

GV-IP Camera 1.3M

User's Manual
Firmware V1.06



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



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Chapter 1 Introduction

1.1 Key Features

- 1.3 megapixel SONY progress CCD or CMOS*
- Built-in Web server for monitoring via IE browser
- Dual video streams JPEG and MPEG-4
- Up to 15 frames per second in megapixel resolution (1280 x 960)
- 2-way audio communication*
- One sensor input and one alarm output
- Motion detection triggering actions, e.g. image upload and output trigger
- Privacy mask allowing the concealment of parts of the image that should not be viewable
- IP address filtering
- 3GPP/ISMA
- Central monitoring station (CMS) supported
- PoE (Power over Ethernet)
- Day/Night function---Optional

*: Mini Fixed Dome is of CMOS and only supports one-way audio.

1.2 Models

The GV-IP Camera 1.3M has the following models:

- Color Box Model (w/o lens)
- D/N Box Model (w/o lens)
- Color Varifocal Lens Model
- D/N Varifocal Lens Model
- Color Vandal Proof Dome
- D/N Vandal Proof Dome
- Mini Fixed Dome

1.3 Packing List

1.3.1 Box Model

- 1.3 Megapixel IP Camera



- 4-Pin Terminal Block



- Power Adaptor
- GV-IP Camera User's Manual
- GV-IP Camera Software CD

- C Mount Lens Adaptor



- Back Focus Adjuster



1.3.2 Varifocal Lens Model

- 1.3 Megapixel IP Camera



- 4-Pin Terminal Block



- Power Adaptor
- GV-IP Camera User's Manual
- GV-IP Camera Software CD

1.3.3 Vandal Proof Dome

- Vandal Proof IP Dome Camera
- Self Tapping Screws



- Power Cable



- Plastic Screw Anchors



- Security Torx



- Power Adaptor
- GV-IP Camera User's Manual
- GV-IP Camera Software CD

1.3.4 Mini Fixed Dome (Indoor Use Only)

- Mini Fixed Dome
- Self Tapping Screws



- Security Torx



- Plastic Screw Anchors



- GV-IP Camera User's Manual
- GV-IP Camera Software CD

1.4 System Requirement

To perform the GV-IP Camera operations via web browser, ensure your PC is in good network connection, and meet this system requirement:

- Microsoft Internet Explorer 6.x or later

Note: To have better image quality, it is highly recommended to use the auto iris lens instead of the manual iris lens.

1.5 Options

Optional devices can expand your GV-IP Camera's capabilities and versatility. Contact your dealer for more information.

GV-Relay V2	Working with this module, GV-IP Camera can drive the loads of relay outputs over 5V.
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1.6 Overview

1.6.1 Box Model and Varifocal Lens Model

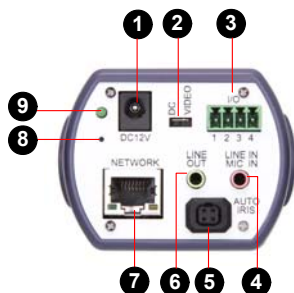


Figure 1-1

No.	Name	Description
1	DC 12V Connector	Connects to power.
2	Lens Type Switch	Switches between a Video and DC controlled auto iris lens. Not available on Varifocal Lens Model.
3	I/O Terminal Block	Provides one digital input and one relay output. For details, see <i>Chapter 9 The I/O Terminal Block</i> .
4	Line In/Microphone In Connector	Connects a monaural microphone for audio input.
5	Auto Iris Connector	If the auto iris lens is in use, insert the auto iris plug into the connector. Not available on Varifocal Lens Model.
6	Line-Out Connector	Connects a speaker for audio output.
7	Network Connector	Connects to a 10/100 Ethernet or PoE.
8	Reset Button	Resets the camera to factory default. See Note in <i>1.6.2 Vandal Proof Dome</i> .
9	Status LED	A system status LED.

1.6.2 Vandal Proof Dome

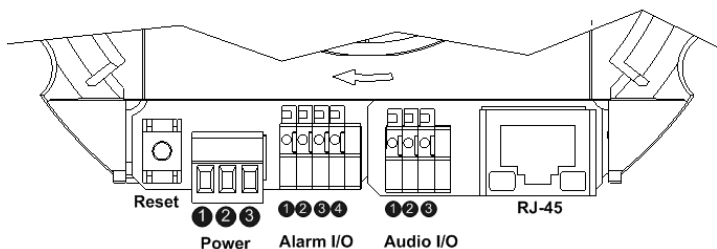


Figure 1-2

Connector	PIN No.	Definition	Description
Reset Button	Restores to factory default.		
Power	1	DC12V	Power Connection
	2	Reserved	
	3	GND	
Alarm I/O	1	Output +	Alarm Connection
	2	Output -	
	3	Input +	
	4	Input -	
Audio I/O	1	Audio Out	Two-way audio transmission
	2	GND	
	3	MIC In	
RJ-45	Connects to a 10/100 Ethernet or PoE.		

Note: If your camera supports Day/Night feature, after applying the Reset function, you need to configure the D/N setting to **Auto**. See the D/N setting on page 42.

1.6.3 Mini Fixed Dome (Indoor Use Only)

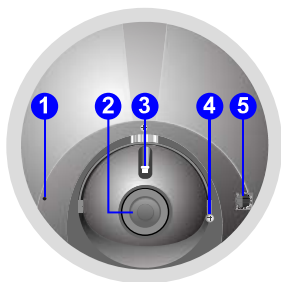


Figure 1-3

No.	Name	Description
1	Reset Button	Resets the camera to factory default.
2	Lens	Rotates the lens right/left to adjust focus.
3	Focus Fixed Screw	Loosens the screw to adjust the lens.
4	Tilt Fixed Screw	Loosens the screw to adjust tilt angle.
5	Built-In Microphone	Provides one-way audio.



Figure 1-4

6	PoE Connection	Connects the PoE cable for power and Ethernet connection.
---	----------------	-----------------------------------------------------------

Chapter 2 Installation

This section provides the instructions to complete the camera installation.

2.1 Color Box Model: C-Mount Lens

C-mount lenses require a certain distance from the camera's imaging chip; otherwise it will not be possible to focus the lens. Mount the supplied C mount adaptor to the camera, and then attach the lens onto the C mount adaptor, as the illustrations shown below.



C Mount Adapter



Completion

2.2 Varifocal Lens Model: Lens Adjustment

When you use Varifocal lenses, follow the steps below to adjust zoom and focus.

1. Pull out the lens shield.



2. Adjust zoom or focus.



3. Place the lens shield back.

2.3 Vandal Proof Dome: Hard Ceiling

The vandal proof dome camera can be installed directly on a wall or ceiling. Make sure the wall or ceiling must have enough strength to support the dome camera.

1. Unpack the camera package and take out the dome camera.
2. Use the hexagon tool to unscrew and remove the housing cover away.
3. Press both sides of the inner cover and remove it from the dome camera unit.

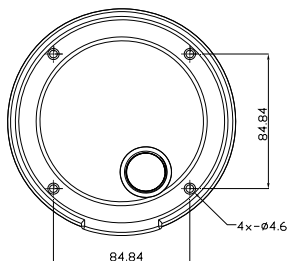


4. Press the sides of the snap-on module, as indicated in the figure, and detach it from the dome camera housing.



Dome Camera Unit detached

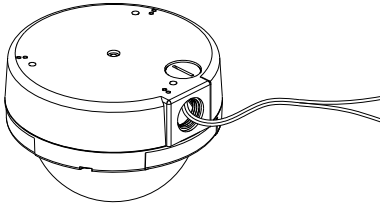
4. Refer to the diagram and mark the positions of the four screw holes at the chosen installation location.



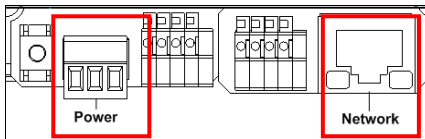
5. In the marked locations, drill a hole slightly smaller than the supplied screw anchors.
6. Put anchors into these drilled holes.
7. Fasten the dome camera housing with the four equipped screws.



8. Thread the power and Ethernet cables through the side conduit entry, as illustrated. You may use a coin to screw the conduit entry block off.



Connect the power and Ethernet cables to their connectors on the dome camera unit, as shown in the figures.



Power and Network connectors

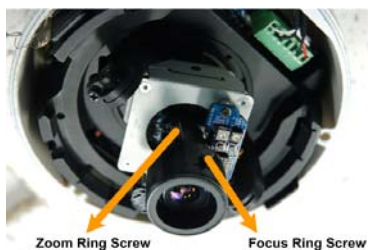
9. Attach the snap-on module into the dome camera housing. Note the terminal blocks should face the side conduit entry, as shown in the figure.



10. Connect the power and network outputs.
11. After the dome camera body is mounted and the cables are connected. Adjust the camera to a desired angle, as shown below.

**Pan Adjustment****Rotation Adjustment****Tilt Adjustment**

12. Rotate the lens to adjust the camera's zoom level and focal length.



Adjust the zoom ring screw to set the desired zoom; subsequently, modifying the focus ring screw to set the desired focal length.

13. Put the inner cover back to the dome camera unit.



14. Screw the housing cover to the dome camera body with the Security Torx.



2.4 Mini Fixed Dome: Lens Adjustment

To produce a clear image, follow the steps below to adjust the camera's focus.

1. Unscrew the camera's cover.



2. Loosen the focus fixed screw, and rotate the lens clockwise or counterclockwise to adjust focus. Loosen the tilt fixed screw, and adjust the camera's tilt angle.



Chapter 3 Getting Started

This section provides basic information to get the GV-IP Camera working on the network.

3.1 Installing on a Network

These instructions describe the basic connections to install the GV-IP Camera (Box Model and Varifocal Lens Model) on the network.

1. Using a standard network cable, connect the camera to your network.
2. Optionally connect a speaker and a microphone for two-way audio communication.
3. Connect to power using one of the methods:
 - Using the supplied power adaptor, connect to power.
 - Power over Ethernet (PoE). If the feature is available, the power will be provided over the network cable.
4. Check if the system status LED is on, and then you can set the IP address for the unit.

3.2 Assigning an IP Address

Designed for use on an Ethernet network, the GV-IP Camera must be assigned an IP address to make it accessible.

Note: The GV-IP Camera has a default address of **192.168.0.10**. The computer used to set the IP address must be under the same IP and subnet sequence assigned to the unit.

1. Open your web browser, and type the default IP address <http://192.168.0.10>
2. In both Login and Password fields, type the default value **admin**. Click **Apply**.
3. In the left menu, select **Network** and then **LAN** to begin the network settings.

The screenshot displays the GeoVision web interface. On the left is a navigation menu with categories: Video and Motion, Digital I/O, Events and Alerts, Monitoring, Schedule, Network, Management, and Logout. Under the Network category, 'LAN' is highlighted with a red circle. The main content area is titled 'LAN Configuration' and contains the following sections:

- LAN Configuration:**
 - Dynamic IP address: Select this option to obtain IP address from a DHCP server
 - Static IP address: Select this option to enter a Static IP address manually
 - PPPoE: Select this option to establish a DSL connection
 - Username:
 - Password:
- Configure connection parameters:**
 - IP Address:
 - Subnet Mask:
 - Router/Gateway:
 - Primary DNS:
 - Secondary DNS: (Optional)

At the bottom of the configuration area are two buttons: 'Apply' and 'Test DHCP'.

Figure 3-1

4. Select **Static IP address**. Type IP Address, Subnet Mask, Router/Gateway, Primary DNS and Secondary DNS in the **Configure connection parameters** section.
5. Click **Apply**. The GV-IP Camera is accessible by entering the assigned IP address on the web browser.

Important:

- **Dynamic IP Address** and **PPPoE** should only be enabled if you know which IP address the GV-IP Camera will get from the DHCP server or ISP. Otherwise you must use the Dynamic DNS service to obtain a domain name linked to the GV-IP Camera's changing IP address first. For details on Dynamic IP Address and PPPoE, see *5.6.2 Advanced TCP/IP*.
- If **Dynamic IP Address** and **PPPoE** is enabled and you cannot access the GV-IP Camera, you may have to reset it to the factory default and then perform the network settings again.
To restore the factory settings, see the **Reset** button in *1.6 Overview*.

3.3 Configuration Basics

Once the camera is properly installed, the following important features can be configured using the browser-based configuration page and are discussed in the following sections in this manual:

- **Date and time adjustment:** see *5.7.1 Date & Time Setting*.
- **Login and privileged passwords:** see *5.7.3 User Account*.
- **Network gateway:** see *5.6 Network*.
- **Camera image adjustment:** see *4.2.2 The Control Panel of the Live View Window*.
- **Video format, resolution and frame rate:** see *5.1.1 Video Settings*.

Chapter 4 Accessing the Camera

Two types of users are allowed to log in the GV-IP Camera: Administrator and Guest. The Administrator has unrestricted access to all system configurations, while the Guest has the access to live view and network status only.

4.1 Accessing Your Surveillance Images

Once installed, your GV-IP Camera is accessible on a network. Follow these steps to access your surveillance images:

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

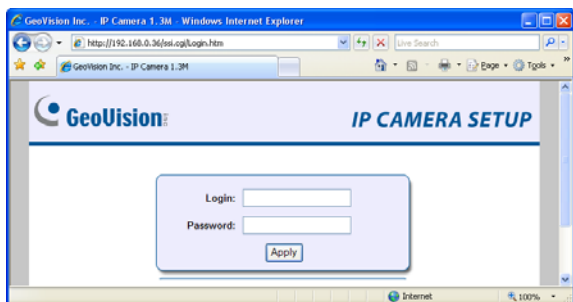


Figure 4-1

3. Enter the login name and password.
 - The default login name and password for Administrator are **admin**.
 - The default login name and password for Guest are **guest**.

- Click **Apply**. A video image, similar to the example on Figure 4-2, is now displayed in your browser.

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

4.2 Functions Featured on the Main Page

This section introduces the features of the Live View window and Network Status on the main page. The two features are accessible by both Administrator and Guest.

Main Page of Guest Mode

- ▼ Video and Motion
 - ▼ Live View
 - ▶ MJPEG
 - ▶ MPEG4
- ▼ Network
 - ▶ Status



Figure 4-2

4.2.1 The Live View Window

Live View

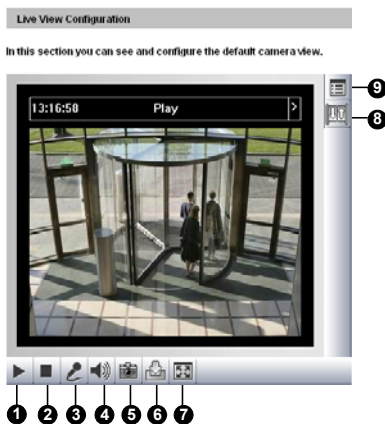


Figure 4-3

No.	Name	Function
1	Play	Plays live video.
2	Stop	Stops playing video.
3	Microphone	Talks to the surveillance area from the local computer.
4	Speaker	Listens to the audio around the camera.
5	Snapshot	Takes a snapshot of live video. --- See section 4.2.3.
6	File Save	Records live video to the local computer. --- See section 4.2.4.
7	Full Screen	Switches to full screen view. Right-click the image to have these options: Snapshot , PIP , PAP , Zoom In and Zoom Out . --- See section 4.2.5 for PIP and PAP views.

8	I/O Control	Starts the I/O Control Panel. --- See section 4.2.11.
9	Show System Menu	Brings up these functions: Alarm Notify, Video and Audio Configuration, Remote Config, Show Camera Name and Image Enhance . --- See sections 4.2.6; 4.2.7; 4.2.8; 4.2.9; 4.2.10.

4.2.2 The Control Panel of the Live View Window

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

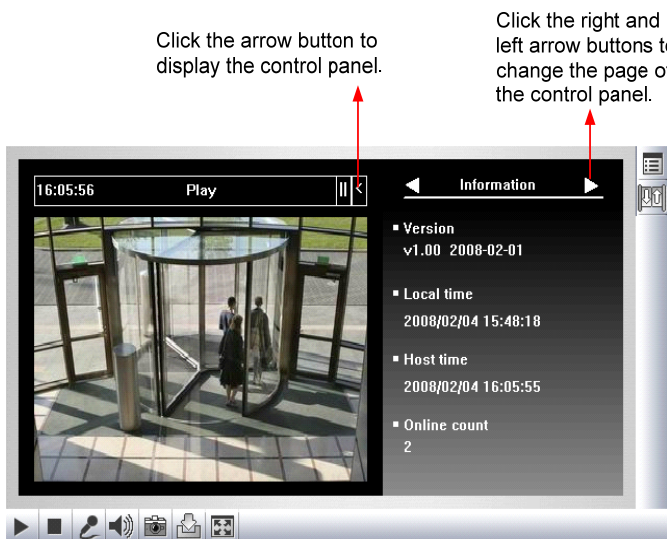


Figure 4-4

[Information] Displays the version of the camera, local time of the local computer, host time of the camera and the number of users logging in the camera.

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

[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.

[Alarm Notify] Displays the captured images by sensor triggers and/or motion detection. For this function to work, you have to configure the Alarm Notify settings first. See *4.2.6 Alarm Notification*.

[GPS] For details *5.7.2 GPS Map Settings*.

[Download] Allows you to install the programs from the hard drive.

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

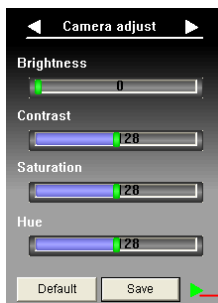


Figure 4-5

To adjust the camera image, use the sliders of Brightness, Contrast, Saturation and Hue.

Click the right button to change the pages of Camera Adjustment.

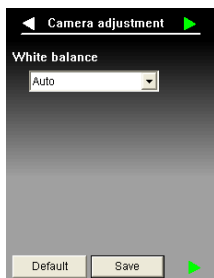


Figure 4-6

- **White balance:** The camera automatically adjusts the color to be closest to the image you are viewing. You can choose one of the three presets: **Indoor**, **Fluorescent** and **Outdoor**. You can also choose **Manual** to adjust the white balance manually.

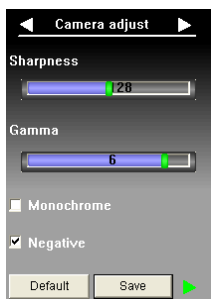


Figure 4-7

- **Sharpness:** Adjusts the sharpness of the image
- **Gamma:** Adjusts the relative proportions of bright and dark areas
- **Monochrome:** When this option is enabled, the camera will discard all color information and create grayscale images. In a poorly-lit scene there is often little or no useful color information, so image quality will improve with monochrome images.
- **Negative:** Inverts images to look like photo negatives

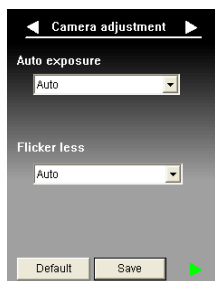


Figure 4-8

- **Auto exposure:** The camera performs the iris adjustment automatically. You can also choose to set the exposure manually.
- **Flicker less:** The camera automatically matches the frequency of your camera's imager 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.

4.2.3 Snapshot of Live Video

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

1. Click the **Snapshot** button (No. 5, Figure 4-3). 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.

4.2.4 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, Figure 4-3). 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 the 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, Figure 4-3).

4.2.5 Picture-in-Picture and Picture-and-Picture View

The full screen mode provides two types of close-up views: **Picture-in-Picture (PIP)** and **Picture-and Picture (PAP)**. The two views are useful to provide clear and detailed images of the surveillance area.

To access this feature:

- Click the **Full Screen** button (No. 7, Figure 4-3). Right-click the full screen to have the options of **PIP** and **PAP**.
- Right-click the live view to have the options of **PIP** and **PAP**.

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 4-9

1. Select **PIP**. An inset window appears.
2. Click the insert 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 4-10

1. Select **PAP**. A row of three inset windows appears 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.

- 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.
- To delete a navigation box, right-click the desired box, select **Focus Area of PAP Mode** and click **Delete**.
- To exit the PAP view, right-click the image and click **PAP** again.

4.2.6 Alarm Notification

After input triggers and motion detection, you can be alerted by a pop-up live video and view up to four captured images.



Figure 4-11

To configure this function, click the **Show System Menu** button (No. 9, Figure 4-3), and select **Alarm Notify**. This dialog box appears.

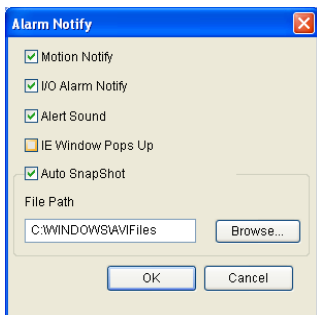


Figure 4-12

- **Motion Notify:** Once motion is detected, the captured images are displayed on the control panel of the Live View window.
- **I/O Alarm Notify:** Once the input device is triggered, the captured images are displayed on the control panel of the Live View window. For this function to work, the Administrator needs to install the input device properly. See *5.2.1 Input Setting*.
- **Alert Sound:** Activates the computer alarm on motion and input-triggered detection.
- **IE Window Pops up:** The minimized Live View window pops up on motion and input-triggered detection.
- **Auto Snapshot:** The snapshot of live video is taken every 5 seconds on motion and input-triggered detection.
- **File Path:** Assigns a file path to save the snapshots.

4.2.7 Video and Audio Configuration

You can enable the microphone and speaker for two-way audio communication and adjust the audio volume. To change audio configuration, click the **Show System Menu** button (No. 9, Figure 4-3), and select **Video and Audio Configuration**.

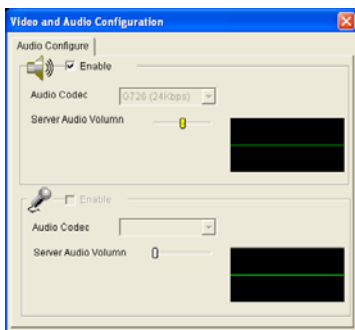


Figure 4-13

4.2.8 Remote Configuration

You can view the connection status of the central monitoring stations and upgrade firmware over the Internet. Click the **Show System Menu** button (No. 9, Figure 4-3), and select **Remote Config**. The Remote Config dialog box will appear.

[Status] In this tab, you can see the current status of the connection to Center V2 and VSM.

[Firmware Upgrade] In this tab, you can upgrade the firmware over the Internet. For details, see *Chapter 6 Advanced Applications*.

4.2.9 Camera Name Display

To display the camera name on the image, click the **Show System Menu** button (No. 9, Figure 4-3), and select **Show Camera Name**.

4.2.10 Image Enhancement

To enhance the image quality of live video, click the **Show System Menu** button (No. 9, Figure 4-3), and select **Image Enhance**. This dialog box appears.

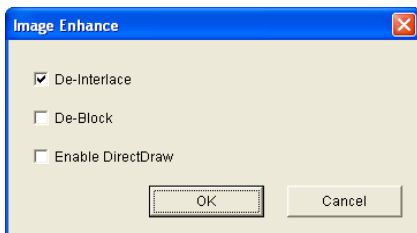


Figure 4-14

- **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.

4.2.11 I/O Control

The I/O Control window provides a real-time graphic display of camera status, I/O status, and alarm events. Additionally, you can remotely force output to be triggered.

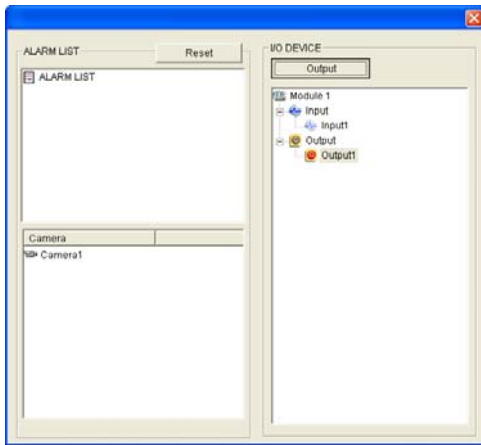


Figure 4-15

- To display the I/O control window, click the **I/O Control** button (No. 8, Figure 4-3).
- 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, highlight an output and then click the **Output** button.

4.2.12 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 5.1.4 *Visual Automation*.



Figure 4- 16

- To access this feature, click the **I/O Control** button (No. 9, Figure 4-3) 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

4.2.13 Network Status

To view the network status, in the left menu, click **Network** and select **Status**.

Network Status Information	
Current Status Information	
In this section you can see an overview of videosever status.	
Interface:	Wired
IP Acquirement:	Fixed
MAC Address:	00000001010A
IP Address:	192.168.1.142
Subnet Mask:	255.255.254.0
Gateway:	192.168.0.1
Domain Name Server 1:	192.168.0.1
Domain Name Server 2:	192.168.0.2

Figure 4-17

Chapter 5 Administrator Mode

The Administrator can access the system configuration via the Internet.

Seven categories of configurations are involved in the system configuration: **Video and Motion**, **Digital I/O**, **Events and Alerts**, **Monitoring**, **Schedule**, **Network** and **Management**.

▼ Video and Motion

- ▼ Live View
 - ▶ MJPEG
 - ▶ MPEG4
 - ▶ Video Settings
 - ▶ Motion Detection
 - ▶ Privacy Mask
 - ▶ Visual Automation

▼ Digital I/O

- ▼ I/O Control
 - ▶ Input Setting
 - ▶ Output Setting

▼ Events and Alerts

- ▶ Email
- ▶ FTP
- ▶ Center V2
- ▶ VSM
- ▶ 3GPP

▼ Monitoring

▼ Schedule

- ▶ Camera
- ▶ I/O Monitor

▼ Network

- ▶ Status
- ▶ LAN
- ▶ Advanced TCP/IP
- ▶ IP Filtering

▼ Management

- ▶ Date and Time
- ▶ GPS Map Settings
- ▶ User Account
- ▶ Log Information
- ▶ Tools

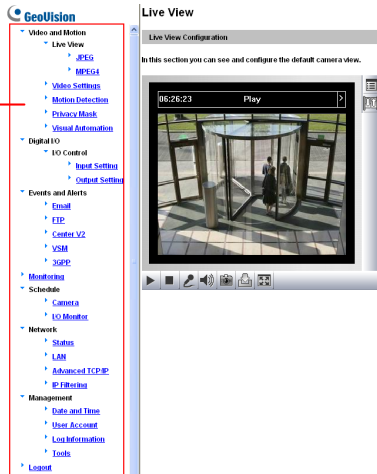


Figure 5-1

5.1 Video and Motion

This section includes the video image settings and how the images can be managed by using Motion Detection, Privacy Mask and Visual Automation.

5.1.1 Video Settings

Video Settings

In this section you can define compression art, broadcasting method and privacy mask.

Name

Name:

Connection template

[Fair LAN, T1, Wireless B02, 11a/g, ADSL high speed.]

Video Signal type

In this section you can configure the resolution and frame per second to be transmitted through the network

MPEG0 Resolution	MPEG4 Resolution	Frame per second
<input type="text" value="1280x720 30"/>	<input type="text" value="640x480"/>	<input type="text" value="15"/>

Only 1 frame when there is no motion.
 Noise detection to reduce frame rate.

Bandwidth Management

In this section you can configure the bit rate used by MPEG-4 video stream. Using VBR (Variable Bit Rate) is an intelligent method to compress between image quality and bandwidth control. But if you want to provide consistently the same image quality at bandwidth cost, please set to CBR (Constant Bit Rate).

VBR Quality:
 CBR Maximal Bit Rate:

GOP Structure and Length

In this section you can configure the composition of the MPEG-4 video stream (GOP structure), by using I frame only will increase video quality automatically but also the bandwidth.

Group of Picture (GOP) size: indicates to generate I-VOP only and disable motion detection)

Overlaid Text Settings

In this section you can configure overlaid text settings.

Overlaid with camera name
 Overlaid with date stamps
 Overlaid with time stamps
 Overlaid with IO input name

Flicker lens

Auto

Mechanical Iris Adjustment

Auto adjustment (This function does not support Mini Fixed Dome)

Special View Setting

Additional functions for Live View

Rotation

DN: Auto Black and White Color (This function does not support Mini Fixed Dome)
 IR Check Function: Default Triggered by input
 Light Correction: Disabled Backlighting Forwardlighting
 Shutter Speed: Auto-Exposure 1/500s 1/1 000s
 Mini Fixed Dome PWB (For Mini Fixed Dome Only)

Figure 5-2

[Name] Rename the camera. To display the camera name on the Live View window, see 4.2.9 *Camera Name Display*.

[Connection Template] Select the type of your network connection. Unless you select **Customized**, this option will automatically bring up the recommended video resolution, frame rate, bandwidth and GOP size.

[Video Signal Type] There are several options for selecting image resolutions. The frame rate to transmit images can reach 30 fps for all kinds of resolutions, except JPEG resolution of 1280 x 960.

Most 3GPP mobile phone supports video streaming with MPEG-4 video. Due to the limitation of the bandwidth for 3GPP, only 176 x 144 video resolution will be supported for mobile phone setting. To change 3GPP port settings, see section 5.3.5 for 3GPP.

- **Only 1 frame when there is no motion:** When there is no motion detected, only 1frame will be transmitted. This option can save the bandwidth.
- **Noise detection to reduce frame rates:** This option will reduce automatically frame rates on video noise conditions caused by weather or light changes, and restore normal frame rates when the disturbing conditions are over.

JPEG Resolution	MEPG-4 Resolution
1280 x 960	
640 x 480	640 x 480
360 x 288	360 x 288
360 x 240	360 x 240
176 x 144	176 x 144 (3GPP/MSView)

[Bandwidth Management] When using MPEG-4 it is possible to control the bitrate, which in turn allows the amount of bandwidth usage to be controlled.

- **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 much more efficiently used than a comparable CBR.

Set the image quality to one of the 3 standards: **Fair**, **Good**, and **Excellent**.

- **CBR (Constant Bitrate):** CBR is used to achieve a specific bitrate by varying the quality of the MPEG-4 stream. Select one of the bitrates from the drop-down list.

[GOP Structure and Length] Set the maximum number of frames in a GOP structure (the GOP size limit). This function is only available when you select **Customized** in the Connection Template section.

[Overlaid Settings]

- **Overlaid with camera name:** Includes camera names on live and recorded videos.
- **Overlaid with date stamps:** Includes date stamps on live and recorded videos.
- **Overlaid with time stamps:** Includes time stamps on live and recorded videos.
- **Overlaid with IO input name:** Includes the name of the selected input on live and recorded videos.

[Mechanical Iris Adjustment] Adjusts the auto iris lens (DC drive) to bring exposure to optimum.

- **Auto adjustment:** Click **Start** for automatic adjustment.

[Flicker-less] The camera automatically matches the frequency of your camera's imager to the frequency of indoor light sources, e.g. fluorescent lighting. You can also select **50 Hz** or **60 Hz** manually.

[Special View Setting]

- **Rotation:** Rotates the image 180 degrees.
- **D/N:** If your camera supports the Day/Night function, select **Auto** that will let the camera switch automatically to monochrome images in a poorly-lit scene. You can also switch either **Black and White** or **Color** images manually.
- **IR Check Function:** The option is only for GV-IP Camera supporting the Day/Night function. Select **Triggered by Input** to control the built-in mechanical IR cut filter with an input signal. The ON/OFF action of the IR cut filter can be controlled by connecting an input device to the GV-IP Camera, such as an infrared (IR) illuminator or timer. The function can avoid the frequent action of IR cut filter under certain lighting condition. Otherwise, keep the selection of **Default**.
- **Light Correction:** If some parts of your image are excessively bright or dark, selecting **Backlighting** can have a brighter and clearer front image, or selecting **Forwardlighting** can have a brighter and clearer background.
- **Shutter Speed:** Three types of shutter speed are offered to suit different needs: **Auto-Exposure**, **1/500s** and **1/1000s**.
- **Mini Fixed Dome PWB:** The PWB (Preset White Balance) option is only for Mini Fixed Dome. The option can solve the issue that the images appear much blue in color. By default the option is enabled, but you need to enable it again after applying the **Load Default** function.

Note:

- The **Mechanical Iris Adjustments** and **IR Check** functions are not available for Mini Fixed Dome.
 - After applying the **Rotation** function, you need to configure Motion Detection, Privacy Mask and Visual Automation again.
-

5.1.2 Motion Detection

Motion detection is used to generate an alarm whenever movement occurs in the video image. You can configure up to 8 areas with different sensitivity values for motion detection.

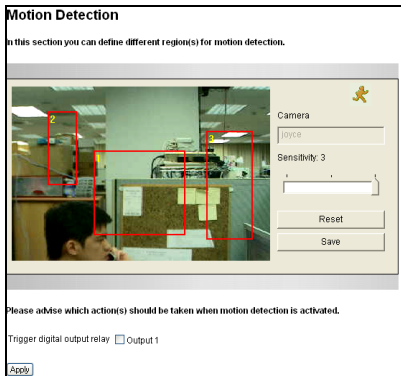


Figure 5-3

1. The default sensitivity value is 2 for the whole area. To define a different sensitivity value, click **Reset**.
2. Select the desired sensitivity by moving the slide bar. There are three values. The higher the value, the more sensitive the camera is to motion.
3. Drag an area on the image. Click **Add** when you are prompted to confirm the setting.

4. To create several areas with different sensitivity values, repeat Steps 2 and 3.
5. Click **Save** to save the above settings.
6. If you want to trigger the alarm output when motion is detected, select **Output 1** and click the **Apply** button. To activate the output settings, you must also start **Camera** monitoring manually or by schedule. For related settings, see *5.4 Monitoring*.

5.1.3 Privacy Mask

The Privacy Mask can block out sensitive areas from view, covering the areas with dark boxes in both live view and recorded clips. This feature is ideal for locations with displays, keyboard sequences (e.g. passwords), and for anywhere else you don't want sensitive information visible.

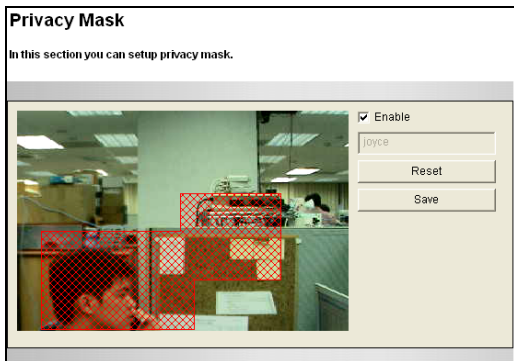


Figure 5-4

1. Check 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.

5.1.4 Visual Automation

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

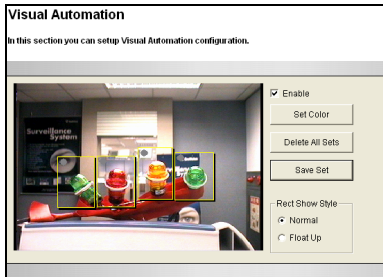


Figure 5-5

1. Check the **Enable** option.
2. Drag an area on the image of the electronic device. This dialog box appears.

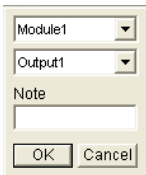


Figure 5-6

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 the **Set Color** button.
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.

To perform the function, see 4.2.12 *Visual Automation*.

5.2 Digital I/O Settings

The I/O terminal block, on the rear of the camera, provides the interface to one external alarm and sensor device. For details on the I/O terminal block, see *Chapter 9 I/O Terminal Block*.

5.2.1 Input Settings

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

The screenshot shows a web interface titled "Input Setting". Below the title, it states: "In this section you can configure GV-IPCAM1.3M digital input port." There is a header bar for "Digital Input 1". The settings are as follows:

- Enable
- Name:
- Normal State: Open Circuit (N/O) Grounded Circuit (N/C)
- Latch Mode: Enable
- Trigger digital output relay: Output
- Send Video to CenterV2: Enable

At the bottom left, there is an "Apply" button.

Figure 5-7

- **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.
- **Send Video to Center V2:** Enable this option to send the images to Center V2 when the input is triggered.

Note: The input settings only function after you start **Input monitoring** manually or by schedule. To configure the input monitoring, see [5.4 Monitoring](#).

5.2.2 Output Settings

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 and N/C Pulse. Set the pulse duration for the pulse mode.

Output Setting

In this section you can configure GV-IPCAM1.3M digital output port.

Digital Output 1 - Normal State

Enable

Name

Open Circuit (N/O) Grounded Circuit (N/C)

Toggle Mode Open Circuit (N/O) Grounded Circuit (N/C)

Pulse Mode Open Circuit (N/O) Grounded Circuit (N/C)

Trigger Pulse Mode for seconds(1~60)

Figure 5-8

5.3 Events and Alerts

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

1. Send a captured still image by E-mail or FTP.
2. Notify Center Monitoring Station, Center V2 or VSM, by video or text alerts.

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

- Motion Detection (See 5.1.2 *Motion Detection*)---Optional
- Input Setting (See 5.2.1 *Input Setting*)
- For e-mail and FTP alerts, it is required to start monitoring (See 5.4 *Monitoring*).

Note: The Motion Detection function is an optional setting since it is activated by default.

5.3.1 E-mail

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

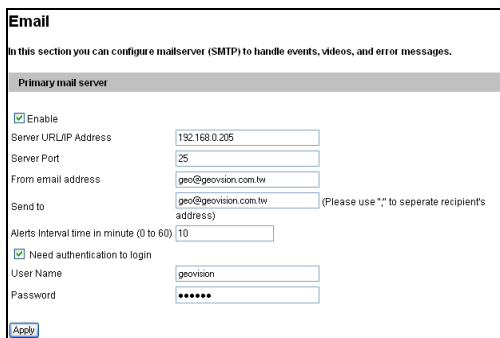


Figure 5-9

[Enable] Check to enable the e-mail function.

- **Sever URL/IP Address:** Type the URL address or IP address of the SMTP Server.
- **Server Port:** Modify the port number of the SMTP Server. 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:** Specify the interval between e-mail alerts. The interval can be between 0 and 60 minutes.

[Need authentication to login] If the SMTP Server needs authentication, enable this option and type a valid username and password to log in the SMTP server.

For the related settings to send e-mail alerts, see *5.1.2 Motion Detection*, *5.2.1 Input Setting* and *5.4 Monitoring*.

5.3.2 FTP

You can also send the captured still image to a remote FTP server for alerts.

FTP Client and Server Setting

Upload to a FTP server

In this section you can configure a ftp server (File Transfer Protocol) to handle events, videos, and error messages.

Enable

Server URL/IP Address: 192.168.0.21

Server Port: 21

User Name: geovision

Password: ••••••

Remote Directory: FTP_Folder

Alerts Interval time in minute (0 to 60): 10

Apply

Figure 5-10

[Enable] Check to enable the FTP function.

- **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 user name 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.

For the related settings to send FTP alerts see *5.1.2 Motion Detection*, *5.2.1 Input Setting* and *5.4 Monitoring*.

5.3.3 Center V2

After a motion or an I/O triggered event, the central monitoring station Center V2 can get notified by live videos and text alerts. For the live monitoring through Center V2, you must already have a subscriber account on Center V2.

Center V2

In this section you can configure the connection to Center V2 and tasks to perform.

Center V2 server

Activate Link:

Host name or IP Address:

Port number:

User Name:

Password:

Cease motion detection messages from: Camera

Cease input trigger message from: Input

Enable schedule mode:

Stream Type: MJPEG MPEG4

Select schedule time

Span 1: 00:00-00:00 Next Day

Span 2: 00:00-00:00 Next Day

Span 3: 00:00-00:00 Next Day

Weekend: Saturday and Sunday Only Sunday

Special Day (MMDD)

01: <input type="text"/>	02: <input type="text"/>	03: <input type="text"/>	04: <input type="text"/>
05: <input type="text"/>	06: <input type="text"/>	07: <input type="text"/>	08: <input type="text"/>
09: <input type="text"/>	10: <input type="text"/>	11: <input type="text"/>	12: <input type="text"/>

Connection Status

Status: Connected. Connected Time: Fri Feb 16 09:56:53 2007

Figure 5-11

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 Video Server port on Center V2. Or keep the default value 5551.

4. **User Name:** Type a valid user name 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.

These options you can also find on this Center V2 setting page:

- **Cease motion detection messages from:** When this option is enabled, the camera will not notify Center V2 of motion-triggered events.
- **Cease input trigger messages from:** When this option is enabled, the camera will not notify 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 *5.5 Schedule* for the same settings.
- **Stream Type:** Sets the stream type to **MJPEG** or **MPEG4**.

For related settings to activate the monitoring through Center V2, see *5.1.2 Motion Detection*, *5.2.1 Input Setting*, and *8.1 Center V2*.

5.3.4 VSM

After a motion or an I/O triggered event, the central monitoring station VSM can get notified by text alerts. For the monitoring through VSM, you must already have a subscriber account on VSM.

Vital Sign Monitor Server Setting

In this section you can configure the connection to VSM Server and tasks to perform.

Vital Sign Monitor Server

Activate Link:

Host name or IP Address:

Port number:

User Name:

Password:

Cease motion detection messages from: Camera

Cease input trigger message from: Input

Enable schedule mode:

Select schedule time

Span 1 : - : Next Day

Span 2 : - : Next Day

Span 3 : - : Next Day

Weekend Saturday and Sunday Only Sunday

Special Day (MMDD)

01: 02: 03: 04:

05: 06: 07: 08:

09: 10: 11: 12:

Connection Status

Status: Connected. Connected Time: Sun Jan 16 07:33:59 2000

Figure 5-12

To enable the VSM connection:

1. **Activate Link:** Enable the monitoring through VSM.
2. **Host Name or IP Address:** Type the host name or IP address of VSM.
3. **Port Number:** Match the port to the Video Server port on VSM. Or keep the default value 5609.

4. **User Name:** Type a valid user name to log into VSM.
5. **Password:** Type a valid password to log into VSM.
6. Click **Apply**. The Connection Status should display “Connected” and connected time.

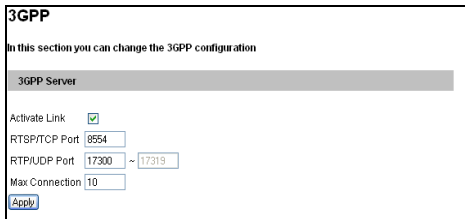
These options you can also find on this VSM setting page:

- **Cease motion detection messages from:** When this option is enabled, the camera will not notify VSM of motion-triggered events.
- **Cease input trigger messages from:** When this option is enabled, the camera will not notify VSM of input-triggered events.
- **Enable schedule mode:** Starts the monitoring through VSM based on the schedule you set in the **Select Schedule Time** section. Refer to *5.5 Schedule* for the same settings.

For related settings to activate the monitoring through VSM, see *5.1.2 Motion Detection* and *5.2.1 Input Settings*, and *8.2 VSM*.

5.3.5 3GPP

The 3GPP Server enables video and audio streaming to your 3G-enabled mobile phone.



The screenshot shows a web interface for configuring the 3GPP server. At the top, it says "3GPP" and "In this section you can change the 3GPP configuration". Below this is a section titled "3GPP Server" with a grey header. The configuration options are: "Activate Link" with a checked checkbox; "RTSP/TCP Port" with a text box containing "8554"; "RTP/UDP Port" with a range selector showing "17300" and "17319" separated by a tilde; and "Max Connection" with a text box containing "10". An "Apply" button is located at the bottom left of the configuration area.

Figure 5-13

- **Activate Link:** Enable the 3GPP service.
- **RTSP/TCP Port:** Keep the default value 8554, or modify it if necessary.
- **RTP/UDP Port:** Keep the default range from 17300 to 17319, or modify it if necessary. The number of ports for use is limited to 20.
- **Max Connection:** Set the maximum number of connections to the GV-IP Camera. The maximum value is 20.

For details on remote monitoring with mobile phones, see *7.4 Remote Monitoring with Mobile Phones*.

5.4 Monitoring

You can start monitoring manually, by schedule or by input trigger.

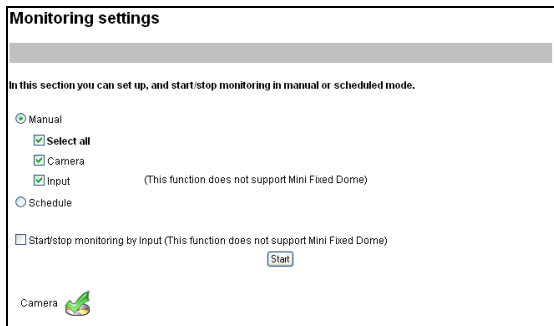


Figure 5-14

[Manual] Manually activates motion detection and I/O monitoring. Select one of the following options and then click the **Start** button.

- **Select all:** Manually starts both motion detection and I/O monitoring.
- **Camera:** Manually starts motion detection. When this option is enabled, the alarm output can be triggered once motion is detected. For this settings, see *5.1.2 Motion Detection*.
- **Input:** Manually starts I/O monitoring. When the sensor input is triggered, the alarm output can be enabled for alerts. For this setting, see *5.2.1 Input Setting*.

[Schedule] The system starts motion detection and I/O monitoring according to the schedule you have set. For schedule settings, see *5.5 Schedule*.

[Start/stop monitoring by Input] Starts and stops monitoring by input trigger. When the input is triggered, the system will response based on your settings in above **Manual** or **Schedule** options. When the input is triggered again, the system will stop monitoring.

[Camera Status Icon]



: On standby



: Enabled for motion detection and input trigger

5.5 Schedule

The schedule is provided to activate motion detection and I/O monitoring on a specific time each day.

5.5.1 Schedule Settings

You can set the schedule for motion detection to start.

Schedule Settings

In this section you can configure schedule time.

Select schedule time

Span 1 00 : 00 ~ 09 : 00

Span 2 09 : 00 ~ 18 : 00

Span 3 00 : 00 ~ 00 : 00 Next Day

Weekend Saturday and Sunday Only Sunday

Special Day (MM/DD)

01. 02. 03. 04.

05. 06. 07. 08.

09. 10. 11. 12.

Figure 5-15

- **Span 1- Span 3:** Set different time frames during the day to enable motion detection. Each day can be divided into 3 time frames, represented by Span 1 to Span 3.
- **Weekend:** If you don't want to apply the span settings to the weekend and need motion detection for the whole day, enable this option and define whether your weekend includes **Saturday and Sunday** or **Only Sunday**.
- **Special Day:** Enable motion detection on a specified day.

Note: In Schedule and I/O Monitoring settings, if the settings for Special Day conflict with those for Weekday or Weekend, the Special Day settings will get priority.

5.5.2 I/O Monitoring Settings

You can set the schedule for I/O monitoring to start.

I/O Monitor Settings

In this section you can configure I/O monitor time.

Select monitor time

Span 1 01 :00 ~ 08 :00
 Span 2 19 :00 ~ 01 :00 Next Day
 Span 3 00 :00 ~ 00 :00 Next Day

Weekend Saturday and Sunday Only Sunday

Special Day (MM/DD)

01. <input type="text"/>	02. <input type="text"/>	03. <input type="text"/>	04. <input type="text"/>
05. <input type="text"/>	06. <input type="text"/>	07. <input type="text"/>	08. <input type="text"/>
09. <input type="text"/>	10. <input type="text"/>	11. <input type="text"/>	12. <input type="text"/>

Figure 5-16

- 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:** If you don't want to apply the span settings to the weekend and need I/O monitoring for the whole day, enable this option and define whether your weekend includes **Saturday and Sunday** or **Only Sunday**.
- Special Day:** Enable I/O monitoring on a specified day.

5.6 Network

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

5.6.1 LAN

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

LAN Configuration

In this section you can configure GV-IPCam1.3M to work inside of LAN.

LAN Configuration

Dynamic IP address Select this option to obtain IP address from a DHCP server

Static IP address Select this option to enter a Static IP address manually

PPPoE Select this option to establish a DSL connection

Username:

Password:

Configure connection parameters

IP Address:

Subnet Mask:

Router/Gateway:

Primary DNS:

Secondary DNS: (Optional)

Figure 5-17

[LAN Configuration]

- **Dynamic IP address:** The network environment has a DHCP server. This option should only be enabled if you know which IP address the camera will get from the DHCP server, or you have obtained a domain name from the DDNS service provider that always links to the camera's changing IP address.
- **Static IP address:** Assign a static IP or fixed IP to the camera. Type the camera's TCP/IP and DNS parameters in the **Configure connection parameters** section.
- **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 the camera's changing IP address.

[Configure connection parameters]

Type the camera'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

For details on Dynamic DNS Server Settings, see *5.6.2 Advanced TCP/IP*.

5.6.2 Advanced TCP/IP

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

Advanced TCP/IP

Dynamic DNS Server Settings

In this section you can configure your GV-IPCAM1.3M to obtain a domain name by using a dynamic IP.

Enable

Service Provider: Geovision DDNS Server [ex Register Geovision DDNS Server](#)

Host Name: username.dpmap.com

User Name: ipcam001

Password: ●●●●●●●●

Update Time : Wed Feb 20 18:12:56 CST 2008 [Refresh](#)

Apply

HTTP Port Settings

In this section you can change the default HTTP port number (80) to any port within the range 1024-65535. It is a simple method to increase system security using port mapping. You can configure HTTP connection to an alternative port.

HTTP Port: 80

Apply

GV-IPCam 1.3M Streaming Port Settings

In this section you can configure Streaming connection from a determine port. The default setting is 10000.

VSS Port: 10000

Apply

UPnP Settings

In this section you can enable or disable UPnP function.

UPnP: Enable Disable

Apply

Figure 5-18

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

Before enabling the following DDNS function, the Administrator should apply for a Host Name from the DDNS service provider's website. There are 2 providers listed in the camera: 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 the camera. For the 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] The HTTP port enables connecting the camera to the web. For security integration, the Administrator can hide the server from the general HTTP port by changing the default HTTP port of 80 to a different port number within the range of 1024 through 65535.

[GV-IPCam1 .3M Streaming Port Settings] The VSS port enables connecting the camera to the GV-System. 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 the camera directly by clicking on the camera listed in the network devices table.

5.6.3 IP Filter Settings

The Administrator can set IP filtering to restrict access to the camera.

IP Filter Setting

IP Filtering

In this section you can allow or deny network connection listed in the table.

Enable IP Filtering

No.	IP Address Range in CIDR format	Action	Customize
1	192.168.1.21	Allow	<input type="button" value="Remove"/>

Filtered IP: (ex: 192.168.0.0/24)

Action to take:

Figure 5-19

To enable the IP Filter function:

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

5.7 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.

5.7.1 Date & Time Settings

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

Date and Time Settings

In this section you can configure time and date or just synchronize with a NTP server.

Date and Time on GV-IPCAM1.3M

Wed Feb 20 18:18:04 2008

Time Zone

(GMT+08:00) China,Hong Kong,Australia Western,Singapore,Taiwan,Russia ▾

Enable Daylight Saving Time

Start (MM/dd/hh/mm)

End (MM/dd/hh/mm)

Synchronized with a Network Time Server

Synchronized with Network Time Server (NTP)

Host name or IP Address:

Update period: 24 hours; Update Time: AM 05:10

Synchronized with your computer or modify manually

Modify manually

Date 2000/01/15 (yyyy/mm/dd)

Time 04:26:54 (hh:mm:ss)

Synchronized with your computer

Overlaid Date and Time Settings

Show date as YYYY/MM/DD ▾

(This is date format. yyy stands for year in 4 digits or yy in 2 digits, mm stands for month, and dd stands for day.)

Display order

Date prior to time (Ex.2007/05/21 17:00:00)

Time prior to date(Ex.17:00:00 2007/05/21)

Figure 5-20

[Date & Time on GV-IPCam1.3M] Displays the current date and time on the camera.

[Time Zone] Sets the time zone for local settings. Select **Enable Daylight Saving Time** to automatically adjust the camera for daylight saving time. Type the Start Time and End Time to enable the daylight saving function.

[Synchronized with a Network Time Server] By default, the GV-IP Camera uses the timeserver of time.windows.com to automatically update its internal clock every 24 hours. You can also change the host name or IP setting to the timeserver of interest.

[Synchronized with your computer or modify manually] Manually changes the camera's date and time. Or, synchronize the camera's date and time with those of the local computer.

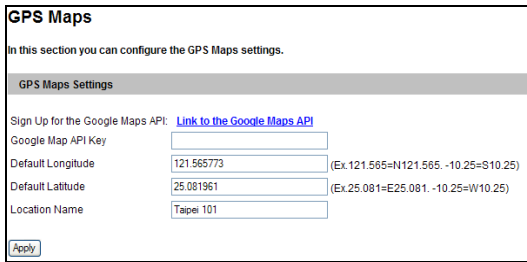
[Overlaid Date and Time Settings] Select the display format of date and time stamps on the image. For this function to work, you must also enable the **Overlaid with date stamps** and **Overlaid with time stamps** options in Figure 5-2.

5.7.2 GPS Maps Settings

The Maps Settings allows you to see the location of your GV-IP Camera on Google maps, without a GPS device.

To see the location of your GV-IP Camera on maps:

1. It is required to sign up for a Google Maps API key before using the Google Maps. Click **Link to the Google Maps API**.



GPS Maps

In this section you can configure the GPS Maps settings.

GPS Maps Settings

Sign Up for the Google Maps API: [Link to the Google Maps API](#)

Google Map API Key

Default Longitude (Ex. 121.565=N121.565, -10.25=S10.25)

Default Latitude (Ex. 25.081=E25.081, -10.25=W10.25)

Location Name

Figure 5-21

2. Enter the registered Maps API Key, the longitude and latitude of your GV-IP Camera, and location name. Click **Apply** to enable this function.
3. Open the control panel of the Live View window.

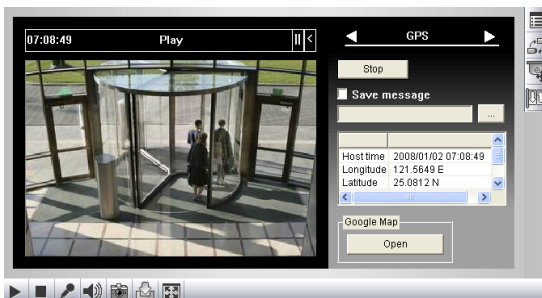


Figure 5-22

- Click **Open**. A warning message appears.

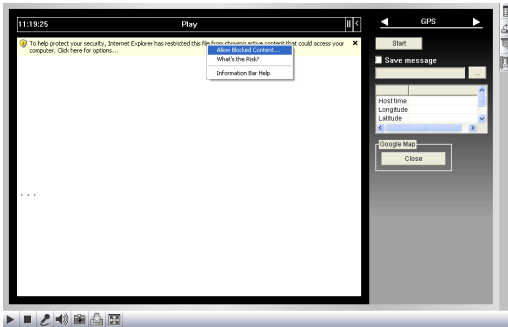



Figure 5-23

- Right-click the warning message and select **Allow Blocked Content**. The map will be displayed. The  icon indicates the location of your GV-IP Camera. At the upper right corner you have options to view different map formats, such as Satellite and Hybrid.

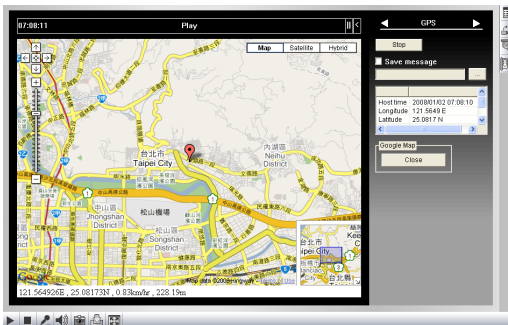


Figure 5-24

5.7.3 User Account

You can change the login name and password of Administrator and Guest. The default Administrator login name and password are **admin**; the default Guest login name and password are **guest**. To allow a Guest user log in without entering name and password, select **Disable Check Login Guest Identity**.

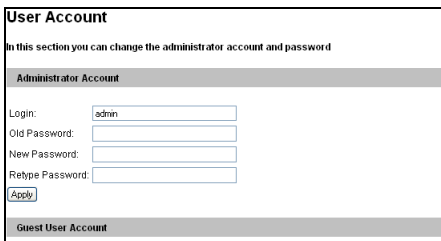


Figure 5-25

5.7.4 Log Information

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

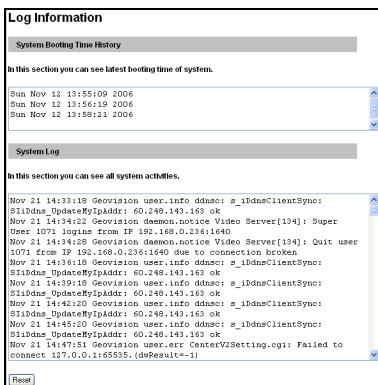


Figure 5-26

5.7.5 Tools

You can execute certain system operations and view the firmware version.

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

- Host Settings:** A header section with a sub-header "Host Settings". Below it is a text input field labeled "Host Name" containing the text "GV-IPCAM". An "Apply" button is located below the input field.
- Firmware Update:** A header section with a sub-header "Firmware Update". Below it is a text input field displaying the firmware version "v1.00 2007-11-29".
- System Settings:** A header section with a sub-header "System Settings". Below it is a text input field labeled "Restore to factory default settings" with a "Load Default" button to its right.
- Reboot:** A header section with a sub-header "Reboot". Below it is a text input field labeled "Do you wish to reboot now?" with a "Reboot" button to its right.

Figure 5-27

[Host Settings] Enter a descriptive name for the camera.

[Firmware Update] This field displays the firmware version of the camera.

[System Settings] Clicking the **Load Default** button will make the camera restore factory default settings.

Note: After applying the default function:

- You need to configure the camera's network setting again.
 - If your camera supports the Day/Night feature, you need to configure the D/N setting to **Auto** again
 - You need to enable the **Mini Fixed Dome PWB** function again.
-

[Reboot] Clicking the **Reboot** button will make the camera perform software reset.

Chapter 6 Advanced Applications

This chapter introduces more advanced applications.

6.1 Upgrading System Firmware

GeoVision will periodically release the updated firmware on the website. The new firmware can be simply loaded into the GV-IP Camera over the Internet or by using the Video Server Utility included in the Software CD.

6.1.1 Upgrading Firmware over Internet

1. In the Live View window, click the **Show System Menu** button (No. 9, Figure 4-3), select **Remote Config**, and then click the **Firmware Upgrade** tab. This dialog box appears.

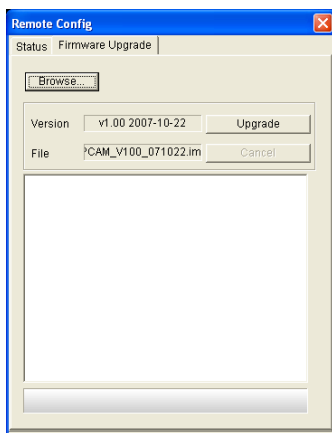


Figure 6-1

- Click the **Browser** button to locate the firmware file (.img) saved at your local computer.
- Click the **Firmware Upgrade** button to process the upgrade.

6.1.2 Upgrading Firmware by Using the VS Utility

The Video Server Utility provides a direct way to upgrade the firmware to multiple GV-IP Cameras.

- Insert the Software CD, select **IP Device Utility**, and follow the onscreen instructions to install the program.
- Double-click the **Video Server Utility** icon created on your desktop. This dialog box appears.

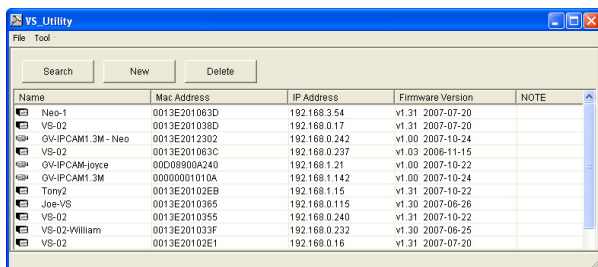
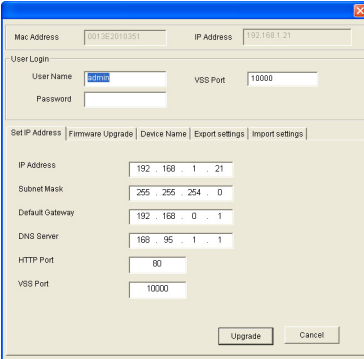


Figure 6-2

- Click the **Search** button to locate available GV-IP Cameras on the same LAN. Or click the **New** button and assign the IP address to locate the GV-IP Camera over the Internet. Or highlight one GV-IP Camera in the list and click the **Delete** button to remove it.

4. Double-click one GV-IP Camera in the list. This dialog box appears.



Mac Address 0013E2010351 IP Address 192.168.1.21

User Login

User Name admin VSS Port 10000

Password

Set IP Address | Firmware Upgrade | Device Name | Export settings | Import settings

IP Address 192 . 168 . 1 . 21

Subnet Mask 255 . 255 . 254 . 0

Default Gateway 192 . 168 . 0 . 1

DNS Server 168 . 95 . 1 . 1

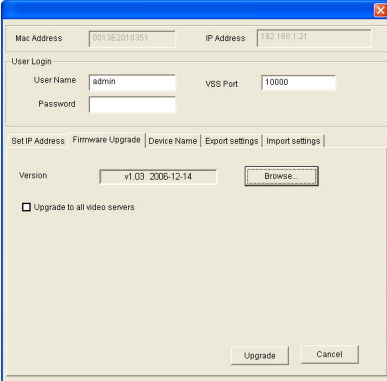
HTTP Port 80

VSS Port 10000

Upgrade Cancel

Figure 6-3

5. Click the **Firmware Upgrade** tab. This dialog box appears.



Mac Address 0013E2010351 IP Address 192.168.1.21

User Login

User Name admin VSS Port 10000

Password

Set IP Address | Firmware Upgrade | Device Name | Export settings | Import settings

Version v1.03_2006-12-14 Browse...

Upgrade to all video servers

Upgrade Cancel

Figure 6-4

6. Click the **Browse** button to locate the firmware file (.img) saved at your local computer.

7. If you like to upgrade all the GV-IP Cameras in the list, check **Upgrade all video servers**.
8. Type Password, and click **Upgrade** to process the upgrade.

6.2 Backing Up and Restoring Settings

With the Video Server Utility included in the Software CD, you can back up the configurations in the GV-IP Camera, and restore the backup data to the current camera or import it to another camera.

To back up the settings:

1. Run **Video Server Utility** and locate the desired GV-IP Camera. See Steps 1-3 in section 6.1.2 of *Upgrading Firmware by Using the VS Utility*.
2. Double-click the GV-IP Camera in the list. Figure 6-3 appears.
3. Click the **Export Settings** button. This dialog box appears.

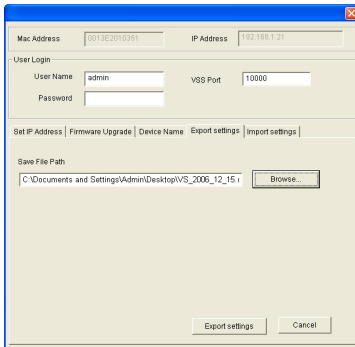


Figure 6-5

4. Click the **Browse** button to assign a file path.

5. Type **Password**, and click the **Export Settings** button to save the backup file.

To restore the settings:

1. In Figure 6-3, click the **Import Settings** tab. This dialog box appears.

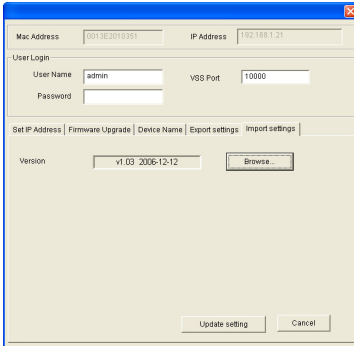


Figure 6-6

2. Click the **Browse** button to locate the backup file (.dat).
3. Click the **Update Settings** button to start restoring.

Chapter 7 DVR Configurations

The GV-System provides hybrid solution, integrating the digital videos from GV-IP Cameras with other analog videos. For the digital videos, the GV-System provides the complete video management, such as video viewing, recording, playback, alert settings and almost every feature of the system. Following is the integration specifications:

- GV-System Version 8.2 or later is required.
- The maximum number of connections to the GV-IP Camera is 20. When one GV-System connects to one GV-IP Camera, it takes up to 4 connections. When the user connects to one GV-IP Camera via browser, it takes up to 2 connections. When the user operates the Camera/Audio Control on Center V2, it takes 1 connection.
- The codec and resolution of digital videos are set up on the GV-IP Camera instead of on the GV-System
- The hardware compression and the “Pre-Recording Using RAM” feature cannot work on the videos from GV-IP Camera.

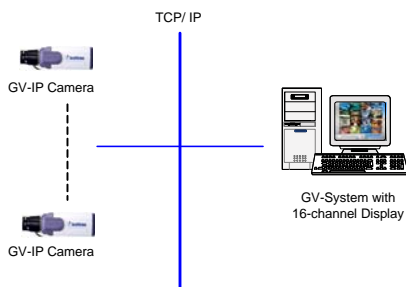


Figure 7-1

Note: Currently the GV-250 Card does not support the GV-IP Camera.

7.1 Setting up an IP Camera

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

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

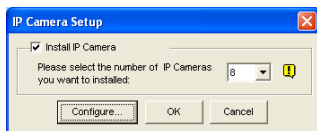


Figure 7-2

2. Check **Install IP Camera**, select the number of GV-IP Cameras you want to link to, and click **Configure**. This dialog box appears.

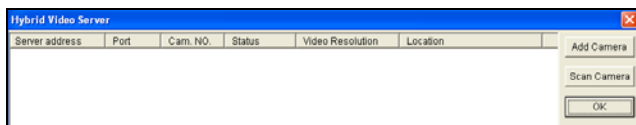


Figure 7-3

- To automatically set up the camera, click **Scan Camera** to detect any GV IP devices on the LAN.
- To manually set up the camera, click **Add Camera**.

The following steps are the example of manual setup.

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



Figure 7-4

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

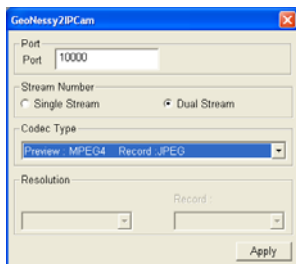


Figure 7-5

- **Port:** Video streaming port number.
 - **Stream number:** You have the option of single or dual streaming.
 - **Codec Type:** You have the codec option of MPEG4 or JPEG. If you select **Dual Stream**, the preview codec and recording codec will be set differently.
- Click **Apply**. The IP camera is added to the list.

- Click the listed camera, and select **Display position** to map the IP camera to a channel on the GV-System.

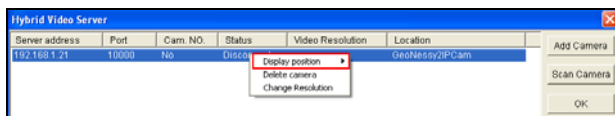


Figure 7-6

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

Previewing Video and Setting Audio

To preview video and activate audio, click the desired camera (see Figure 7-6) and select **Preview & Audio Setting**. This dialog box appears.

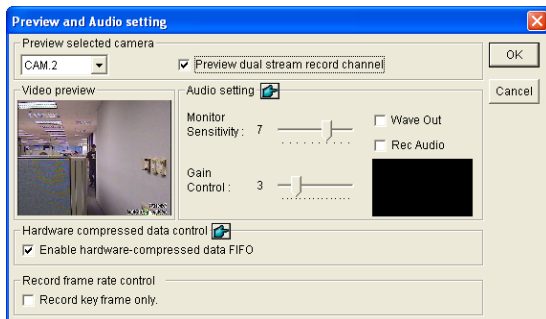


Figure 7-7

[Preview selected camera]

- Drop-down List:** Select the desired camera for live preview.
- Preview dual stream record channel:** The option is only available when the dual stream is set, i.e. the cameras for live view and recording are configured differently (see Figure 7-5). Check this option for recording preview.

[Audio Setting]

- **Monitor Sensitivity:** Adjust the sensitivity of the audio that will be detected. The higher the value, the more sensitive the system is to the surrounding sound.
- **Gain Control:** Increase or decrease the gain of the microphone.
- **Wave Out:** Select this option to listen to live audio from the camera.
- **Rec Audio:** Select this option to activate the audio recording.

[Hardware compressed data control]

Hardware-compressed data from the video IP device, such as IP Camera, Video Server and Compact DVR, can be transmitted directly to remote servers instead of being compressed again on GV-System. The remote servers include Center V2, Control Center and WebCam. This function is useful when many remote servers access GV-System at one time. It can reduce the system load on GV-System, and provide more frame rates and better image quality for each remote server.

Note: It is highly recommended to enable this function on a LAN environment because it requires a lot of bandwidth.

[Record Frame Rate Control] Set the recording frame rate to meet your bandwidth requirements.

- **Maximum recording frame rate:** This option is available when the recording codec of the IP camera is set to JPEG. Select the frame rate from 1 to 30 fps.
- **Record key frame only:** This option is available when the recording codec of the IP camera is set to MPEG4. You can choose to record key frames instead of all frames. 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. For the GOP setting, see *5.1.1 Video Settings*.

7.2 Remote Monitoring with Multi View

You can use the Multi View to monitor and manage the GV-IP Camera.

Connecting to GV-IP Camera

1. On the Multi View window, click the **Edit Host** button. The Edit Host window appears.
2. To create a host, click the **New** button. You need to create a group before creating a host.
3. Select **GV IP Camera** from the Device drop-down list. Type the host name, IP address, user name and password of the camera. Modify the default VSS port **10000** if necessary.

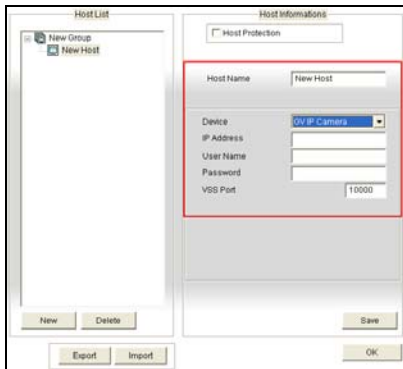


Figure 7-8

4. Click **Save** to establish connection.

For details on the Multi View functions, see “Multi View MPEG 4 Encoder Viewer”, *Viewing Live Video Using WebCam, User’s Manual* on the Surveillance System Software CD.

7.3 Remote Monitoring with E-Map

You can use the Remote E-Map to monitor and manage the GV-IP Camera.

Creating an E-Map for GV-IP Camera

With the E-Map Editor, you can create an E-Map for the GV-IP Camera. The E-Map Editor is available in the two applications: Main System and E-Map Server. The following is an example of running the E-Map Editor included in the Main System.

1. Go to Windows **Start** menu, point to **Programs**, select **GV folder** and click **E-Map Editor**.
2. To create an E-Map, click the **Add Map** button on the toolbar. A New Map file appears.
3. Double-click the New Map file, and click the **Load Map** button on the toolbar to import a graphic file
4. To create a host, click the **Add Host** button on the toolbar and select **Add IPCam**.
5. Right-click the created New Host in the Host View, and select **Host Settings**. This dialog box appears.

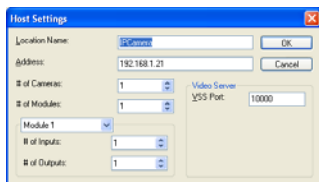


Figure 7-9

6. Give the GV-IP Camera a location name, and type its IP address (or domain name). Modify the default VSS port **10000** if necessary.
7. Click **OK** to save the settings.

8. Expand the created host folder. Drag and drop the icons of camera and I/O devices onto the imported E-Map.
9. Close the E-Map Editor. Click **Yes** when you are promoted to save the file.

For details on creating an E-Map file on the E-Map Server, see “E-Map Server”, *E-Map Application, User’s Manual* on the Surveillance System Software CD.

Connecting to GV-IP Camera

Depending on where you save the created E-Map file (DVR, E-Map Server or Control Center), the steps to open the Remote E-Map window for monitoring may vary slightly. The following is the connection example when you store the E-Map file in the DVR.

1. To enable the remote access to the DVR, click the **Network** button, select **WebCam Server** to display the Server Setup dialog box, and click **OK** to start the WebCam server.
2. At the local computer, open the web browser and type the address of the DVR. The Single View page appears.
3. Select **Emap**. A valid user name and password are required for login. For the first-time user, you will be directed to the Download page. Install the E-Map program before you can run it.
4. On the Remote E-Map window, click the **Login** button and select the GV-IP Camera host to access its videos and I/O devices. A valid user name and password are required to log in the GV-IP Camera.

For details on the Remote E-Map functions, see “The Remote E-Map Window”, *E-Map Application, User’s Manual* on the Surveillance System Software CD.

7.4 Remote Monitoring with Mobile Phones

Using a PDA, Smartphone and 3G-enabled mobile phone, you can receive live video streaming from the GV-IP Camera. The list below is the GV mobile applications supporting the GV-IP Camera.

Handheld Device View	OS Supported	Port	Settings on GV-IP Camera
GView V2	Windows Mobile 5.0 and 2003 for Pocket PC Windows Mobile 6 Classic and Professional	TCP/IP Port: 10000	Video Settings / GViewV2 Supported
MSView V2	Windows Mobile 5.0 and 2003 for Smartphone	TCP/IP Port: 10000	Video Settings / 3GPP, MSViewV2, SSViewV3 Supported
SSView V3	Nokia S60 2nd and 3rd for Smartphone	TCP/IP Port: 10000	Video Settings / 3GPP, MSViewV2, SSViewV3 Supported
3GPP	Mobile phones with players supporting RTSP	TCP/IP Port: 8554 UDP Port: 17300-17319	Video Settings / 3GPP, MSViewV2, SSViewV3 Supported

Note:

- For the 3G-enabled mobile phone, you can receive live video from the camera without installing any GV mobile applications first.
 - To install the mobile applications GView V2, MSView V2 and SSView V3, see "Mobile Phone Applications", *E-Map Application, User's Manual* on the Surveillance System Software CD.
 - To enable connecting 3G-enabled mobile phone to the camera, see section 5.3.5 for 3GPP.
-

Connecting to GV-IP Camera

The following is the example of connecting the PDA based on Windows Mobile 5.0 to the GV-IP Camera.

1. The GV-IP Camera needs to allow the remote access first. On the main page, select **Video and Motion** and click **Video Settings**. The Video Settings page appears.
2. In the Connection Template field, select **3GPP, MSViewV2, SSVViewV3 Supported**. Click **Apply** to enable the remote viewing function.
3. In the mobile phone, enter the address, port number, user name and password of GV-IP Camera to enable the connection.



Figure 7-10

Chapter 8 CMS Configurations

This section introduces the related settings to enable connecting to the GV-IP Camera in the central monitoring stations Center V2, VSM and Dispatch Server.

8.1 Center V2

The Center V2 can monitor and manage the camera and I/O devices connected to the GV-IP Camera.

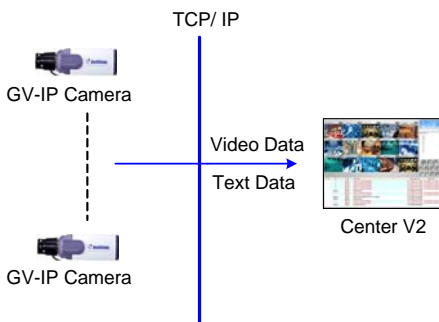


Figure 8-1

- To set the appropriate port connecting to the GV-IP Camera, click the **Preference Settings** button, point to **System Configure**, click the **Network** tab, and check **Accept connection from video server**. Keep default port **5551**, or modify it to match the Center V2 port on the GV-IP Camera.

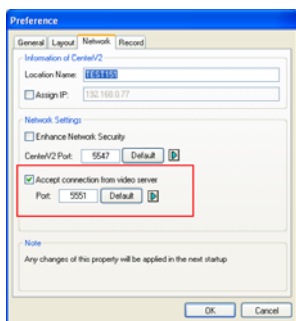


Figure 8-2

- To define how to display the received video on motion detection and input trigger from the GV-IP Camera, click the **Preference Setting** button and select **System Configure**. This dialog box appears.

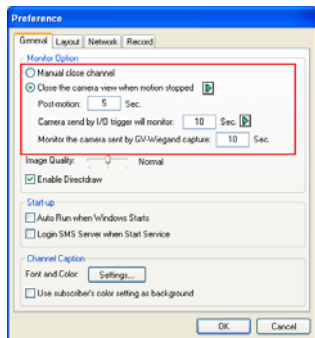


Figure 8-3

- **Manual close channel:** Closes the triggered camera view manually.
- **Close the camera view when motion stopped:** Closes the triggered camera view automatically when motion stops.
- **Post Motion:** Specify the duration of the camera view remaining on the monitoring window after motion stops.
- **Camera send by I/O trigger will monitor:** Specify the duration of the camera view remaining on the monitoring window when an I/O device is triggered.

To keep the camera view remaining on the monitoring window even after the alarm is finished, click the right-arrow button, and uncheck **Latch Trigger**. Then the camera view will keep remaining on the monitoring window for the specified time. For example, the alarm is triggered for 5 minutes and you set 10 minutes, which means the total display time will be 15 minutes.

For further information on how to manage the received video from the GV-IP Camera, see *GV-CMS Series User's manual*.

8.2 VSM

The VSM can monitor and manage the camera and I/O devices connected to the GV-IP Camera.

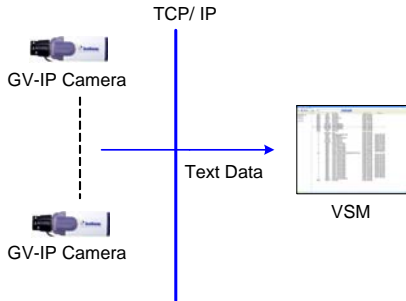


Figure 8-4

- To set the appropriate port connecting to the GV-IP Camera, click **Configure** on the window menu, and select **System Configure** to display this dialog box. Under the Connective Port for Video Server item, keep the default port **5609**, or modify it to match the VSM port on the GV-Video Server.

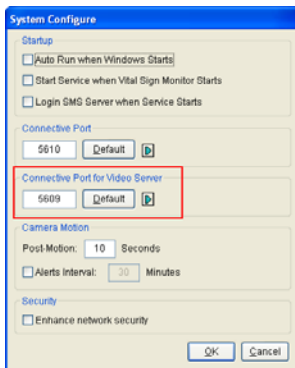


Figure 8-5

For further information on how to manage the received video from the GV-IP Camera, see *GV-CMS Series User's manual*.

8.3 Dispatch Server

The Dispatch Server can manage the camera and I/O devices connected to GV-IP Camera, and distribute them to the Center V2.

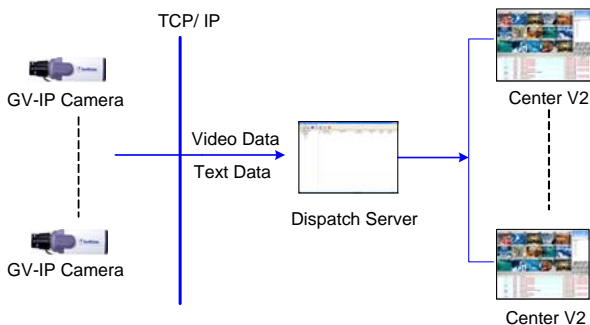


Figure 8-6

- To set the appropriate port connecting to the GV-IP Camera, click the **Server Setting** button on the toolbar, and enable **Allow Video Server Login as Subscriber from Port**. Keep the default port as **5551**, or modify it to match the Center V2 port on the GV-IP Camera.

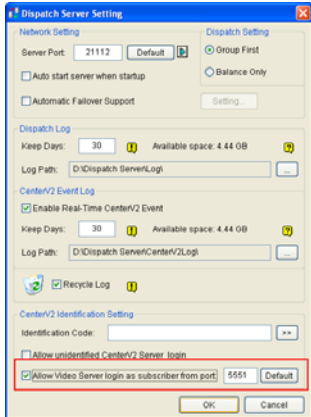


Figure 8-7

For further information on how to manage the received video from the GV-IP Camera, see *GV-CMS Series User's manual*.

Chapter 9 The I/O Terminal Block

The 4-pin terminal block, located on the back panel, provides the interface to one digital input and one relay output. The I/O terminal block can be used to develop applications for motion detection, event alerts via E-Mail and FTP, and center monitoring by Center V2 and VSM.

9.1 Pin Assignment

The pin assignment for the terminal block:



1 2 3 4

Figure 9-1

Pin	Function
1	Output +
2	Output -
3	Input +
4	Input -

9.2 Relay Output

The relay outputs on the terminal block can only drive a maximum load of 5V. Working in conjunction with the GV-Relay V2 module, it can drive heavier loads. Refer to the figure and table below to connect the GV-Relay V2 module to the GV-IP Camera.

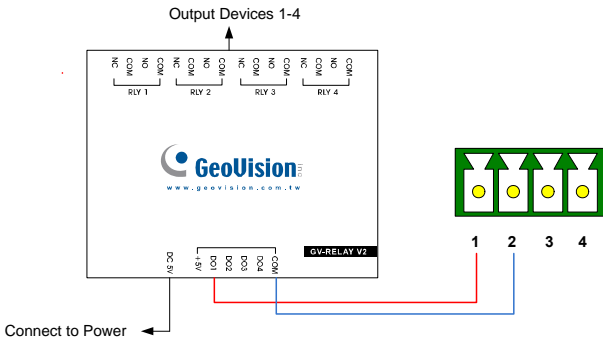


Figure 9-2

GV-Relay V2	I/O Terminal Block
DO 1	Pin 1
COM	Pin 2

Note: The GV-Relay V2 module is an optional product.

Specifications

A. Box Model

Camera

Image Sensor	1/3" SONY Progressive Scan CCD
Picture Elements	1280 (H) x 960 (V), 1.3 M CCD
Resolution	700 TVL
Minimum Illumination	0.1 lux @ F1.2 0.02 lux @ F1.2 (B/W)
Shutter Speed	1.5 – 1/10000 sec.
White Balance	Manual / Automatic (1500K – 15000K)
Lens	Video drive / DC drive (switchblade)

Operation

Video Codec	MPEG4, MJPEG
Video Streaming	Simultaneous MPEG4 and MJPEG video stream (dual stream) Selectable single stream (MPEG4 or MJPEG)
Resolution	MPEG4: VGA, QVGA, CIF, QCIF MJPEG: 4 VGA (1280 x 960), VGA, QVGA, CIF, QCIF
Frame Rate	MPEG4 30 fps @ VGA MJPEG 15 fps @ 1280 x 960
Image Setting	Auto Exposure, Auto White Balance, Brightness, Contrast, Sharpness, Gamma, Monochrome, Negative, Rotate 180 degree, Flicker-less 50/60 Hz
Audio Codec	G.726
Digital Input	Dry Contact
Digital Output	Photo relay output: 40 mA, 5~12 VDC

Network

Interface	10 / 100 Ethernet
Protocol	HTTP, TCP, UDP, SMTP, FTP, DHCP, NTP, UPnP, DynDDNS, 3GPP/ISMA RTSP

Mechanical

Lens Mounting	C / CS-Mount
Power	DC Jack
Ethernet	RJ-45
Audio	1 In, 1 Out (stereo phone jack, 3.5mm)
Digital I/O	4-pin terminal block
Auto Iris	Video drive and DC drive
LED Indicator	Power, Link, ACT

General

Operating Temperature	0°C ~ 50°C / 32°F ~ 122°F
Humidity	10% - 90%, no condensation
Power Source	DC 12 V / PoE
Power Consumption	4.2 W (max. 350mA DV 12V)
Certificate	CE, FCC, RoHS compliant
Dimensions (L x W x H)	125 x 70 x 52 mm / 4.92 x 2.76 x 2.05 in w/o lens
Weight	250 g / 0.55 lb

Web Interface

Installation Management	Web-based configuration
Maintenance	Firmware upgrade through Web browser

Applications

Network Storage	GV-NVR, GV-System
3G Mobile Phone	3GPP, ISMA
Live Viewing	Multi View, E-Map, Mobile Phone
CMS	Center V2, Control Center, VSM

B. Varifocal Lens Model

Camera

Image Sensor	1/3" SONY Progressive Scan CCD
Picture Elements	1280 (H) x 960 (V), 1.3 M CCD
Resolution	700 TVL
Minimum Illumination	0.1 lux @ F1.2 0.02 lux @ F1.2 (B/W)
Shutter Speed	1.5 – 1/10000 sec.
White Balance	Manual / Automatic (1500K – 15000K)

Lens

Max. Aperture	Wide F1.4, Tele F2.9	
Lens Focal	f= 3.3 ~ 12 mm	
Angle of View	Wide end	Diagonal 125.7° Horizontal 89.8°
	Lens Focal	Diagonal 29.9° Horizontal 23.9°

Operation

Video Codec	MPEG4, MJPEG
Video Streaming	Simultaneous MPEG4 and MJPEG video stream (dual stream) Selectable single stream (MPEG4 or MJPEG)
Resolution	MPEG4: VGA, QVGA, CIF, QCIF MJPEG: 4 VGA (1280 x 960), VGA, QVGA, CIF, QCIF
Frame Rate	MPEG4 30 fps @ VGA MJPEG 15 fps @ 1280 x 960
Image Setting	Auto Exposure, Auto White Balance, Brightness, Contrast, Sharpness, Gamma, Monochrome, Negative, Rotate 180 degree, Flicker-less 50/60 Hz
Audio Codec	G.726

Digital Input	Dry Contact
Digital Output	Photo relay output: 40 mA, 5~12 VDC

Network

Interface	10 / 100 Ethernet
Protocol	HTTP, TCP, UDP, SMTP, FTP, DHCP, NTP, UPnP, DynDDNS, 3GPP/ISMA RTSP

Mechanical

Power	DC Jack
Ethernet	RJ-45
Audio	1 In, 1 Out (stereo phone jack, 3.5 mm)
Digital I/O	4-pin terminal block
LED Indicator	Power, Link, ACT

General

Operating Temperature	0°C ~ 50°C / 32°F ~ 122°F
Humidity	10% - 90%, no condensation
Power Source	DC 12 V / PoE
Power Consumption	4.2 W (max. 350mA DV 12V)
Certificate	CE, FCC, RoHS compliant
Dimensions (L x W x H)	165 x 73 x 53 mm / 6.5 x 2.87 x 2.09 in
Weight	310 g / 0.68 lb

Web Interface

Installation Management	Web-based configuration
Maintenance	Firmware upgrade through Web browser

Applications

Network Storage	GV-NVR, GV-System
3G Mobile Phone	3GPP, ISMA
Live Viewing	Multi View, E-Map, Mobile Phone
CMS	Center V2, Control Center, VSM,

C. Vandal Proof Dome

Camera

Image Sensor	1/3" SONY Progressive Scan CCD
Picture Elements	1280 (H) x 960 (V), 1.3 M CCD
Resolution	700 TVL
Minimum Illumination	0.1 lux @ F1.2 0.02 lux @ F1.2 (B/W)
Shutter Speed	1.5 – 1/10000 sec.
White Balance	Manual / Automatic (1500K – 15000K)

Lens

Max. Aperture	Wide F1.4, Tele F2.9	
Lens Focal	f= 3.3 ~ 12 mm	
Angle of View	Wide end	Diagonal 125.7° Horizontal 89.8°
	Lens Focal	Diagonal 29.9° Horizontal 23.9°

Operation

Video Codec	MPEG4, MJPEG
Video Streaming	Simultaneous MPEG4 and MJPEG video stream (dual stream) Selectable single stream (MPEG4 or MJPEG)
Resolution	MPEG4: VGA, QVGA, CIF, QCIF MJPEG: 4 VGA (1280 x 960), VGA, QVGA, CIF, QCIF
Frame Rate	MPEG4 30 fps @ VGA MJPEG 15 fps @ 1280 x 960

Image Setting	Auto Exposure, Auto White Balance, Brightness, Contrast, Sharpness, Gamma, Monochrome, Negative, Rotate 180 degree, Flicker-less 50/60 Hz
Audio Codec	G.726
Digital Input	Dry Contact
Digital Output	Photo relay output: 40 mA, 5~12 VDC

Network

Interface	10 / 100 Ethernet
Protocol	HTTP, TCP, UDP, SMTP, FTP, DHCP, NTP, UPnP, DynDDNS, 3GPP/ISMA RTSP

Mechanical

Power	3-pin terminal block
Ethernet	RJ-45
Audio	3-pin terminal block
Digital I/O	4-pin terminal block
LED Indicator	Power, Link, TX

General

Operating Temperature	0°C ~ 50°C / 32°F ~ 122°F
Humidity	10% - 90%, no condensation
Power Source	DC 12 V / PoE
Power Consumption	4.2 W (max. 350mA DV 12V)
Certificate	CE, FCC, RoHS compliant
Dimensions	Ø 142 x 119 mm / 5.6 x 4.7 in
Weight	1 kg / 2.2 lb

Web Interface

Installation Management	Web-based configuration
Maintenance	Firmware upgrade through Web browser

Applications

Network Storage	GV-NVR, GV-System
3G Mobile Phone	3GPP, ISMA
Live Viewing	Multi View, E-Map, Mobile Phone
CMS	Center V2, Control Center, VSM,

D. Mini Fixed Dome (Indoor Use Only)

Camera

Image Sensor	1/3.8" SONY Progressive CMOS
Picture Elements	1280 (H) x 960 (V), 1.3 M CMOS
Resolution	> 700 TVL

Lens

Max. Aperture	F = 20
Lens Focal	f = 3.6 mm
Angle of View	96°

Operation

Video Codec	MPEG4, MJPEG
Video Streaming	Simultaneous MPEG4 and MJPEG video stream (dual stream) Selectable single stream (MPEG4 or MJPEG)
Resolution	MPEG4: VGA, QVGA, CIF, QCIF MJPEG: 4 VGA (1280 x 960), VGA, QVGA, CIF, QCIF
Frame Rate	MPEG4 30 fps @ VGA MJPEG 15 fps @ 1280 x 960
Image Setting	Auto Exposure, Auto White Balance, Brightness, Contrast, Sharpness, Gamma, Monochrome, Negative, Rotate 180 degree, Flicker-less 50/60 Hz
Audio Codec	G.726

Network

Interface	10 / 100 Ethernet
Protocol	HTTP, TCP, UDP, SMTP, FTP, DHCP, NTP, UPnP, DynDDNS, 3GPP/ISMA RTSP

Specifications

PoE	Yes
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Mechanical

Camera Angle Adjustment	Tilt 0-90° ; Pan 0-90°
Ethernet	RJ-45 Connector
Microphone	Built in

General

Operating Temperature	0°C ~ 50°C / 32°F ~ 122°F
Humidity	10% - 90%, no condensation
Power Source	PoE
Power Consumption	3 W
Certificate	CE, FCC, RoHS compliant
Dimensions	Ø 110 x 47 mm / 4.3 x 1.9 in
Weight	170 g / 0.36 lb

Web Interface

Installation Management	Web-based configuration
Maintenance	Firmware upgrade through Web browser

Applications

Network Storage	GV-NVR, GV-System
3G Mobile Phone	3GPP, ISMA
Live Viewing	Multi View, E-Map, Mobile Phone
CMS	Center V2, Control Center, VSM,

Product specifications are subject to change without notice.