Megapixel Network Camera

User Manual

Quality Service Group

Product name:	Network Camera
Release Date:	2011/06
Manual Revision:	V1.6

Table of Contents

⚠ **NOTE - (*)** The features that are available for this product are optional. They are not supported by the economy model.

Package Contents

Please check to make sure the product package contains all of the accessories listed below.

- ♦ IP Camera
- ♦ Product CD
- ♦ Camera Stand
- ♦ Flat RJ-45 cable(1.5m)
- ♦ Warranty Card
- ♦ Power Adapter

Installation

System Requirements

Operating System:

Microsoft Windows XP

Microsoft Windows Vista

Microsoft Windows Win7

Computer:

IBM PC/AT Compatible

CPU:

Pentium 3GHz or faster

Memory:

1024 MB or more

Monitor:

1024 x 768 pixels or more, 24-bit True color or better

Network Interface:

10/100Mbps Network interface card must be installed

Web Browser:

Microsoft Internet Explorer 6.0 SP2 or higher

Adobe Reader:

Adobe Reader 8.0 or higher

Audio:

The audio function will not work if a sound card is not installed in the PC. Audio may be interrupted depending on network traffic.
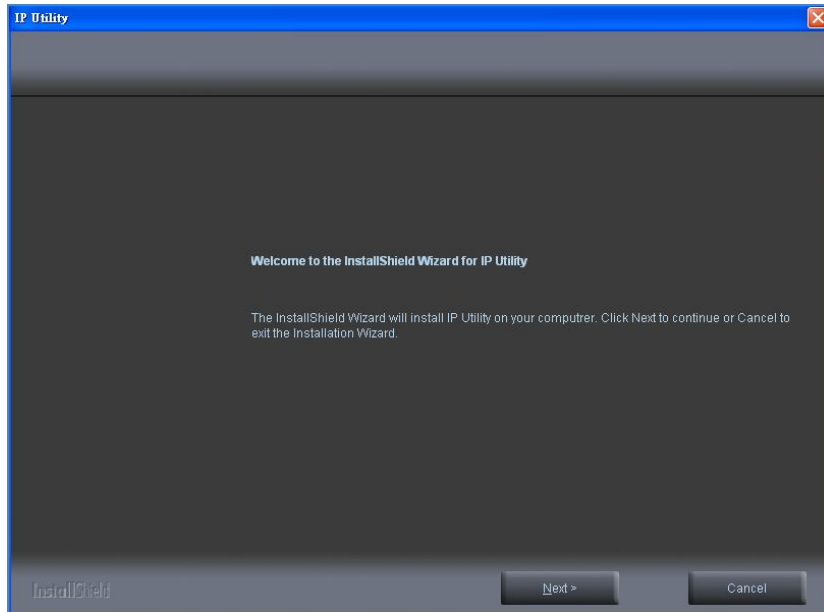
Software Installation

In this manual, "User" refers to whoever has access to the Network Camera, and "Administrator" refers to the person who can configure the camera and grant user access to the camera.

After checking the hardware connection, run the Installation Wizard program included on the product's CDROM to automatically search the intranet for the camera. There may be many cameras on the local network. Differentiate the cameras using the serial number which is printed on the labels on the carton and on the bottom of the camera.

1. Insert the Installation CD into the CD-ROM driver. Run the Auto-Run Tool directly from the CD-ROM to start the installation. When installing the Network Camera Toolkit for the first time, select a desired language for the interface. The available languages are listed in the scroll box. Click <**Install IP Utility**> or <**Install PC-NVR**> to install. If installing the PC-NVR program, please refer to the PC-NVR user manual. If installing the IP Utility, follow the steps to install the IP Utility wizard on the desired computer.
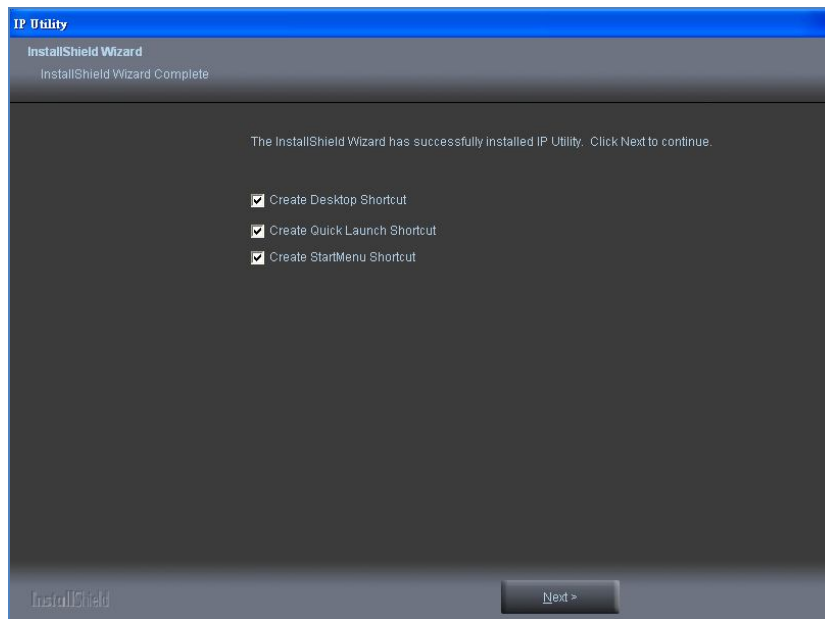

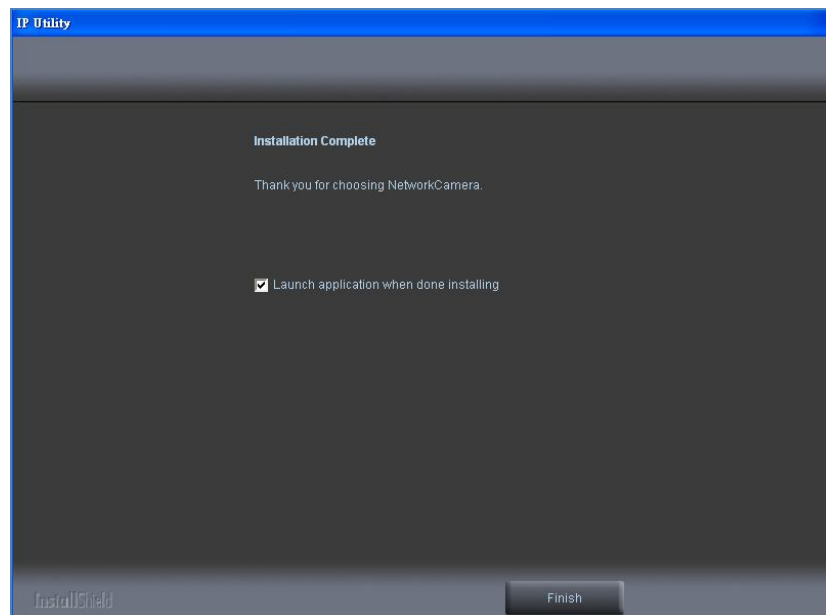2. In the Install Shield Wizard dialog box, click <Next> to continue.

3. Click <**Change**> to change the folder where installation and program files will be stored.

   Click <Next> to continue.
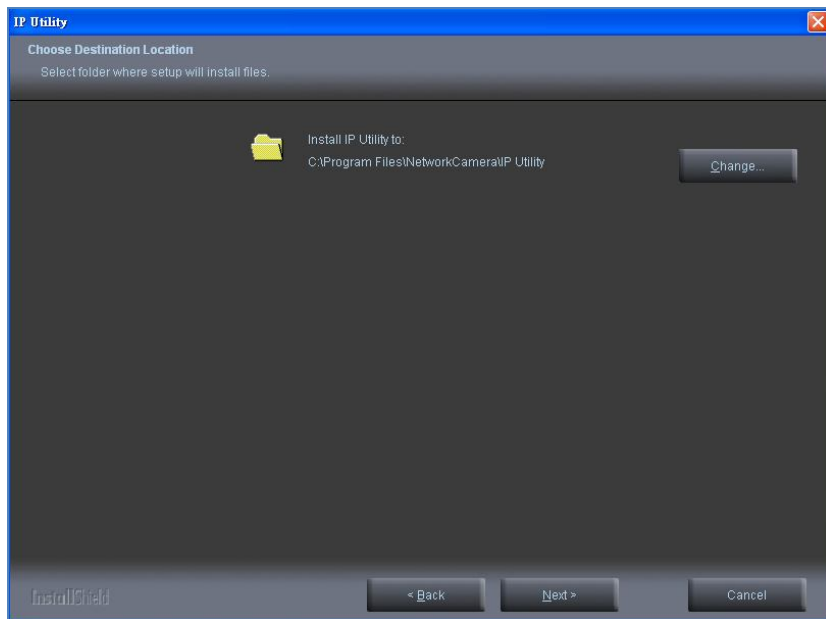
4. Select to create shortcuts. Click <Next> to continue.

5. Click to launch the application, and click <**Finish**> to complete the installation.

IP Utility

To launch the IP Utility, an IP Utility icon was installed on the desktop.   Double click on the icon to open. The program can also be found in C:\Program Files\NetworkCamera\IP Utility unless the program was saved to a preferred directory.

1. Click <**Start**> to continue.   The program will automatically search for the camera

on the intranet.

2. There may be many cameras on the local network. Differentiate the cameras by using their UPnP name. Double click on the camera from the survey list to connect.

Authentication

To access the camera's live view, open a web browser and enter the IP address of the camera. A dialog window will pop requesting a username and password.   The default username and password for the Administrator are assigned as "**admin/admin**".   For non administrator

accounts, users can choose to remember the password for future convenience. However, it is not recommended that this feature be used when viewing the camera from a public computer.


Installing the Plug-In

For initial access to the camera in Windows, the web browser may ask the administrator for permission to install a new plug-in for Internet Explorer. Permission request depends on the Internet security settings of the user's PC or notebook. If the highest security level is set, the computer may prohibit any attempt to install or run the program. This plug-in has been certified and is used to display the video in the browser. Click on Install to proceed. If the web browser does not allow the administrator to continue the installation, check the Internet security options and lower the security levels or contact the network supervisor or IT

for help.

(1) ⚠️**NOTE** – After upgrading firmware of the camera, if an

error occurred or the plug-in fails to install. Please refer to

the following steps:Remove the "NetworkCamera Media

Control Embedded" via the path "Control

Table"->"Add/Remove program".

(2) Restart the computer.

(3) Connect to the camera

(4) Install the permission again.

Live View
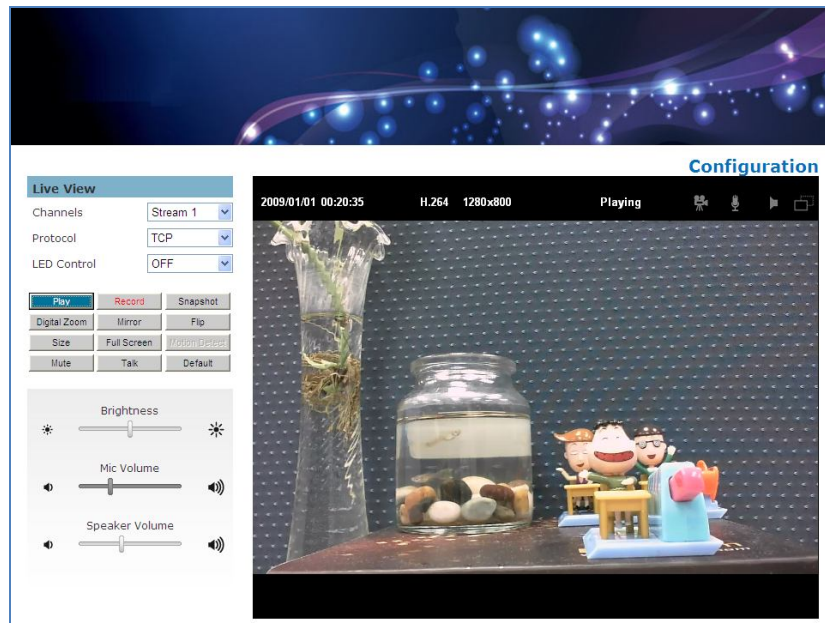
Live View is the default page that opens when accessing the camera. Live video is displayed directly in the window browser.

Stream1/Stream2 Channels

The network camera offers simultaneous dual stream for optimized quality and bandwidth. Go to Configuration → Camera/Video/Audio → Video to configure the codec compression and video resolution or refer to the Video configuration page.

HTTP/TCP/UDP protocol

HTTP – This unicast method can be used to traverse firewalls. Firewalls are commonly configured to allow the HTTP protocol, thus allowing RTP to be tunneled.

TCP - This protocol guarantees the complete delivery of streaming data and provides better video quality. The downside of using this protocol is that the quality of its real-time effect is less than that of the UDP protocol.

UDP - This protocol allows for more real-time audio and video streams. However, network

packets may be lost due to network traffic and images may be broken. Activate UDP connection time - sensitive responses are more important than video quality.

(*) LED Control – Use the drop-down menu to adjust the brightness of the camera's LED.
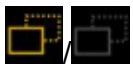
Recording on/off - Displays the status of recording video

MIC on/off - Displays the status of the MIC volume

Speaker on/off - Displays the status of the Speaker volume

MD on/off - Displays the status of Motion Detection

Play or Stop - Play or stop the video.

Record - Record video to a computer.

Snapshot - Capture and save still images.

Digital Zoom - Enable the digital zoom operation.

Mirror - Horizontally reflect the display of the live video.

Flip - Vertically reflect the display of the live video.

Size - View the object in real size. Click again to switch back to normal mode.

Full Screen - Switch to full screen mode. Press the "Esc" key to return to normal mode.

Motion Detection – Observe the detection condition of motion detection.

Mute – Turn off the sound.

Talk – Communicate through the camera using the computer MIC.

Default – Reset to default.

- **Brightness -** Drag the slider bar to adjust the image brightness.
- **Mic volume** - Drag the slider bar to adjust the microphone volume.

● **Speaker volume -** The built-in speaker will play sound from an audio clip from the computer microphone when it is enabled.

For more Audio settings, please refer to the Audio configuration page.

⚠️ **NOTE**

1. The <Control Panel> functions have no effect on the recorded video. Whatever changes are made to the <Control Panel> **will not** be applied to the recorded video.

2. The LED is not for continuous use and has an estimated life span of 30,000 hours.

3. The LED cannot be replaced.

Configuration

Click <**Configuration**> on the top right corner of the main page to make changes to the camera settings.   Please refer to Appendix A "Comparison datasheet for different product series" for further comparison.

⚠️ **NOTE -** Only Administrators can access the Configuration page.

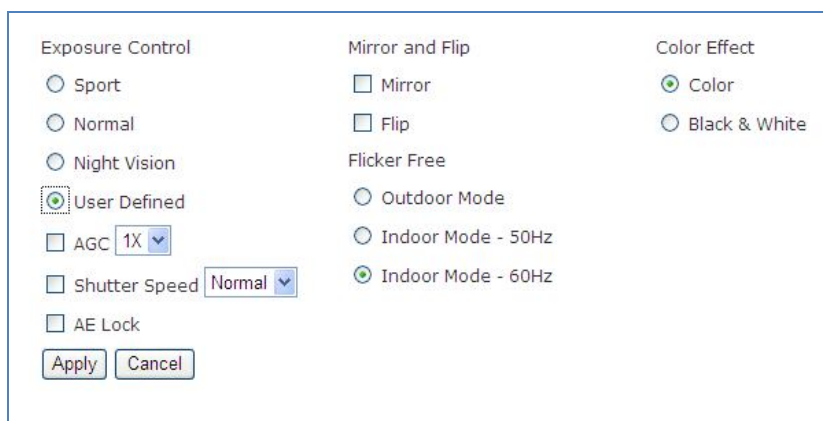## Camera/Video/Audio

Camera
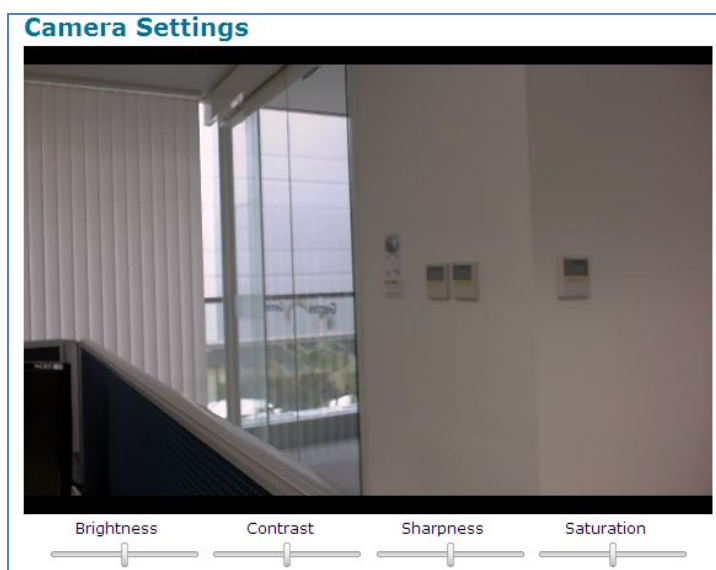
Brightness - Drag the slider bar to adjust the image brightness level from -5 to +5.

Contrast - Drag the slider bar to adjust the image contrast level from -5 to +5.

Sharpness - Drag the slider bar to adjust the image sharpness level from -5 to +5.

Saturation - Drag the slider bar to adjust the image saturation level from -5 to +5.

Exposure Control

Sport – Select this option when monitoring rapidly moving objects.

Normal – Select this option for normal monitoring conditions.

Night Vision – Select this option when monitoring at night or in low light conditions.

User Defined – Select this option to define the exposure manually.

AGC (Auto Gain Control) - The AGC can be set from 1X to 5X. Set the Gain Rate higher for better video illumination. 5X provides the best video illumination.

Shutter Speed

Fast – For high activity exposure.

Normal – For normal exposure.

Slow – For night vision exposure.

AE Lock (Auto Exposure) - The camera will automatically adjust the exposure to changes in ambient light.

⚠ **NOTE** – A higher gain rate may cause fast moving images to judder or blur.

Mirror and Flip

Mirror - Enable to horizontally reflect the display of the live video.

Flip - Enable to vertically reflect the display of the live video.

Flicker-Free – Eliminate the problem of flicker.

Click the Radio button to select outdoor or indoor mode based on the conditions.

Color Effect - Select to display color or black and white video streams.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Light Sensor

Light Sensor   ⏱ 10 ▾ Second ☼ 41 [====|====|====] 79 ☀

(1)Under low Lux, modify the waiting time before light sensor service begin.

Video

The Network Camera offers two separate streams for different viewing options.

Stream 1 & Stream 2

  Video Codec - The Network Camera offers three choices of video codec standards for

   real-time viewing: H.264, MPEG-4 and MJPEG.

    Video Resolution - Select from the drop-down menu to choose the best resolution

recording settings.

Frame Rate - Select the frame rate from drop-down menu. When H.264 or MJPEG or MPEG-4 is selected, the frame rate ranges from *1 to 15 fps.* Set a higher frame rate for smoother video quality.

Video quality and bitrate - Choose either "quality" or "bitrate" to control the video quality with H.264 or MPEG4. Only "quality" available when video codec is MJPEG. Set the bitrate higher for better video quality.
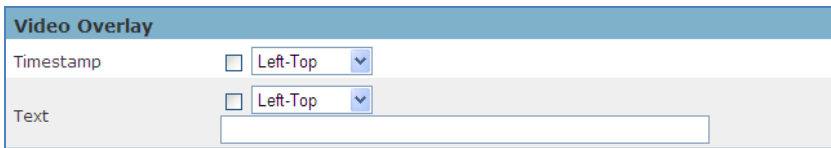
⚠ **NOTE** - a higher bitrate will use more network bandwidth. The video quality can be set between Level 1 to Level 6, with Level 6 producing the best image quality.

Quick Settings: For Mobile Streaming – Click to adjust the video codec to MPEG4 with 320x192 (QVGA) resolutions for the video that can be viewed in mobile phone.

HTTP Transport – If MJPEG is used for Video Codec, users can enable HTTP Transport protocol for video communication.

⚠ **NOTE** – HTTP Transport is for non-IE browser users only.

Video Overlay

Video Overlay		
Timestamp	☐ Left-Top ▾	
Text	☐ Left-Top ▾	

Timestamp

To display the date and time on the screen during live view, check to enable the timestamp function and select the display position from the drop-down menu.

Text

To make a note about the camera, check to enable and select the display position from the drop-down menu.   Enter a video description in the text box.

Click **Apply** to apply settings or **Cancel** to cancel changes.

⚠ **NOTE -** The video overlay will only take effect in stream 1.

RTSP Server

RTSP Server	
Port	554
Authentication	NONE ▼
Apply Cancel	

To utilize RTSP authentication, the user must first set a password for the camera. RTSP (Real-Time Streaming Protocol) controls the delivery of streaming media. By default the port number is set to 554.

Authentication - Depending on the network security requirements, the camera provides two types of security settings for streaming via RTSP protocol: NONE and DIGEST.

If DIGEST authentication is selected, user credentials are encrypted using MD5 algorithm, thus providing better protection against unauthorized access.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Audio Configuration

The administrator can set up two separate streams for the camera for different viewing devices. The administrator can enable or disable the audio function on either stream. If audio enable is selected, select the Audio codec from the drop-down menu.

Audio Configuration	
Stream 1	☐ Audio Codec G.711 ▼
Stream 2	☐ Audio Codec G.711 ▼
Advanced Settings	
Camera MIC	MIC Type Built-in MIC ▼
Camera Speaker	☑ Volume 50% ▼
Echo Cancellation	☐
Apply Cancel	

Advanced Settings(*)

Camera MIC (*) - The Network Camera supports two way audio communication so that

operators can transmit and receive audio simultaneously. By using the Network Camera's built-in microphone and an external speaker, users can communicate with people who are within range of the Network Camera.

Camera Speaker (*) – If the speaker is enabled, select the volume from the drop-down menu.

Echo Cancellation (*) - Enable to avoid echo.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Privacy Mask Control(*)

The Cube camera is equipped with a privacy feature which allows users to mask the camera's live view.   A black screen will be displayed in the place of the live view window. This application is particularly useful when the camera is being used for home surveillance.   With the privacy button, users can have privacy while they are going about their daily life.
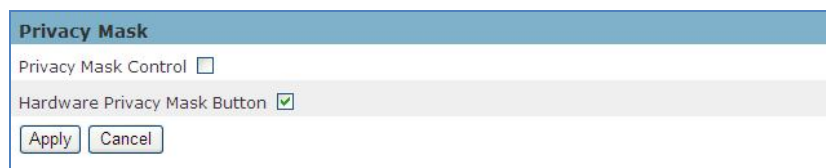
Privacy Mask Control(*) – Enable the Privacy Mask control to remotely mask the camera's live view.

Hardware Privacy Mask Button(*) *) – Click to enable the privacy mask button on the camera.   If this feature is not enabled, the user will not be able to use the privacy mask button.

Click **Apply** to apply settings or **Cancel** to cancel changes.
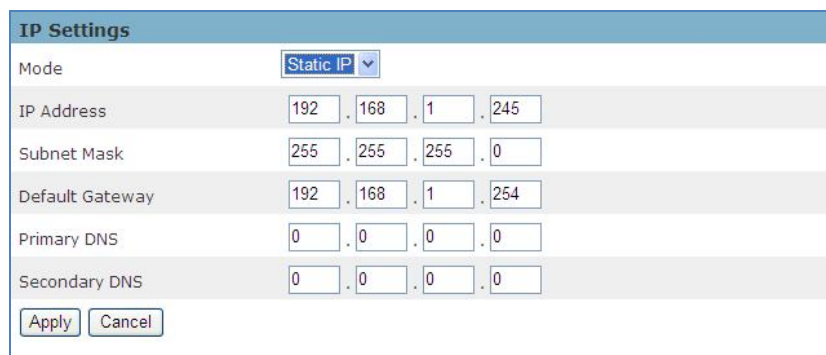
Network

IP Settings

This section explains how to configure a wired network connection for the camera. There are several ways to setup the camera over the Internet: (1) obtain an available dynamic IP address assigned by a DHCP server, (2) use a static IP address, or (3) use PPPoE (Point-to-point over Ethernet).   Select the desired setup mode from the IP settings drop-down menu.

IP Settings

Mode   DHCP ▾

[Apply] [Cancel]

1. **DHCP –** If this option is selected, the camera will automatically obtain an available
    dynamic IP address from the DHCP server each time it connects to the LAN.

Click **Apply** to apply settings or **Cancel** to cancel changes.

IP Settings

Mode	Static IP ▾
IP Address	192 . 168 . 1 . 245
Subnet Mask	255 . 255 . 255 . 0
Default Gateway	192 . 168 . 1 . 254
Primary DNS	0 . 0 . 0 . 0
Secondary DNS	0 . 0 . 0 . 0

[Apply] [Cancel]

2. **Static IP -** Select this option to manually assign a static IP address to the camera. Enter
    the static IP address, Subnet mask, Default Gateway, and Primary and Secondary DNS
    provided by the ISP.

Click **Apply** to apply settings or **Cancel** to cancel changes.

IP Settings

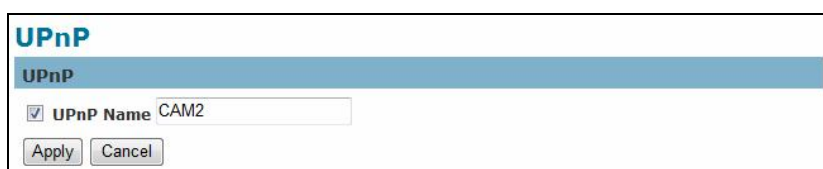| Mode | PPPoE ▾ |
| Username | [   ] |
| Password | [   ] |

[Apply] [Cancel]

3. **PPPoE** (Point-to-point over Ethernet)**:** Use this mode if connecting to the Internet
    through a DSL Line. ⚠ **NOTE** – This feature requires an account provided by an

Internet Service Provider. Enter the user name and password provided by the ISP.

Click **Apply** to apply settings or **Cancel** to cancel changes.

UPnP

Universal Plug and Play (UPnP) simplifies the process of adding a camera to a local area network.   Once connected to a LAN, the camera will automatically appear on the intranet. Click to enable this function and enter an UPnP name that the camera will appear as on the intranet.
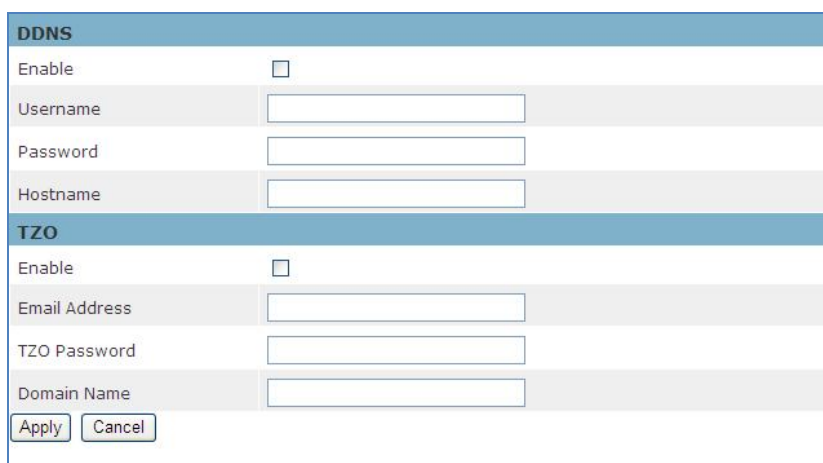
UPnP

UPnP	
☑ **UPnP Name**	CAM2
Apply Cancel	

Click **Apply** to apply settings or **Cancel** to cancel changes.

DDNS (dynamic domain name service)

DDNS links a domain name to an IP address, allowing users to easily access their camera even with a changing IP address.   The network cameras are compatible with two DDNS service providers (1) DynDNS, and (2) TZO.   ⚠**NOTE** - Before utilizing this function, please apply for a dynamic domain account from a DDNS provider.

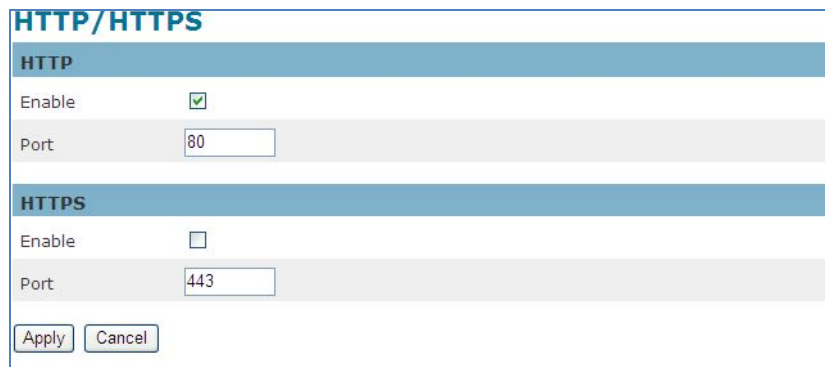| DDNS	
Enable	☐
Username	
Password	
Hostname	
TZO	
Enable	☐
Email Address	
TZO Password	
Domain Name	
Apply Cancel	

DynDNS – Enable the DynDNS to give the camera a fixed host and domain name.   Refer to

the DynDNS website (www.dyndns.com) to apply for a dynamic domain account. When an account has been created, enter the username, password and hostname.

TZO is a DDNS provider that allows users to create a dynamic DNS. Refer to the TZO website (http://www.tzo.com/) to apply for a dynamic domain account. When an account has been created, enter the e-mail address, password and domain name.

Click **Apply** to apply settings or **Cancel** to cancel changes.
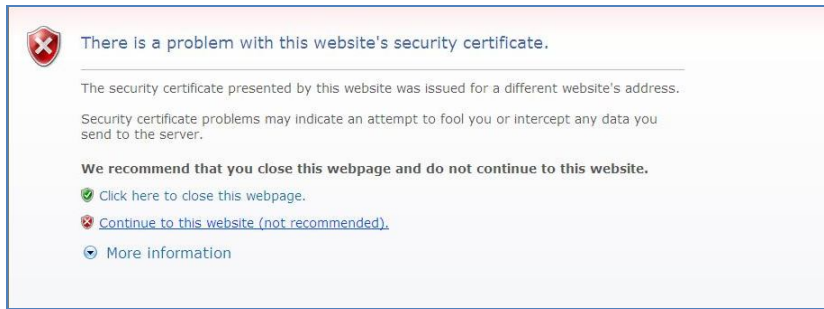
HTTP/HTTPS

HTTP – (HyperText Transfer Protocol) - This protocol allows for TCP protocol quality without having to open specific ports for streaming. Users inside a firewall can utilize this protocol to allow data to stream through.

HTTPS - (Hypertext Transfer Protocol over SSL) - This protocol allows authentication and encrypted communication over SSL (Secure Socket Layer). It helps protect streaming data transmission over the Internet on a higher security level than HTTP.

Click "Enable" to enable and **Apply** to apply settings or **Cancel** to cancel changes.

To enable HTTPS, users have to create and install a certificate.

1. Click "Continue to this website" to install.

There is a problem with this website's security certificate.

The security certificate presented by this website was issued for a different website's address.

Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.

We recommend that you close this webpage and do not continue to this website.

✅ Click here to close this webpage.

❎ Continue to this website (not recommended).

⊙ More information

2. Enter the User name and Password of the camera.

3. Click "Certificate Error" on the top right corner of the window to view the certificate.
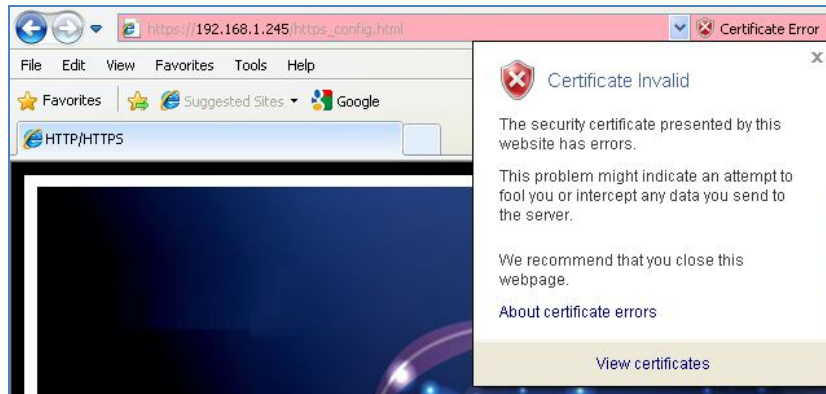
4. Click "Install Certificate" and follow the steps to finish the installation.

Multicast

Multicast sends a video stream to the multicast group address and allows multiple clients to access the stream at the same time by requesting a copy from the multicast group address. Therefore, multicast can effectively save Internet bandwidth. The RTSP (Real-Time Streaming Protocol) controls the delivery of streaming media.

Click "Enable" to enable Multicast stream 1 or Multicast stream 2. The default value for the multicast address and port are 234.1.2.3 and 10000. Use different port numbers for different streams. It is recommended to use the default values.

⚠ **NOTE** - Using the IP address of the Network Camera enables access to the video.

Example: rtsp://192.168.1.1/channel1(Not supported by IE, Windows media player. It is recommended to use: VLC media player)

Click **Apply** to apply settings or **Cancel** to cancel changes.

EasyLink
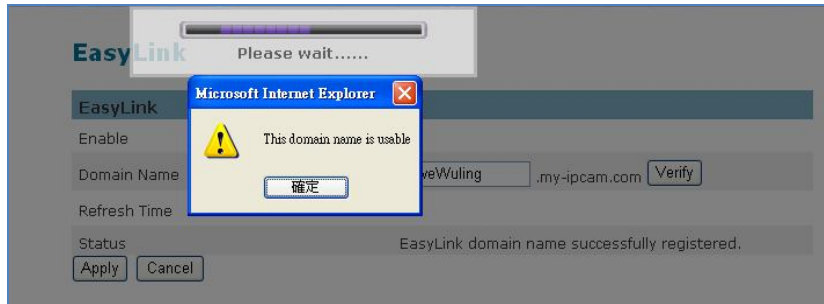
EasyLink has similar function with DDNS. User can create and use a memorized easily domain name after verifying successfully.

Wireless (*)

These settings control how a Network Camera interacts with a wireless network. Users can identify the wireless network and enable wireless encryption.

⚠️ **NOTE** – This function is only available for Wi-Fi models.

Basic Settings(*)

Network Name (SSID) - The Service Set Identifier (SSID) is the network name used to identify the wireless signal emitted from a wireless camera.   It is case-sensitive and can be up to 32 characters long.

Wireless devices have a default SSID set by the factory. NetworkCamera wireless products use **NetworkCamera** as the default name. It is recommended that users rename their SSID to something unique in order to distinguish their wireless device from surrounding wireless networks.

⚠️ **NOTE** - Be careful when including personal information when naming the SSID as it can be viewed by anyone browsing for wireless networks.

Security - Encryption protects data transmitted over a wireless network. Wi-Fi Protected Access (WPA-Personal/WPA2-personal) and Wired Equivalent Privacy (WEP) offer different levels of security for wireless communication. A network encrypted with WPA-Personal/WPA2-personal is more secure than a network encrypted with WEP because WPA-Personal/WPA2-personal uses dynamic key encryption. To protect the information as it passes through the airwaves, it is recommended that the highest level of encryption supported by the network equipment be enabled.

Site Survey – Survey the local area for available wireless networks.   The user should select their Local Area Network (LAN) from the Site Survey List.

Click **Apply** to apply settings or **Cancel** to cancel changes.

WEP- Wired Equivalent Privacy (WEP) is a basic encryption method that transmits network broadcast messages using radio signals.   It is not as secure as WPA.

TX Key - Select a key from the drop-down menu.

WEP Encryption - Select a level of WEP encryption: 64 bits 10 hex digits or 128 bits 26 hex digits. The default is 64 bits 10 hex digits.

Key 1-4 - Enter the WEP key(s) manually.

Authentication - The default is set to Open System, which allows either Shared Key or Auto authentication to be used. With Shared Key authentication, the sender and recipient use a WEP key for authentication. With Auto authentication, the sender and the recipient do not use a WEP key for authentication.

Click **Apply** to apply settings or **Cancel** to cancel changes.

WPA-Personal - WiFi Protected Access (WPA)-Personal

Encryption - Supports two encryption methods with dynamic encryption keys: Temporal Key Integrity Protocol (TKIP) and Advanced Encryption Standard (AES). Select the algorithm type from the drop down menu: TKIP or AES. The default is TKIP.
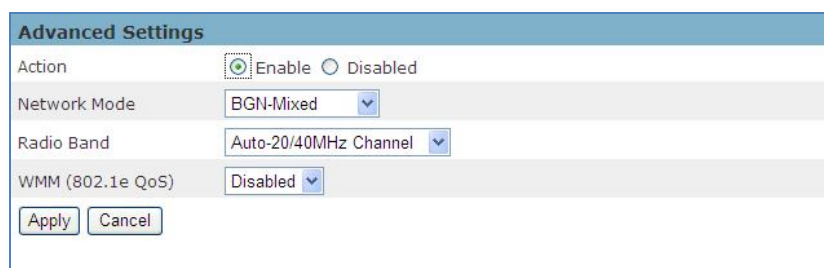
Shared Key - Enter the key shared between the Router and the server keys. Enter a password of 8-63 characters.

Click **Apply** to apply settings or **Cancel** to cancel changes.

WPA2-Persona l - WiFi Protected Access (WPA2-Personal)

Network Name (SSID)	NetworkCamera	Site survey
Security	WPA2-Personal ▾	
Encryption	AES ▾	
Shared Key		(8 to 63 characters)
Apply Cancel		

Encryption - WPA2 supports AES encryption method with dynamic encryption keys.

Shared Key - Enter the key shared between the Router and the server keys. Enter a password of 8-63 characters.

Click **Apply** to apply settings or **Cancel** to cancel changes.

⚠ **NOTE -** If using WPA or WPA2, each device in the wireless network must use the same WPA or WPA2 method and shared key or else the network will not function properly.

Advanced Settings(*)

Advanced Settings	
Action	⊙ Enable ○ Disabled
Network Mode	BGN-Mixed ▾
Radio Band	Auto-20/40MHz Channel ▾
WMM (802.1e QoS)	Disabled ▾
Apply Cancel	

Action – Click to enable or disable the function.

Network Mode - From the drop-down menu, select the wireless standard running on the network.

- •If there are Wireless-B, Wireless-G and Wireless-N (2.4GHz) devices on the network, use the default setting, **BGN-Mixed**.

- •If there are Wireless-B and Wireless-G devices on the network, select **BG-Mixed**.

- If there are only Wireless-B devices on the network, select **Wireless-B Only**.

- If there are only Wireless-G devices on the network, select **Wireless-G Only**.

- If there are only Wireless-N (2.4GHz) devices on the network, select **Wireless-N Only**.

Radio Band - The settings are available for the Auto-20/40MHz channel and Standard-20 MHz channel.

WMM (802.1e QoS) - WMM is a wireless Quality of Service feature that improves quality for audio, video, and voice applications by prioritizing wireless traffic. To use this feature, the wireless client devices on the network must support Wireless WMM. The default setting is **Enable.**　To disable this feature, select **Disable**.

Click **Apply** to apply settings or **Cancel** to cancel changes

Wi-Fi Protected Setup(*)

Wi-Fi Protected Setup	
PIN Mode	Enter the PIN number **45891649** into the AP device's WPS interface.
	Enter the AP's SSID NetworkCamera
	Click Register to begin WPS. [Register]
Wi-Fi Protected Setup Status	Not Configured

[Apply] [Cancel]

Use this method if the client device has a Wi-Fi Protected Setup PIN number.

1. Enter the network name from the device in the field.

2. Click <Register> to start WPS.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Event

Motion Detection

Motion can be detected by measuring changes in the speed or vector of an object or objects in the monitored area. This section explains how to configure the Network Camera to enable
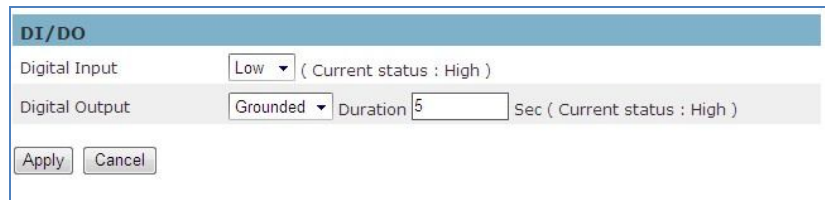
motion detection.
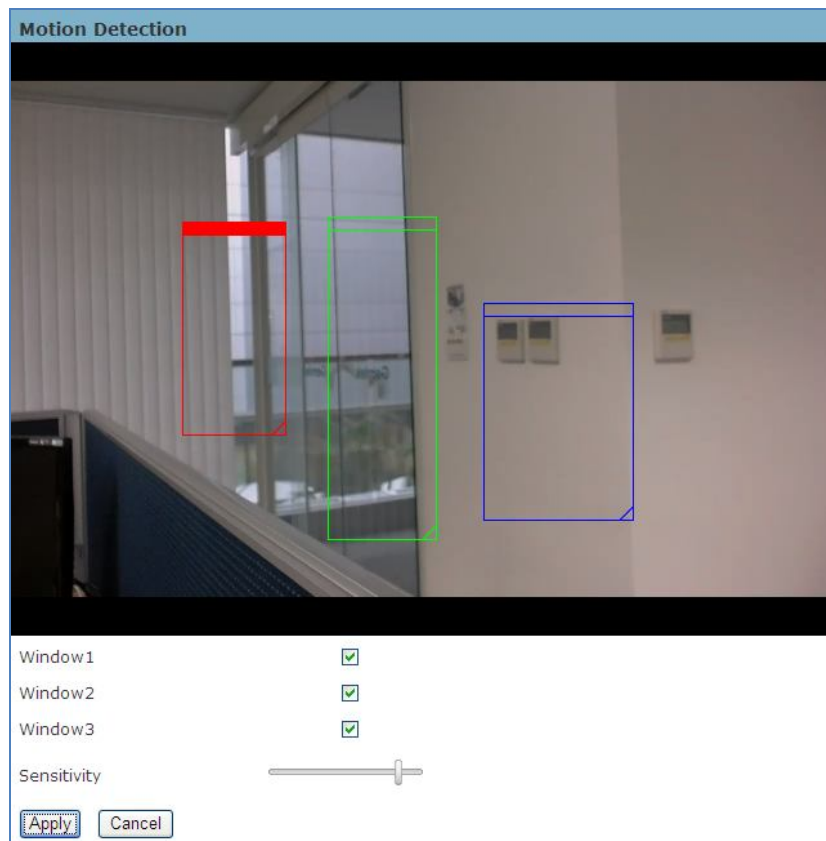
Use this setting to enable and define the motion detection windows. The user can define up to three areas on the live view window for motion detection.

1. Select <Window1>, <Window2>, or <Window3> to adjust the motion detection window.

2. Check the box to enable the window.

3. Use the mouse to resize or move the motion detection window.

4. Adjust the "Sensitivity" level.   Lower sensitivity levels will result in more activity needed to trigger an event.

5. Users can use this feature as a trigger source to send photos or videos to a remote server via email or FTP.

Click **Apply** to apply settings or **Cancel** to cancel changes.
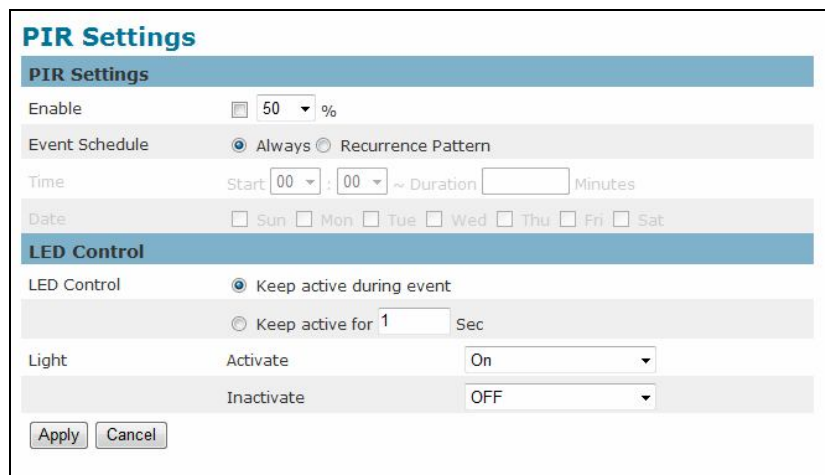
DI/DO(*)

The photo above shows how to modify the digital input and digital output. If the current status is set to high, when an event occurs, the digital output will send a notification to the user depending on the notification settings.

PIR (*)

PIR Settings - The PIR (Passive Infra Red) sensor measures infrared light radiating from objects in its field of view.   This can be used to detect a moving object, such as a person, in dimly lit areas.

Enable and adjust the sensitivity of the PIR Sensor from the drop down menu.   The sensitivity can be set from 10 - 100%; with the default sensitivity set at 50%.   Higher sensitivity levels will increase the range of the PIR Sensor.   When the sensitivity level is set to 100%, the PIR sensor will be able to detect moving objects within six meters.
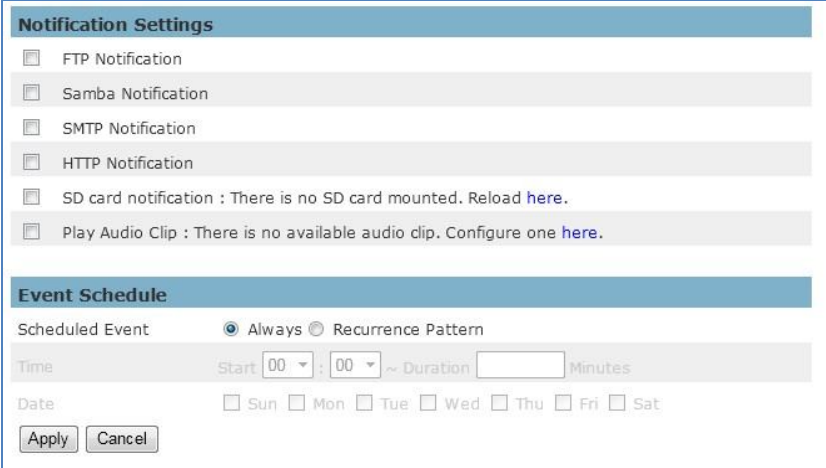
LED Control

LED Control - select "Keep active during event" or "Keep active for" a specific amount of time when an event occurs.

Light - The LED on the front of the camera can be set to flash at a configurable interval when an event is triggered.   From the Activate drop down menu, select a percentage level for the LED to brighten to.   When the LED reaches the selected percentage, it can be configured to fade off or to turn off immediately.   Select the option from the Inactive menu.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Notifications

Notifications are the reactions that occur in response to particular events. Users can set their notifications up so that when motion is detected, the Network Camera sends buffered images to an FTP server, Samba, SMTP, HTTP or an audio clip can be played. In this page, you can specify which notification messages will be sent when a trigger is activated.

Notification Settings

When an event is triggered, you can specify what kind of action will be performed. You can attach a video clip or snapshot to your email address, FTP site, and samba or use URL to send
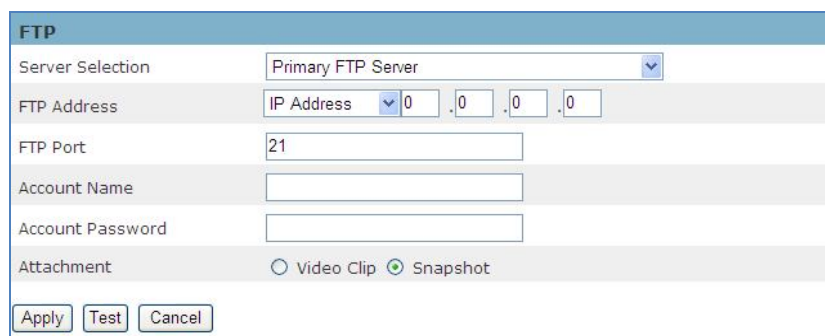
HTTP requests as the notification.

⚠️**NOTE** - Refer to the Audio Clip section for more details about the "Play Audio Clip."

Click **Apply** to apply settings or **Cancel** to cancel changes.

FTP Settings

File Transfer Protocol (FTP) is used as an application component to automatically transfer files for a program internal functions. Select "Primary FTP Server" from the Server Selection drop down menu to send media files to a FTP server when an event is triggered. Enter the FTP IP address or hostname. By default, the FTP port server is set to 21. Enter the account nameand password to configure the settings. There are two choices of media types available; video clip and Snapshot.

FTP	
Server Selection	Primary FTP Server
FTP Address	IP Address 0 .0 .0 .0
FTP Port	21
Account Name	
Account Password	
Attachment	○ Video Clip ⊙ Snapshot
Apply Test Cancel	

Click **Apply** to apply settings or **Cancel** to cancel changes.

SMTP Settings

Select to send the media files via Email when a trigger is activated.

From - Enter the email address of the sender.

To - Enter the email address of the recipient. Multiple recipients should be separated by commas.

CC - Enter the email address of the indirect recipient.

My name - The title shown in the email.

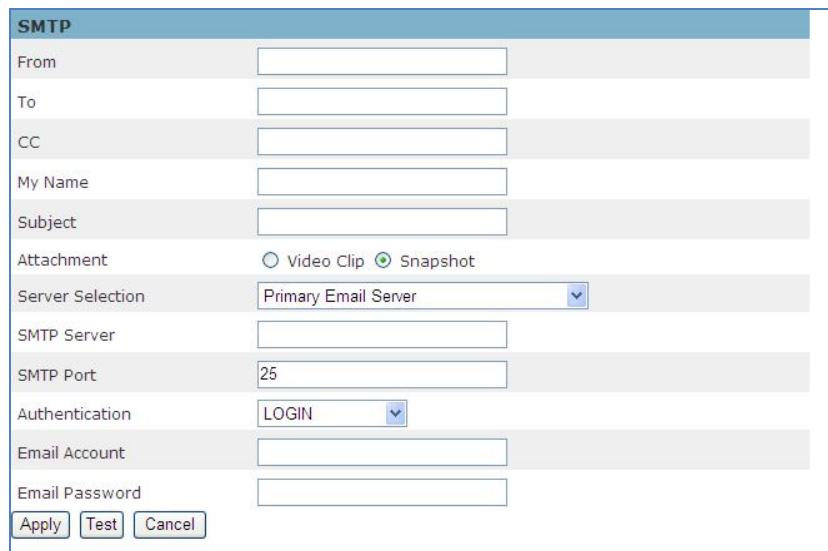Subject - Enter the subject of the email.

Attachment - There are two choices of media types available; video Clip and Snapshot.

SMTP Server and port number - Enter the server host name and port number of the email server.

Authentication - Select the authentication type from the drop-down menu.

Email Account - Enter the user name of the email account if necessary.

Email Password - Enter the password of the email account if necessary.

SMTP	
From	
To	
CC	
My Name	
Subject	
Attachment	○ Video Clip ⊙ Snapshot
Server Selection	Primary Email Server ▼
SMTP Server	
SMTP Port	25
Authentication	LOGIN ▼
Email Account	
Email Password	
Apply Test Cancel	

Click **Apply** to apply settings or **Cancel** to cancel changes.

Samba Settings

Select this option to send the media files via a network neighborhood when an event is triggered.

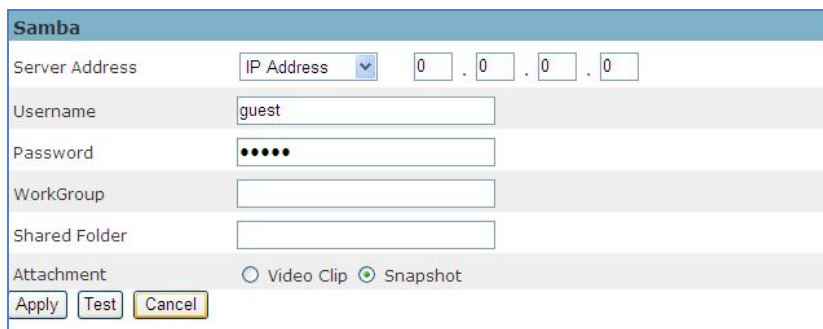Server Address - Enter the IP address of the Samba server.

User Name - Enter the user name of the Samba server.

Password - Enter the password of the Samba server.

WorkGroup - Enter the workgroup of the Samba server.

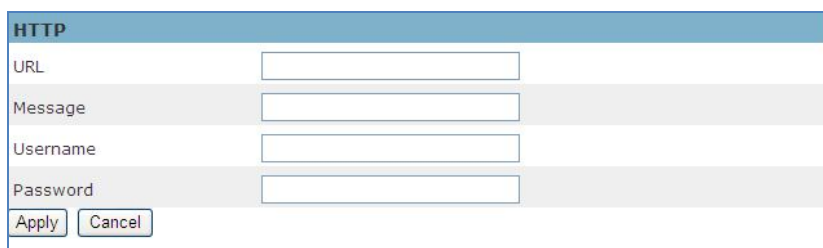Shared Folder - Enter the shared folder of the Samba server.

Attachment - There are two choices of media types available; video Clip and Snapshot.

Click **Apply** to apply settings or **Cancel** to cancel changes.

HTTP Settings

Select this option to send the media files via an HTTP notification when an event is triggered.

URL –Specify the URL to send HTTP requests.   The URL is normally written as:

http://ip_address/ notification.cgi?parameter
ip_address – type the IP address or host name of the HTTP host.
Parameter – type the notification parameter if necessary.

Example

URL - http://192.168.1.1/xxxx.cgi

Message - name1=value1&name2=vlaue2

Result - http://192.168.1.1/xxxx.cgi? name1=value1&name2=vlaue2

Ex:

https://192.168.1.1/notification.cgi?event=MD&camera=CAM1

Message - Enter the message notification that will be sent when an event is triggered.

Enter the user name and password if necessary.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Audio Clip(*)

Audio clips can be recording and played when an event occurs.

To record a new clip using the camera's microphone:

1. File Name - Enter a file name.

2. Duration - Enter the number of recording seconds.

3. Click **Record** to record the new audio clip.

4. Import audio clips from computer is available

5. The new audio clip will appear on the audio clip list.

6. Select an audio clip file from the Audio Clip List.

   a. Play- Select to hear the audio clip
   b. Stop- Select to stop playing the audio clip.
   c. Delete- Select to delete an audio clip.

Video Clip(*)

Video Clip can adjust the recording time and maximum buffer size before and after the event.

For example, if you set Pre-Alarm Buffer=5 seconds, the camera will record video 5 seconds before the motion was detected.

1. Pre-Alarm Buffer-The number of seconds recorded before detecting the event.
2. Post-Alarm Buffer-The number of seconds recorded after detecting the event.
3. Maximum Buffer Size-The Maximum Size used per recording.

SD card(*)

Scheduled Event(*)

Click **New** to open the recording setting page.

On this page, you can define the recording schedule and recording capacity.

Select **Enable**; the system begins recording and sends recorded files to the Network Storage.

Name - Enter a descriptive name for the recording setting.

Record - Select from the drop-down menu *for the recording event*

Time - Specify the recording duration.

■ Select the recording time in a 24-hr time format.

■ Select the days on a weekly basis.

When complete, Click Add to have the recording name appear on the recording list on the recording page. To **edit** a recording setting; click Edit to modify. Upon completion, click update to finish the modification. To remove a recording setting from the list, select a

recording name from the list and click **Delete**. Click New to add more events.

Storage Management (*)

Storage Management is used to view all of the recorded files on the (Micro)-SD/SDHC card.

Click **Reload** to refresh the list of recorded files.

Click **Remove** to safely remove the storage device.

Select a folder to list the recorded files.

Select a file and click **Delete** to delete the recorded file.

Select a file and click **Download** to save the file in the desired folder.

Automatic Recycle – Enable to automatically overwrite old files when the available space remaining on the (Micro)-SD/SDHC card is less than 100MB. If the Automatic Recycle function is disabled, there must be at least 50MB hard drive space available for the camera to be able to record video files.

Offline Record – Enable to keep recording if the Network Camera is offline.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Maintenance

Language

Select the desired language from the drop-down menu.

Click **Apply** to apply settings or **Cancel** to cancel changes.

User Management

This section explains how to enable password protection and create multiple accounts.

> **Privilege Settings -** Enter the new user's name and password. Select the privilege for new user account. Click **Add** to take effect. The administrator account name is "admin." This is permanent and can not be deleted.
>
> Access rights are divided as follows: (Administrator, Viewer and Remote Viewer).
>
> Administrator - user has access to view and change the Configuration page. Users with administrative privileges can change other user's access rights and delete user accounts. Click **Delete** or **Update** to delete or modify a user's account.
>
> Viewer - user can only access the main page for live viewing.
>
> Remote Viewer - user can only access the main page for live viewing using TCP protocol.
>
> Administrators can add up to 10 user accounts.

IP Filter

The IP Filter is used to filter the IP addresses that are able to access the network camera. Enable the IP Filter and select a range of IP addresses that are either allowed or denied access to the server.   Click **Add to List** to add the IP range to the IP filter list.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Firmware Upgrade

This feature allows the user to upgrade the camera firmware. It will take a few minutes to complete the process.

⚠ **NOTE** - Do not power off the camera or camera during the upgrade.

Upgrade - Click **Browse…** and specify the firmware file. Click **Upgrade**. The camera will begin upgrading and will reboot automatically when the upgrade is finished.
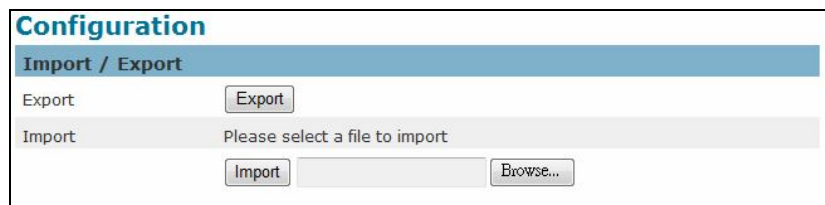
Configuration

This feature allows the user to export/import the configuration files of the network camera.
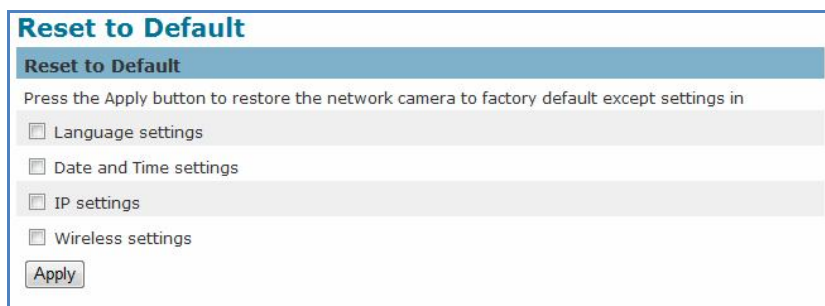
> **Import/Export -** Click **export** to pop up a dialog to indicate the location and file to export.
>
> Click **browse** to indicate the location and file of the camera configuration and click **import**
>
> to import the configuration file back into the network camera.

Reset to Default

Click **Apply** to restore the network camera to factory default settings.

In addition, you can choose whether or not to reset the language, data and time, and IP

settings.

Reboot

This feature will reboot the camera. Click **Apply** to begin.   A message will pop up asking "The

device will reboot.   Are you sure?"   Click "OK" to continue.   The camera will take about one

minute to reboot.

System

System Log

Log – Set up the camera to record a system log when an event is triggered.
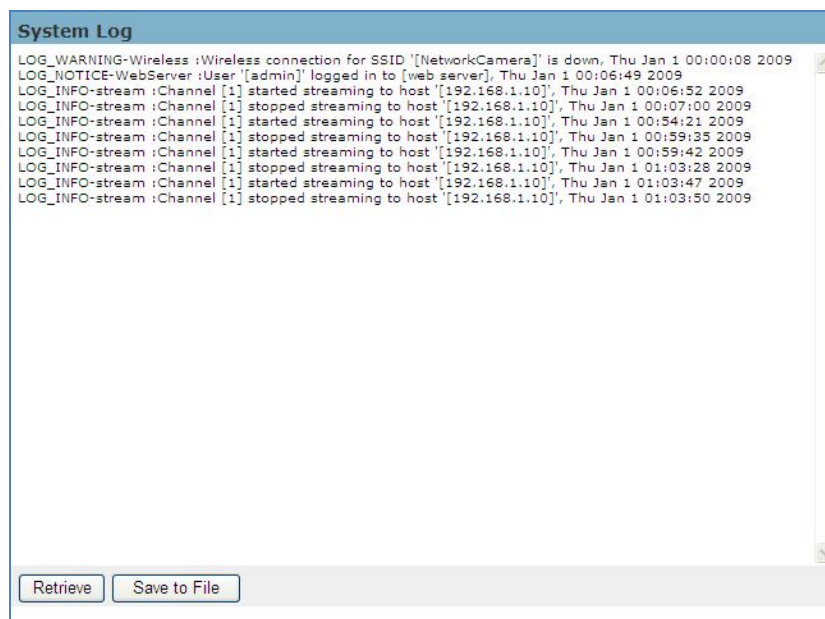
This page displays the system's log in chronological order. The system log is stored in the camera's buffer area and will be overwritten when the buffer area is full.

Click **Retrieve** to retrieve the log or click **Save to File** to save the system log.

Date and Time

Manual – Manually enter the date and time.

Clone from PC – The camera will sync with the time, and date of the computer used to modify the camera settings.   Check "Clone" to utilize this option.   The read-only date and time of the PC will be displayed.

NTP – (Network Time Protocol) - NTP is a protocol for synchronizing the clocks of a computer system.   Select to update the time with a NTP server on an hourly, daily, weekly, or monthly basis.

Time Zone – Select the local time zone from drop-down menu.

NTP Server 1 and Server 2 - Enter the address of the NTP server

Daylight Saving - Enable this option to automatically update for Daylight Savings Time.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Save File Folder

Recording folder path - The destination for saving the recording video files. Click Browse to

specify the saving path.

Snapshot folder path - The destination for saving the snapshot files. Click Browse to specify the saving path.

Click **Apply** to apply settings or **Cancel** to cancel changes.

Device Information

System Information – Displays the complete system information of the camera.

Network Settings – Displays the complete network settings information of the camera.

Video/Audio Settings – Displays the complete video/audio settings information of the camera.

Video/Audio Settings		
Stream 1		
	Video Codec	H264
	Video Resolution	1280x800(WXGA)
	Video Frame Rate	15 fps
	Video Quality	3
	Audio Codec	N/A
	Multicast IP	N/A
Stream 2		
	Video Codec	MJPEG
	Video Resolution	1280x800(WXGA)
	Video Frame Rate	15 fps
	Video Quality	3
	Audio Codec	N/A
	Multicast IP	N/A

Appendix A. Comparison Datasheet For Different Product Series:

Series Type		Cube				Bullet				Fixed Box				Fixed Dome		Vandal Dome		Mini Dome		Video			
Type		P	E	P+W	E+W	P	E	P+W	E+W	P	E	P+W	E+W	P	E	P	E	P	E	P	E	P+W	E+W
Camera		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Video		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Audio	Configuration	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	X	O	O	O	O
	Advanced Settings	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	X	X	O	X	O	X
Multicast		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Privacy Mask Control	Software	O	O	O	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	Hardware	O	X	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Network		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Wireless	Basic	X	X	O	O	X	X	O	O	X	X	O	O	X	X	X	X	X	X	X	X	O	O
	Advanced	X	X	O	O	X	X	O	O	X	X	O	O	X	X	X	X	X	X	X	X	O	O
	Wi-Fi Protected	X	X	O	O	X	X	O	O	X	X	O	O	X	X	X	X	X	X	X	X	O	O
Event	Motion Detection	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	DI/DO	X	X	X	X	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	PIR	O	X	O	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Notifications	FTP	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	SMTP	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	Samba	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	HTTP	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
	SD card	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O
	Audio Clip	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X
	Video Clip	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
SD card	Scheduled Event	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O
	Storage Management	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	X	O	O	O	O
Maintenance		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Configuration		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
System		O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O

where P, E, W are

	P	E	W
Function	Professional	Economy	Wireless