*.

---

**[Act as FTP Server]**

- **Enable FTP access to the GV-IP Cam:** The camera acts as an FTP server, enabling users to download AVI files.
- **Use alternative port:** The default port is set to 21.

To access the internal FTP server through a Web browser, enter the IP address or the domain name of the camera in your browser like this: ftp://192.168.0.10

When you are prompted for Username and Password, enter the default value username **ftpuser** and password **123456**. Then you should find the AVI files recorded after trigger events.

### 4.3.3 Center V2

After a motion or an I/O triggered event, the central monitoring station Center V2 can be notified by live videos and text alerts. For the live monitoring through Center V2, you must already have a subscriber account on Center V2. The device can connect to up to 2 Center V2 stations simultaneously.

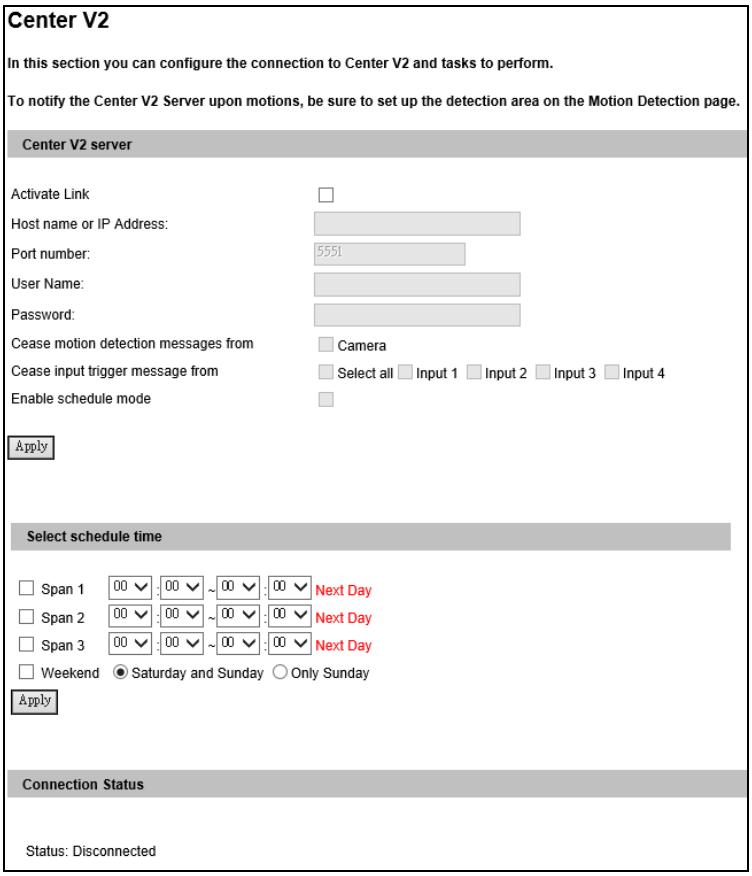


*Figure 4-15*

To enable the Center V2 connection:

1. **Activate Link:** Enable the monitoring through Center V2.
2. **Host Name or IP Address:** Type the host name or IP address of Center V2.
3. **Port Number**: match the port to the Port 2 value on Center V2 or keep the default value **5551**.
4. **User Name:** type a valid username to log into Center V2.
5. **Password:** Type a valid password to log into Center V2
6. Click **Apply**. The Connection Status should display “Connected” and connected time.
7. To establish connection to a second Center V2 server, click the **Connection 2** tab and repeat the above steps for setup.

You can also find the following options on this Center V2 setting page:

- **Cease motion detection messages from:** Stops notifying Center V2 of motion-triggered events.
- **Cease input trigger messages from:** Note this function is only supported by cameras with I/O function. Stops notifying Center V2 of input-triggered events.
- **Enable schedule mode:** Starts the monitoring through Center V2 based on the schedule you set in the **Select Schedule Time** section. Refer to *4.5 Recording Schedule* for the same settings.

---

**Note:** For related settings to activate the monitoring through Center V2, see *4.1.2 Motion Detection*, *4.1.5 Tampering Alarm* and *4.2.1 Input Setting*.

---

**[Select schedule time]**

You can optionally set a schedule for which GV-CR1320 is connected to Center V2.

- **Span 1- Span 3:** Set different time frames during the day to enable the connection. Each day can be divided into 3 time frames, represented by Span 1 to Span 3.
- **Weekend:** Enable this option to establish all-day connection on the weekend and define whether your weekend includes **Saturday and Sunday** or **Only Sunday**.
- **Special Day:** Enable connection on a specified day.

### 4.3.4 Vital Sign Monitor

After a motion or an I/O triggered event, the central monitoring station Vital Sign Monitor can be notified by text alerts. For the monitoring through Vital Sign Monitor, you must already have a subscriber account on Vital Sign Monitor. The device can connect up to 2 Vital Sign Monitors simultaneously.

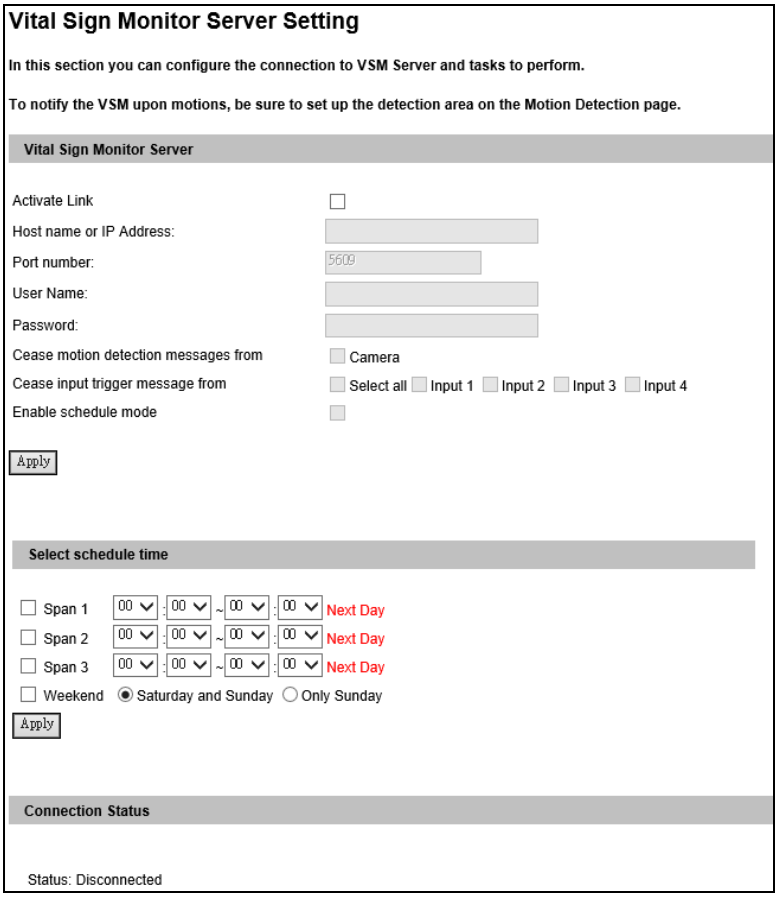


*Figure 4-16*

To enable the Vital Sign Monitor connection:

1. **Activate Link:** Enable the monitoring through Vital Sign Monitor.
2. **Host Name or IP Address:** Type the host name or IP address of Vital Sign Monitor.
3. **Port Number:** Match the port to the Port 2 value on Vital Sign Monitor. Or keep the default value 5609.
4. **User Name:** Type a valid username to log into Vital Sign Monitor.
5. **Password:** Type a valid password to log into Vital Sign Monitor.
6. Click **Apply.** The Connection Status should display “Connected” and connected time.
7. To establish connection to a second Vital Sign Monitor, click the **Connection 2** tab and repeat the above steps for setup.

These options you can also find on this Vital Sign Monitor setting page:

- **Cease motion detection messages from:** Stops notifying Vital Sign Monitor of motion-triggered events.
- **Cease input trigger messages from:** Note this function is only supported by cameras with I/O function. Stops notifying Vital Sign Monitor of input-triggered events.
- **Enable schedule mode:** Starts the monitoring through Vital Sign Monitor based on the schedule you set in the **Select Schedule Time** section. Refer to *4.5 Recording Schedule* for the same settings.

---

**Note:** For related settings to activate the monitoring through Center V2, see *4.1.2 Motion Detection*, *4.1.5 Tampering Alarm* and *4.2.1 Input Setting*.

---

**[Select schedule time]**

You can optionally set a schedule for which GV-CR1320 is connected to Vital Sign Monitor.

- **Span 1- Span 3:** Set different time frames during the day to enable the connection. Each day can be divided into 3 time frames, represented by Span 1 to Span 3.
- **Weekend:** Enable this option to establish all-day connection on the weekend and define whether your weekend includes **Saturday and Sunday** or **Only Sunday**.
- **Special Day:** Enable connection on a specified day.

### 4.3.5 Video Gateway / Recording Server

GV-Video Gateway / GV-Recording Server is a video streaming server designed for large-scale video surveillance deployments. The GV-Video Gateway / GV-Recording Server (with recording capability) can receive up to 128 channels from various IP video devices, and distribute up to 300 channels to its clients. With the GV-Video Gateway / GV-Recording Server, the desired frame rate can be ensured while the CPU loading and bandwidth usage of the IP video devices are significantly reduced.

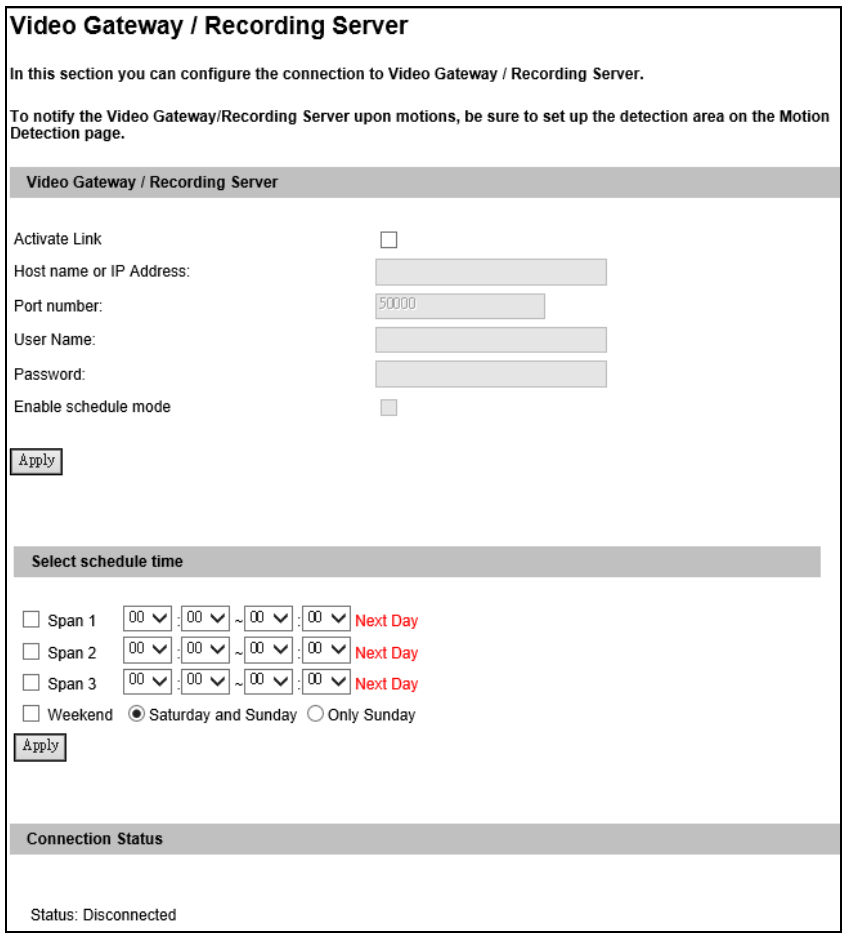


*Figure 4-17*

The device can connect up to two GV-Video Gateway / GV-Recording Server. To send the video images to the GV-Video Gateway or GV-Recording Server, follow the steps below.

1. **Activate Link**: Enable the connection to the GV-Video Gateway / GV-Recording Server.
2. **Host Name or IP Address**: Type the host name or IP address of the GV-Video Gateway / GV-Recording Server.

3. **Port Number**: Match the communication port on the GV-Video Gateway / GV-Recording Server or keep the default value **50000**.
4. **User Name**: Type a valid user name to log into the GV-Video Gateway / GV-Recording Server.
5. **Password**: Type a valid password to log into the GV-Video Gateway / GV-Recording Server.
6. **Enable Schedule mode**: Enable the GV-Video Gateway / GV-Recording Server on the schedule you set in the **Select Schedule Time** section. Refer to *4.5 Recording Schedule* for the same settings.
7. Click **Apply**. The Connection Status should display “Connected” and the connected time.
8. To establish connection to the second GV-Video Gateway / GV-Recording Server, click the **Connection 2** tab and repeat the above steps for setup.

---

**Note:** For related settings to activate the monitoring through Center V2, see *4.1.2 Motion Detection*, *4.1.5 Tampering Alarm* and *4.2.1 Input Setting*.

---

**[Select schedule time]**

You can optionally set a schedule for which GV-CR1320 is connected to Video Gateway / Recording Server.

- **Span 1- Span 3:** Set different time frames during the day to enable the connection. Each day can be divided into 3 time frames, represented by Span 1 to Span 3.
- **Weekend:** Enable this option to establish all-day connection on the weekend and define whether your weekend includes **Saturday and Sunday** or **Only Sunday**.
- **Special Day:** Enable connection on a specified day.

### 4.3.6 RTSP/ONVIF

The RTSP enables video and audio streaming to your 3G-enabled mobile phone. You can configure the ONVIF settings for a third-party DVR and access controllers.

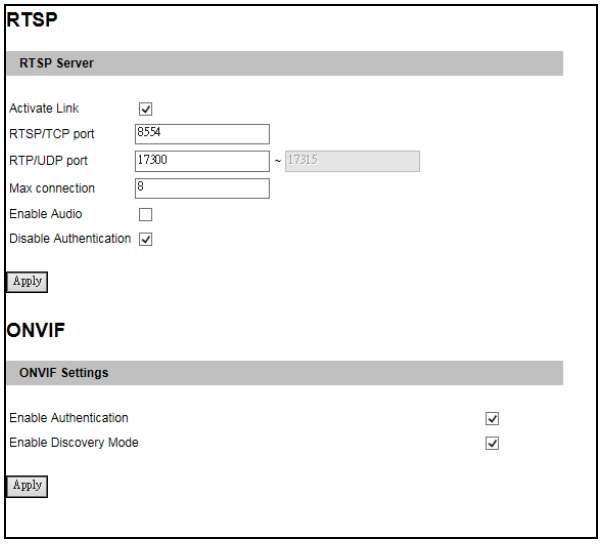


*Figure 4-18*

**[RTSP]**

- **Activate Link:** Enable the RTSP protocol.
- **RTSP/TCP Port:** Keep the default value 8554, or modify it if necessary.
- **RTP/UDP Port:** Keep the default range from 17300 to 17315, or modify it if necessary. The number of ports for use is limited to 20.
- **Max Connection:** Set the maximum number of connections to GV-CR1320. The maximum value is 8.
- **Enable Audio:** Turns the audio streaming on or off.
- **Disable Authentication:** By default, when accessing live view through the RTSP command, the ID and password of GV-CR1320 are required. Select this option to disable the authentication prompt.

**[ONVIF]**

- **Enable Authentication:** The ID and password of GV-CR1320 are required to access GV-CR1320 by a third-party DVR through ONVIF. This function is enabled by default.
- **Enable Discovery Mode:** Allows the third-party DVR to browse GV-CR1320. This function is enabled by default.

For details on the RTSP command, see *RTSP Protocol Support* in *Appendix B*.

## 4.4 Monitoring

Click **Start** or **Stop** to enable or disable monitoring, which is required for the following functions: Motion Detection, Tampering Alarm, E-mail / FTP alerts and I/O Control.

## 4.5 Recording Schedule

The schedule is provided to activate the connected I/O devices on a specific time each day.

### 4.5.1 I/O Monitor

You can set the schedule for which the connected I/O devices are enabled for GV-CR1320.

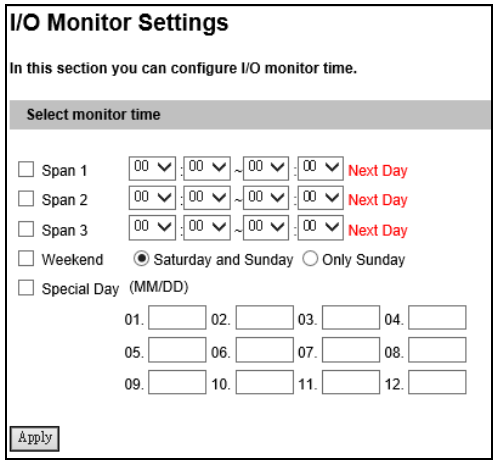


*Figure 4-19*

- **Span 1- Span 3:** Set different time frames during the day to enable I/O monitoring. Each day can be divided into 3 time frames, represented by Span 1 to Span 3.
- **Weekend:** Enable this option to start I/O monitoring all day on the weekend and define whether your weekend includes **Saturday and Sunday** or **Only Sunday**.
- **Special Day:** Enable I/O monitoring on a specified day.

**Note:**

1. In I/O Monitoring Schedule, if the settings for Special Day conflict with those for Span 1-3 or Weekend, the Special Day settings is of top priority.
2. For related I/O settings, please refer to *4.2.1. Input Setting* and *4.2.2. Output Setting*.

## 4.6 Network

The Network section includes some basic but important network configurations that enable the GV-CR1320 to be connected to a TCP/IP network.

### 4.6.1 Status

You can access an overview of GV-CR1320's network status.

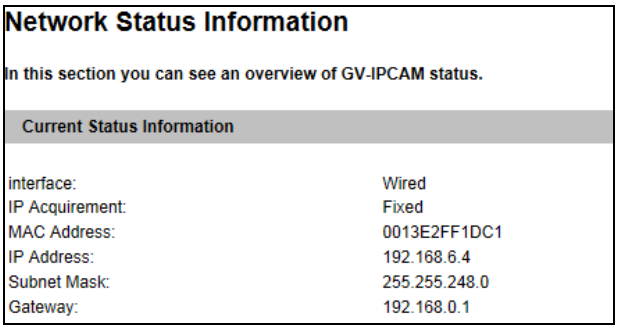


*Figure 4-20*

### 4.6.2 LAN

According to your network environment, select among DHCP, static IP and PPPoE.

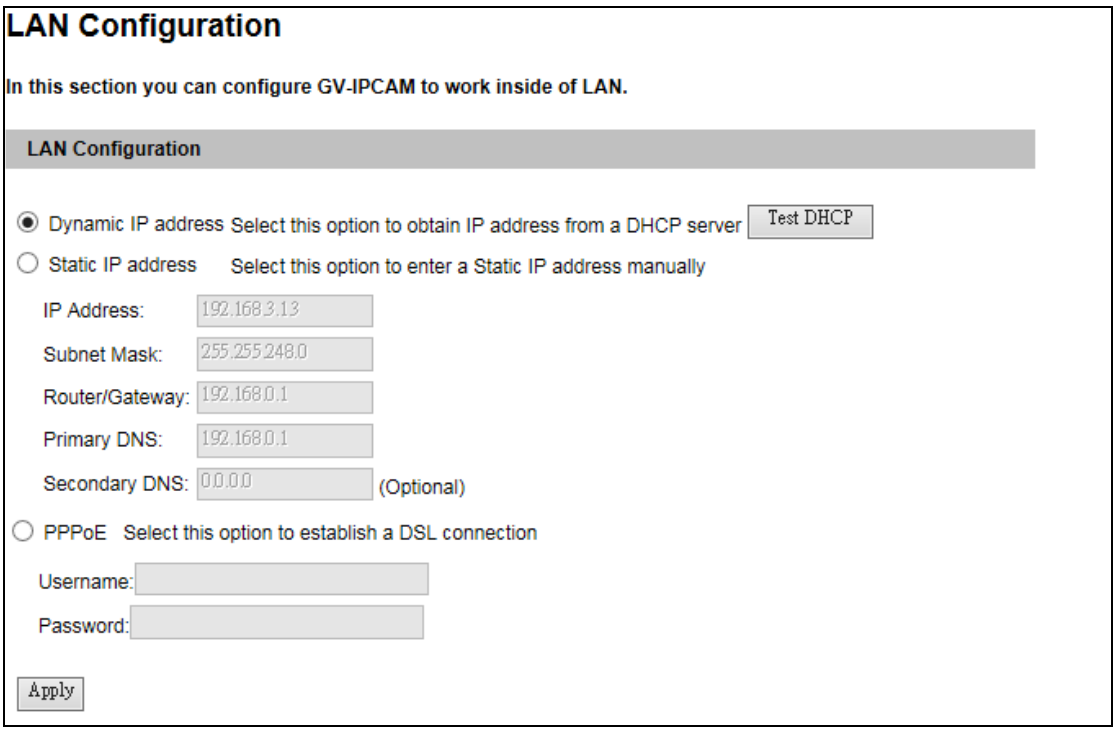


*Figure 4-21*

**[LAN Configuration]**

- **Dynamic IP address:** The network environment has a DHCP server which will automatically assign a dynamic IP address to GV-CR1320. Click the **Test DHCP** to see the currently assigned IP address or look up the address using GV-IP Device Utility.
- **Static IP address:** Assign a static IP or fixed IP to GV-CR1320. Type GV-CR1320's IP address, Subnet Mask, Router/Gateway, Primary DNS server and Secondary DNS server.

| Parameters | Default |
|---|---|
| IP address | 192.168.0.10 |
| Subnet Mask | 255.255.255.0 |
| Router/Gateway | 192.168.0.1 |
| Primary DNS server | 192.168.0.1 |
| Secondary DNS server | 192.168.0.2 |

- **PPPoE:** The network environment is xDSL connection. Type the Username and Password provided by ISP to establish the connection. If you use the xDSL connection with dynamic IP addresses, first use the DDNS function to obtain a domain name linking to GV-CR1320's changing IP address.

### 4.6.3 Advanced TCP/IP

This section introduces the advanced TCP/IP settings, including the DDNS Server, HTTPS port, streaming port, UPnP and QoS.

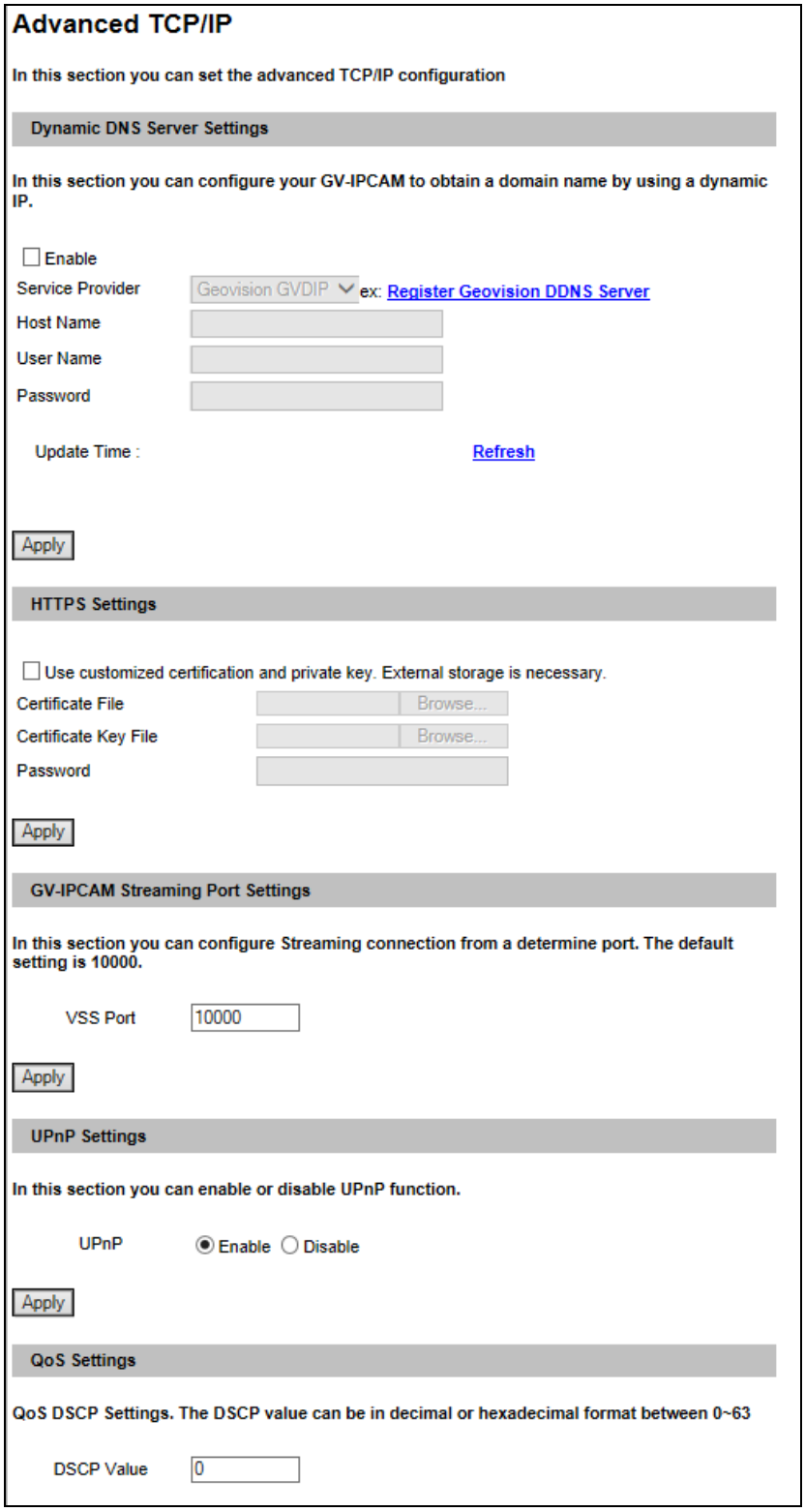


*Figure 4-22*

**[Dynamic DNS Server Settings]**

DDNS (Dynamic Domain Name System) provides a convenient way of accessing GV-CR1320 when using a dynamic IP. DDNS assigns a domain name to GV-CR1320, 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.

Before enabling the following DDNS function, the Administrator should have applied for a Host Name from the DDNS service provider's website. There are 3 providers listed in GV-CR1320: GeoVision GVDIP, GeoVision DDNS Server and DynDNS.org.

**To enable the DDNS function:**

1. **Enable:** Enable the DDNS function.
2. **Service Provider:** Select the DDNS service provider you have registered with.
3. **Host Name:** Type the host name used to link to GV-CR1320. For users of GeoVision DDNS Server, it is unnecessary to fill the field because the system will detect the host name automatically.
4. **User Name:** Type the user name used to enable the service from the DDNS.
5. **Password:** Type the password used to enable the service from the DDNS.
6. Click **Apply**.

**[HTTP Port Settings]** You can optionally change the default HTTP port value of **80** to any port within the range of 1024-65535.

**[HTTPS Settings]** You can optionally change the default HTTPS port value of **443** to any port within the range of 1024-65535.

**[IPCAM Streaming Port Settings]**

The VSS port enables your GV-CR1320 to be connected to the GV-DVR / NVR / GV-VMS and to send images to GV-ASManager. The default setting is **10000**.

**[UPnP Settings]**

UPnP (Universal Plug & Play) is a networking architecture that provides compatibility among networking equipment, software and peripherals of the 400+ vendors that are part of the Universal Plug and Play Forum. It means that they are listed in the network devices table for the operating system (such as Windows XP) supported by this function. Enabling this function, you can connect to GV-CR1320 directly by clicking on the camera listed in the network devices table.

**[QoS Settings]**

The Quality of Service (QoS) is a bandwidth control mechanism that guarantees delay-sensitive data flows such as voice and video streams and obtains a certain amount of bandwidth to keep the streaming smooth.

To apply QoS to the camera reader, all network routers must support QoS and QoS must be enabled on these devices. To enable the QoS on the camera, enter a Differentiated Services Code Point (DSCP) value. This value is a field in an IP packet that enables different levels of services for the network traffic. When the video stream from the camera reaches a router, the DSCP value will tell the router what service level to be applied, e.g. the bandwidth amount. This value ranges from 0 to 63 in decimal format. The default value is 0, meaning QoS is disabled.

**[Network Connection Check Settings]** The camera checks for Internet connection, and reboots when it is disconnected from the Internet. This function is enabled by default.

---

**Note:** If you do not intend to connect GV-CR1320 to the network, disable this function to prevent automatic reboot.

---

### 4.6.4 IP Filtering

The Administrator can set IP filtering to restrict access to GV-CR1320.

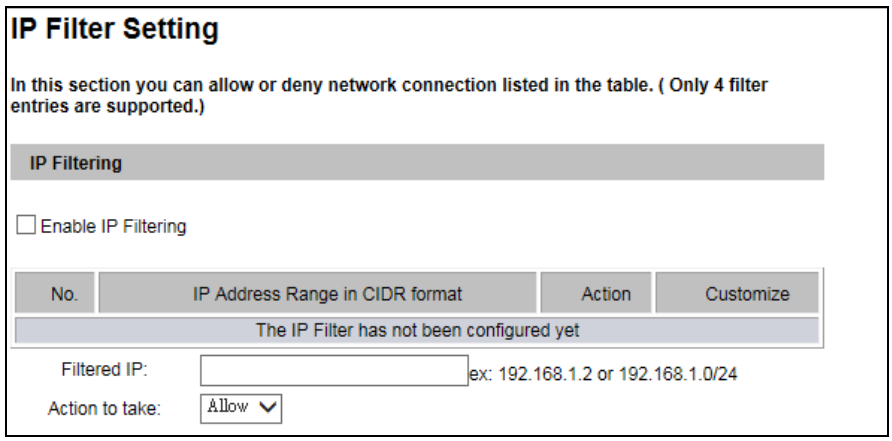


*Figure 4-23*

To enable the IP Filter function:

1. **Enable IP Filtering:** Enable the IP Filtering function.
2. **Filtered IP:** Type the IP address from which you want to restrict the access.
3. **Action to take:** Select the action of **Allow** or **Deny** to be taken by the IP address(es) you have specified.
4. Click **Apply**.

### 4.6.5 SNMP Settings

The Simple Network Management Protocol (SNMP) allows you to monitor the status of GV-CR1320 through SNMP network management software.

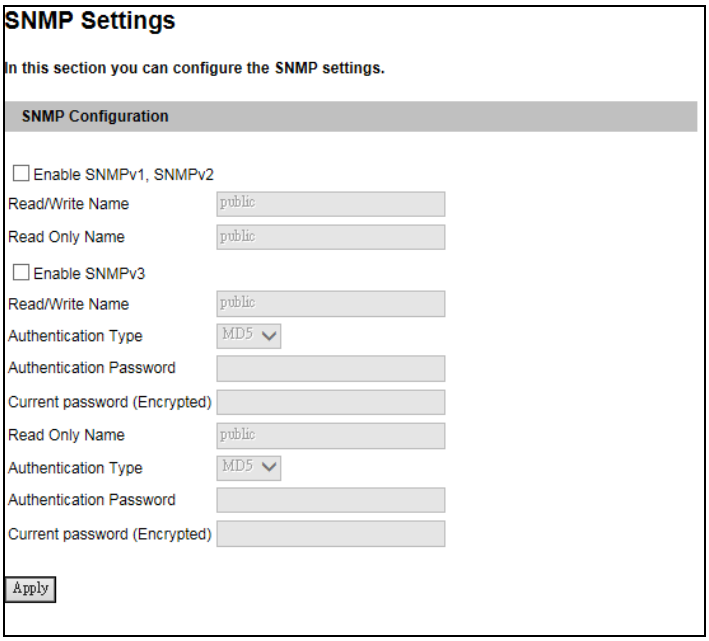


*Figure 4-24*

To set up the SNMP settings:

1. Select **Enable SNMPv1 SNMPv2c** to enable the function.
2. To enable access to **Read/Write Name**, type a community string. This will serve as a password to allow read and write access to GV-CR1320 from the SNMP software.
3. To enable **Read Only Name**, type a community string to allow read-only access to the camera from the SNMP software.
4. For a more secured connection, select **Enable SNMPv3** to enable SNMP version 3.
5. To enable access to **Read/Write Name**, type a community string.
6. Select an **Authentication Type** to be used for SNMP requests.
7. Type the **Authentication Password** and **Current Password (Encrypted)**. You will need to type these passwords in the SNMP software to be able to access GV-CR1320.
8. To enable access to **Read Only Name**, type a community string to allows read-only access to GV-CR1320, and set up the **Authentication Type**, **Authentication Password** and the **Current Password (Encrypted)**.
9. Click **Apply** to save the settings.

## 4.7 Management

The Management section includes the settings of data and time and user account. You can also view the firmware version and execute certain system operations.

### 4.7.1 Date and Time

The date and time settings are used for date and time stamps on the image.

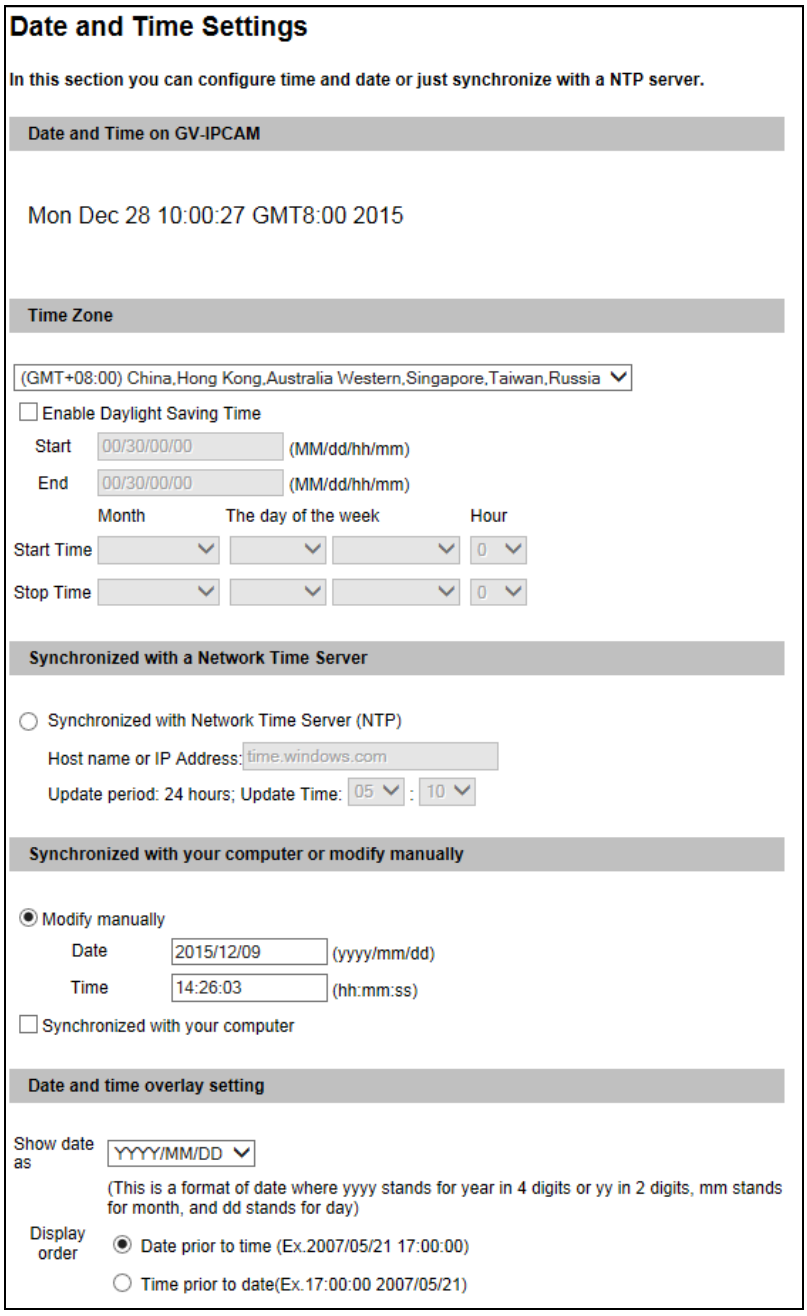


*Figure 4-25*

**[Date & Time on IPCAM]** Displays the current date and time on GV-CR1320

**[Time Zone]** Sets the time zone for local settings. Select Enable Daylight Saving Tim to automatically adjust GV-CR1320 for daylight saving time. Select the Start and Stop time to enable the daylight savings function.

**[Synchronized with a Network Time Server]** By default, GV-CR1320 uses the timeserver to automatically update its internal clock every 24 hours at the Update Time you specified. You can also change the host name or IP setting to the timeserver of interest.

**[Synchronized with your computer or modify manually]** Manually changes GV-CR1320's date and time or synchronize the camera reader's date and time with those of the local computer.

**[Date and time overlay setting]** Select the display format of date and time stamps on the image. For this function to work, you must also enable the **Overlaid with date stamps** and **Overlaid with time stamps** options in *4.1.1 Video Settings*.

## 4.7.2 Storage Settings

GV-CR1320 supports micro SD card for storing the device's log information, which has already been inserted and formatted by default.

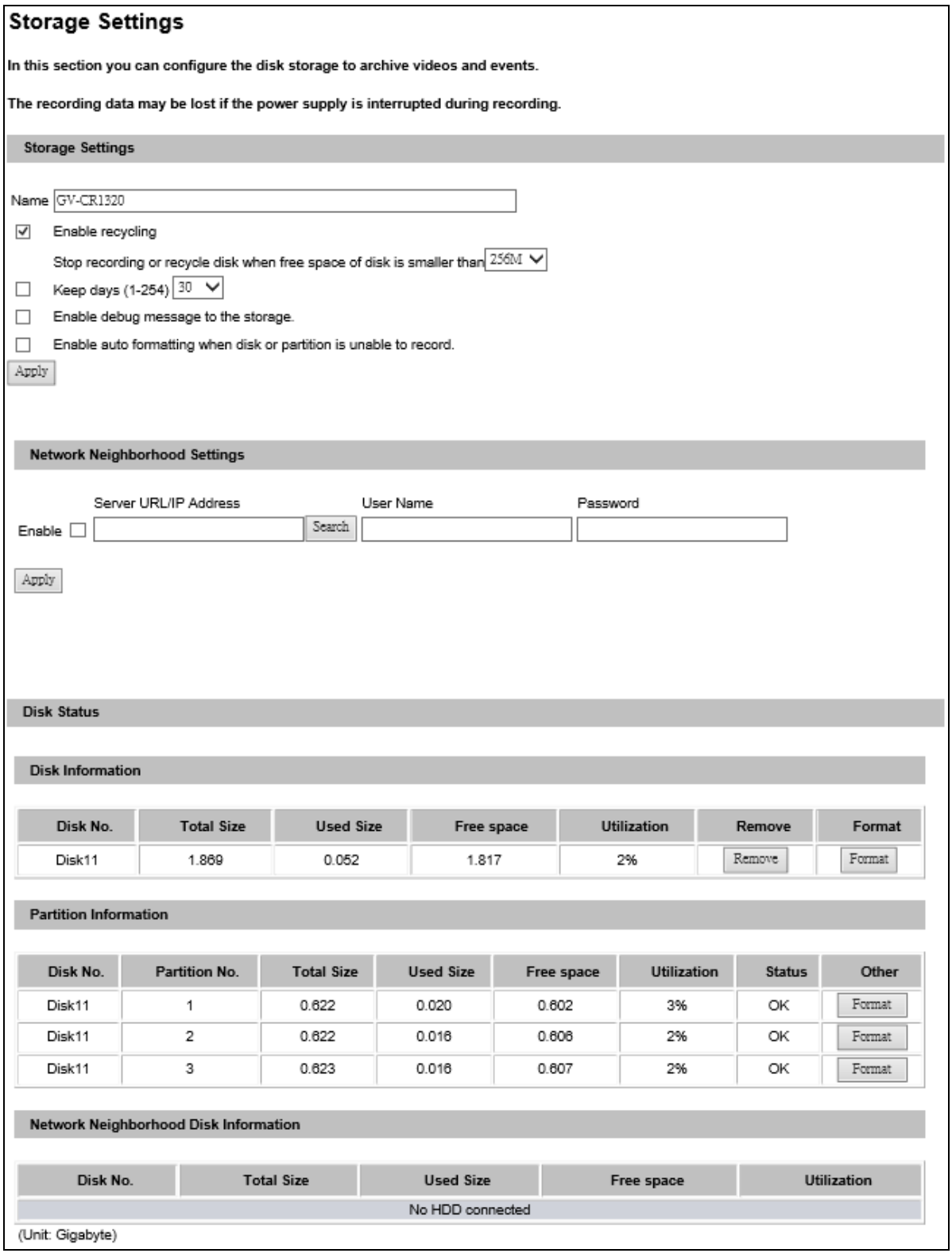


*Figure 4-26*

**[Storage Settings]**

- **Name:** Type the name of the storage device. The name can only contain English letters (of upper or lower cases), numerals, slashes, and hyphens.
- **Enable recycling:** When selected, the system will overwrite the oldest recorded files after the storage space is lower than specified.
- **Keep days (1-254):** Select the number of days to keep the files from 1 to 254 days. When both Keep days and Enable recycling are selected, the system applies whichever condition comes first. For example, if the specified smallest amount of storage space comes earlier than the designated keep days, then recycle is applied first.
- **Enable debug message to the storage:** Debug message within log information (see *4.7.4 Log Information*) is deleted after reboot. Select this option to store log information to the memory card.
- **Enable auto formatting when disk or partition is enabled to record:** Select this option for the camera to automatically format the memory when there is error during recording.

**[Network Neighborhood Settings]** Currently not functional.

**[Disk Information]**

Use the **Format** / **Remove** button to format or unload a storage device. See below for details

**[Partition Information]**

**To remove a memory card:**

1. Click the **Remove** button.
2. When you are prompted to ensure the action, click Yes. The page will be refreshed and the partition information will be cleaned.
3. Remove the memory card from the camera reader.

**To add a memory card:**

1. Insert the memory card into to the camera reader.
2. Click the **Format** button.
3. After formatting is complete, the partition information is displayed. The maximum space for one partition is 200 GB.

### 4.7.3 User Account

You can change the Administrator's login name and password. To remain logged in after reboot, select **Disable auto logout after reboot**.

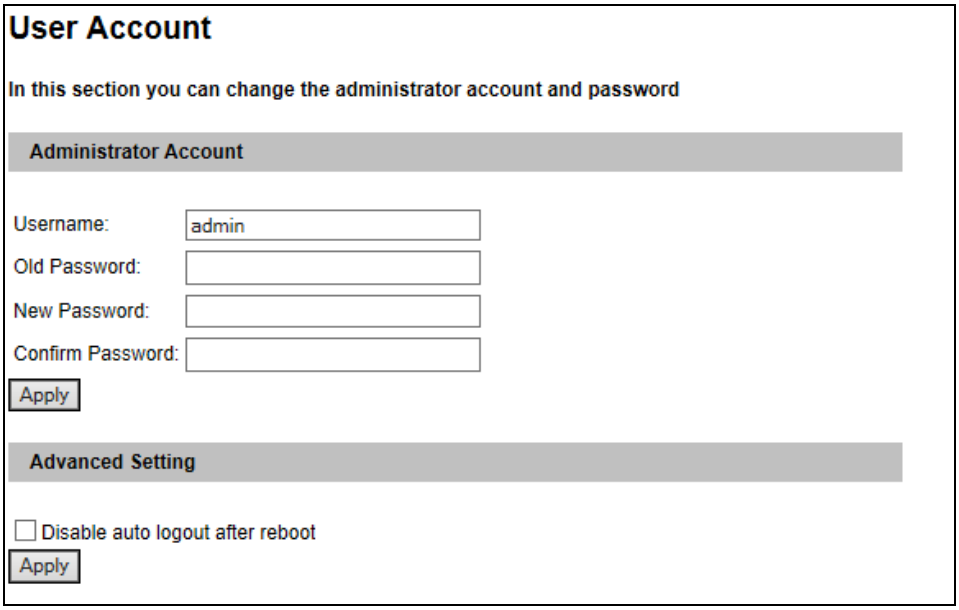


*Figure 4-27*

### 4.7.4 Log Information

The log information contains dump data that is used by service personnel for analyzing problems.

## 4.7.5 Tools

You can use additional tools to execute certain system operations and view the firmware version.

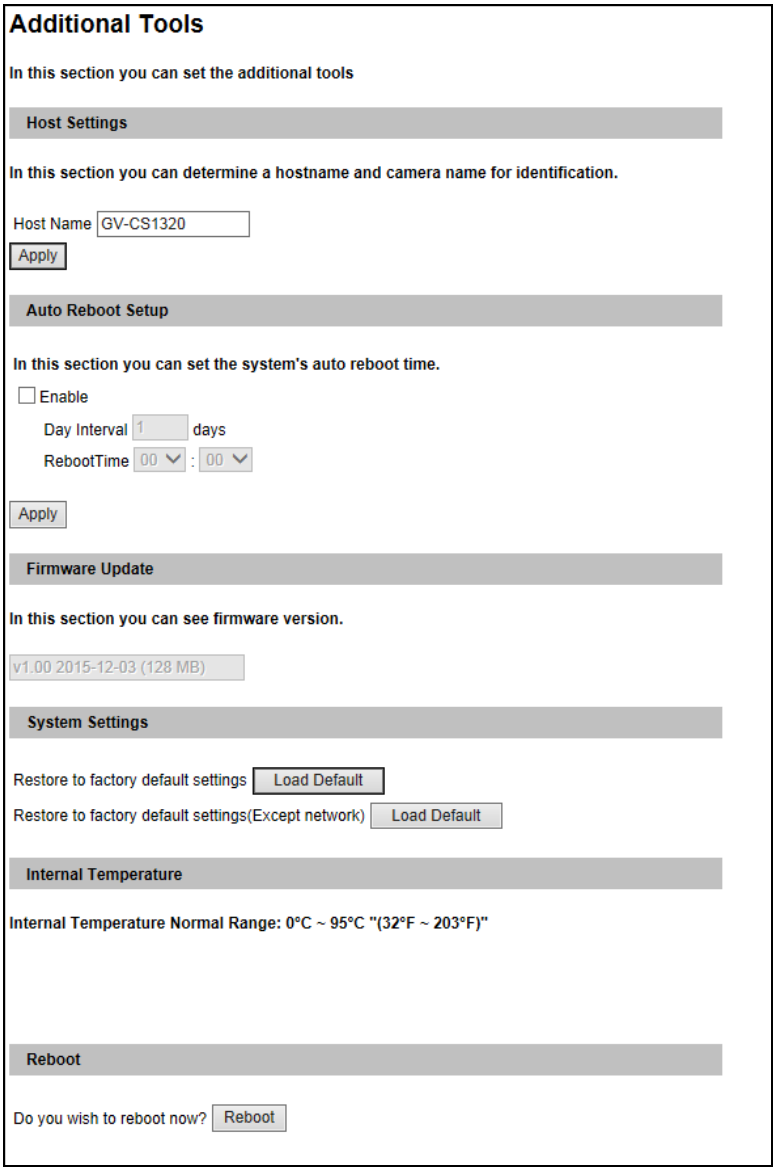


*Figure 4-28*

**[Host Settings]** Enter a descriptive name for GV-CR1320.

**[Auto Reboot Setup]** Select **Enable** to activate automatic reboot and specify the time for reboot in the sub fields.

- **Day Interval:** Type the day interval between each automatic reboot.
- **Reboot Time:** Use the drop-down lists to specify the time for automatic reboot.

**[Firmware Update]** Displays the firmware version of GV-CR1320.

**[System Settings]**

Clicking the first **Load Default** button will restore GV-CR1320 to factory default settings.

Clicking the second **Load Default** button will restore GV-CR1320 to factory default settings (Except network).

---

**Note:** After clicking the first default function, you will need to configure the camera reader's network setting again.

---

**[Internal Temperature]** Displays the chipset temperature inside GV-CR1320.

**[Reboot]** Click the **Reboot** button to initiate system restart for GV-CR1320

## 4.7.6 Language

You can select the language for the Web interface. By default, the language on the Web interface will be the same with the one used for the operating system.

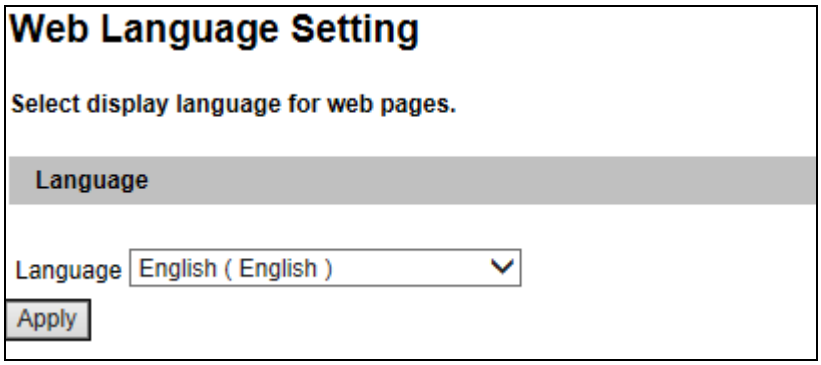


*Figure 4-29*

## 4.8 SIP

SIP (Session Initiation Protocol) is an IP telephony signaling protocol for Voice over Internet Protocol (VoIP) calls. You can connect to a SIP server and configure VoIP services on the setting page. The GV-CR1320 can then place a call to the operator with an IP phone or a computer with VoIP software. Through VoIP, the operator can communication with the visitor and enter an access code to open the door.

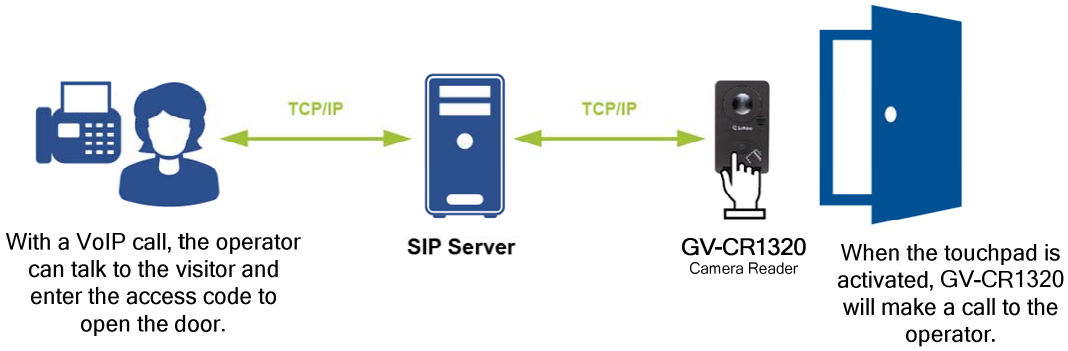


*Figure 4-30*

### 4.8.1 SIP Setting

Select **Enable** to start.

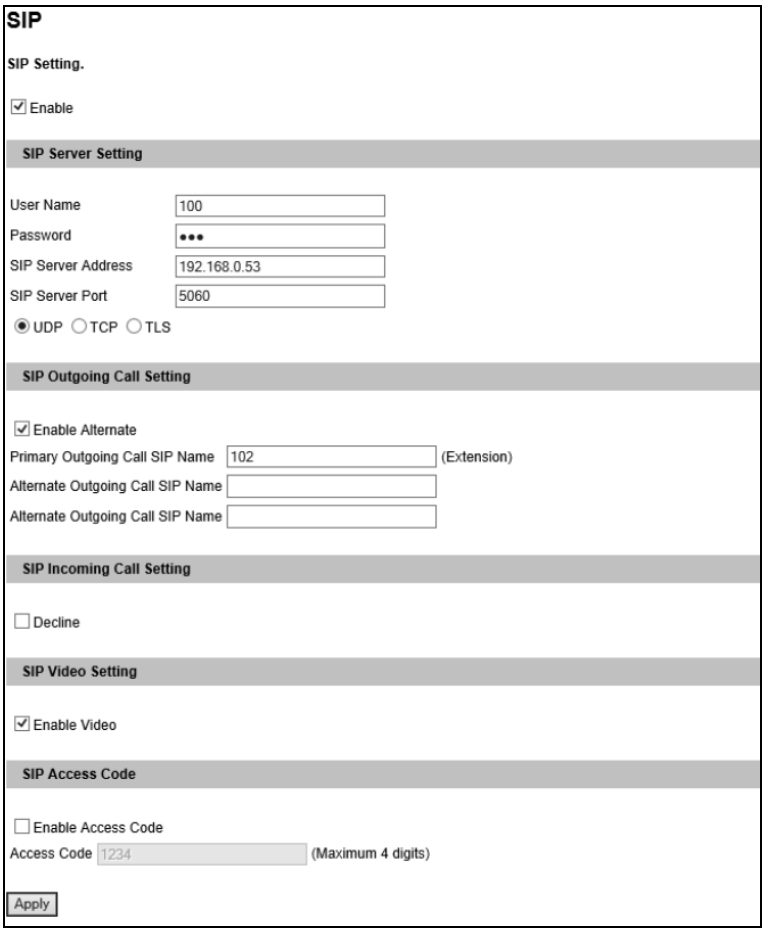


*Figure 4-31*

**[SIP Server Setting]**

- **User Name:** Type the phone number of GV-CR1320 registered on SIP Server.
- **Password:** Type the password of GV-CR1320 registered on SIP Server.
- **SIP Server Address:** Type the IP Address of the SIP Server.
- **SIP Server Port**: Type the SIP Server's port number or keep the default value of **5060**. Select the type of Port used from **UDP**, **TCP** or **TLS**.

**[SIP Outgoing Call Setting]**

Select **Enable Alternate** to allow GV-CR1320 to make phone calls to at most three phone numbers registered on SIP server. If unanswered, GV-CR1320 will automatically forward the call to the next two phone numbers, in sequential order.

- **Primary Outgoing Call SIP Name**: Type the first phone number for GV-CR1320 to call.
- **Alternate Outgoing Call SIP Name**: Type the second phone number for GV-CR1320 to call.
- **Alternate Outgoing Call SIP Name**: Type the third phone number for GV-CR1320 to call.

**[SIP Incoming Call Setting]**

Select **Decline** to reject phone calls from SIP server to GV-CR1320. It indicates that the operator cannot talk to the visitor.

**[SIP Video Setting]**

Select **Enable Video** to display live view of GV-CR1320 during the SIP call.

**[SIP Access Code]**

Select **Enable Access Code** to set a desired access code, up to 4 digits, that can be used for the security personnel to grant access to the door connected via SIP.

---

**Note:** The SIP Access Code function is only compatible with GV-CS1320 V3.00 or later and GV-AS Controller V2.20 or later.

---

## 4.9 Access Control

On the Access Control page, users can connect GV-CR1320 to a controller, by IP address, for access control management and configure the necessary Face Detection settings.

### 4.9.1 Basic Setting

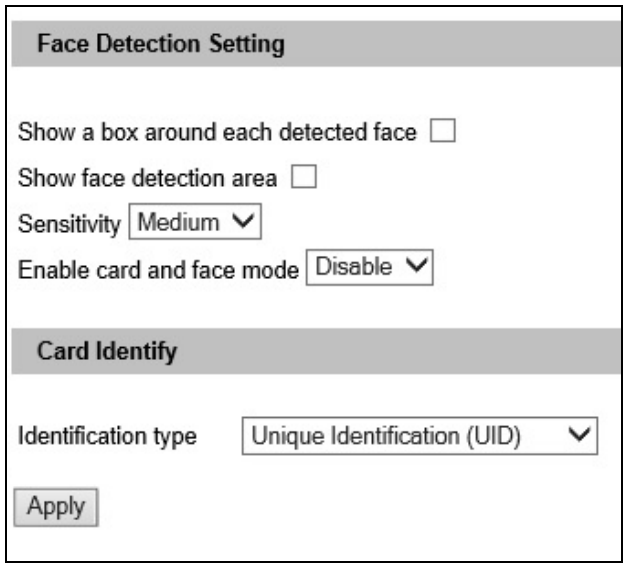


*Figure 4-32*

**[Face Detection Setting]**

- **Show a box around each detected face:** Select this option to draw a box around each detected face on the camera view.
- **Show face detection area:** Show the face detection area on the camera view to indicate the area where face detection is supported.
- **Sensitivity:** Select a sensitivity level for face detection.
- **Enable card and face mode:** Select this option to require a card to be presented and a face to be detected before access is granted. The LED Indicator will flash red if the camera reader controller fails to detect the face.

**[Card Identify]**

- **Card Type:** Select the type of access cards the reader is used for, between **UID** and **GID**.

---

**Note:**

1. If face detection fails, the card will not be recognized by GV-CR1320.
2. When **Card and Face** mode is enabled, the cardholder should stand in front of GV-CR1320 for at least 5 seconds to allow face detection before presenting the card.
3. When **Night** mode is enabled, the built-in IR LEDs may be automatically switched off at the time of face detection for approximately 2 seconds whenever a card is swiped through GV-CR1320.

---

# Chapter 5 Advanced Applications

This chapter introduces more advanced applications.

## 5.1 Upgrading System Firmware

GeoVision periodically releases the updated firmware on the website. The new firmware can be simply loaded into GV-CR1320 using the Web interface or **GV-IP Device Utility**, downloadable from our website.

### Important Notes before You Start

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

1. If you use GV-IP Device Utility for firmware upgrade, the computer used to upgrade firmware must be under the same network of GV-CR1320.
2. Stop the connection to GV-DVR / NVR / VMS.
3. Stop all the remote connections, including RTSP.
4. While the firmware is being updated, the power supply and network connection must not be interrupted.

---

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

---

5. If firmware upgrade fails, you will need to restore the GV-CR1320 to the default settings. For details, see *5.3 Restoring to Factory Default Settings* in the User's Manual.

### 5.1.1 Using the Web Interface

1. In the Live View window, click the **Show System Menu** button (No. 8, Figure 3-4) and select **Remote Config**. This dialog box appears.

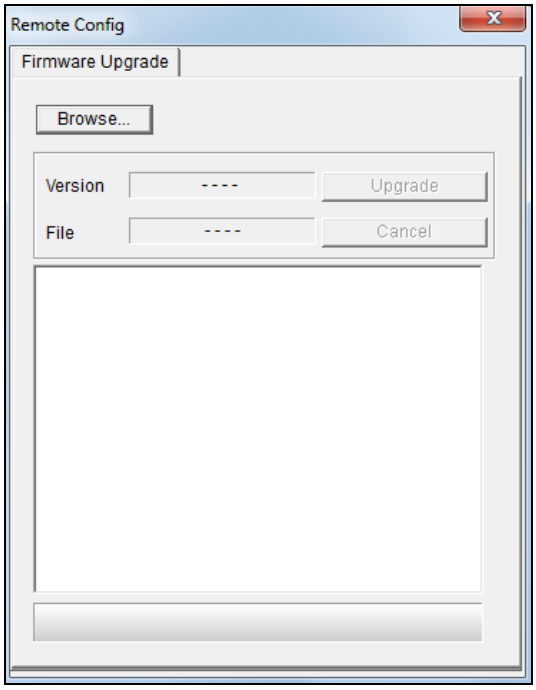


*Figure 5-1*

2. Click the **Browse** button to locate the firmware file (.img) saved at your local computer.
3. Click the **Upgrade** button to process the upgrade.

## 5.1.2 Using the IP Device Utility

GV-IP Device Utility provides a direct way to upgrade the firmware for multiple IP devices. Note the computer used to upgrade firmware must be under the same network as GV-CR1320.

1. Download GV-IP Device Utility from our website.
2. On the **GV-IP Device Utility**, click the **Search** button to locate the available IP devices under the same LAN.
3. Double-click GV-CR1320 in the list to bring up a dialog box, and click the **Firmware Upgrade** tab. This dialog box appears.

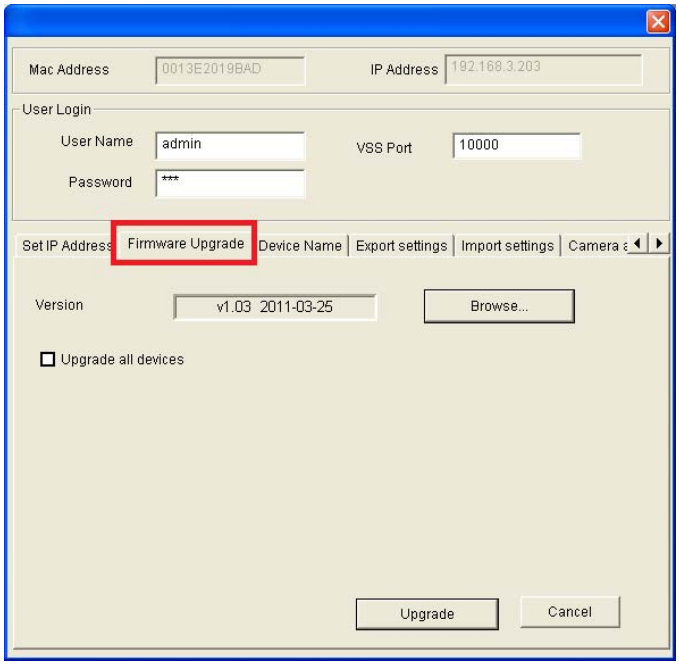


*Figure 5-2*

4. Click the **Browse** button to locate the firmware file (.img) saved at your local computer.
5. If you would like to upgrade all cameras / camera readers of the same model in the list, check **Upgrade all devices**.
6. Type **Password**, and click **Upgrade** to process the upgrade.

## 5.2 Backing Up and Restoring Settings

With GV-IP Device Utility, you can also back up the configurations in GV-CR1320, and restore the backup data to the current unit or import it to another unit.

### 5.2.1 Backing Up the Settings

1. Run **GV-IP Device Utility** and locate GV-CR1320. See Steps 1-2 in *5.1.2 Using the IP Device Utility.*
2. Double-click a GV-CS1320 in the list to bring up a dialog box, and click the **Export Settings** tab. This dialog box appears.

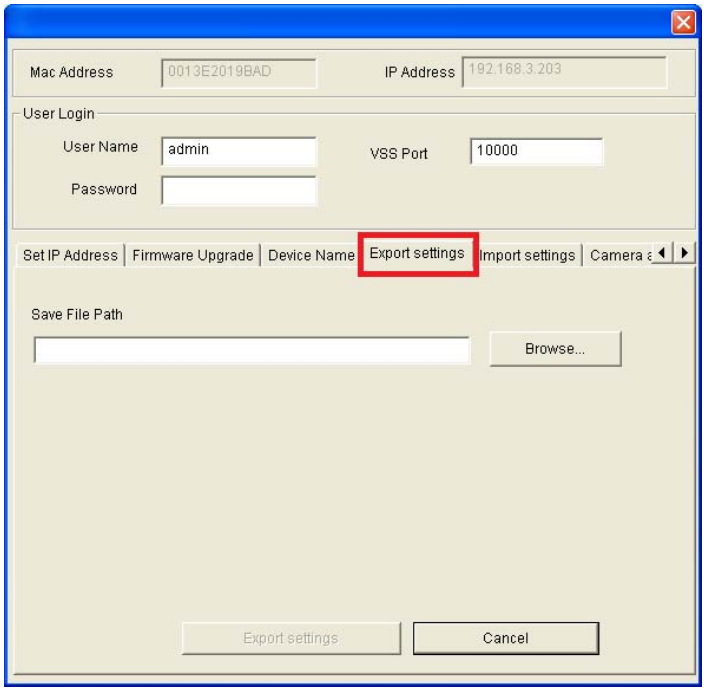


*Figure 5-3*

4. Click the **Browse** button to assign a file path.
5. Type the **Password**, and click **Export Settings** to save the backup file.

## 5.2.2 Restoring the Settings

1. Following Step 1-2 in *5.2.1 Backing Up the Settings* and click the **Import Settings** tab. This dialog box appears.

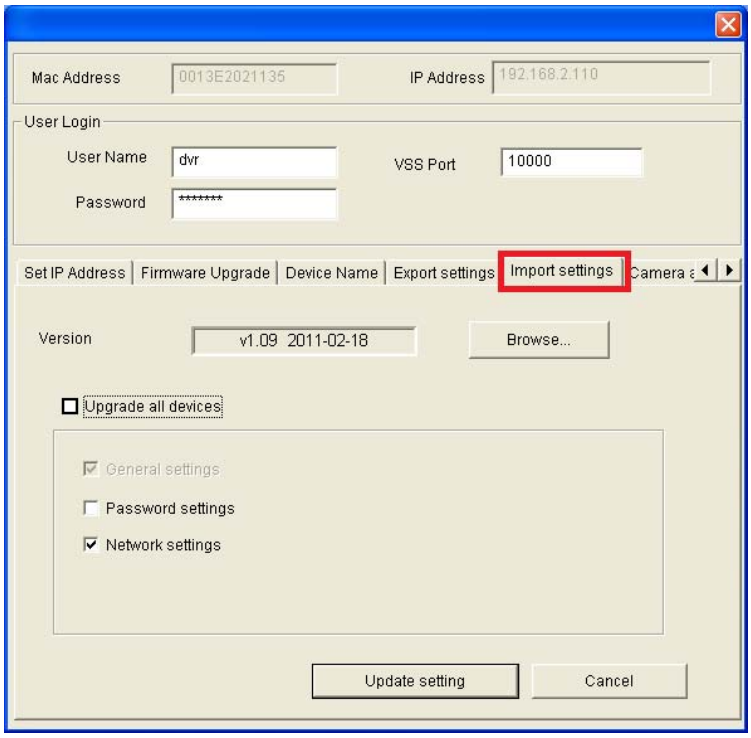


*Figure 5-4*

2. Click the **Browse** button to locate the exported file (.dat).
3. Select **Upgrade all devices** to apply the settings to all devices of the same model in the same LAN. To import password settings and/or network settings, select **Password Settings** and/or **Network settings**.
4. Click the **Update Settings** button to start restoring.

## 5.3 Restoring to Factory Default Settings

You can restore GV-CR1320 to factory default settings using the Web interface or directly on the camera.

To restore to default settings using the Web interface:

1. In the left menu, select **Management** and select **Tools**.
2. Under the **System Settings** section, click the **Load Default** button.

To restore to default settings directly on the camera reader:

1. Unplug the power cable.
2. Use a pointy object such as the tip of a pen to hold down the **Load default** button (No. 7, Figure 1-3) while plugging the power cable.
3. Wait until the status LED blinks twice to release the **Load default** button. The process takes about 5 seconds.

## 5.4 Verifying Watermark

The watermark is an encrypted and digital signature embedded in the video stream during the compression stage, protecting the video from the moment of its creation. Watermarking ensures that an image is not edited or damaged after it is recorded. To enable the watermark function, see [Watermark], *4.1.1 Video Settings.*

The **Watermark Proof** is a watermark-checking program. It can verify the authenticity of the recording before you present it in court.

### 5.4.1 Accessing AVI Files

To verify watermark, first you have to access the recorded AVI files by one of these methods:

1. Use the **File Save** function on the Live View window (No. 6, Figure 3-4) to start recording on the local computer.

### 5.4.2 Running Watermark Proof

1. Install **Watermark Proof** from our website. After installation, a **WMProof** icon is created on your desktop.
2. Double-click the created icon. The Water Mark Proof window appears.
3. Click **File** from the menu bar and select **Open** and locate the recording (.avi). The selected recording is then listed on the window. Alternatively, you can drag the recording directly from the storage folder to the window.
4. If the recording is unmodified, a check will appear in the **Pass** column. On the contrary, if the recording is modified or does not contain watermark during recording, a check mark will appear in the **Failed** column. To review the recording, double-click the listed file on the window.

### 5.4.3 The Watermark Proof Window

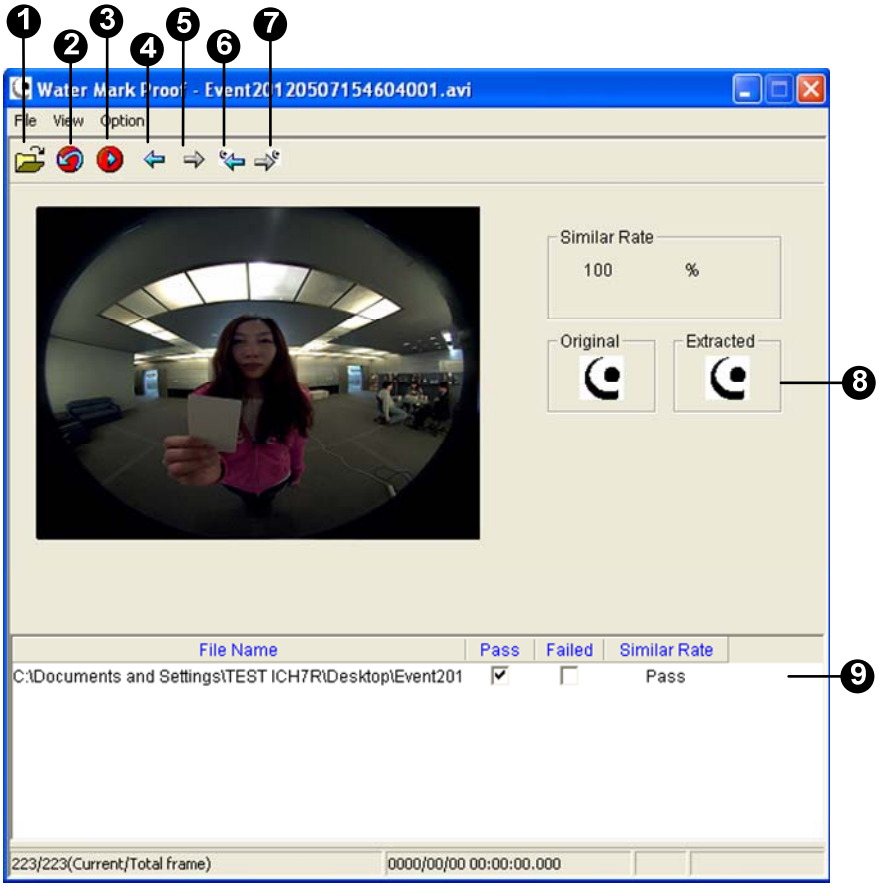


*Figure 5-5*

The controls in the window:

| No. | Name | Description |
|---|---|---|
| 1 | Open File | Opens the recorded file. |
| 2 | First Frame | Goes to the first frame of the file. |
| 3 | Play | Plays the file. |
| 4 | Previous Frame | Goes to the previous frame of the file. |
| 5 | Next Frame | Goes to the next frame of the file. |
| 6 | Previous Watermarked Frame | Goes to the previous frame that contains watermark. |
| 7 | Next Watermarked Frame | Goes to the next frame that contains watermark. |
| 8 | Original vs. Extracted | The Extracted icon should be identical to the Original icon. If not, it indicates the recording has been tampered with. |
| 9 | File List | Displays the proof results. |

# Chapter 6 GV-DVR / NVR / VMS Configurations

The GV-DVR / NVR / VMS provide a complete video management, such as video viewing, recording, playback, alert settings and more. The integration specifications are listed below:

1. GV-CR1320 is compatible with GV-DVR / NVR V8.7.6.0 or later.
2. GV-CR1320 is compatible with GV-VMS V17.1.0.100 or later.
3. The maximum number of streams supported by GV-CR1320 is **8**. When GV-CR1320 is connected to IE browser or any other applications, it takes up **1** stream. When GV-CR1320 is connected to GV-DVR / NVR / GV-VMS, it takes up **2** streams.

| | |
|---|---|
| **Maximum number of streams** | 8 |
| **Connection from one GV-DVR / NVR / VMS** | Takes up 2 streams |
| **Connection to one GV-ASManager** | Takes up 2 streams |
| **One connection to Web interface** | Takes up 1 stream |

**Note:**

1. The above maximum numbers of streams are based on the maximum resolution for the camera reader and the codec H.264.
2. By default, GV-CR1320 is in dual streams and will take up 2 streams when connected to GV-DVR / NVR / GV-VMS.

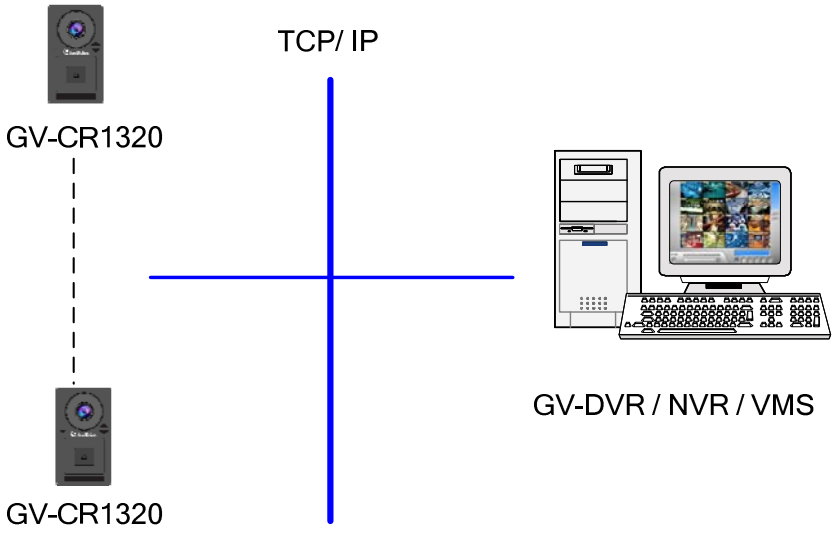


*Figure 6-1*

## 6.1 Setting up GV-CR1320 on GV-DVR / NVR

To set up GV-CR1320 and receive live view on the GV-DVR / NVR, 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.

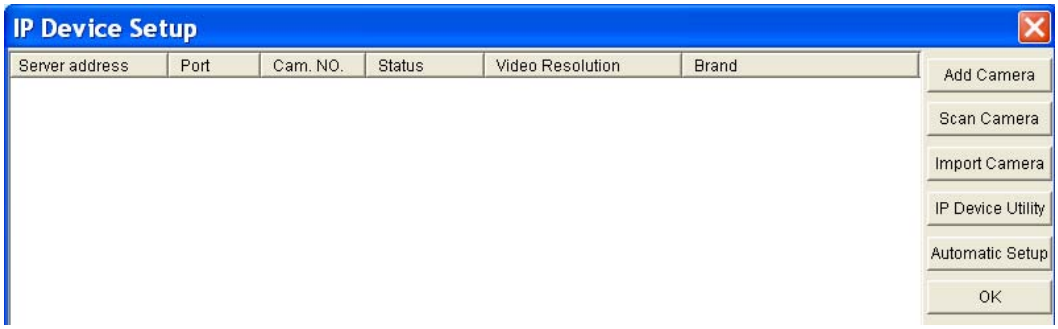


*Figure 6-2*

- To automatically set up GV-CR1320, click **Scan Camera** to detect any GV-IP devices on the LAN.
- To manually set up GV-CR1320, click **Add Camera**. Follow steps 2 to 7.

2. Click **Add Camera**. This dialog box appears.

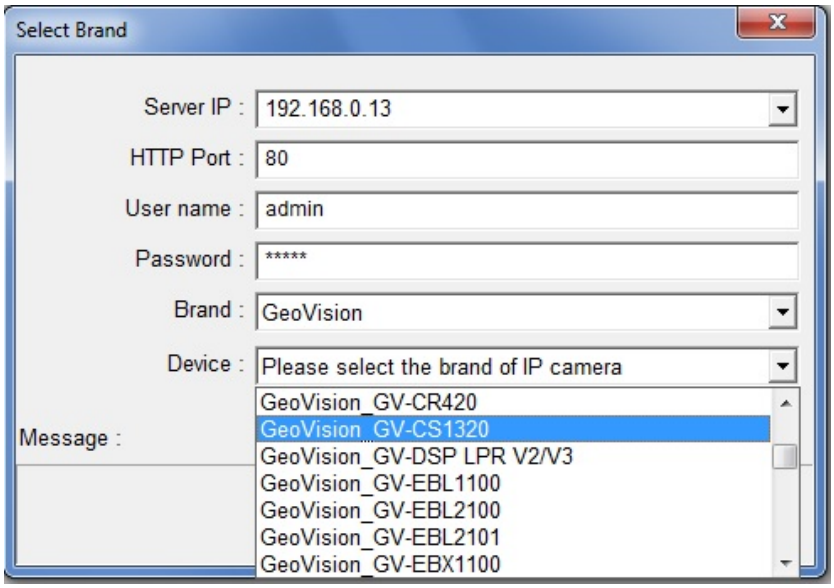


*Figure 6-3*

3. Type the IP address, username and password of GV-CR1320. Modify the default HTTP port if necessary. Select **GeoVision** from the **Brand** drop-down list and select the model from the **Device** drop-down list. This dialog box appears.

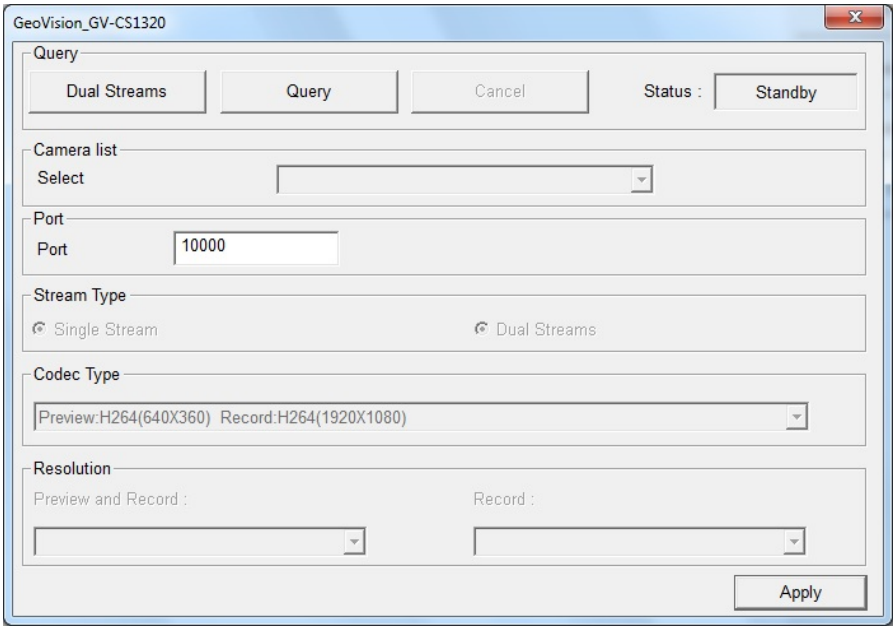


*Figure 6-4*

4. Click **Query** to acquire the information from GV-CR1320. The video streaming port should match the VSS port on GV-CR1320. The default port number is 10000.
5. Click **Apply**. GV-CR1320 is added to the connection list.
6. Click the listed camera reader and select **Display position** to map the IP camera reader to a channel on the GV-DVR / NVR.

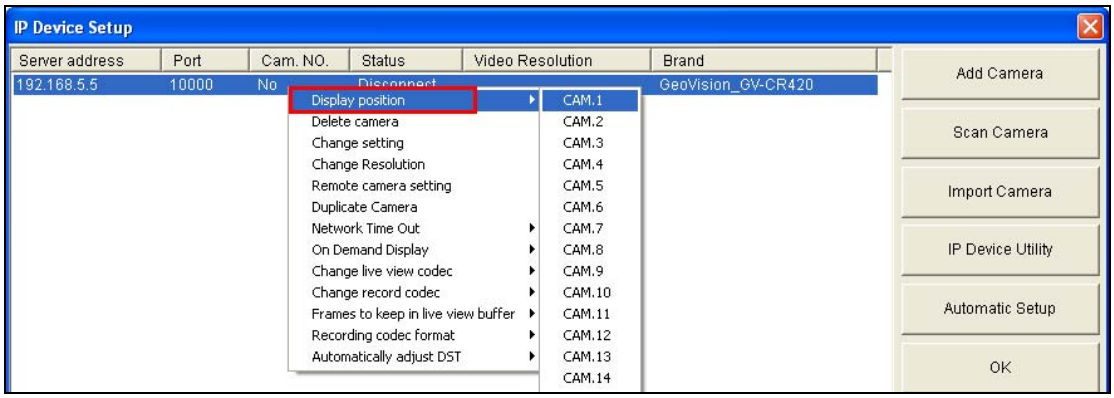


*Figure 6-5*

7. The Statue column should display “Connected”. Click **OK.**

### 6.1.1 Customizing the Basic Settings

After GV-CR1320 is connected and assigned with a display position, you can configure the GV-CR1320's settings such as frame rate, codec type and resolution. Right-click the desired camera reader to see the following list of options:

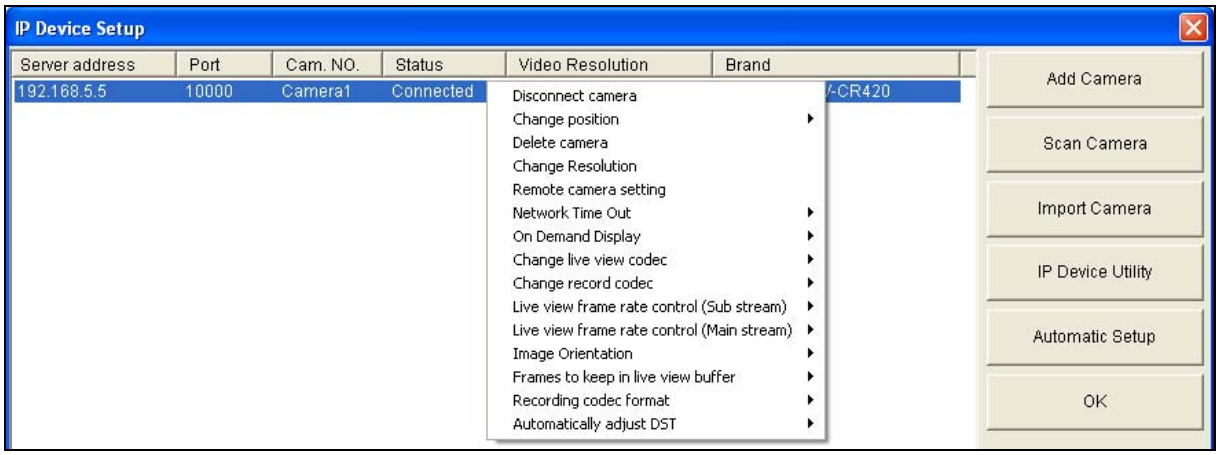


*Figure 6-6*

- **Remote Camera Setting:** Accesses the configuration interface of the connected device.
- **Network Time Out:** When network disconnection exceeds the specified time period, the camera status will be displayed as Connection Lost.
- **On Demand Display:** Enable automatic adjustment of live view resolution. Refer to the *On Demand Display* section in *DVR User's Manual* for more details.
- **Change live view codec:** Changes the code type of the live view.
- **Change record codec:** Change the codec type to record in.
- **Live view frame rate control (Sub stream):** Sets the live view of the sub stream to help reduce the CPU usage. If you have set the live view codec to be MJPEG, select the number of frames to allow in a second. If the live view codec selected is 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.

- **Live view frame rate control (Main stream):** Sets the live view frame rate of the main stream with higher resolution when On Demand function is enabled. Refer to the sub stream setting above to see the options available.
- **Image Orientation:** You can adjust the image orientation by selecting **Normal**, **Horizontal Mirror**, **Vertical Flip** or **Rotate 180°**.
- **Frames to keep in live view buffer:** Specifies the number of frames to keep in the live view buffer.
- **Recording Codec Format:** Specifies whether to record in standard or GeoVision type of MJPEG H.264 codec.
- **Automatically Adjust DST:** If enabled, the time on the GV-IP device Web interface will be synchronized with the time of the GV-DVR / NVR when DST period starts or ends on the GV-DVR / NVR.

## 6.2 Setting up GV-CR1320 on GV-VMS

Follow the steps below to manually connect your GV-CR1320 to GV-VMS.

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

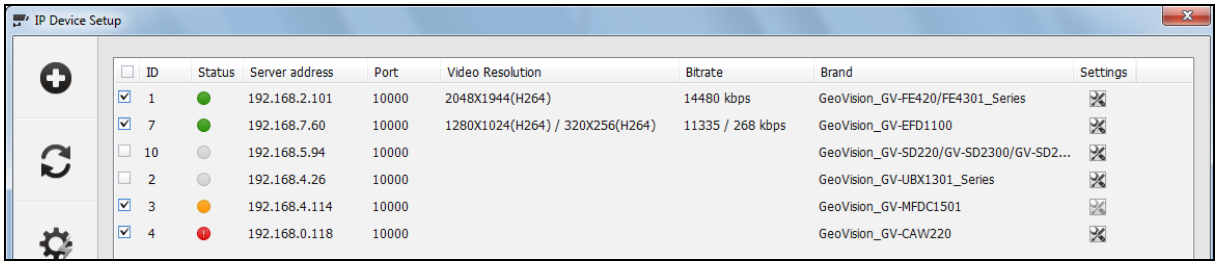


*Figure 6-7*

2. Click **Add Camera**. This dialog box appears.

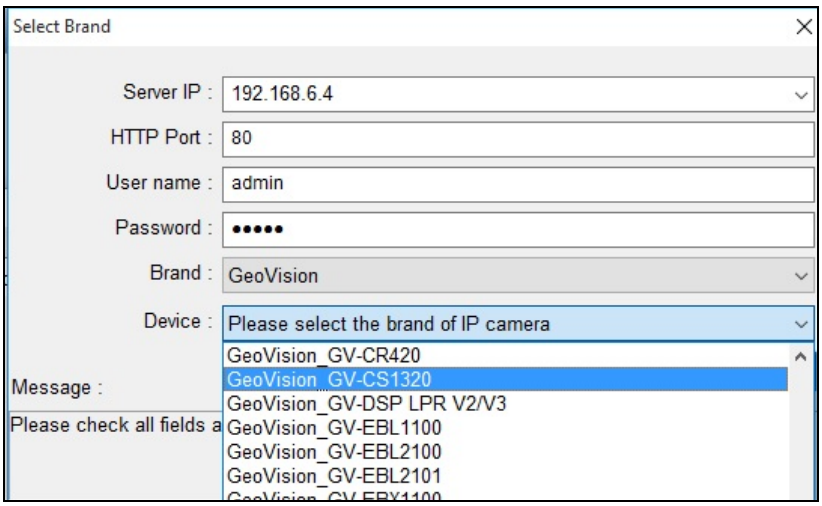


*Figure 6-8*

3. Type the IP address, username and password of the GV-CR1320. Modify the default HTTP port **80** if necessary.
4. Select GeoVision and model name from the **Brand** drop-down list and select the GV-CR1320 from the **Device** drop-down lists. This dialog box appears.

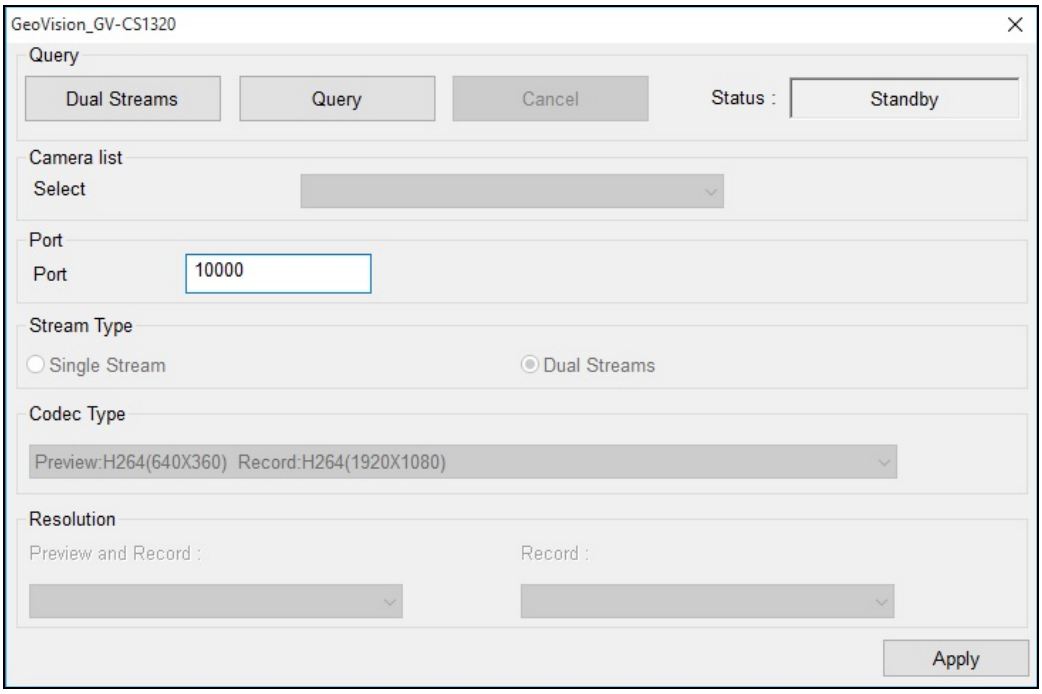


*Figure 6-9*

5. In the dialog box, configure the options.
   - **Dual Streams:** Select this option to apply the dual-streaming settings (lower resolution for live view and higher resolution for recording).
   - **Query:** Detect and apply the current codec and resolution setting on GV-CR1320.
   - **Port:** Modify the video streaming port number if necessary.
6. Click **Apply** to add the GV-CR1320 to the list.
7. To connect the added GV-CR1320, click the box besides the **ID** column. Upon successful connection, the **Status** icon shows green, with the video resolution and bit rate being displayed in the correspondent columns.

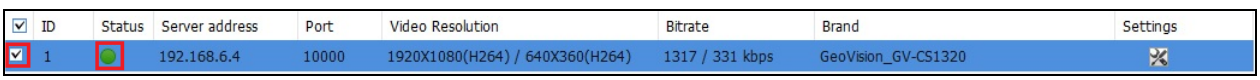


*Figure 6-10*

# Appendix

## A. RTSP Protocol Support

The camera reader 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 reader>:8554/<CH No.>.sdp

For example, rtsp://192.168.3.111:8554/CH001.sdp

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

rtsp://<ID>:<Password>@<IP of the camera reader>:8554/<CH No.>.sdp

For example, rtsp://admin:admin@192.168.3.111:8554/CH001.sdp

---

**Note:**

1. RTSP streaming is supported over HTTP, UDP and TCP.
2. The RTSP protocol must be enabled on the Web interface. See *4.3.8 RTSP*.
3. Only VLC and QuickTime players are supported for streaming video via RTSP protocol.

---

## B. The CGI Command

You can use the CGI command to obtain a snapshot of the live view without logging in the Web interface or to access the User Account Web interface. For a camera reader with the following details:

IP address: 192.168.2.11

Username: admin

Password: admin

Desired stream: 1

Type the following into your web browser to **obtain a snapshot**:

http://192.168.2.11/PictureCatch.cgi?username=admin&password=admin&channel=1

Type the following into your web browser to **access the User Account Web interface**:

http://192.168.2.11/ConfigPage.cgi?username=admin&password=admin&page=UserSetting