

2 Megapixels
Box Network Camera
CAM713M/CAM713M-PoE
User's Manual

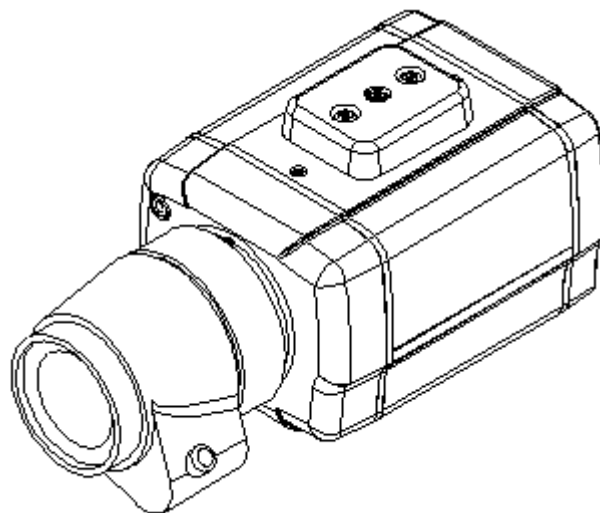


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1 Overview

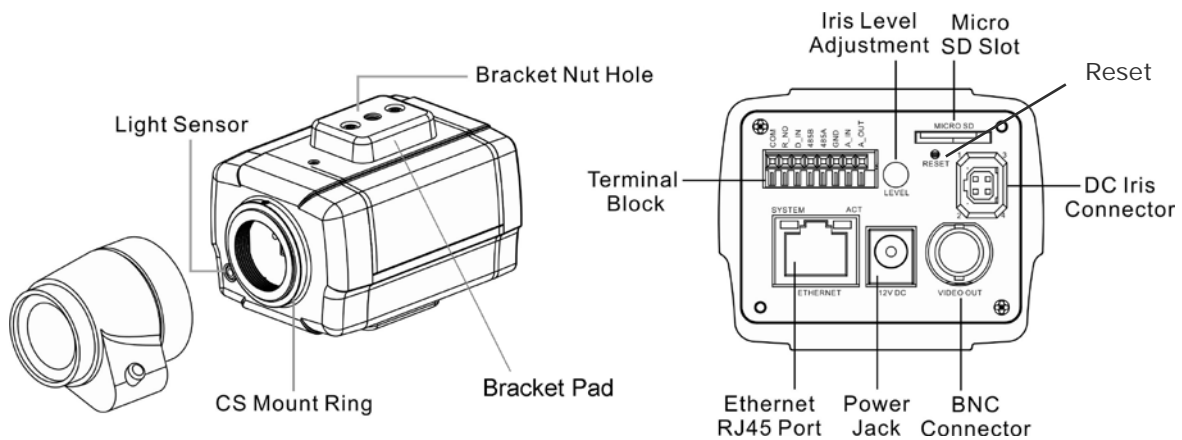
This camera is a high-end 2 Megapixel Box Network Camera, which is designed for professional security applications. This network camera is equipped with ICR (IR-Cut filter Removable) and provides outstanding day and night performance. It comes with a 2 Megapixel CMOS Sensor, with a maximum resolution of 1600 x 1200, delivering sharp image quality. Besides Pelco D/P protocol for PTZ (Pan/Tilt/Zoom), the Digital PTZ function allows user to navigate any area of the monitored image with maintained sharp resolution. With unique features, this network camera provides an ideal solution for surveillance and monitoring.

2 Product Description

Key features

- 1. H.264 High Profile / MJPEG Dual Compression:**
Offers the user the option to select H.264 or MJPEG compression.
- 2. Compact Size for Easy Installation and Maneuvering:**
Small and light weighted, for areas that are limited in space.
- 3. ONVIF® Compliant for Easy Integration & Fast Deployment:**
Web services built-in with international standard protocols, integration cycles have been reduced and deployment has become easier. (Contact your distributor for documentation).
- 4. Multiple video profiles simultaneously for streaming:**
Streams up to 8 independent streams with multiple profiles.
Different configurations can be set according to the bandwidth that is available from the network.
- 5. Infrared-Cut Filter Removable for Day & Night Environment**
The Network Camera comes with an infrared-cut filter removable (ICR) already built-in, for which turns the video into black & white once the illumination that enters into the camera is not enough.
- 6. Audio In & Audio Out Connectors for Camera Audio enhancements**
Offers an Audio In connector and an Audio Out connector to connect to an external microphone and speaker, in order to transmit two way audio together with the video streaming.
- 7. Micro SD Card Slot for Local Storage**
For saving snapshots that can be later checked by the user, upon events occurred during motion detection.
- 8. Analog Video BNC Out for Video Redundancy on Analog devices**
The Network Camera has a video output with analog signal that allows connecting to analog monitors.
- 9. Alarm In & Alarm Out for connecting Alarm Devices**
The Network Camera comes with a Terminal Block for connecting alarms to execute actions upon it.
- 10. RS485 Connector for PTZ Support**
Placing the Network Camera into a Pan Tilt device, control the Pan& Tilt device smoothly.
- 11. Power-over-Ethernet IEEE 802.3 af for simplified connection (Optional)**
Make installations simple with connecting only one cable without additional powering sources.

2.1 Hardware Description



- **Video Out** BNC Connector (75 Ohm) for connecting analog monitor
- **Power Jack** connect AC/DC power adapter for DC12V power input
- **Ethernet** RJ45 port for network connection
- **Micro SD** insert SD card for local storage
- **DC Iris** connect to control the iris of lens that supports DC iris
- **Level** adjust the iris level
- **Reset** use a pin to insert into it to ignite the reset function

*The Bracket Pad comes as an accessory of the box camera. Place the stand mounting pad on the top/bottom panel of the camera for different mounting options. Secure the pad with the two supplied retention screws and tighten them up with the supplied L-wrench or another screwdriver in proper size.



Terminal Block Definition

COM	Common	485B	RS485(-)
D_OUT	Relay Normal Open / Close	GND	Ground
D_IN	Digital Input	A_IN	Audio In
485A	RS485(+)	A_OUT	Audio Out

3 Setting up the Network Camera

3.1 Read Before Use

The use of surveillance devices may be prohibited by law in your country. The Network Camera is not only a high-performance web-ready camera but can also be part of a flexible surveillance system. It is the user's responsibility to ensure that the operation of such devices is legal before installing this unit for its intended use. It is important to first verify that all contents received are complete. Take note of the warnings in the Quick Installation Guide before the Network Camera is installed; then carefully read and follow the instructions in the Installation chapter to avoid damage due to faulty assembly and installation. This also ensures the product is used properly as intended. It is designed for various applications including video sharing, general security/surveillance, etc.

3.2 Hardware Installation Steps

After unpacking the package and identifying its parts, assemble the network camera to run the device for the first time.

It is recommended set up the camera before installing it to the intended location.

The following instructions will consist of basic steps that will help you through the hardware preparation.

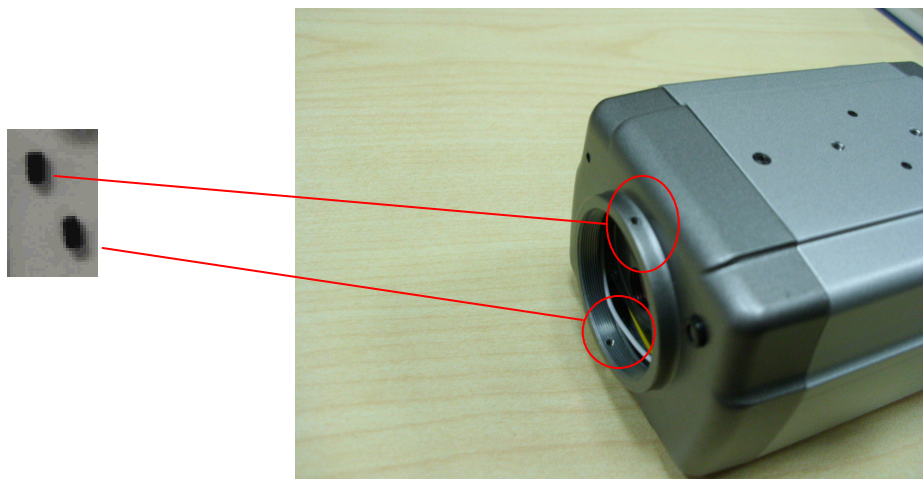
Other required devices before powering up the Network Camera:

1. Personal Computer or Laptop; and
2. Network Hub or Switch and 2 (two) pieces of Ethernet Cable; or
3. 1(one) piece of Crossover Ethernet Cable

Using a CS Type Mount Lens

Use a CS Type Mount Lens for the Network Camera. It is recommended using megapixel lenses, supporting a pixel size of $2.8\mu\text{m} \times 2.8\mu\text{m}$, $1/3''$ inch size.

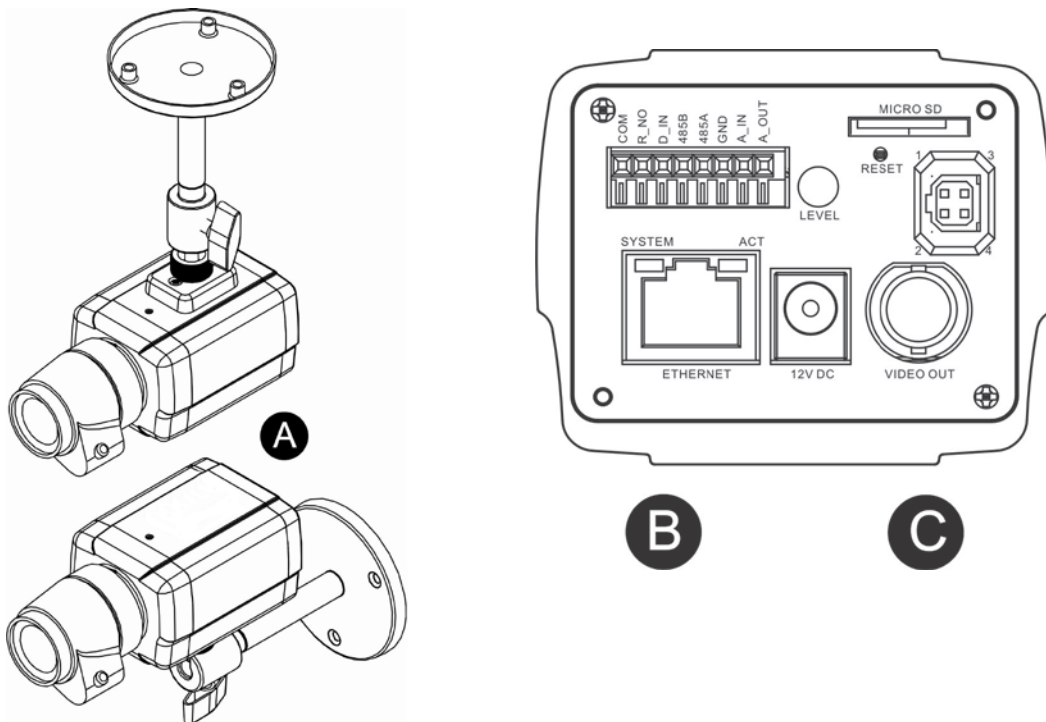
There are two mini screw holes around CS mounting ring. Use the two provided CS lens mounting screws to mount a CS lens.



Installing the Network Camera

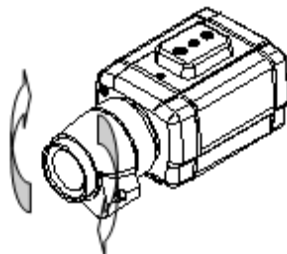
- A. Attach the bracket that comes in the package to the Bracket Nut Hole
- B. Connect the Ethernet Plug to the Network Connector RJ-45 from the device.
- C. Plug the Power Jack to the Power Connector (Not necessary for Power-over-Ethernet Network Camera Models).

After the Power Connector is plugged in, the Network Camera will boot up. Wait a few seconds for the Network Camera to startup



How to adjust the lens focus

In order to adjust the focus of the Network Camera, turn the focus ring in clockwise direction to get the appropriate image.



Note: it is required get connected to the Network Camera prior to adjust the focus.

3.3 Using the Network Camera for the first time

The Network Camera is a network device and its use should be straightforward for those who have basic networking knowledge. Making the initial steps for setting up the network camera will be based on a simple network connection.

Option 1

Connect the network camera to a HUB / Switch which is connected to a PC

Option 2

Connect the network camera directly to a PC with a crossover cable.

After the network camera has its activity lights on, use the PC for setting up the IP Address of the Network camera. Refer to the section of “**Accessing the Network Camera**” at the next page for detailed instructions.

Hints: Possible Network Configurations in your network infrastructure

1. Configuration 1

Internet Access: ADSL or Cable Modem

IP address: One real IP or one dynamic IP

Connection Type: Only the Network Camera connects to the internet

For fixed real IP, set up the IP into the Network camera. For dynamic IP, start PPPoE.

2. Configuration 2

Internet Access: ADSL or Cable Modem

IP address: More than one real IP or one dynamic IP

Connection Type: The Network Camera and PC connect to the internet

Device needed: Switch Hub

For fixed real IP, set up the IP into the Network camera and PC. For dynamic IP, start PPPoE.

3. Configuration 3

Internet Access: ADSL or Cable Modem

IP address: one real IP or one dynamic IP

Connection Type: The Network Camera and PC connect to the internet

Device needed: IP sharing such as Hub / Switch and a Router

Use virtual IP, set up port forwarding in IP sharing.

(Suggestion: Refer to your Network Administrator if necessary for more information)

3.4 Using the Terminal Block

The network camera comes with a Terminal Block that can offer multiple functions to the user:

Pin 1 ~ 3, 6: Intended for triggering and receiving alarms for the Event Configuration feature.

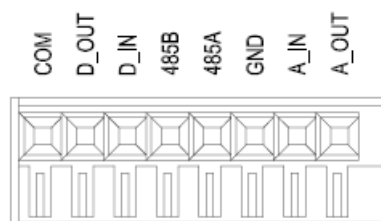
Pin 4~ 5: for connecting Pan Tilt and Zoom devices.

The network camera can be placed with Pan / Tilt device to control the pan left/right, or tilt up/down. It may also be possible to use motorized zoom cameras, in order to zoom in/out at convenience.

Pin 7 ~ 8: For connecting audio devices, that allows the transmission of audio through the video streaming.

Terminal Block Definition

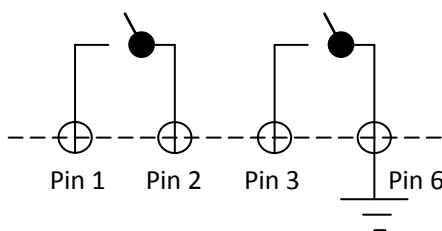
COM	Relay Common
D_OUT	Relay Normal Open / Close
D_IN	Digital Input
485B	RS485(-)
485A	RS485(+)
GND	Ground
A_IN	Audio In
A_OUT	Audio Out



3.4.1 Connecting Alarm devices

Connect Pin 1 and Pin 2 for an external relay device such as an alarm that expects to be activated.

Connect Pin 3 and Pin 6 for an external Triggering device for sending a signal into the Network Camera.



Refer to Chapter 5) Configuring the camera, Event Settings for more references on how to use the even trigger and alarm to perform tasks such as taking snapshots and uploading images.

3.4.2 Connecting Audio Devices

The Network Camera has an Audio Input (Line in) and Audio Output (for connecting speakers) with Mono quality. The connection of audio may also share the Ground Point of Pin 6.

Refer to Chapter 5) Configuring the Camera, Camera Settings for more references on enabling the audio device.

3.4.3 Connecting Pan/Tilt/Zoom Devices

The Network Camera allows the connection of a Pan/Tilt/Zoom device into the camera.

The RS485 (+) and RS485(-) may be used for connecting such devices.

The supported protocol is Pelco D and Pelco P.

Refer to Chapter 5) Configuring the Camera, Camera Settings for more references on setting and controlling the device by the Web user interface.

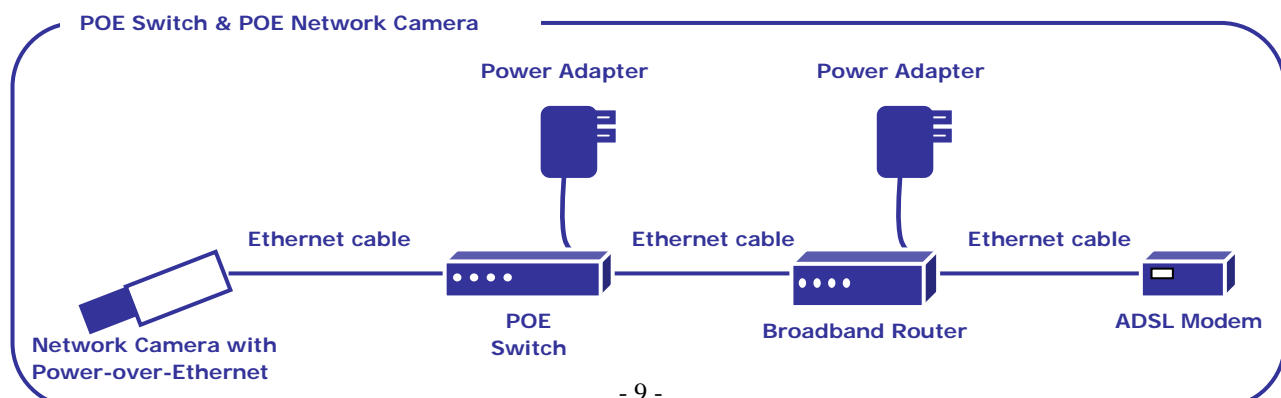
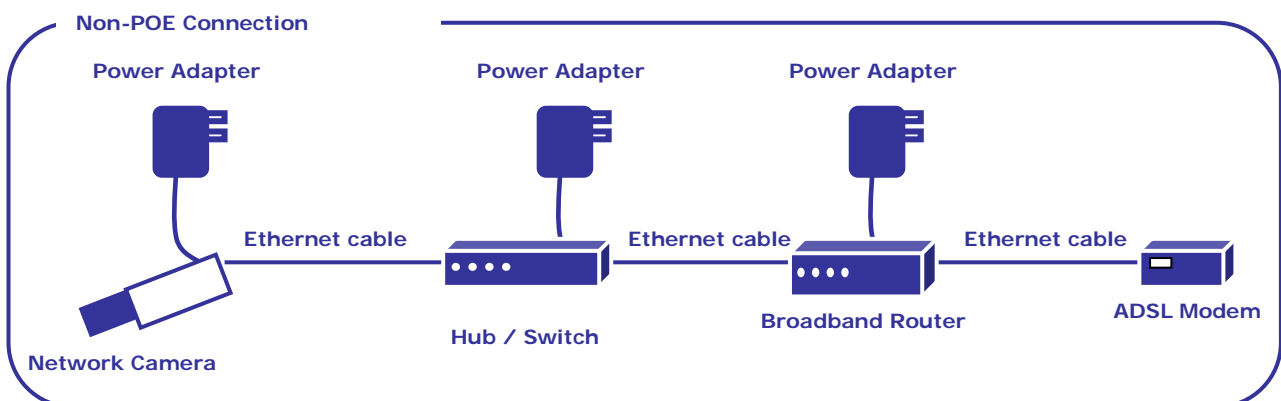
3.5 Power-over-Ethernet supported Network Cameras

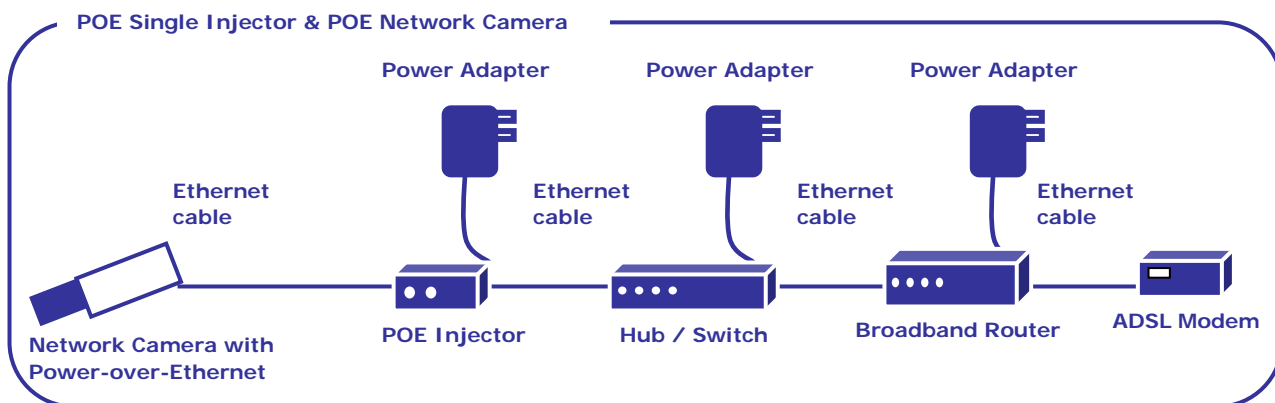
The Network Camera comes as an optional model which supports Power-over-Ethernet (PoE).

Using Power-over-Ethernet as power supplying mode, takes advantage of having a simple connection, with only one Ethernet Cable to act like Data and Power transmission. And it is not necessary to use any Power Adapter since the powering will be done directly through the Ethernet Connector.

Below a comparison between a Regular Ethernet connection and a connection using Network Camera with built-in Power-over-Ethernet.

Note: For safety precautions, when using a PoE Video Encoder, ensure that the standard Power Connector has been Deleted before plugging the Ethernet cable (which is attached on the other end to a PoE Hub / Switch).





3.6 Using the Micro SD Card

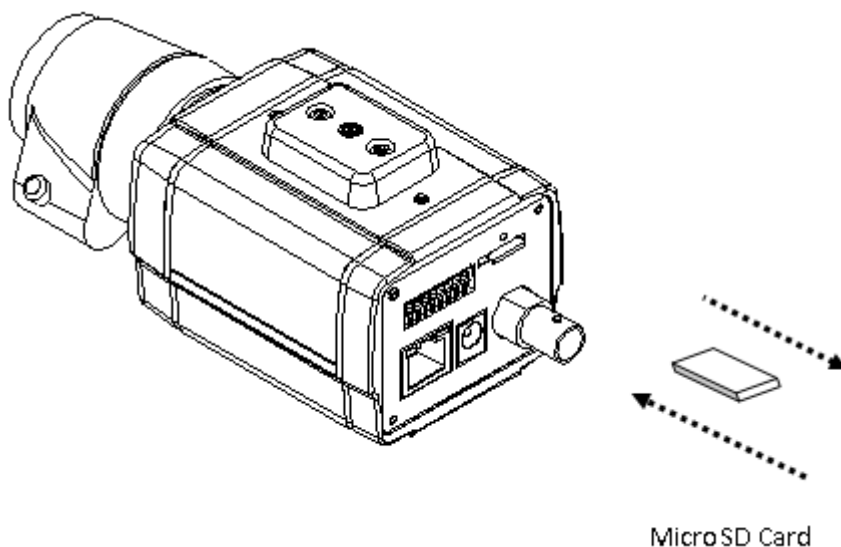
The network camera comes with a Micro SD card slot to allow users insert a Micro SD card to save snapshots and videos into it. Refer to **Chapter 5) Configuring the camera, Storage Settings and Event Settings.**

Before plugging / unplugging Micro SD card into / from the slot, it's recommended to turn the device off.



Note: The device does not support Hot-Swapping function.

Note: this unit supports min 2GB and max 32GB Micro SD/SDHC card and Class 6 or higher for smooth operation.

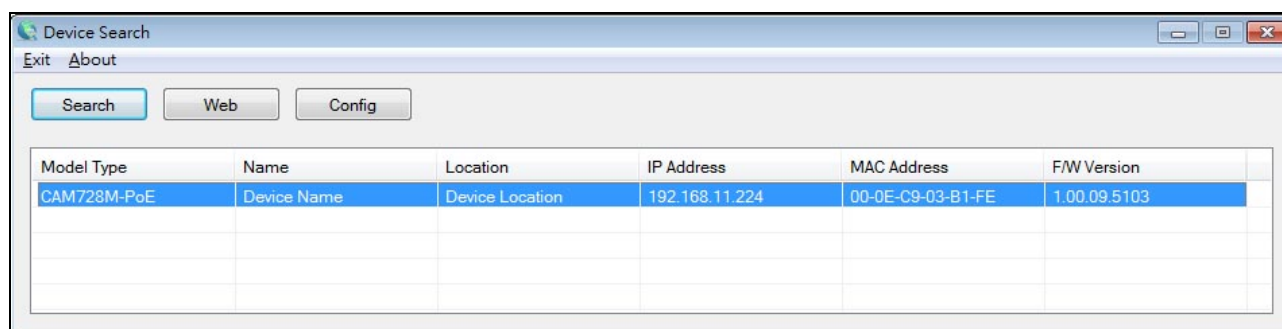


4 Accessing the Network Camera

Before getting access to the Network Camera from user's PC, it's necessary to properly configure its network setting. This camera uses 192.168.1.200 as the default IP address. If you would like to assign a new static IP address, please install "CAM7 Series Device Search" from the CD-ROM, and then use this program to do that.

4.1 Find Camera

1. Once installed on the PC, click on [Start Menu >> All Programs >> Asoni >> Search Tooling >> Asoni CAM7 Series Device Search] to open the software.



2. The software automatically (or by clicking on "Search" button) displays cameras on the network. Identify your camera by its MAC Address that is shown on the label of the camera.
3. Click on "Web" button or double-click on the identified camera item on the list to launch live viewing (it is assumed that the network cable you've connected to your camera has provided a set of useable IP address/subnet mask/Gateway), or click on "Config" button to configuring IP information.

4.2 Before Assigning an IP Address

Before assigning an IP address, make sure the Network Camera is powered on and correctly connected to the network.

Obtain a LAN IP address not yet used and its related configuration from your network administrator.

The following will be required:

1. IP Address
2. Subnet Mask
3. Gateway

MAC Address: Each Network Camera has a unique Ethernet address (MAC address) shown on the label of the Network Camera.

Hints: When assigning an IP Address

User can find necessary IP information by checking the current IP information of user's host PC via Windows command "ipconfig":

- Click on Windows screen: the **Start Menu >> All Programs >> Accessories >> Command Prompt**.
- Type "**ipconfig**" at the command prompt to show the current IP information of user's host PC.

For example,

```
C:\> ipconfig
Windows IP Configuration

Ethernet adapter Local Area Connections:

    Connection-specific DNS Suffix  . : king-tech.com
    IP Address. . . . . : 192.168.1.102
    Subnet Mask . . . . . : 255.255.255.0
    Default Gateway . . . . . : 192.168.1.254

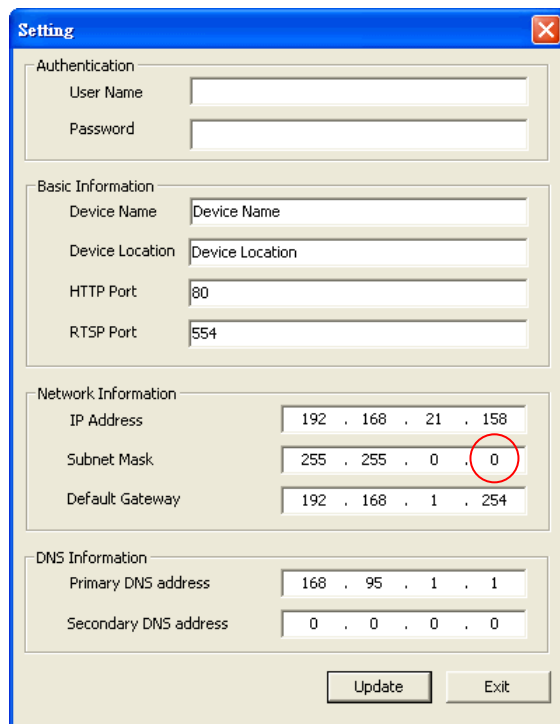
C:\>
```

Then, use other IP address 192.168.1.xxx (1-253, except IP address of host PC 192.168.1.102), the same subnet mask 255.255.255.0 and default gateway 192.168.1.254 for the network camera.

4.3 Assigning the IP address to the network camera

Select a Network Camera and click on **“Setup”**. Then, start to configure network settings, such as the following fields:

IP Address / Subnet Mask / Gateway / DNS



* Remember to input a different value for the last digits of IP address from the “ipconfig”, ranging from 1 to 255.

Make sure you enter the same values for Subnet Mask and Default Gateway shown on your “ipconfig” screen.

Click on **“Update”** to apply the changes only by using administrator’s privilege (default user/password = admin/admin).

To open the main page of the network camera, select your camera and click on **“Web”**.

4.4 Access the camera from the browser

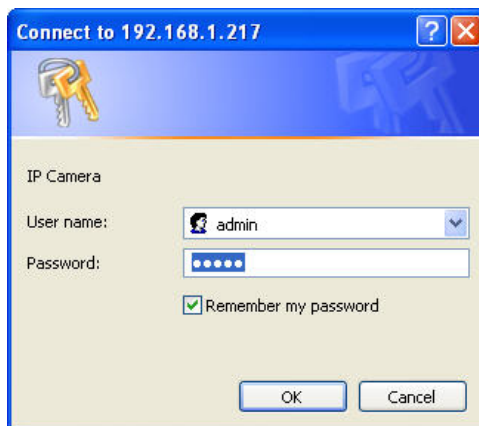
Start the IE browser, type the IP address of the network camera in the address field:

http://<IP of camera>

If the “HTTP Port” has been changed from “80”, type the URL as:

http://<IP of camera>:<HTTP Port>

Once the Network Camera is accessed, the Network Camera will request a Username and Password. The default Username and Password is “admin” and “admin”.

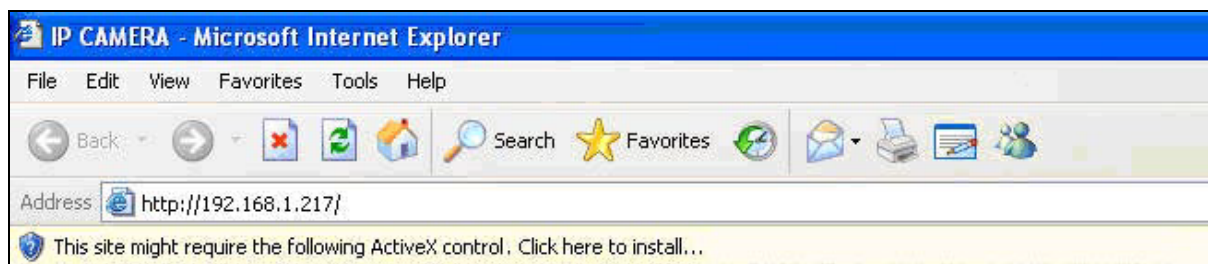


Note: If “anonymous login” (see 5.6.2) is enabled, the Live View page will be shown without restriction. Or please enter “admin/admin (default account/password)” to pass the authentication.

Hints: Changing the root password

To avoid security breaches, it is recommended changing the Username and Password once the device is set up to work. Refer to Chapter 5, Configuring the Camera, System Settings.

When the Network Camera is accessed via Internet Explorer, it will ask you to install the ActiveX component.



Note: during the webpage loading, you may be asked to allow the installation of Active X elements. Please allow it to proceed.

Once get accessed, follow the instructions in the manual for the camera operation.

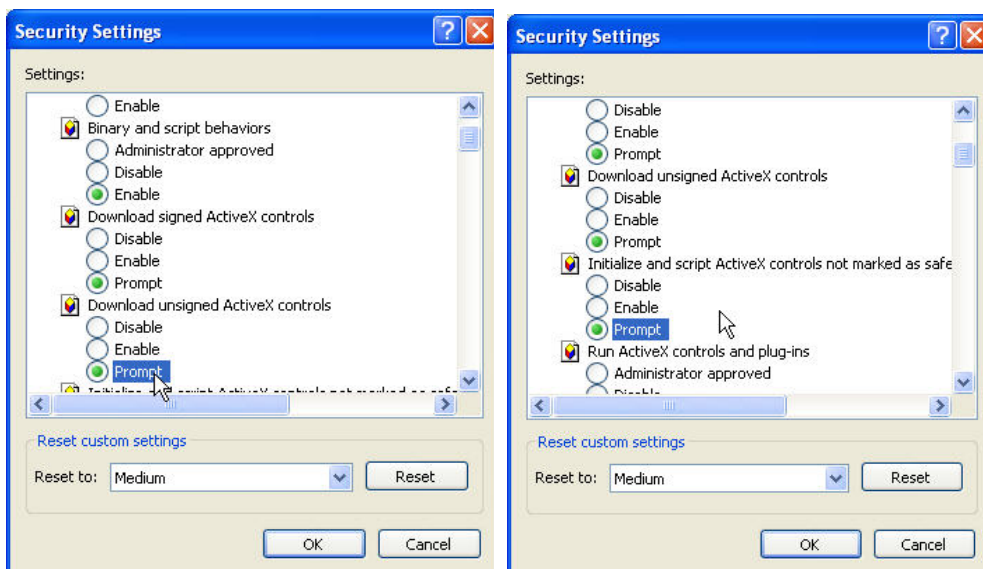
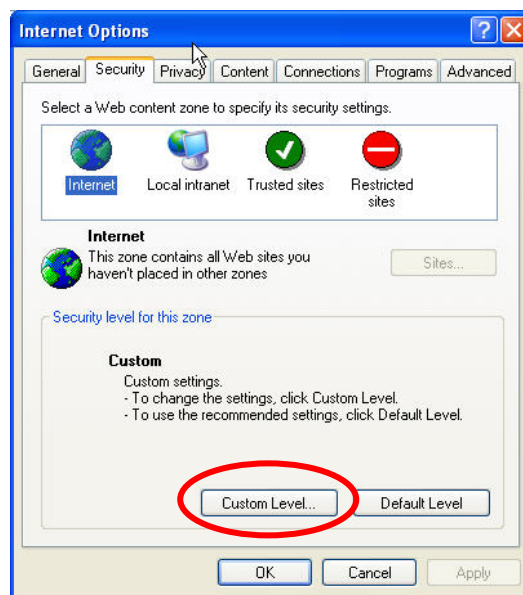
If the ActiveX installation doesn't start automatically, please follow below procedures to change security level settings of your Internet Explorer browser.

Kindly note that if you didn't install ActiveX and you will not be able to see the Live view image. Please make sure to install it first.

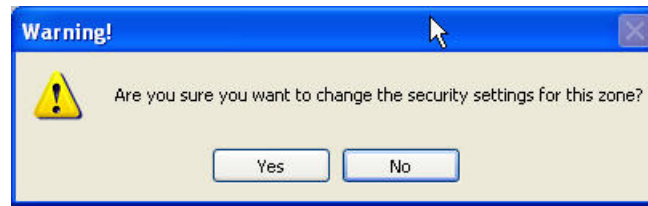
To adjust the Security Options of Internet Explorer follow the below instructions:

Internet Explorer > Tools > Internet Options > Security Tab > Custom Level > Security Settings > Download unsigned ActiveX controls > Select “Enable” or Prompt.

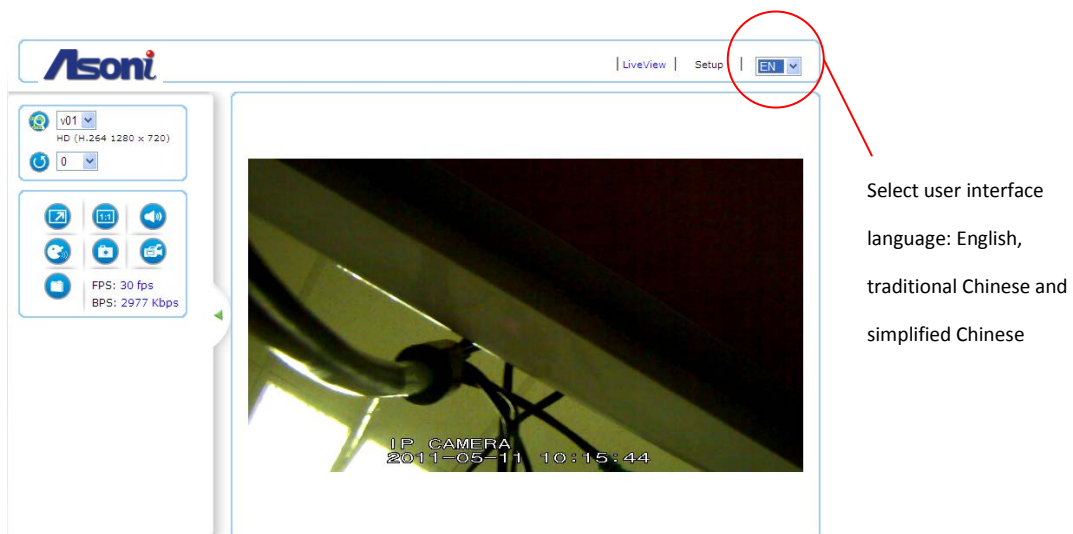
Internet Explorer > Tools > Internet Options > Security Tab > Custom Level > Initialize and script ActiveX controls not marked as safe > Select “Enable” or Prompt.



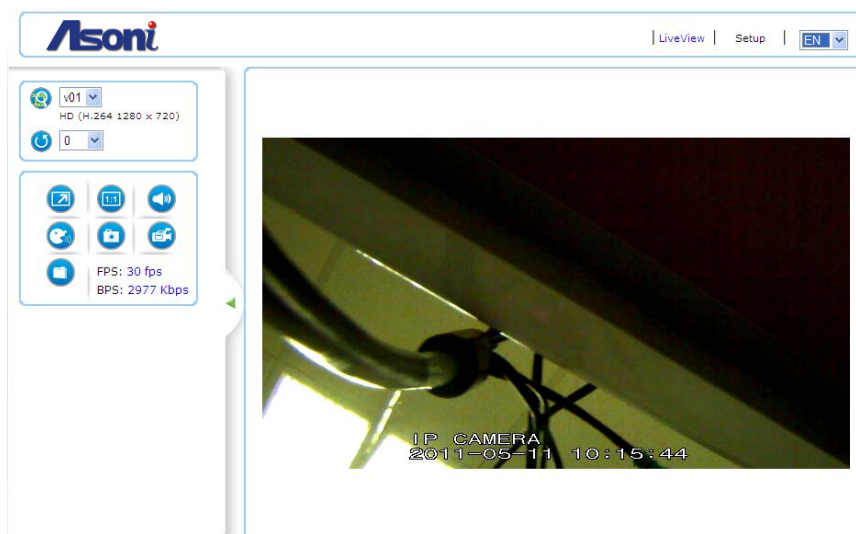
When popup the following dialogue box, click “Yes”



Then, the Live View page will be opened. Click on the “Setup” link of the Live View page to change the configurations of the network camera.

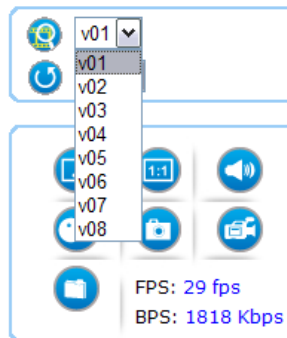


4.5 The Live View Page

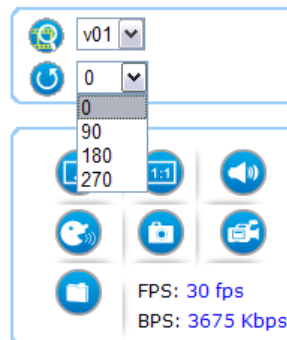


Video Source: The Stream Profile drop-down list allows you to select a customized or pre-programmed stream

profile on the Live View page. Refer to Streaming Settings of this chapter for more references.



Rotation: allows the rotation of the video to be viewed in an angle of 0 (current), 90, 180 or 270 degrees at a clockwise direction.



Full Screen: Maximizes the video to be displayed at a full screen size.



Real Size: Displays the real size of the video; (the initial video size will be adjusted to fit your monitor, while the real size could be bigger than it is being shown in the monitor).



Listen: allows the user from the PC listen the location where the camera is set.



Talk: allows the user from the PC talk remotely to the camera, for which the speaker will emit the voice.



Manual Record: Once pressed, it records and saves the currently viewed video the indicated path below. To stop the recording, press back the Recording button.



Snapshot: once clicked, it will take a snapshot and save it to the indicated path below.



Path Button: Sets the location where the video and snapshot are saved to. To change the location, click on the button and select the desired path.

FPS **Frames per Seconds:** Indicates the quantity of frames displayed in the current view.

BPS **Bit per second:** Indicates the bandwidth allocated for the streaming of the live video.

Notes for Windows 7 Users:

For Window 7 users, the operating system requires users to configure the Internet Explorer administrator setting

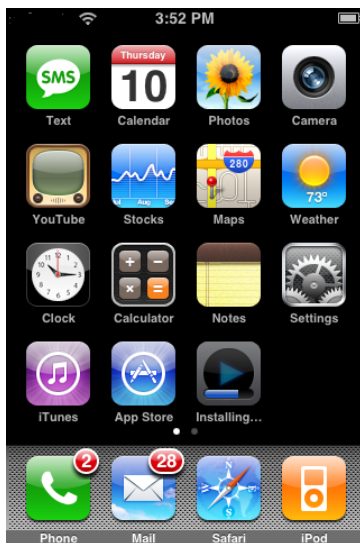
before the recording and snapshot functions can be enabled.

4.6 iPhone Camera Viewer

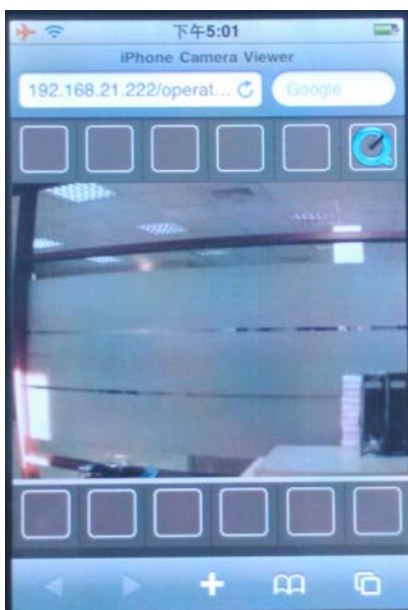
The network camera provides “iPhone Camera Viewer” for user to monitor via iPhone.

Once LAN or internet settings are completed on iPhone, as below, user can monitor via iPhone web browser by just entering the IP address (or domain name) of the network camera.

- 1). Go to “Settings” to complete network settings, such as WiFi, network (DCHP, BootP, or Static IP).



- 2). Go to “Safari” and enter the IP address (or domain name) of the network camera, which is followed by an authentication procedure (user/password = admin/admin). Then, Live video page “iPhone Camera Viewer” can be seen.



5 Configuring the camera

Video	Main features and advanced configurations of video streaming.
Camera	Image adjustments such as brightness, white balance and more.
Storage	Displays information of the files located in the Micro SD card (if any).
Event	Smart features for event settings to send emails, snapshots and more.
Network	Network configuration for the network camera and Event features.
System	Firmware version information and upgrade, User access management, and system information.

5.1 Video Settings

The video settings page contains setting for the streaming

General		Advanced	
Stream 1 (H.264) HD			
URL ID :	<input type="text" value="v01"/>	GOP :	<input type="text" value="30"/> (5~150)
Video Mode :	<input type="button" value="CBR"/>	Frame Rate :	<input type="text" value="30"/> (3~30 FPS)
Quality Level :	<input type="button" value="Best"/>	Target Bit Rates :	<input type="text" value="3000"/> (512 ~ 4000 Kb)
Resolution :	<input type="button" value="1280x720"/>	Profile :	<input type="button" value="high"/>
Stream 2 (MJPEG) HD			
URL ID :	<input type="text" value="v02"/>	Frame Rate :	<input type="text" value="10"/> (3~10 FPS)
Quality Level :	<input type="button" value="Best"/>		
Stream 3 (H.264) VGA			
URL ID :	<input type="text" value="v03"/>	GOP :	<input type="text" value="30"/> (5~150)
Video Mode :	<input type="button" value="CBR"/>	Frame Rate :	<input type="text" value="30"/> (3~30 FPS)
Quality Level :	<input type="button" value="Best"/>	Target Bit Rates :	<input type="text" value="1500"/> (256 ~ 2000 Kb)
Profile :	<input type="button" value="baseline"/>		
Stream 4 (MJPEG) VGA			
URL ID :	<input type="text" value="v04"/>	Frame Rate :	<input type="text" value="15"/> (3~15 FPS)
Quality Level :	<input type="button" value="Best"/>		
Stream 5 (H.264) QVGA			
URL ID :	<input type="text" value="v05"/>	GOP :	<input type="text" value="30"/> (5~150)
Video Mode :	<input type="button" value="CBR"/>	Frame Rate :	<input type="text" value="30"/> (3~30 FPS)
Quality Level :	<input type="button" value="Best"/>	Target Bit Rates :	<input type="text" value="512"/> (128 ~ 1000 Kb)
Profile :	<input type="button" value="baseline"/>		
Stream 6 (MJPEG) QVGA			
URL ID :	<input type="text" value="v06"/>	Frame Rate :	<input type="text" value="15"/> (3~15 FPS)
Quality Level :	<input type="button" value="Best"/>		
Stream 7 (H.264) QQVGA			
URL ID :	<input type="text" value="v07"/>	GOP :	<input type="text" value="30"/> (5~150)

5.1.1 General Settings

Video General Setting:

The Network Camera has in total 8 independent and simultaneous streams which can be used.

Your requirements and the properties of your network will determine the type you use.

The Live View page in the network camera provides access to a list of streams which are set in this page.

They can either be H.264 or Motion JPEG video streams that are configured according to each user's need.

Other applications and clients can also access these video streams/images directly, without going via the Live View page.

Stream Types: Stream 1, 3, 5 and 7: H.264

Stream 2, 4, 6 and 8: MJPEG

URL ID: Sets the name for the streaming; input an appropriate name to indicate the stream type which is being used.

Video Mode: CBR : 512 Kbps ~ 4Mbps – Increase CBR to increase the picture quality; or vice versa
VBR : The network camera will adjust itself automatically to fit the best picture quality through the bandwidth provided by the network. The balance between VBR and network bandwidth will affect picture quality.

Quality Level: There are three levels to adjust: Best, Good and Standard
The higher the quality is, the more bandwidth it will use for streaming the video.

Resolution: You can set up a different video resolution for different viewing devices.
Note that a larger frame size takes up more bandwidth.

GOP: GOP stands for "Group of Pictures". The GOP is a group of successive pictures within a coded video stream.

Frame Rate: This limits the maximum refresh frame rate per second. Set the frame rate higher for smoother video quality.

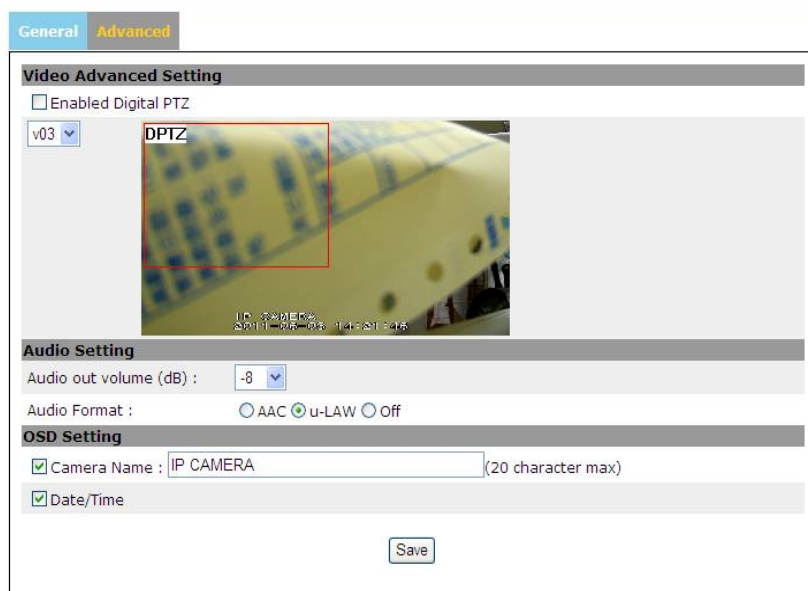
Target Bit Rates: 512 Kbps ~ 4Mbps – Increase CBR to increase the picture quality; or vice versa.

Profile: Providing both of high profile and baseline profile. High profile can deliver better video quality ,but it will cause network camera have larger load relatively.

Notes for Stream 1 (H.264) HD:

When the Resolution is 1600x1200, the Frame Rate is "15". When the Resolution is 1280x720, the Frame Rate is 30.

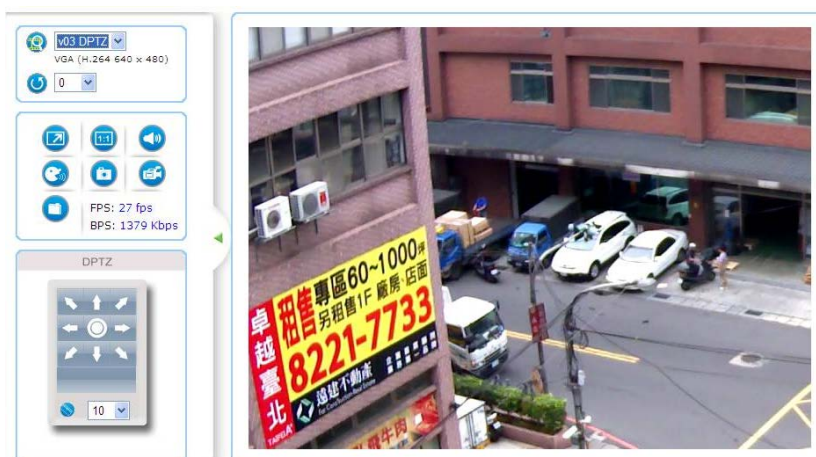
5.1.2 Advanced Settings



Enable Digital PTZ: The Digital PTZ feature allows you pan, tilt and zoom electronically around the image without having moving parts at the device. Once enabled, it will display a frame which will let you slide it through different areas and automatically zoom the area being focused on, to have a bigger and more detailed image for your viewing.

The streams for using Digital PTZ are streams 3/4 and 5/6. Stream 3&4 or stream 5&6 will be enabled respectively when choosing v03 or v05. The naming of the streams by default are v03/04 and v05/06. Such naming can be changed in this same section of Video, going to the page of General settings.

Once you tick the box “Enable Digital PTZ” and click on save, you can return to “Live View” and use the navigation interface to browse around zoomed image area.



Audio Setting

Adjust the output gain.

Audio Format: select "AAC", "u-LAW" or "Off" as the audio compression format. The "u-LAW" is highly recommended for 3GPP mobile surveillance (for example, on iPhone or other network-enabled smart phones and NVR surveillance application software).

OSD Setting:

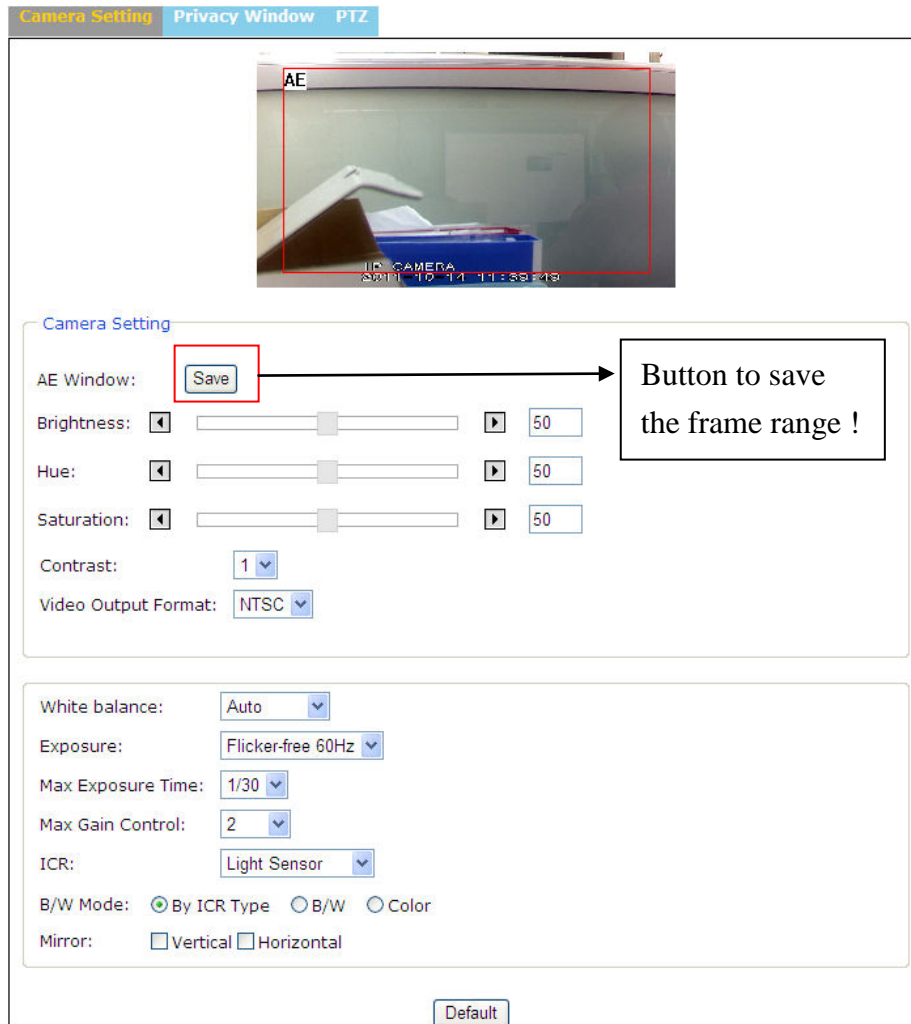
Camera Name: To display the OSD, type a text on the box with a maximum of 20 characters.

Date / Time: Displays the date and time on the video which is streamed from the Network Camera.

Save: Once the options have been selected, click on Save to make the changes permanent for the device.

5.2 Camera Settings

5.2.1 Camera General Settings



AE Window: The area of selected window will be the auto-exposure sense area for entire camera image.

Therefore, if you want to have the image lighting-exposed level depends on particular area, please use the AE Window to select the desired area, otherwise we suggest you selecting the window to cover the central area of the image, same as default setting.

Brightness: The image brightness can be adjusted in the range 0-100, where a higher value produces a brighter image.

Hue: The image hue can be adjusted in the range 0-100, where a higher value produces more stimulus on the image.

Saturation: The image saturation can be adjusted in the range 0-100, where a higher value produces more neutral image.

Contrast: The image contrast can be adjusted in the range 1-5, where a higher value produces more difference in brightness between adjacent areas.

Video Output Format: Select for redundant output (analog monitor) to assign video signal “NTSC” or “PAL”.

White balance: This is used to compensate for the different colors present in different light sources, to make the colors in the image appear the same. The Network Camera can be set to automatically identify the light source and compensate for its color. Alternatively, the type of light source can be manually selected from the drop-down list.

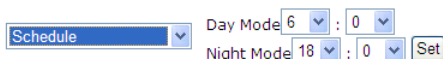
Exposure: Configure the exposure settings to suit the image quality requirements in relation to lighting, frame rate and bandwidth considerations. Values can be set to: 50 or 60 kHz

Max Exposure Time: Select the exposure time for the camera for the duration of the time that gets into the sensor.

Max Gain Control: Select the level gain control for the camera

ICR: Select “Light Sensor” to activate IR-cut filter or Delete it automatically according to day or night vision.

Select “Schedule” to assign the starting time of day mode and night mode.



The screenshot shows a 'Schedule' dropdown menu selected. Below it, there are two rows of settings: 'Day Mode' with a dropdown set to '6' and a time input set to '0', and 'Night Mode' with a dropdown set to '18' and a time input set to '0'. A 'Set' button is located to the right of the Night Mode settings.

Day Mode/Night Mode:

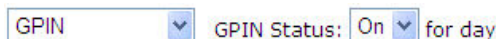
Select “Day Mode” to set time duration for disabling IR.

Select “Night Mode” to set time duration and enable IR.

GPIN

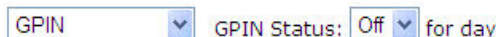
Select “GPIN” to Delete IR-cut filter automatically according to the GPIN status “On” or “Off” for day

Select “On” for day.



The screenshot shows a 'GPIN' dropdown menu followed by 'GPIN Status: On for day', where 'On' is selected in a dropdown.

Select “Off ” for night.

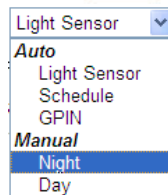


The screenshot shows a 'GPIN' dropdown menu followed by 'GPIN Status: Off for day', where 'Off' is selected in a dropdown.

Manual:

Select “Night” to always Delete IR-cut filter.

Select “Day” to always activate IR-cut filter.



The screenshot shows a dropdown menu for ICR mode. The options are: Light Sensor, Auto, Light Sensor, Schedule, GPIN, Manual, Night (highlighted), and Day.

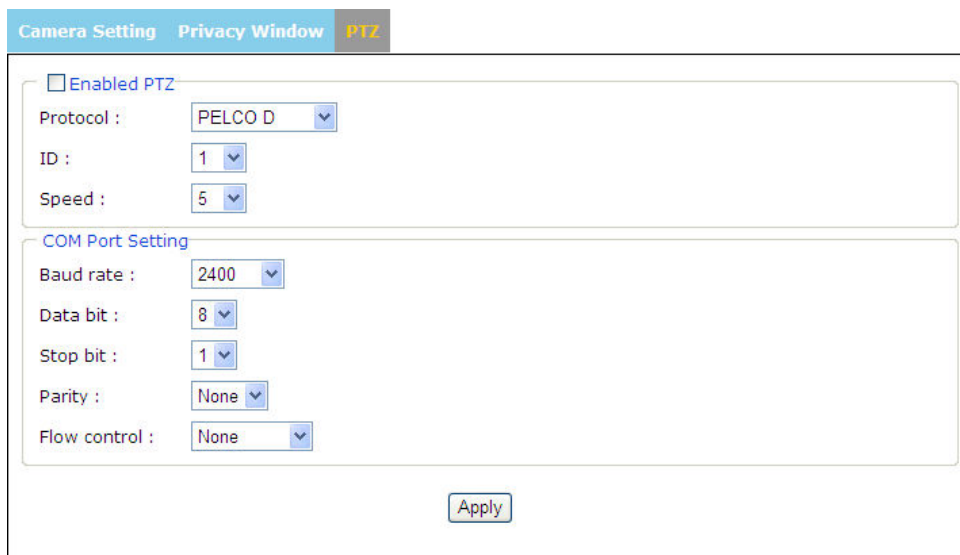
B/W Mode: Select “By ICR Type” to present image automatically in color or monochrome, which is based on ICR status. When IR-cut filter is off (in case that external IR is on), B/W mode is activated. When IR-cut filter is on, B/W mode is disabled.

Select “B/W” to present image in monochrome (black and white).

Select “Color” to present image in its original color.

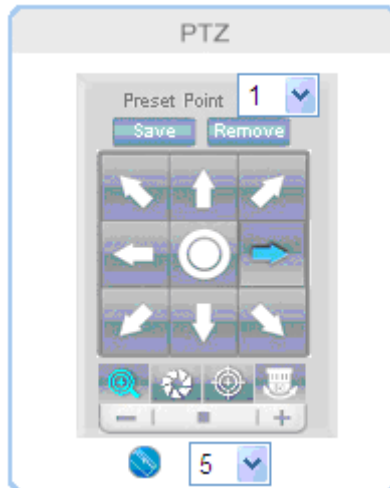
Mirror: Flips the video based on Vertical and Horizontal view.

5.2.2 PTZ Settings



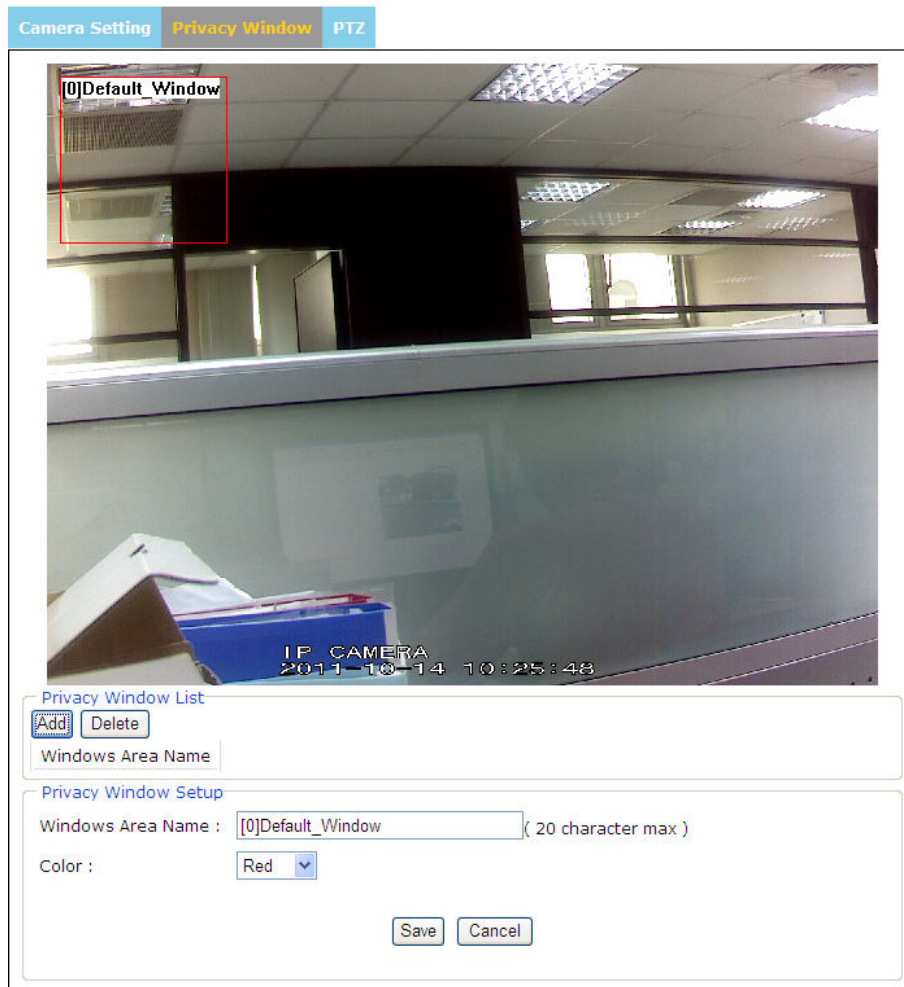
The screenshot shows a configuration window with three tabs: 'Camera Setting', 'Privacy Window', and 'PTZ'. The 'PTZ' tab is active. It contains two main sections: 'Enabled PTZ' and 'COM Port Setting'. In the 'Enabled PTZ' section, there is a checkbox for 'Enabled PTZ' which is currently unchecked. Below it are three dropdown menus: 'Protocol' set to 'PELCO D', 'ID' set to '1', and 'Speed' set to '5'. The 'COM Port Setting' section includes five dropdown menus: 'Baud rate' (2400), 'Data bit' (8), 'Stop bit' (1), 'Parity' (None), and 'Flow control' (None). An 'Apply' button is located at the bottom center of the window.

Enable PTZ To enable PTZ control on the connected analog camera. Once the video encoder is appropriately configured, the Live View page will display the control panel for the installed PTZ device.



- Protocol:** Select one from the list of protocols, such as Pelco D, Pelco P, Li-Lin, and
- ID:** Select ID of the analog camera that the video encoder intends to control.
- Speed:** Select the PTZ speed (1 – 10).
- Baud rate / Data bit / Stop bit / Parity / Flow control:** Depending on protocol used, the values are assigned accordingly.

5.2.3 Privacy Window



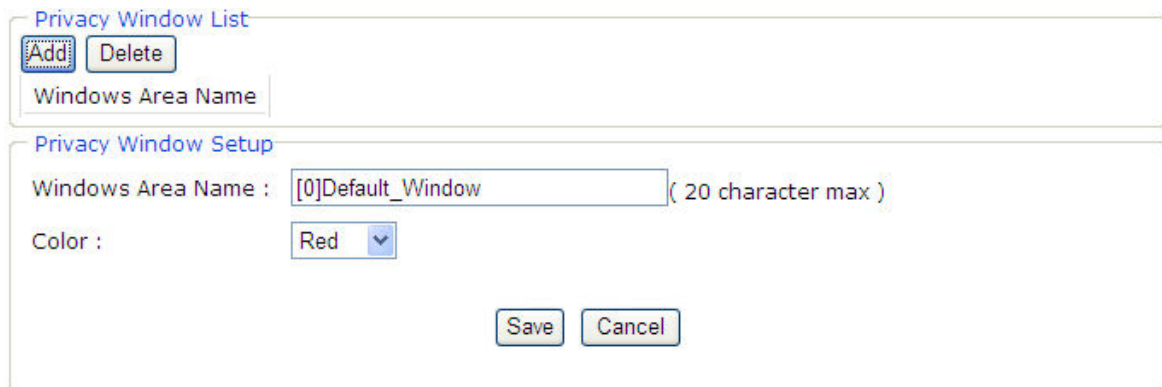
Privacy Window is used to generate an masking area in the video image for protect your personal privacy.

To set the privacy window, follow the steps below:

1. Click Add button to create a new window.
2. Use the mouse to decide window size and drag-drop the window.
3. Enter a Window area name.
4. To choice Window color, and click **Save** to enable the setting.

Once configured, the video masking privacy windows will appear in the list of masking area.

Note: Up to 6 privacy windows can be set up on the same screen.



The screenshot shows two panels. The top panel, titled "Privacy Window List", contains an "Add" button and a "Delete" button, and a text input field labeled "Windows Area Name". The bottom panel, titled "Privacy Window Setup", contains a text input field for "Windows Area Name" with the value "[0]Default_Window" and a note "(20 character max)", a "Color" dropdown menu currently set to "Red", and "Save" and "Cancel" buttons at the bottom.

Privacy Window List

Add: 6 areas can be set for which they will be identified in 3 colors each, Red, Green or Blue.

Once clicked, according to the color selected, a squared block can be drawn on top of the video displayed using the mouse.

Press the left click of the mouse to start drawing the box, and drag it upon the video to mark the desired area. Once finished, release the left click of the mouse, and the box will be drawn as intended.

Delete: In case any of the area is not required, click on the name of the Area Name from the Privacy Window List, and click on Delete.

Windows Area Name: Descriptive name of your choice.

Color: 3 colors can be chosen among the areas set for the motion detection; Red, Blue or Green.

Save: Once the process has been completed click on "Save" to make the changes permanent.

Cancel: in case for any reason, the selection was not properly configured, click on Reset to clear up the values for each feature.

5.3 Storage Settings

5.3.1 Disk Information

Disk Information	
Total Size :	0 Mbytes
Free Size :	0 Mbytes
Used Size :	0 Mbytes
Disk Status :	no SD card

Displays information on the Micro SD Card inserted in the network camera that the user is working with, which will be useful for saving live videos and snapshots, lately used in the built-in live recording Schedule feature of this same section.

Disk Information	File List
Total Size :	7648 Mbytes
Free Size :	7648 Mbytes
Used Size :	0 Mbytes
Disk Status :	Ready
Disk Format :	<input type="button" value="Format"/>
Record Format :	mp4 <input checked="" type="radio"/> file <input type="radio"/> (mp4: for download only; file: for play-online only)
Record Stream :	v01 (HD)
Pre Alarm :	<input type="checkbox"/> Enabled <input type="text" value="2"/> seconds
Duration :	<input type="text" value="900"/> seconds Max record seconds per file(10 ~ 900) seconds
<input type="button" value="Save"/>	

It won't display if insert Micro SD card not yet !

Click on “Format” to format the inserted Micro SD card. Reminder for first time users, please do it first before you try to read or write into your SD card or update/back up your data.

Record Format:

- Mp4 select to make .mp4 file for playing after download.
- File select to make file for playing online.

Record Stream: Select v01, v03, v05 or v07 streaming which is H.264 (HD) compressed.

Pre Alarm: Pre-Recording works when Pre Alarm enabled which is to record video to Micro SD card. The buffered memory in device contains selectable 1~3 Sec Pre Alarm. When alarm occurs, the recording will start and include the buffered video and to save in Micro SD card.

Notice: Pre Alarm function will act only after Event system enabled.

Warning: when removing the Micro SD card out of the slot, remember to disable the event recording first.

Duration: This is to define the time period of each video clips recorded, the available period is from 10~900 seconds.

Notice: Before executing record video event, you must synchronize the time first.

Please refer to P.48 regarding the details of the options for setting Date and Time.

5.3.2 File list

Displays the list of files which are stored in the Micro SD Card. User can find the needed files by configuring the duration (between **Start** time and **End** time) and clicking on “**Search**”.

A checkbox is shown to allow the deletion of the file if necessary.

Disk Information
File List

Search

Start : Date: - - Time: : 00 : 00

End : Date: - - Time: : 59 : 59 Search

File List => Start Date(yyyy-mm-dd hh:mm:ss) ~ End Date(yyyy-mm-dd hh:mm:ss)

File List

(note: *.mp4: click filename to download file; *.file: click filename to play-online .)

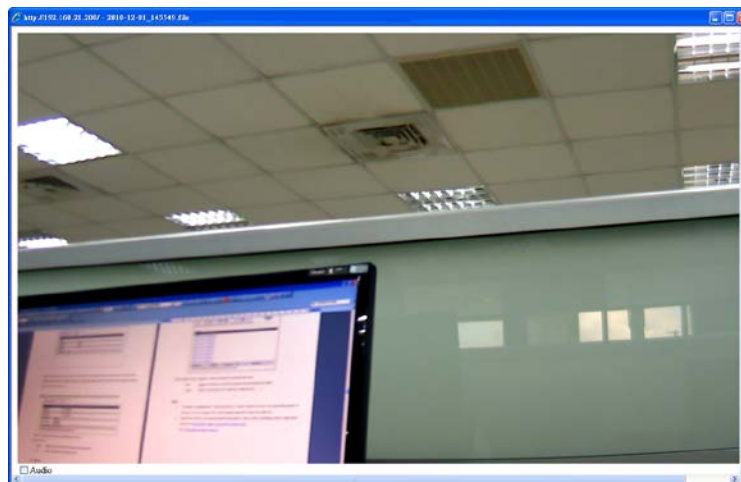
File List	
<input type="checkbox"/>	2011-08-25_110435_CH01.mp4
<input type="checkbox"/>	2011-08-25_110157_CH01.mp4

Select All

Now Page :
Total Page : 1

The network camera supports 2 ways to play the recorded video files:

- *.file click on the file to play the record video file online. There will be a pop-out window, as below, playing the recorded video.



- *.mp4: click on the .mp4 file to download.
The .mp4 file is encoded with H.264. The used media player on the host PC has to support the H.264-encoded video file to play the video file.

Note:

There are some recommended media players, as below, that support H.264-encoded video file. Please refer to following webs to download and install.

QuickTime: <http://www.apple.com/quicktime/download/>

VLC: <http://www.videolan.org/vlc/>

KMPlayer: <http://kmplayer.en.softonic.com/>

5.4 Event Settings

The Event Settings page allows the user to customize the Network Camera to perform actions during a period of time, upon the occurrence of certain events in order to have a result.

For example: Capture a snapshot, at anytime, when a motion is detected; and send the snapshot to an email address.

In simple words: Upon some condition, during a time, do something with a result.

The condition will be set by “Trigger by”

The time of doing something will be set by “Respond to Trigger”

Doing something with a result will be set by “When Triggered...”

5.4.1 Event Configuration



The screenshot shows the 'Event Configuration' page with a navigation bar containing 'Event-Configuration', 'Motion-Detection', 'Event-Server', and 'Server-I/O'. The 'Event-Configuration' tab is active. Below the navigation bar is a section titled 'Event Type List' containing a table with the following structure:

Name	Enable	Trigger	Actions
<input type="button" value="Add"/> <input type="button" value="Delete"/>			

Below the table, there is a note: (Note: The maximum number of events is 10.)

Event Type List

Add: In order to turn on the capability of setting an Event, go to the Event Configuration page and click on Add to see the available options.

Note: *the maximum number of events are limited to 10 (ten).*

Delete: In order to Delete any existing event, click on the name of the Event and click on Delete.

Event Type List

Name	Enable	Trigger	Actions
<input type="button" value="Add"/> <input type="button" value="Delete"/>			
(Note: The maximum number of events is 10.)			

Event Type Setup

General

Name (20 character max)

Trigger by Schedule ▾

Respond to Trigger

Always Motion Detection ▾

Only during time frame

Temporal disable

When Triggered...

Upload images

Send email notification ----- ▾

Send HTTP notification to ----- ▾

Send TCP notification to ----- ▾

GPOUT GPOUT1 ▾

Event Type Setup

Name: Input a name to identify the Event that will perform the action upon some event occurrence.

Trigger by: (Condition)

Schedule: it will perform an action during a time defined by the user.

Motion Detection: it will perform an action upon a motion detected set in some are defined by the user.

Event Type Setup

General

Name (20 character max)

Trigger by Motion Detection ▾

Motion Window ID None ▾

Please select be configured of windows

[Please refer to P.36 regarding the details of the options for setting Motion Detection.](#)

By Boot: it will perform an action when the camera is booted or restarted. This feature is useful to detect reconnections that are not anticipated or expected.

GPIN: it will perform an action when a connected triggering device (at Pin3&4) is activated.

Event Type Setup

General

Name (20 character max)

Trigger by

GPIN

Respond to Trigger (Activated Time)

Always: always keep the Network Camera alert to wait for some condition to happen.

Only during time frame: it will perform the action only for the time frame set. This is different from the Schedule condition, since the Schedule condition sets the time as the main reason to start doing something, while the “time frame” sets the duration of the action.

Event Type Setup

General

Name (20 character max)

Trigger by

Respond to Trigger

Always

Only during time frame Sun Mon Tue Wed Thu Fri Sat

Start Time : :

End Time : :

Temporal disable

Check the corresponding days to execute the triggering time.

Start Time: indicates that time that the trigger will be start executing

End Time: indicates that time that the trigger will be end executing

Interval: indicates the interval between each action.

Duration: indicates the duration of the trigger from the Start Time.

Temporal Disable: don't do anything while activated. In other words, even if the condition has happened the Network Camera shall not do anything. This option is useful to pre-set conditions that will probably be used in the future by desire, but that hasn't to be activated now.

When Triggered...(Do some action with a result)

When Triggered...

- Upload images
- Send email notification ----- ▾
- Send HTTP notification to ----- ▾
- Send TCP notification to ----- ▾
- Record to SD
- GPOUT GPOUT1 ▾

It won't display if insert Micro SD card not yet !

Upload Images: sends the images to an FTP server.

Upload images

FTP ftp ▾

File Type : JPEG

Interval : . second

Interval: Set the time between each two notifications.

Send Email notification: Send an email message to a predefined email address set in the Network Configuration.

Send email notification ----- ▾

Interval : . Second

To : (80 character max)

Subject : (80 character max)

Message : (80 character max)

Attach file

File Type : JPEG

Interval: Set the time between each two notifications.

To: the email account that will be sent to

Subject: input the subject of the email

Message: write in the message contents

Attach file: tick it if you need to attach a file

Send HTTP notification: Send a text message as a parameter to an HTTP port that should be expecting a text message or a command.

Send HTTP notification to ----- ▾

Interval : . Second

Message : (80 character max)

Interval: Set the time between each two notifications.

Message: write in the message contents

Send TCP notification: Send a text message to an TCP port that should be expecting a text message

Send TCP notification to ----- ▾

Interval : . Second

Message : (80 character max)

Interval: Set the time between each two notifications.

Message: write in the message contents

For configuring the FTP, Email, and TCP settings, refer to the Network Configuration, on Event Server.

Record to SD: Record video image to SD card.

Record to SD

Note: It won't display if insert SD card not yet !

GPOUT: Set to activate a connected device (at Pin1&2) once triggered.

GPOUT GPOUT1 ▼

When **Trigger by:** (Condition): **Motion Detection** 、 **By Boot** or **GPIN**,it would be show below configure.

When Triggered...

Upload images

FTP ----- ▼
 File Type : JPEG
Post Alarm : (1 ~ 200) Second
 Interval : . Second

Send email notification ----- ▼

Post Alarm : (1 ~ 200) Second
 Interval : . Second
 To : (80 character max)
 Subject : (80 character max)
 Message : (80 character max)
 Attach file
 File Type : JPEG

Send HTTP notification to ----- ▼

Post Alarm : (1 ~ 200) Second
 Interval : . Second
 Message : (80 character max)

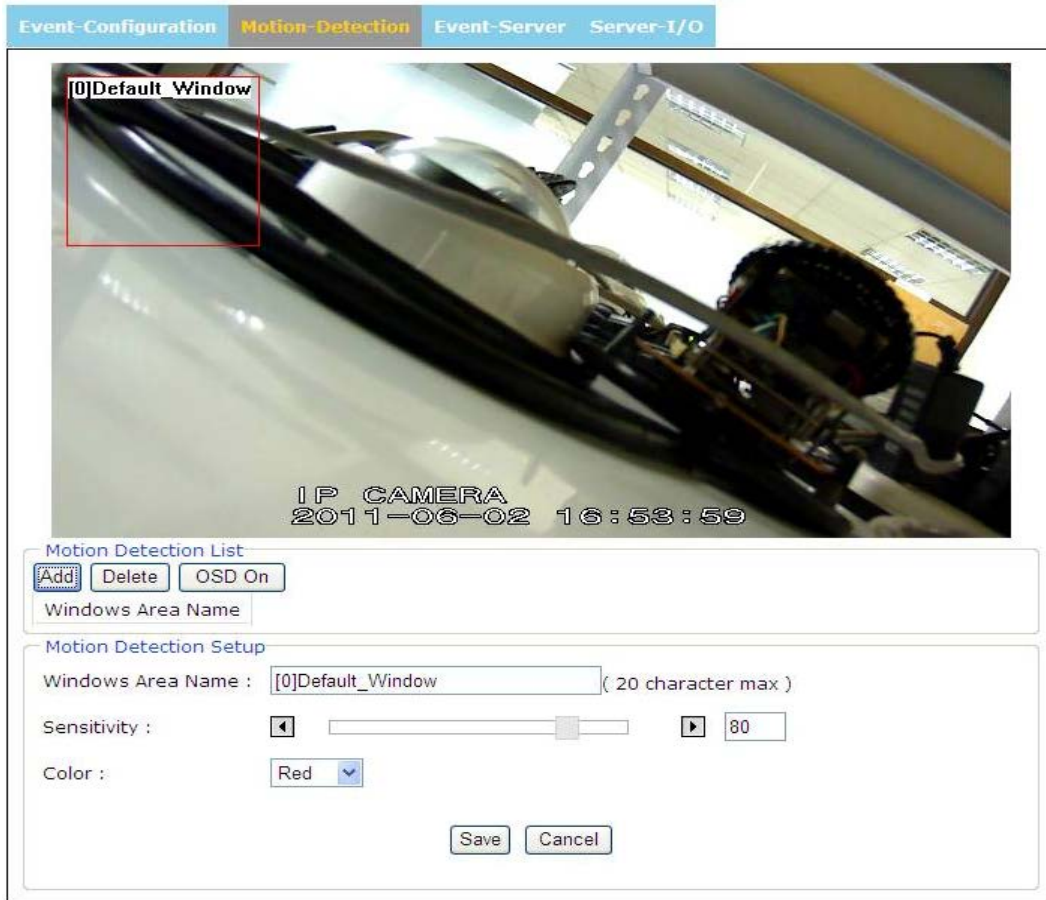
Send TCP notification to ----- ▼

Post Alarm : (1 ~ 200) Second
 Interval : . Second
 Message : (80 character max)

Post Alarm:

Set the duration of action after the event

5.4.2 Motion Detection



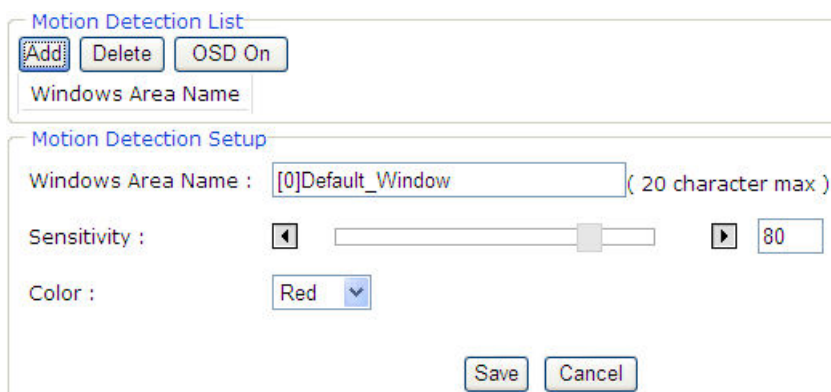
Video motion detection is used to generate an alarm whenever movement occurs (or stops) in the video image.

A total of 3 Include and/or Exclude windows can be configured.

Once configured, the video motion detection windows appear in the list of available triggers, for triggering events.

Note:

1. Using the motion detection feature may decrease the camera's overall performance
2. Don't set Date & Time of OSD (On-Screen Display) included in the detected area.



Motion Detection List

Add: 3 areas can be set for which they will be identified in 3 colors each, Red, Green or Blue.

Once clicked, according to the color selected, a squared block can be drawn on top of the video displayed using the mouse.

Press the left click of the mouse to start drawing the box, and drag it upon the video to mark the desired area. Once finished, release the left click of the mouse, and the box will be drawn as intended.

Delete: In case any of the area is not required, click on the name of the Area Name from the Motion Detection List, and click on Delete.

OSD On/Off: Select “OSD On” to present in screen that Motion Detection is working.



Windows Area Name: Descriptive name of your choice

Sensitivity: values run from 0 to 100; for which the higher the number, the more sensitive is the motion area.

Color: 3 colors can be chosen among the areas set for the motion detection; Red, Blue or Green.

Save: Once the process has been completed click on “Save” to make the changes permanent.

Cancel: in case for any reason, the selection was not properly configured, click on Reset to clear up the values for each feature.

5.4.3 Event Server

Event Servers are used to receive uploaded image files and/or notification messages. To set up Event Server connections in your camera, go to Setup > Event Configuration > Event Servers and enter the required information for the required server type.



Add FTP: adds an FTP to be used as a recipient for the images

Add HTTP: adds an HTTP server to receive text messages.

Add TCP: adds a TCP port to received text messages.

Add SMTP: adds an Email server/address to receive email messages

Delete: to Delete any existing Event Server, select a Name from the Event Server List and click on Delete.

Upon clicking on any button to add FTP, HTTP, TCP or SMTP server a box will show up for filling the required information.

FTP Server

Receives uploaded images

FTP Server

Name : (32 character max)

Network Address :

Upload Path :

Port : [1...65535]

Login Information

User Name : (32 character max)

Password : (4 character min,32 character max)

Name: Descriptive name of your choice

Network address (IP address or host name)

User Name and Password: Enter the Username and Password for allowing the upload of the images.

Note: Consult your Network Administrator for the correct Username and Password applied to the folder. Make sure that the Username applied in this folder does have Write and Delete permissions to it. In case Write and Delete permissions are not applicable, the intended files to be stored will not take into effect

HTTP Server

Receives notification messages

HTTP Server

Name (32 character max)

URL

User Name (32 character max)

Password (4 character min, 32 character max)

Name: Descriptive name of your choice

URL: URL (IP address or host name)

Username and Password: Enter the Username and Password for allowing the reception of messages.

Note: Consult your Network Administrator for the correct Username and Password applied to the HTTP and Proxy Server. Make sure that the Username applied in the HTTP and Proxy does have Write and Delete permissions to it. In case Write and Delete permissions are not applicable, the intended messages to be delivered will not take into effect

TCP Server

Receives notification messages

TCP Server

Name : (32 character max)

Network Address :

Port : [1...65535]

Name: Descriptive name of your choice

Network Address: IP address or host name

Port number: Enter the port number of the TCP service that is expecting to receive the message.

Note: Consult your Network Administrator for the availability of the TCP service and Port number to be used.

SMTP Server

To send email messages

Event-Configuration Motion-Detection **Event-Server** Server-I/O

Event Server List

Name	Protocol	Address	Upload Path	User Name
ftp	FTP	192.168.3....	/	quest
EMAIL	SMTP	smtp.gmail....		qa3.amegia

(note: The maximum number of event server is 10.)

SMTP Server

Name (80 character max)

Email Address

Mail Server (hostname or IP address)

Port [1...65535]

User Name (128 character max)

Password (4 character min, 32 character max)

Enabled SSL

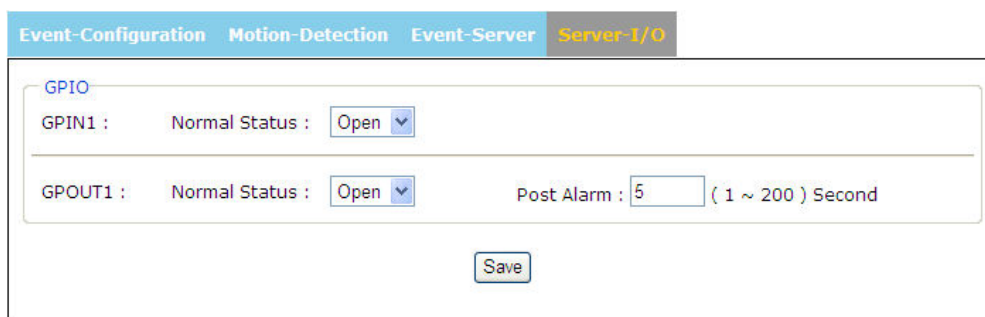
Name: Descriptive name of your choice

Email Address: enter sender's (the network camera) email address

Mail Server: URL of mail server (IP address or host name)

Username and Password: Enter the Username and Password for authentication if necessary.

5.4.4 Server I/O



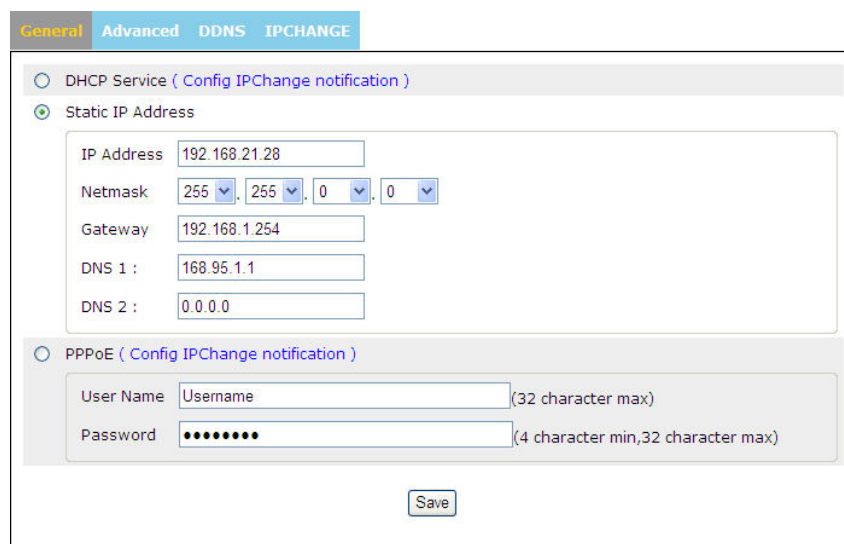
GPIO: is used to configure normal circuit status for receiving and triggering Alarms.

GPIN 1 Normal Status: sets “Open” or “Close” for the Normal Status of GPIN circuit

GPOUT 1 Normal Status: sets “Open” or “Close” for the Normal Status of GPOUT circuit

Post Alarm: Set the duration of action after the event happened from 1 ~ 200 seconds.

5.5 Network Settings



The Network Settings page allows the user to change and add more sophisticated configurations based on the network infrastructure where the Network Camera is installed.

As for the IP Discovery Tool is useful for initial boot up and straight network configuration, the Network Settings page offers a flexible way to fully utilize the network capabilities.

General: Basic IP configuration settings.

Advanced: Page for network settings that include Time Server, Hostname and Port for services.

DDNS: Service for accessing the Network Camera through domain names rather than IP addresses.

PPPoE: Configuration page for connecting directly to ADSL internet services.

Event Server: Sets up the servers utilized in the Event feature page, such as FTP, HTTP, SMTP and TCP.

Note: Consult your Network Administrator for the availability of the services and the values for the configuration to be used.

5.5.1 General

DHCP: Obtain IP address via DHCP

Dynamic Host Configuration Protocol (DHCP) is a protocol that lets network administrators centrally manage and automate the assignment of IP addresses on a network. Although a DHCP server is mostly used to set an IP address dynamically, it is also possible to use it to set a static, known IP address for a particular MAC address.

Advise to set IPCHANGE for dynamic IP mode while DHCP service is activated.

Static IP Address

IP address: Specify a unique IP address for your network camera.

Subnet mask: Specify the mask for the subnet the network camera.

Gateway: Specify the IP address for the Gateway

DNS1: Specify the IP address for the first group of DNS

DNS2: Specify the IP address for the second group of DNS

PPPoE:



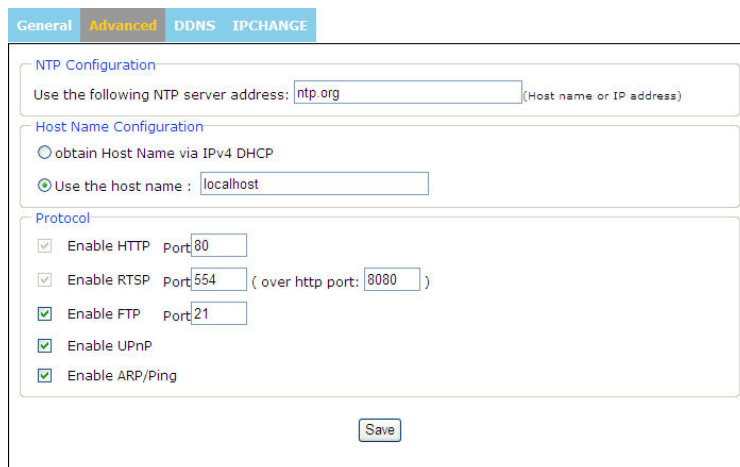
The PPPoE feature enables the user to connect the Network Camera directly to the ADSL Modem having direct access to Internet. Click on the PPPoE Enable box to activate the feature, and enter the Username and respective Password.

The Username and Password, as well as the internet service that goes with the ADSL Modem are provided by an Internet Service Provider (ISP) such as your local telephone company.

Contact your ISP for more information on how to acquire such service.

Advise to set IPCHANGE for dynamic IP mode while PPPoE is enabled.

5.5.2 Advanced



The screenshot shows a configuration interface with four tabs: General, Advanced (selected), DDNS, and IPCHANGE. The Advanced tab contains three sections:

- NTP Configuration:** A text input field for "Use the following NTP server address:" containing "ntp.org" with a "(Host name or IP address)" label.
- Host Name Configuration:** Two radio buttons. The first is "obtain Host Name via IPv4 DHCP" (unselected). The second is "Use the host name:" (selected) with a text input field containing "localhost".
- Protocol:** A list of checkboxes:
 - Enable HTTP Port: 80
 - Enable RTSP Port: 554 (over http port: 8080)
 - Enable FTP Port: 21
 - Enable UPnP
 - Enable ARP/Ping

A "Save" button is located at the bottom center of the form.

NTP Configuration

Obtain NTP server address via DHCP - check this radio button to automatically look up and use the NTP server settings as provided by DHCP. Click the View button to see the current settings.

Use the following NTP server address - to create manual settings, check this radio button and enter the host name or IP address of the NTP server.

Warning

For users using PPPoE as their network access, any change made to the “Network address” of the “NTP Configuration may cause the screen to remain still for a while, because your local ISP (Internet Service Provider) is assigning new IP address and new values for the HTTP, RTSP and FTP ports, whenever a change is made to NTP through PPPoE.

Host Name Configuration

The network cameras can be accessed using a host name, instead of an IP address.

Obtain Host Name server address via IPv4 DHCP - automatically use the DNS server settings provided by the DHCP server. Click the View button to see the current settings.

Use the Host Name - enter the desired DNS server by specifying the following:

Domain name - enter the domain(s). Multiple domains can be separated by semicolons (;). The host name is always the first part of a Fully Qualified Domain Name, for example, myserver is the host name in the Fully Qualified Domain Name myserver.mycompany.com where mycompany.com is the Domain name.

Protocol

HTTP

The default HTTP port number 80 can be changed according to the user’s need. This is useful for simple security port mapping.

Note: if you enter a different value other than 80 for your HTTP port, you can not return to the Live View screen. In order to return to the Live View screen, please launch IP Discovery tool again and select your network camera.

RTSP

The RTSP protocol allows a connecting client to start an H.264/MJPEG stream. Check the box to enable the server and enter the RTSP port number to use. The default setting is 554.

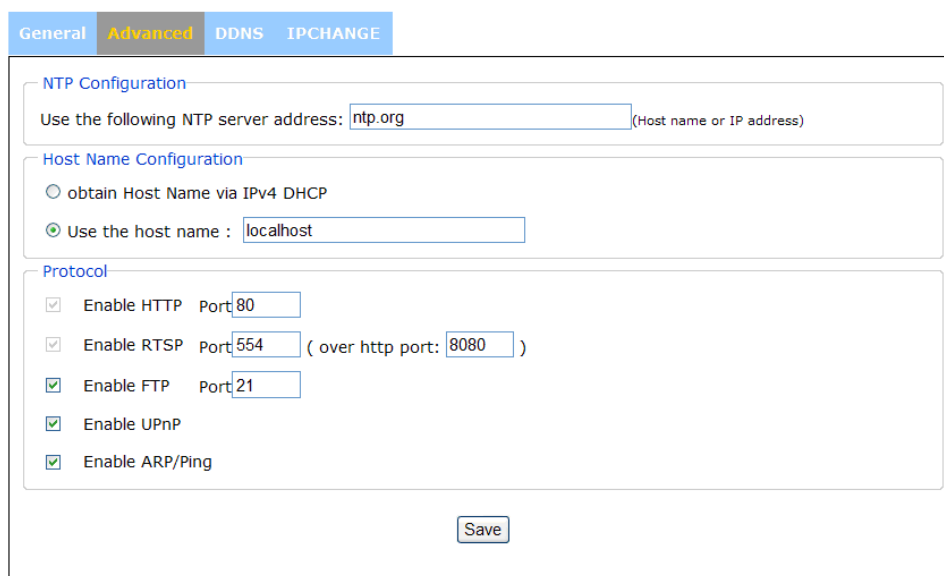
Note: that H.264/MJPEG video streams will not be available if this service is not enabled.

FTP

The FTP server running in the network cameras enables the upload of new firmware, and user applications. Check the box to enable the service.

UPnP Setting

First, tick the box “Enable UPnP” (actually, it’s ticked in factory default).

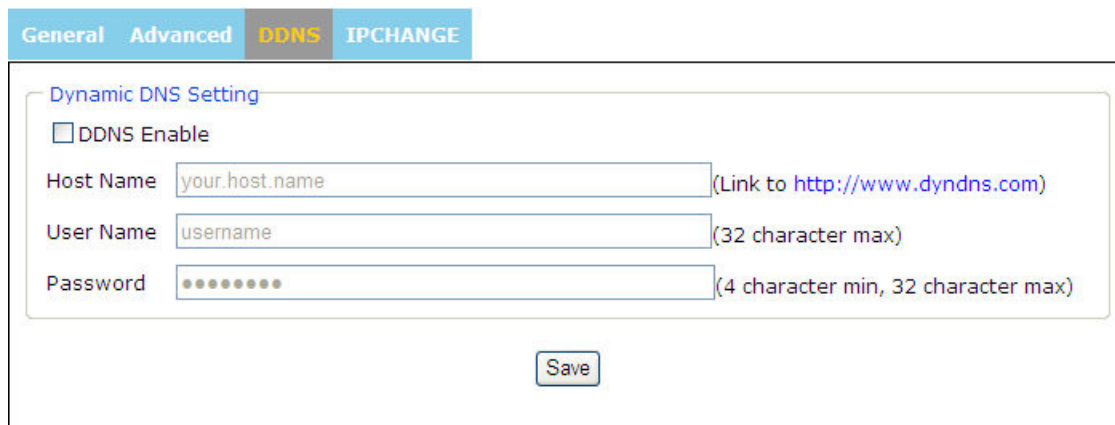


The screenshot shows the 'Advanced' configuration page with tabs for 'General', 'Advanced', 'DDNS', and 'IPCHANGE'. The 'Advanced' tab is selected. The page is divided into three sections: 'NTP Configuration', 'Host Name Configuration', and 'Protocol'.
- **NTP Configuration:** A text input field contains 'ntp.org' with a '(Host name or IP address)' label to its right.
- **Host Name Configuration:** Two radio buttons are present. The first is 'obtain Host Name via IPv4 DHCP'. The second is 'Use the host name : localhost', which is selected.
- **Protocol:** A list of five items, each with a checked checkbox and a text input field for a port number:
 - 'Enable HTTP' with port '80'
 - 'Enable RTSP' with port '554' and '(over http port: 8080)'
 - 'Enable FTP' with port '21'
 - 'Enable UPnP'
 - 'Enable ARP/Ping'
A 'Save' button is located at the bottom center of the form.

Arp / Ping

Enabling Arp / Ping will offer an additional tool to the user in order to detect the status of the Network Camera. For related commands to ARP/Ping, refer to your Network Administrator.

5.5.3 DDNS



The DDNS (Dynamic Domain Name Service) feature allows users to access the Network Camera without the need of remembering the IP address, but rather using a name.

For example: <http://www.mycamera.com>

Reminder: the DDNS is only effective for PPPoE connection.

To be able to use the DDNS feature, a domain name must be registered first in a domain name service from a 3rd party service provider, such as DynDNS (www.dyndns.org).

The DDNS feature only forwards the information between the Host Name server and the Network Camera, therefore the Username and Password must be obtained from the 3rd party service provider before using the feature.

Note: Refer to your Domain Name Service Provider for more information on setting up a domain name. Some Domain Name Service providers charge a fee for the registration, while some offer the service as free of charge. It will be in the user's decision which service to acquire.

In order to use the DDNS feature, it is assumed that the Network Camera already has direct access to Internet. For more information on how to allow the Network Camera to access the Internet, consult with your Network Administrator and you can also refer to the Port Forwarding Section in this manual for a basic guide line and a better understanding of the topic in matter.

5.5.4 IPCHANGE Settings

General Advanced DDNS **IPCHANGE**

IPCHANGE Setting

IPChange Enable

SMTP Server: none (Config SMTP Server)

Mail To:

Save

This setting triggers an email sending to notify the latest IP address when the IP address of this network camera is changed. Please configure SMTP Server information (Network -> Event Server) first.

IPCHANGE: Disable or Enabled

SMTP Server: Select one on the list of configured Email servers

Mail To: Set the destination (e.g. 0001@abc.com) which the alerting email is sent to.

Click on “Save” to apply the change.

5.6 System Settings

5.6.1 Information

Information User Date & Time Maintenance

System

Model	XXXX
System up time	2011-09-09 17:12:24
Firmware Version	1.00.07.4910
MAC Address	00:0e:c9:03:b2:e3
ActiveX Version	1.0.0.162

Ethernet

Mode	Static
IP Address	192.168.21.28
Netmask	255.255.0.0
Gateway	192.168.1.254

PPPoE

Status	Disabled
--------	----------

DNS Server

Primary DNS IP address	168.95.1.1
Secondary DNS IP address	0.0.0.0

DDNS

Status	Off
Domain Name	your.host.name
Success/Fail	Fail

Device Settings

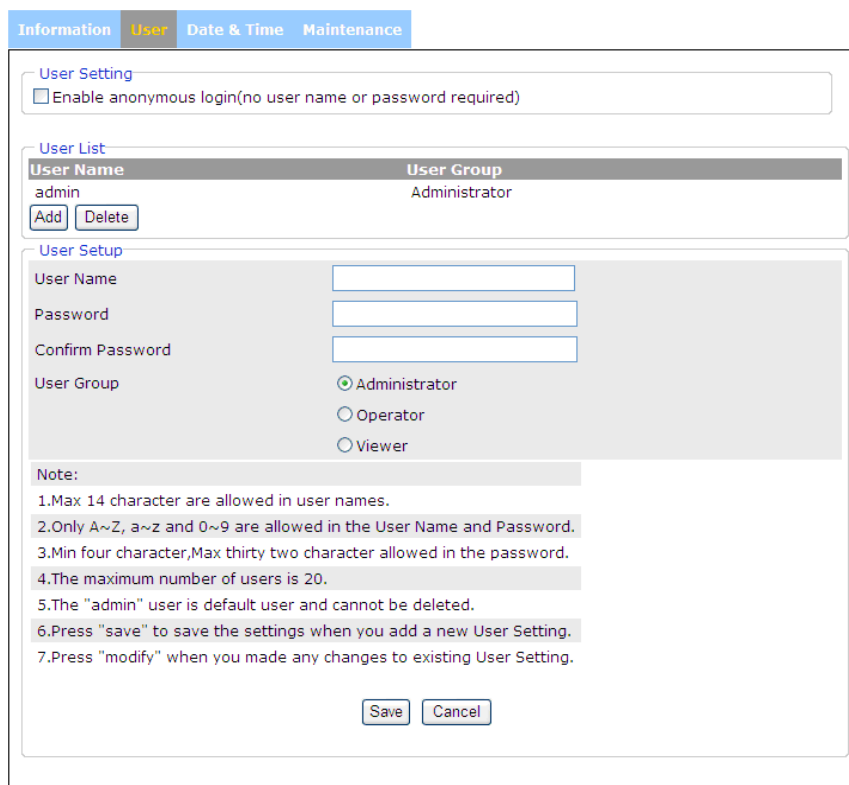
Device Name	<input type="text" value="Device Name"/>
Device Location	<input type="text" value="Device Location"/>

Save Device Settings

The

System Settings page displays information about the current status of the Network Camera. Such information is useful to have references when direct information is required without going through the different pages of configuration of the Network Camera.

5.6.2 User



The screenshot shows the 'User' configuration page. At the top, there are navigation tabs: 'Information', 'User' (highlighted), 'Date & Time', and 'Maintenance'. Below the tabs, the page is divided into three main sections:

- User Setting:** Contains a checkbox labeled 'Enable anonymous login(no user name or password required)'. The checkbox is currently unchecked.
- User List:** Displays a table with two columns: 'User Name' and 'User Group'. The table contains one entry: 'admin' under 'User Name' and 'Administrator' under 'User Group'. Below the table are 'Add' and 'Delete' buttons.
- User Setup:** Contains several input fields and radio buttons:
 - 'User Name': A text input field.
 - 'Password': A text input field.
 - 'Confirm Password': A text input field.
 - 'User Group': Three radio buttons labeled 'Administrator' (selected), 'Operator', and 'Viewer'.

Below the 'User Setup' section is a 'Note' section with a list of seven instructions:

- 1.Max 14 character are allowed in user names.
- 2.Only A~Z, a~z and 0~9 are allowed in the User Name and Password.
- 3.Min four character,Max thirty two character allowed in the password.
- 4.The maximum number of users is 20.
- 5.The "admin" user is default user and cannot be deleted.
- 6.Press "save" to save the settings when you add a new User Setting.
- 7.Press "modify" when you made any changes to existing User Setting.

At the bottom of the 'User Setup' section are 'Save' and 'Cancel' buttons.

The user configuration page allows the Network Camera to have multiple users and profiles to access the Network Camera.

Enable anonymous login:

To allow the access to the Network Camera without restrictions, select the box of Enable anonymous login and click on "Save" to make the changes permanent.

Such change will allow anyone to access the Network Camera without a username or password.

Note: it is in the user's discretion whether or not to allow authorized and unauthorized to access the Network Camera.

Adding a user

In order to add a new user, click on the "Add" button and fill the information which is required.

After filling the information, click on "Save" to make changes permanent to the device.

Administrator: Permission to view and change the configuration of the Network Camera.

Operator: Has permission to change certain configuration of the camera.

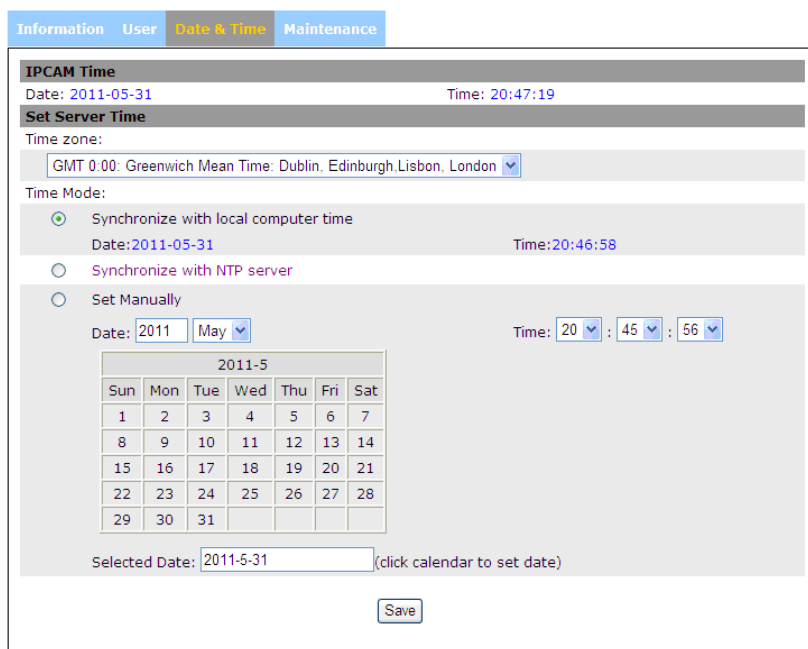
Viewer: Has only permission to view the Network Camera.

Note: follow the instructions displayed on the User's page while selecting of a Username and Password.

Deleting a user

To delete user, click on a Name from the Users list and click on "Delete", then click on "Save" to make the changes permanent.

5.6.3 Date & Time



Information User **Date & Time** Maintenance

IPCAM Time
Date: 2011-05-31 Time: 20:47:19

Set Server Time
Time zone:
GMT 0:00: Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London

Time Mode:
 Synchronize with local computer time
 Date: 2011-05-31 Time: 20:46:58
 Synchronize with NTP server
 Set Manually
 Date: 2011 May Time: 20 : 45 : 56

2011-5						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Selected Date: 2011-5-31 (click calendar to set date)

Save

Displays the date and time (24 hours clock) of the Network Camera.

Set Server Time

Select the Automatically adjust for **daylight saving** time changes if necessary.

From the **Time Mode** section, select the preferred method to use for setting the time:

Synchronize with computer time - sets the time from the clock on your computer.

Synchronize with NTP Server - the camera will obtain the time from an NTP server every 60 minutes.

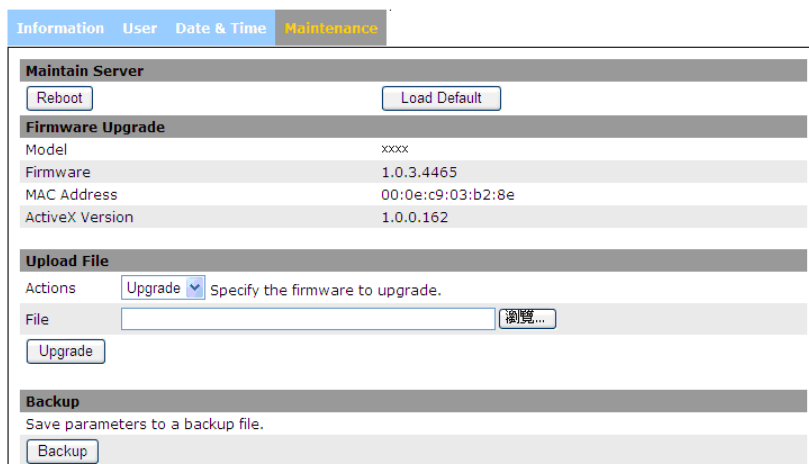
Set manually - this option allows you to manually set the time and date.

Note: If using a host name for the NTP server, a DNS server must be configured under Network Settings.

Click on "Save" to make the changes permanent.

In case there was error during the selection, click on "Reset" and restart the process.

5.6.4 Server Maintenance



Maintain Server	
Reboot	Load Default
Firmware Upgrade	
Model	xxxx
Firmware	1.0.3.4465
MAC Address	00:0e:c9:03:b2:8e
ActiveX Version	1.0.0.162
Upload File	
Actions	Upgrade Specify the firmware to upgrade.
File	<input type="text"/> 浏览...
Upgrade	
Backup	
Save parameters to a backup file.	
Backup	

The Server Maintenance page allows the user to make changes in the Network Camera, such as:

Reboot: restarts the Network Camera

Load Default: sets the Network Camera back to the default parameters from factory.

Upload File: Upgrades the Network Camera to a new firmware. Look up for the file and select it.

Click on “Upgrade” to proceed with the upgrading of the firmware.

Notes: if you plan to upload older firmware versions, please keep in mind there could be possible risks that some functions might not work properly.

Note: if you enter a different value other than 80 for your HTTP port, you can not return to the Live View screen. In order to return to the Live View screen, please launch IP Discovery tool again and select your network camera.

Restore: Look up for the file that restores a previous configuration of the Network Camera. Click on “Upload” to begin the process.

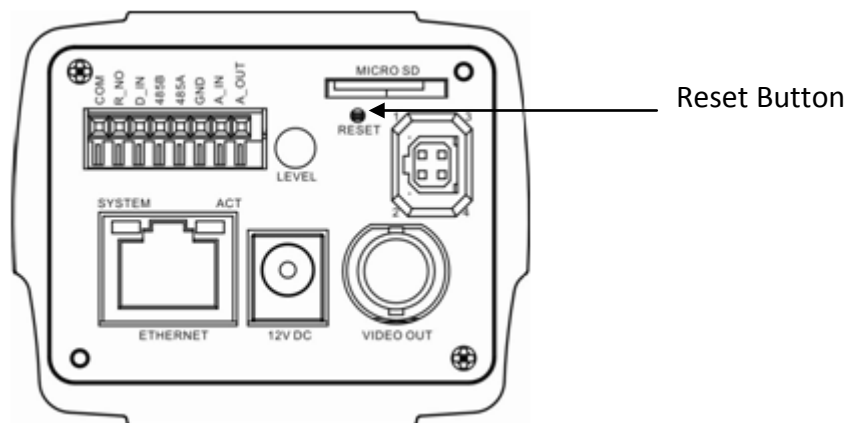
Backup: click on “Backup” to save the current parameters of the Network Camera to a file.

Note:

1. **Please do not restore previous configuration file into camera which has been upgraded with new firmware version. It may lead to malfunction.**
2. *Before making any changes to the system of the Network Camera, make sure it is what is required while all alternatives have been considered and executed.*

6 Troubleshooting

6.1 Factory Default



To execute the Factory Default, proceed as follows:

1. Delete the power adapter from the socket power of the network camera
2. With a pin thin enough to go through the Reset Button hole, push inside gently
3. Plug back the power
4. The Power LED will flash
5. Release the pin
6. The network camera enters into the process of getting back to factory defaults

Or when the device has finished system booting, press the reset button until the Power LED starts flashing. The device is back to factory default. All settings will be erased from the device, and the assigned IP will be back to 192.168.1.200 and Subnet mask to 255.255.0.0.

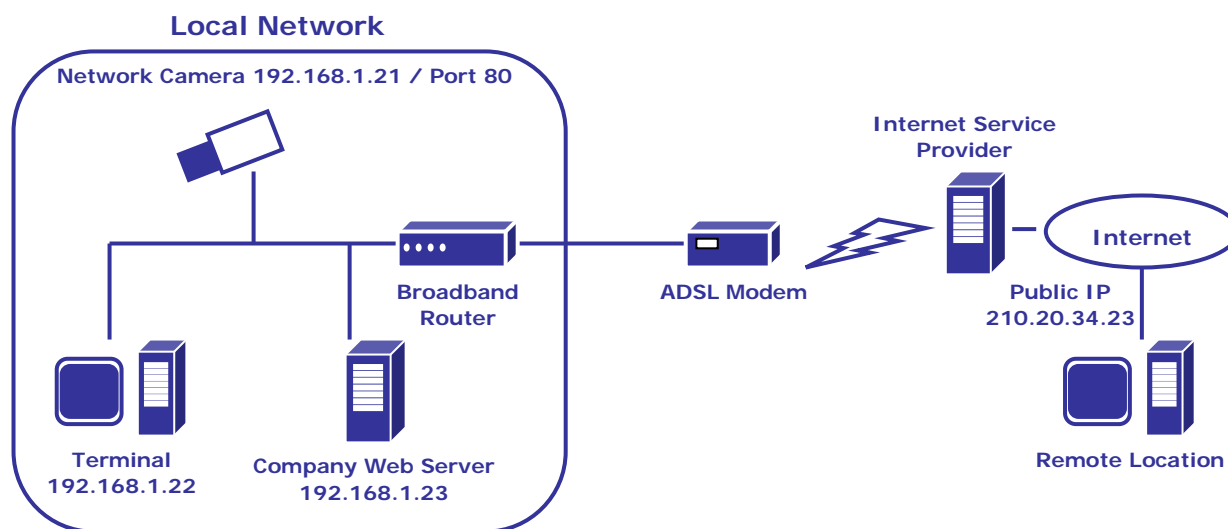
6.2 Viewing the camera from a remote location

The below guideline shows you how to setup the Network Camera for viewing it from a remote location.

The network infrastructure demonstration is just for your reference only. Each network infrastructure may vary upon the needs of the organization.

Note: Consult your Network Administrator for a better understanding of networking concepts and related topics.

6.2.1 Standard connection



In this case what we have here is:

Public IP Address 210.20.34.23, assigned by the Internet Service Provider (ISP)

Network Camera, with a local IP of 192.168.1.22

Broadband router

Since we are sharing only one single Internet connection through our Local Network, the Port Forwarding configuration in our Broadband Router for the camera will be as follows:

Private IP	Private Port	Type	Public Port
192.168.1.22	80	● TCP ○ UDP	80
192.168.1.22	554	● TCP ○ UDP	554

Notice that the Port 80 is the default port for any Web-Server, but this also can be changed. Since Port 80 is the default, when we type our IP address at the Address bar, there won't be any need to type the port number.

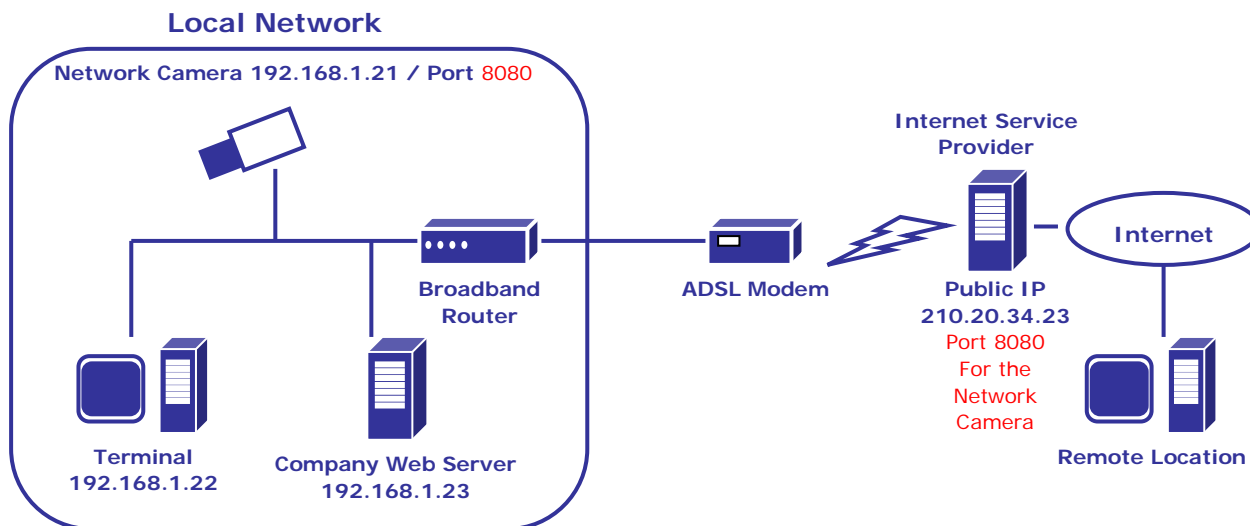
The default port for streaming an H.264 video is port 554, being the same as the port 80, it can also be changed.

Once the broadband router's configurations are set, we can open the Internet Explorer and type in the Address bar the Public IP address.

Once the broadband router's configurations are set, we can open the Internet Explorer and type in the address bar the Public IP address.

<http://210.20.34.23/>

6.2.2 Assigning Ports Manually



In this case what we have here is:

Public IP Address 210.20.34.23, assigned by the Internet Service Provider (ISP), but we will be using Port 9999 for accessing the camera from the Internet.

The Network Camera, with a local IP of 192.168.1.22, using port 8080 to get access to the camera through the Local Network.

Broadband router

Since we are sharing only one single Internet connection through our Local Network, the Port Forwarding configuration in our Broadband Router for the camera will be as follows:

Private IP	Private Port	Type	Public Port
192.168.1.22	8080	● TCP ○ UDP	8080
192.168.1.22	554	● TCP ○ UDP	554

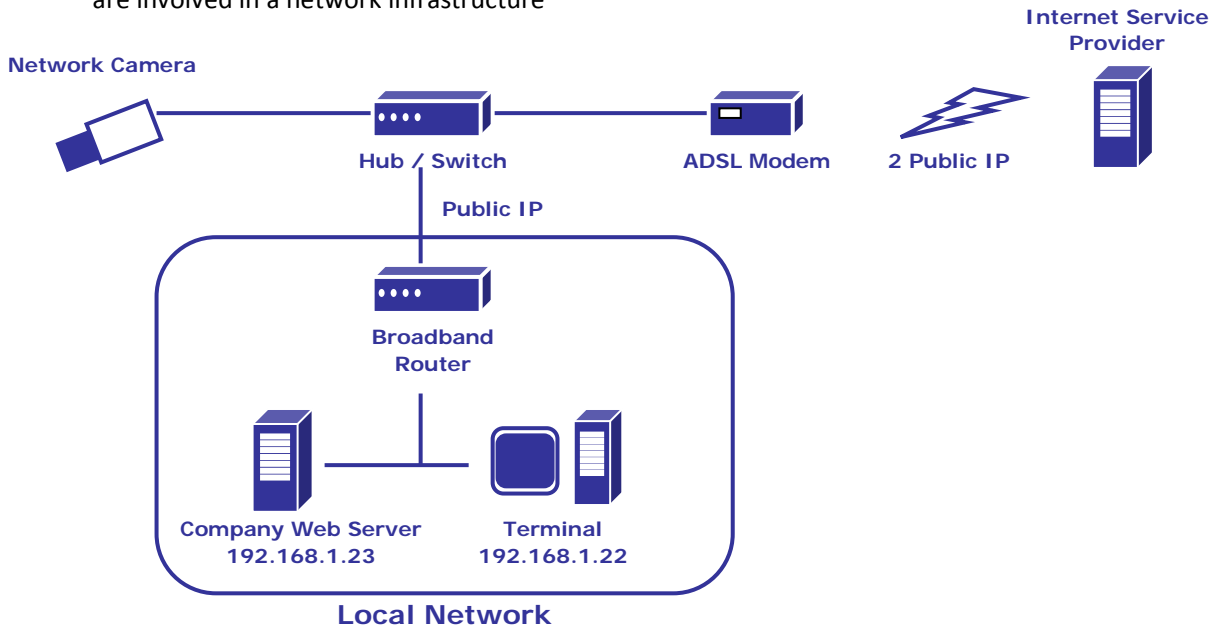
In this case we are using Port 8080 for the Network Camera at 192.168.1.22, and using Port 8080 for the Internet access at 210.20.34.23.

When we are in a remote location, in order to access our camera through Internet, we have to specify the Public Port when typing the Public IP Address as the figure below

<http://210.20.34.23:8080/>

6.2.3 Using two or more public IPs

The following figure is just an illustration on how the camera can be connected when 2 or more Public IPs are involved in a network infrastructure



7 Frequently Asked Questions

Symptoms, Possible Causes, and Remedial Action

Problems setting the IP address

The camera is located on a different subnet

If the IP address intended for the camera and the IP address of your computer are located on different subnets, you will not be able to set the IP address. Contact your network administrator to obtain an appropriate IP address.

The IP address is being used by another device

Disconnect the camera from the network. Run the Ping command. (In a Command/DOS window, type ping and the IP address of the unit).

If you receive: Reply from <IP address>: bytes = 32; time = 10 ms..... - this means that the IP address may already be in use by another device on your network. You must obtain a new IP address and reinstall the unit.

If you see: Request timed out - this means that the IP address is available for use with your camera. In this case, check all cabling and reinstall the unit.

Possible IP address conflict with another device on the same subnet

The static IP address in the camera is used before the DHCP server sets a dynamic address. This means that if the same default static IP address is also used by another device, there may be problems accessing the camera. To avoid this, set the static IP address to 0.0.0.0.

The camera cannot be accessed from a browser

The IP address has been changed by DHCP

If the camera and client are on the same network, run the IP Discovery Utility to locate the camera.

Identify the camera using its model or serial number

Alternatively:

- 1) Move the camera to an isolated network or to one with no DHCP or BOOTP server. Set the IP address again, using the IP Discovery Utility (see the Installation Guide) or the ARP/Ping commands.
 - 2) Access the unit and disable DHCP in the TCP/IP settings. Return the unit to the main network. The unit now has a fixed IP address that will not change.
 - 3) As an alternative to 2), if dynamic IP address via DHCP or BOOTP is required, select the required service and then configure IP address change notification from the network settings.
- Return the unit to the main network. The unit now has a dynamic IP address, but will notify you if the address changes.

Other networking problems

Test the network cable by connecting it to another network device, then Ping that device from your workstation. See instructions above.

Camera is accessible locally, but not externally

Broadband router configuration

To configure your broadband router to allow incoming data traffic to the camera, enable the NAT port forwarding feature which will configure the router to allow access to the camera.

Firewall protection

Check the Internet firewall with your system administrator.

Default routers required

Check if you need to configure the default router settings.

Problems with the H.264/MJPEG format

No H.264/MJPEG displayed in the client

Check with your network administrator to see if there is a firewall preventing viewing.

Poor rendering of H.264/MPEG-4 images

Color depth set incorrectly on clients. Set to 16-bit or 32-bit color.

Ensure that your graphics card is using the latest device driver. The latest drivers can usually be downloaded from the manufacturer's web site.

Color saturation is different in H.264 and Motion JPEG

Modify the settings for your graphics adapter. Please see the adapter's documentation for more information.

Lower frame rate than expected

Reduce number of applications running on the client computer.

Limit the number of simultaneous viewers.

Check with the system administrator that there is enough bandwidth available. See also the online help.

Lower the image resolution.

No images displayed on web page

Installation of additional ActiveX component restricted

Configure your Internet Explorer to allow the installation of ActiveX by lowering temporarily the Internet Explorer security settings.

Video/Image problems, general

Image too dark or too light

Check the video image settings.

Missing images in uploads

This can occur when trying to use a larger image buffer than is actually available. Try lowering the frame rate or the upload period.

Slow image update

Configuring pre-buffers, motion detection, high-resolution images, or high frame rates, will affect the performance of the camera.

Poor performance

Poor performance may be caused by heavy network traffic, multiple users accessing the unit, low performance clients, use of features such as Motion Detection, Event handling.

Poor quality snapshot images

Screen incorrectly configured on your workstation

In Display Properties, configure your screen to show at least 65000 colors, that is, at least 16-bit. Using only 16 or 256 colors will produce dithering artifacts in the image.

Audio volume too low/high

Volume settings incorrect

The volume of the microphone is either too high or too low. Change the volume for the microphone in the toolbar on the Live View page.

Poor audio quality

CPU overloaded

Reduce the number of listeners and viewers and decrease the image resolution and compression.

Unsynchronized audio and video

It is recommended that the camera's time setting is synchronized with an NTP Server. This is enabled under System Options > Date & Time.

Distorted audio

Select Microphone for the internal microphone or for a connected external microphone.

Select Line for a connected line in source.