User's Manual

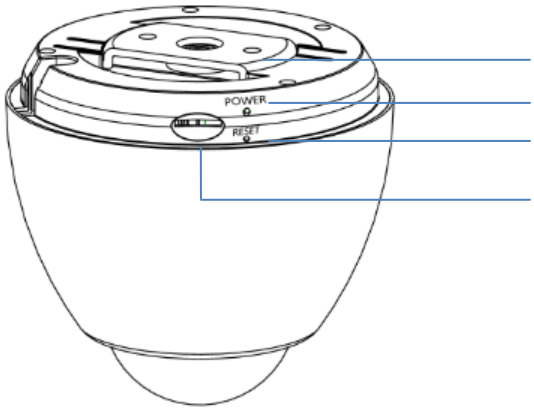
Dome IP Camera

V4.21

Please read this manual carefully before you attempt to Install this product and retain it for your future reference.

Physical Description

Dome IP Camera

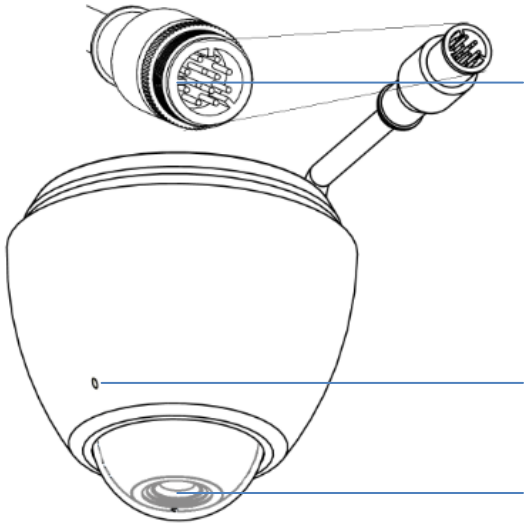


Metal Mounting Kit

Status LED

Reset Button

SD Card Slot

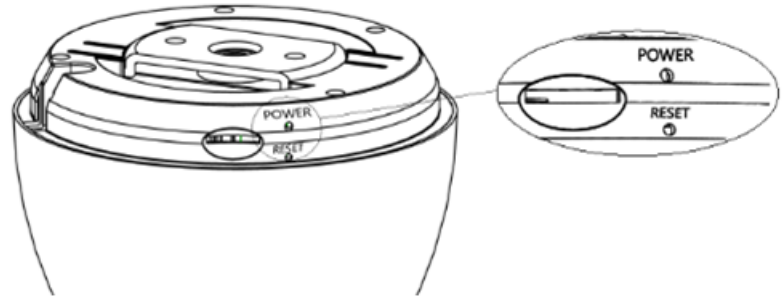


Aviation Connect Plug in

Built in Microphone

LENS

Hardware Reboot & Restore



The ***Reset*** button is used to restore the factory default settings. Sometimes resetting the system can return the camera to normal operation.

Restore - Press and release the reset button with a paper clip or thin object. The LED light will be out, after few seconds it will relight again. (**Note**: that all settings will be restored to factory default)

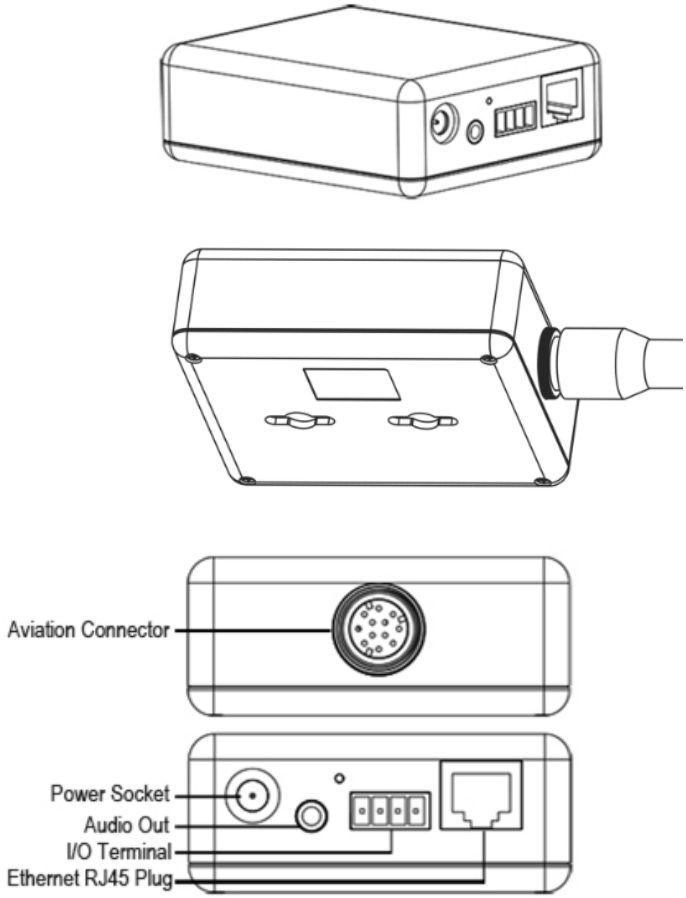
Status LED

The LED indicates the status of the Network Camera.

1) Green LED - Power is being supplied to the Network Camera.

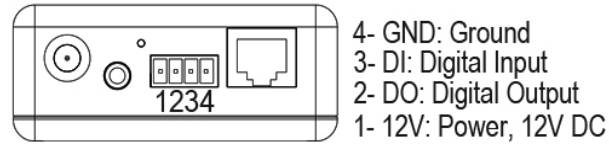
2) Blinking Orange LED – IP camera has been connected and data is present.

Adapter Box



General I/O Terminal Block

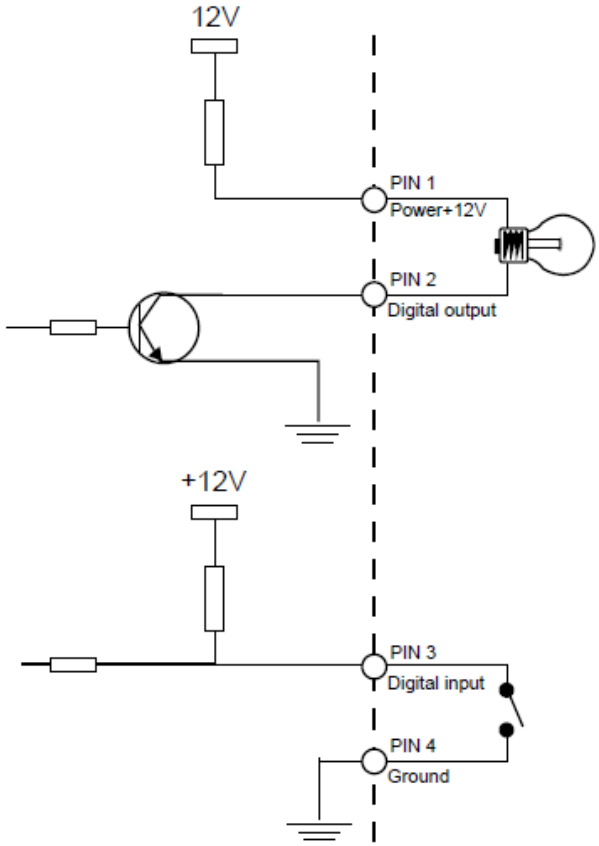
This Network Camera provides a general I/O terminal block which is used to connect external input / output devices. The pin definitions are described below.

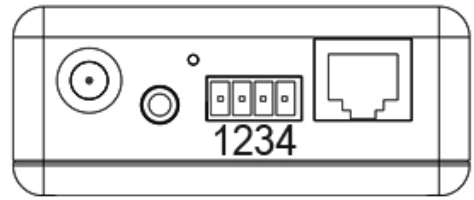


Pin No.	*Name*	*Function*	*Description*
4	GND	Ground	This is a signal ground use for DI and DO.
3	DI	Digital Input	Connect to GND to activate or deactivate by software setting.
2	DO	Digital Output	With a maximum load of 1A and maximum voltage of 60V DV, this output has an open-collector NPN Darlington transistor with the emitter to the GND pin. If used with an external relay, a diode must be connected in parallel with the load, for protection against voltage transients.
1	12V	Power	12VDC ± 10%, max. 0.4A

DI/DO Diagram

Please refer to the following illustration for the connection method.



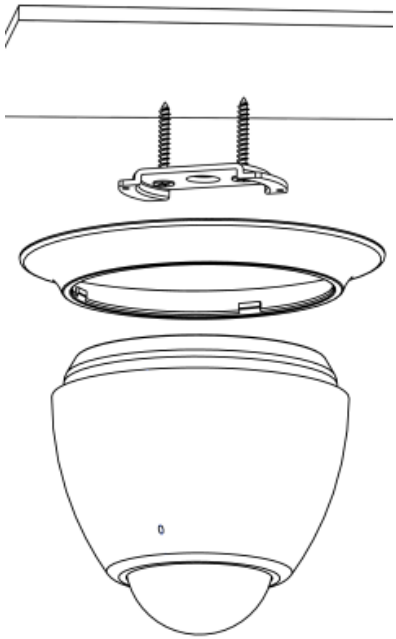


4- GND: Ground
3- DI: Digital Input
2- DO: Digital Output
1- 12V: Power, 12V DC

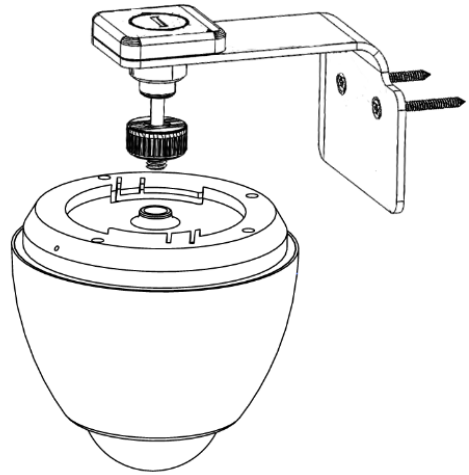
Installation Method

Please refer to the illustration and consider environment differences to appropriately mount the IP camera.

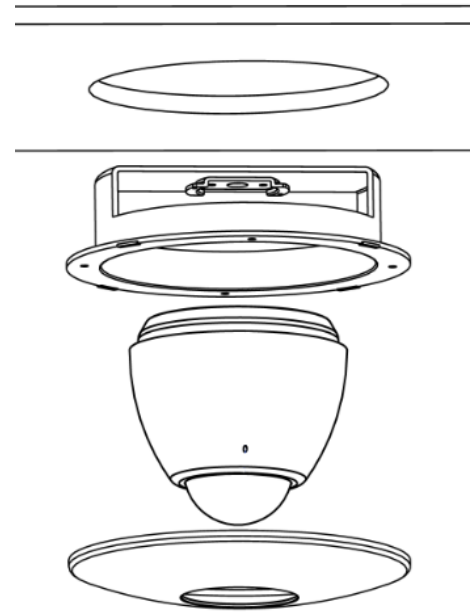
1)



2)



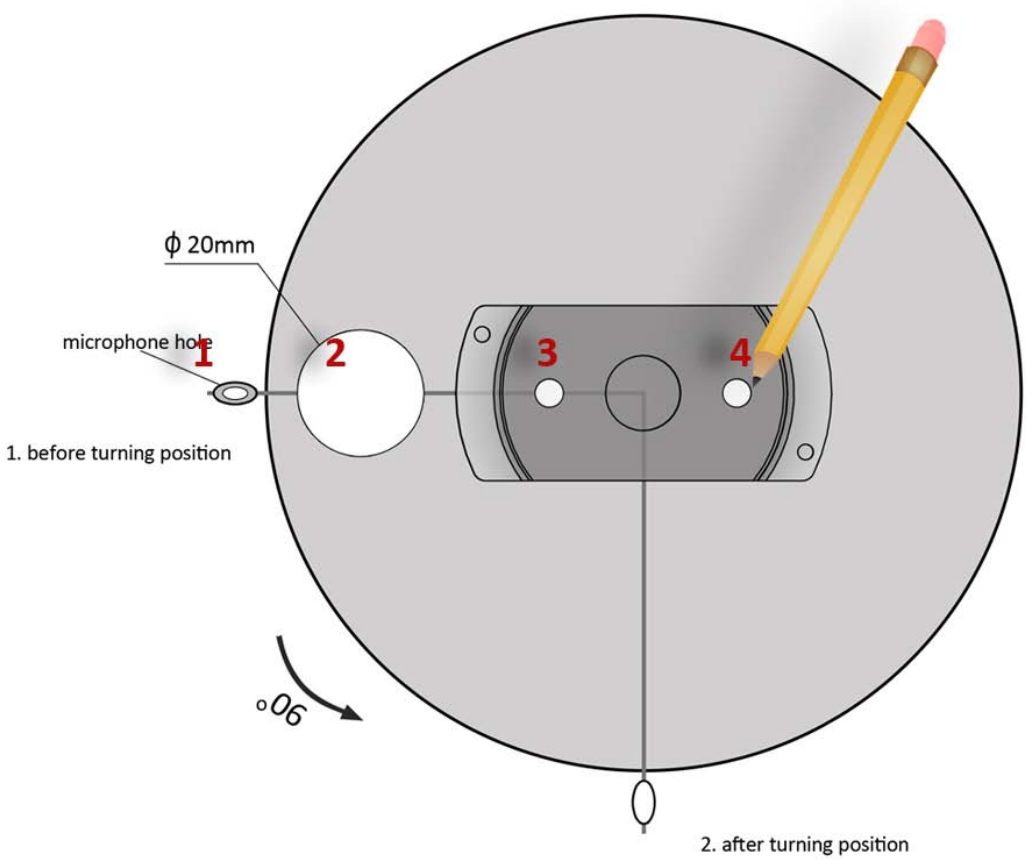
3)



Notes: This **2) 3)** is extra mounting Kit and required to buy separately, please contact with your dealer.

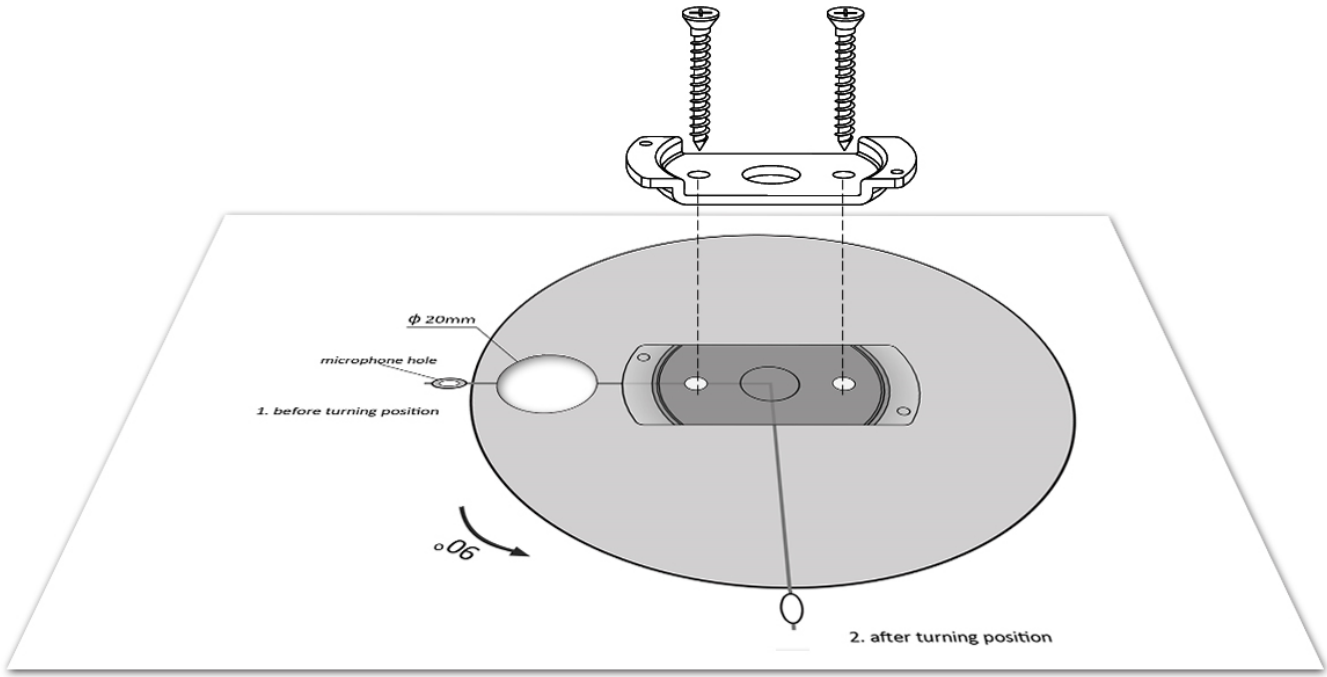
Installation steps for metal bracket

1) Take out the ***Installation Template*** (from the packing box), and stick it to the desired installation spot on your ceiling. Please mark down the 4 circles that show on the figure. (see picture below)

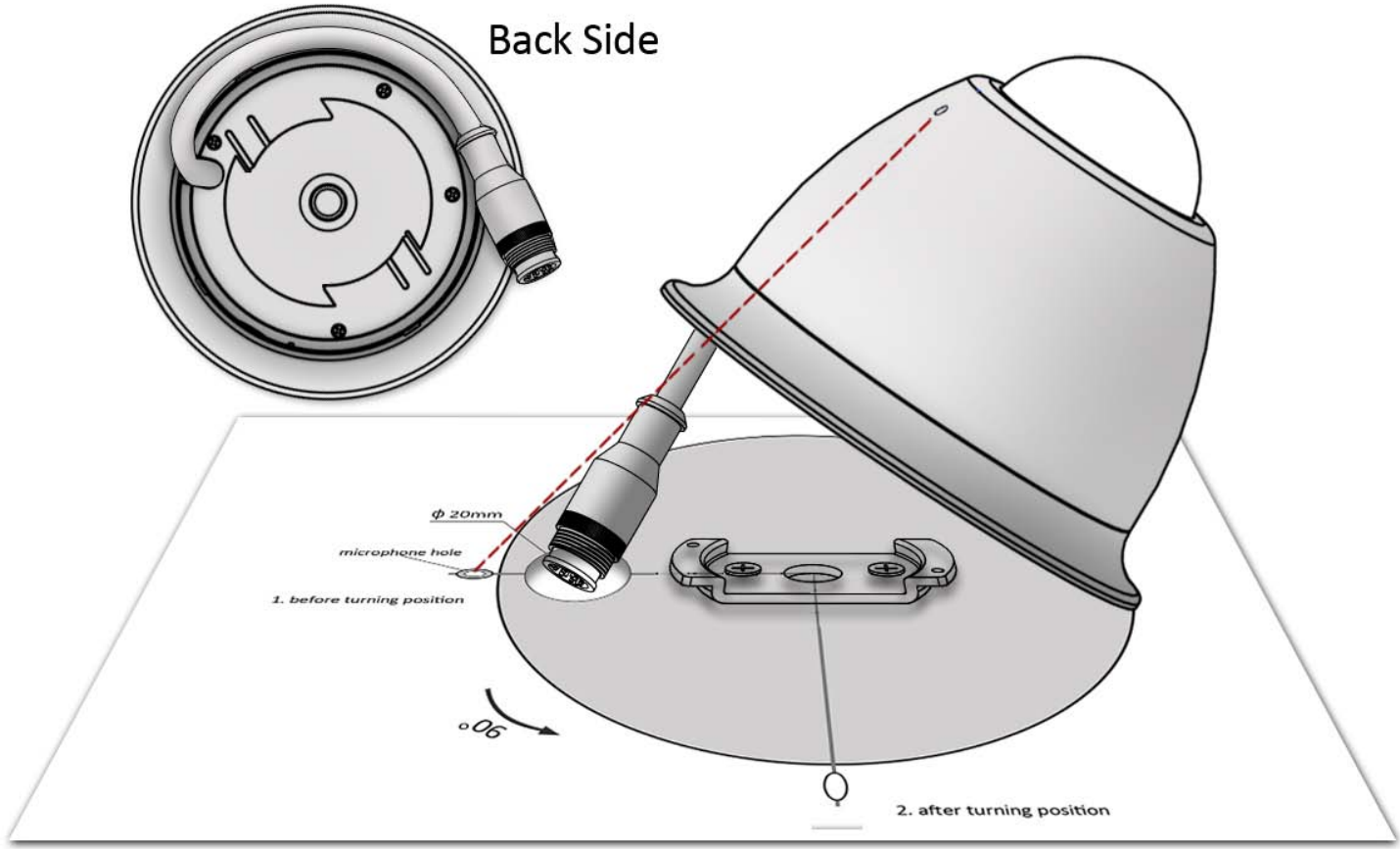


2) Screw down the ***metal bracket*** with the same position as the instruction figure, and drill the hole with at least 20mm diameter in specific area.

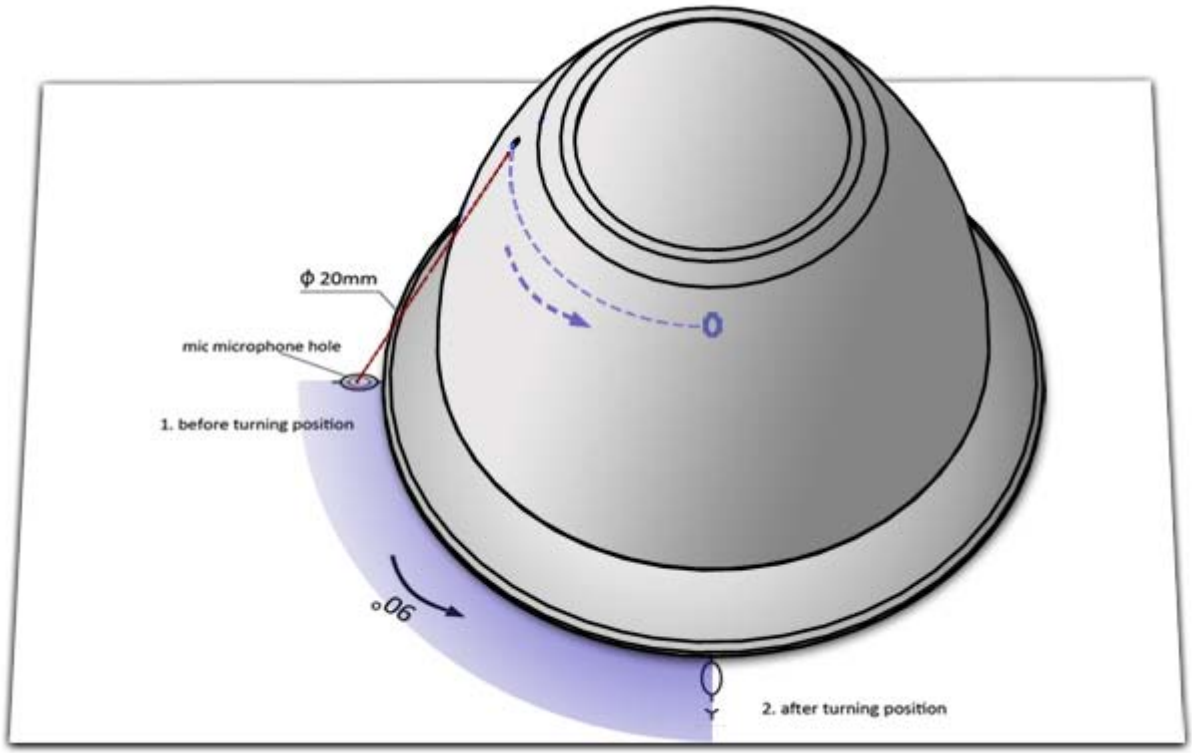
Notes: this step is very important, and includes 2 key factors, 1. The centre line of the biggest circle should be on the same horizontal line as the other circles. 2. The biggest circle should be between 20mm to 25mm in diameter.



3) Before you try to attach the Dome IP camera to the ceiling, take off the white plastic chips (at cable outlet), then push the cable down into the gap between camera and plastic ring (see the picture below), then feed the cable connector into the biggest hole, and align the microphone hole with the mark circle.



4) Turn the camera 90 degrees (anticlockwise), using the microphone hole as reference.



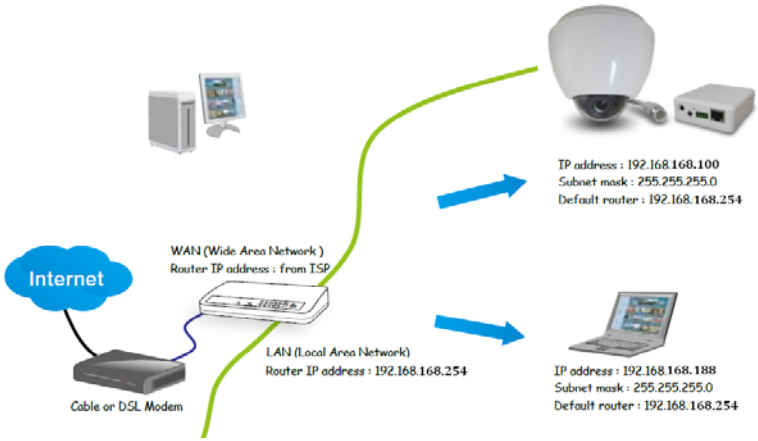
Internet connection

Connected Via a router

Before setting up the Network Camera over the Internet, make sure you have a router and follow the steps below.

1) Connect your Network Camera behind a router, the Internet environment is illustrated below.

Regarding how to obtain your IP address, please refer to *Manually Setting TCP/IP Settings for a Camera* for details.



2) In this case, if the Local Area Network (LAN) IP address of your Network Camera is 192.168.168.100, please forward the following ports for the Network Camera on the router.

- HTTP port
- RTSP port
- RTP port for audio
- RTCP port for audio
- RTP port for video
- RTCP port for video

If you have changed the port numbers on the Network page, please open the ports accordingly on your router. For information on how to forward ports on the router, please refer to your router's user's manual.

3) Find out the public IP address of your router provided by your ISP (Internet Service Provider). Use the public IP and the secondary HTTP port to access the Network Camera from the Internet. Please refer to *TCP/IP Setup* for details.

Connected directly to a Computer

You can also connect the IP Cam directly to a computer. **Please note that in this mode you will not be able to view your IP Cam from anywhere else apart from the computer you are currently using.**

Connect one end of the network cable in to the IP Cam Network Connection socket, and plug the other end in to a spare network port on your computer.

Connect the included power adapter to the power port on the camera and the other end into an electrical socket. Do not turn the power on at this time.

You must then assign your computer an IP address so it can talk easily to the camera.

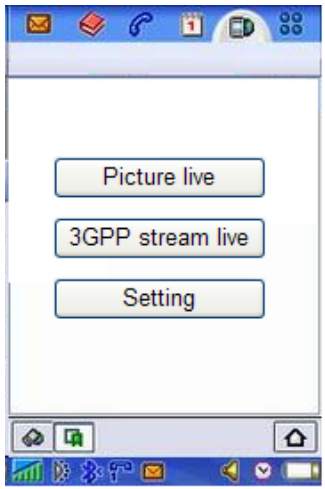
For Windows system:

1. Open the Control Panel and double click on "Network Connections" then right click on your "Local Area Network" connection, and click Properties. Be sure to select the Network icon that corresponds to where you have plugged the IP Cam in to – so this **would not** be listed as a Wireless, WiFi or Bluetooth Network.
2. Select "Internet Protocol (TCP/IP)" then click Properties.
3. Take note of your current TCP/IP Settings and then click on "Use the following IP settings"
4. In the "IP Address" Field type in the number **192.168.168.20**
5. In the "Subnet Mask" type in **255.255.255.0**
6. Leave "Default Gateway" setting blank (The camera will automatically assign itself this IP address when no DHCP server is present)
7. Leave DNS server settings blank.
8. Click "OK" then "Close" to apply these settings.
9. Turn the power on to the IP Cam.
   The Connectivity Status indicator on the front of the camera will light up.

Viewing the camera from your mobile phone

The camera provides the ability to view the cameras monitored through your mobile phone as a live video stream, it supports the telecommunications standard of 3GPP streaming format. All 3G enabled mobile devices and most 2G phones that support the streaming standard of 3GPP are compatible. Otherwise, you also can view the pictures even if your phone is not 3GPP compatible.

1) For example, if camera's external IP address is 202.96.135.206 and external port is 8151, then type **http://202.96.135.206:8151/mobile** in your Internet browser address bar of mobile phone, the login screen will appear:



2) To click the "Picture live" button if your mobile phone is not 3GPP standard, then you can view the pictures which will refresh every 3 seconds.

3) To click the "3GPP stream live" if your mobile phone support 3GPP standard, and the following screen will appear:

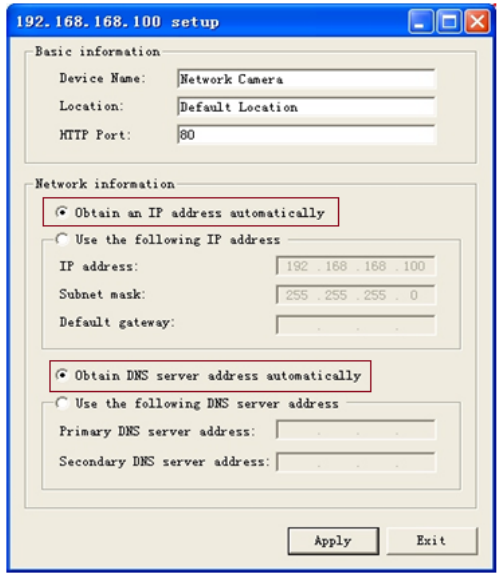
Notes: You have to click "Setting" button, make sure that the Mobile stream is enabled and the RTSP authentication is disabled before you view the 3GPP stream live.

Manually Setting TCP/IP Settings for a Camera

In most cases, this is not required as the router will assign the correct settings to the camera. It is however useful if you want to setup the TCP/IP settings of the camera before you connect to it, if DHCP is disabled across your network, or if you have subnet network problems.

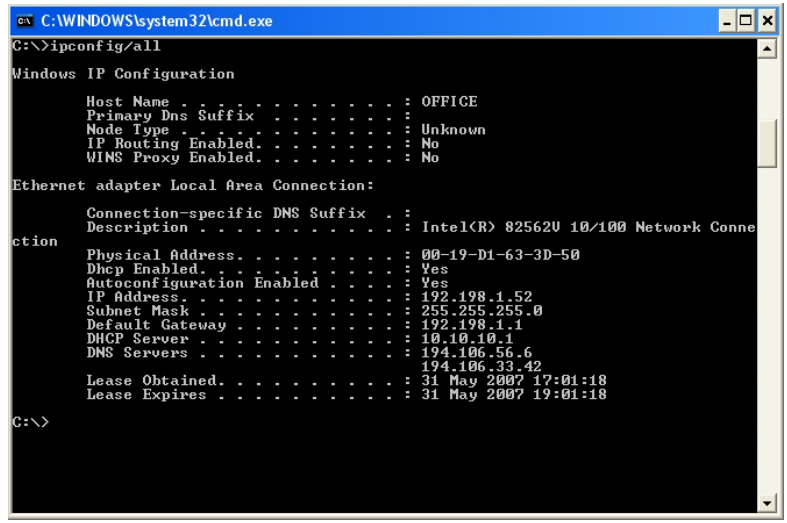
1) Launch *Camera Setup program* to detect cameras on the local network.

2) Click on "***Setup***" button and the following setup interface will pop up.



3) Enter a unique name for the camera, the location (optional) and leave the default port number as 80. "***Obtain an IP address automatically***" and "***Obtain DNS server address automatically"*** are selected by default, if you are confident enough to enter your own settings, you can do so by selecting "Use the following IP address" and follow the guidelines on the next page.

4) To obtain the IP addresses specific to your network, click "Start" then "Run" and type "cmd" in the text box and click "Ok". The will bring up the MS-DOS prompt and in this window type "ipconfig/all" and press enter. A screen similar to the one below will be displayed.



5) Take Notes of the following:

a. IP Address

b. Subnet Mask

c. Default Gateway

d. DNS Servers (Both numbers with the first being the primary DNS server and the second being the secondary DNS server)

6) Enter the details Noted in step 5 into the relevant fields.

Notes: *The default IP address of the camera is 192.168.168.100This can be changed to any IP address on your IP range.*

- *For example if the IP address of your PC is 192.198.1.52*
- *then the IP address of your camera should be unique and on the same subnet*
- *i.e. 192.198.1.X where X is any number between 1 and 255 except 52*

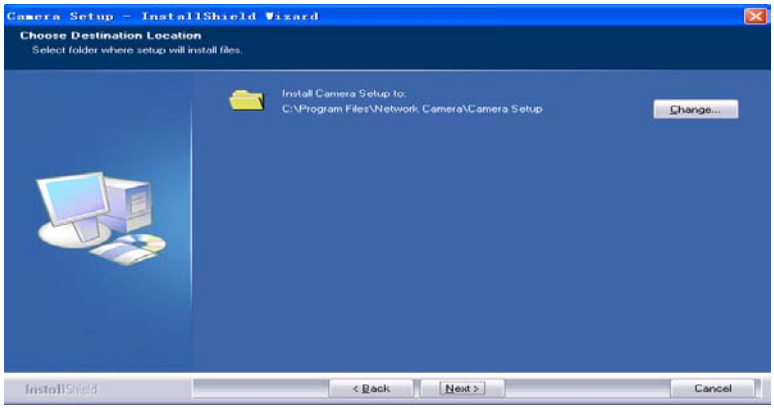
Ensure the IP address you chose is not the same as other network devices on your network as this will result in conflict and may cause the device to not to work properly.

7) Once you've entered the details click "**Apply**" then "**Exit**".

Program installation & Usage

The camera Setup utility can easily and quickly detect cameras connected to your local network and list them on the Camera Setup window; also you can use the camera Setup utility to assign an IP address to each camera.

1) Insert the Installation CD into your CD-ROM drive and the installation screen should appear automatically *(See image below)*. If it does not, click "Start" then "Run". In the text field enter "D:\autorun.exe" (if "D:" is the letter of your CD-ROM Drive)

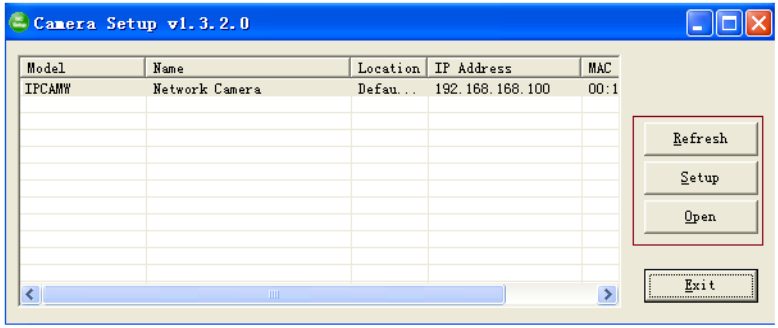


2) Click on "***Install Camera Setup***" and with the following screen Click "***Next***".

3) If you want to change the default folder click "***Change***" to replace otherwise click "***Next***".

4) Click *"**Install**"* to install *IP Camera Software.*

5) Click *"**Finish**"* to end the installation. You should now find an icon on the desktop.



6) Double-click the Camera Setup icon on the Desktop to launch the program. The Camera Setup utility should automatically find your camera if is correctly connected *(See image below)*.

Refresh - Click Refresh to search for cameras on the local network.

Setup - Select the required camera and click Setup to configure the network settings for the camera.

Open - Select the required camera and click Open to access the camera via a web browser.

Exit - Click Exit to exit the Camera Setup window.

Tips: *Select and double click one of the cameras from the Device list, to open the camera view via the web browser.*

Launch the Program

1) Find Icon from the desktop and double click it,
2) Find IP Camera from the pop up window

3) Double click the relevant IP Camera item or click "*Open*" button, the IP camera homepage will shows up with your default Internet explorer.

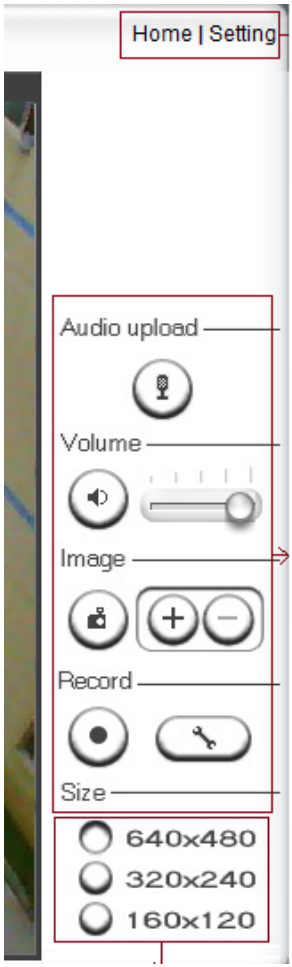
Login in

You could choose to click on the item ***Enter*** to access the picture viewing interface or the item ***Setting*** to access the system setting interface.

The dialog will appear. The default username and password for IP Camera is:
Username: **admin**
Password: **admin**

Tips: The general users assigned by the administrator are not allowed to enter the system ***Setting*** interface. They can only be permitted to ***Enter*** the picture viewing interface.

User Interface



Home - takes you back to your Homepage.

Settings - will take you to the cameras internal settings.

Audio Upload - Press and release to start sending audio from your computer's microphone to the camera speakers.

Press and release to stop sending audio.

Volume----

Mute - Click the Mute button to mute the audio.

Slider - the slide block horizontally to adjust volume.

Image----

Snapshot - Press the Snapshot button to capture a still image of the camera view. Click Save to store the snapshot on your computer, the file is automatically assigned the data & time of the snapshot. Press Cancel to exit.

Zoom - Click on the + button and the cursor turns to a magnifier. Move the magnifier to the desired location and click on an image area. Press - button to return to the normal view.

Record-----

Recording - Press the Record button to record video and audio (if enabled). This will save the file in ASF format on your PC.

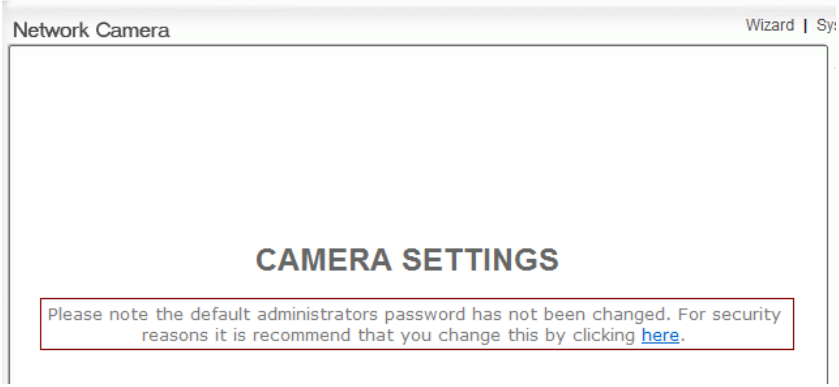
Recording options - Click this button to set the recoding parameters. You can set record path, video file size and select whether to star recording automatically when motion is detected and the length of the recording in seconds.

Size-----

Image size - There are three Image Size options: [640x480] [320x240] [160x120] Please Notes that this only changes the image size being viewed not the image size the camera is transmitting and/or recording. To change the transmitting/recording image size, please refer to the Stream Setup.

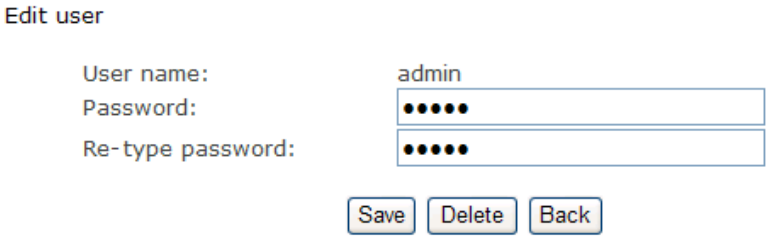
Network Camera Interface Setting

Change the passwords



1) Click on ***Settings*** from the home page. When connecting the camera for the first time or after resetting it to its default settings, the setup interface start page below will load.

It is recommended that you change the ***admin*** password in order to avoid unauthorized access to the camera. To do this follow the instructions by clicking on the underlined link “here” to access administrator password editing page.



2) Type the password in both fields then click ***Save***. Please take Notes of the password. If you forget the password, the camera will have to be reset to its default settings in order to gain access to the settings page and this will also reset all other settings you may have changed.

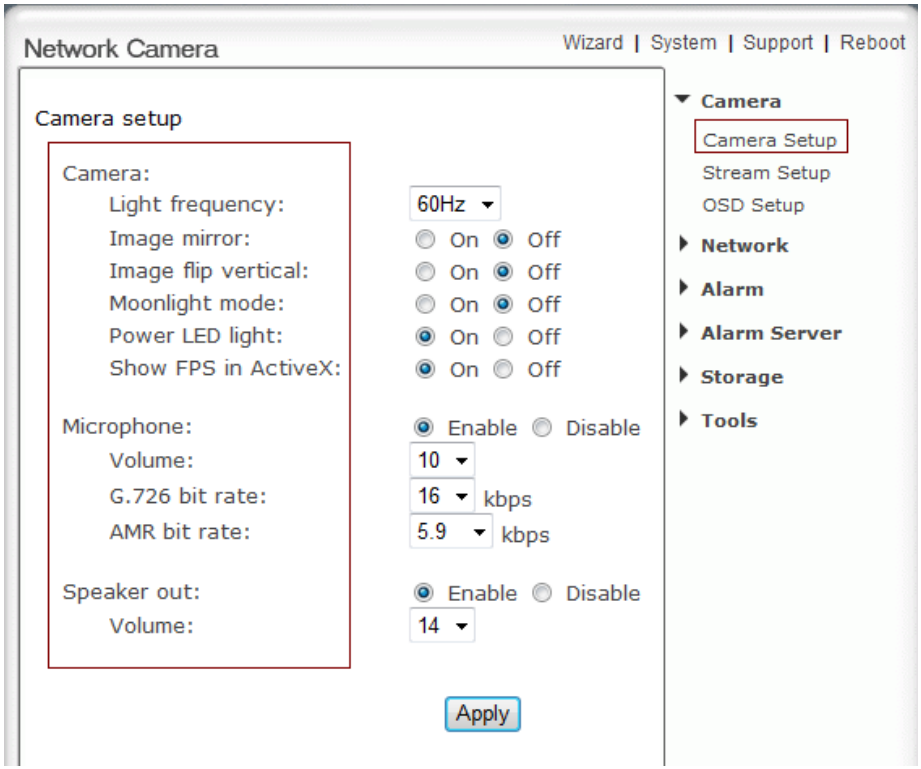
3) You are required to re-login with the changed password.

Notes: *After successful login, the following page will appear.*

Camera

Camera Setup

From the home page click ***settings*** and enter the administrator user name and password.



Notes: If the camera is inversely installed, images flip horizontally and images flip vertically should be turned on at the same time.

Camera:

Light frequency- Two options: 50Hz & 60Hz. Set according to the mains frequency in the country of use. *For UK this would be 50Hz.*

Image mirror- Image can be flipped from left to right.

Image flip vertical- Image can be flipped up and down.

Moonlight mode- Turn ***On/off*** the brightness setting according to the light intensity of the area being monitored manually.

Power LED light- Turn on/off the power & network LED indicator of camera.

Show FPS in ActiveX- Show FPS On/Off in ActiveX control.

Microphone-Turn ***on/off*** the built-in microphone.

Volume- Adjusts the volume of the microphone from 0~14 where 0 is the lowest.

G.726 bit rate- Four options: 16, 24, 32, and 40(kbps). Determines the quality of the audio being transmitted.

AMR bit rate- Eight options will Determines the quality of the audio being transmitted.

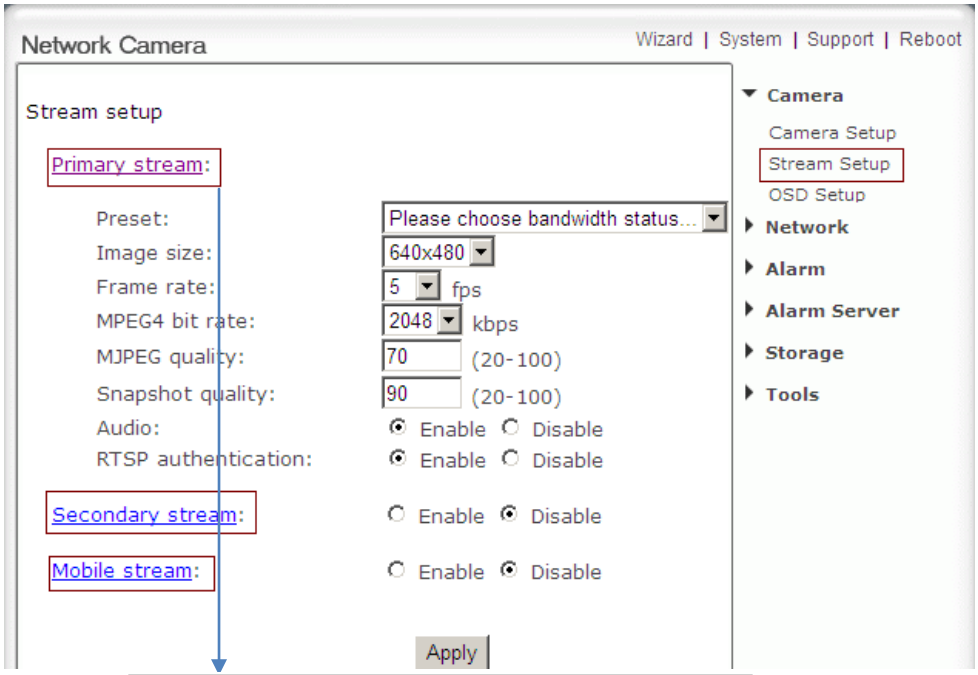
Speaker out – enable or disable *speaker out* function

Volume – control the Volume of the sound

Click ***Apply*** to confirm your settings.

Camera

Stream Setup



Intranet stream URL	
RTSP MPEG4 stream:	rtsp://192.168.168.131/live_mpeg4.sdp
RTSP MJPEG stream:	rtsp://192.168.168.131/live_mjpeg.sdp
HTTP MPEG4 stream:	http://192.168.168.131/stream.av
HTTP MJPEG stream:	http://192.168.168.131/stream.jpg
HTTP ASF stream:	http://192.168.168.131/stream.asf
HTTP snapshot image:	http://192.168.168.131/snapshot.jpg
Internet stream URL	
RTSP MPEG4 stream:	rtsp://183.15.241.59:8174/live_mpeg4.sdp
RTSP MJPEG stream:	rtsp://183.15.241.59:8174/live_mjpeg.sdp
HTTP MPEG4 stream:	http://183.15.241.59:8174/stream.av
HTTP MJPEG stream:	http://183.15.241.59:8174/stream.jpg
HTTP ASF stream:	http://183.15.241.59:8174/stream.asf
HTTP snapshot image:	http://183.15.241.59:8174/snapshot.jpg

The camera supports three streams: Primary stream, Secondary stream and Mobile stream.

Steam setup

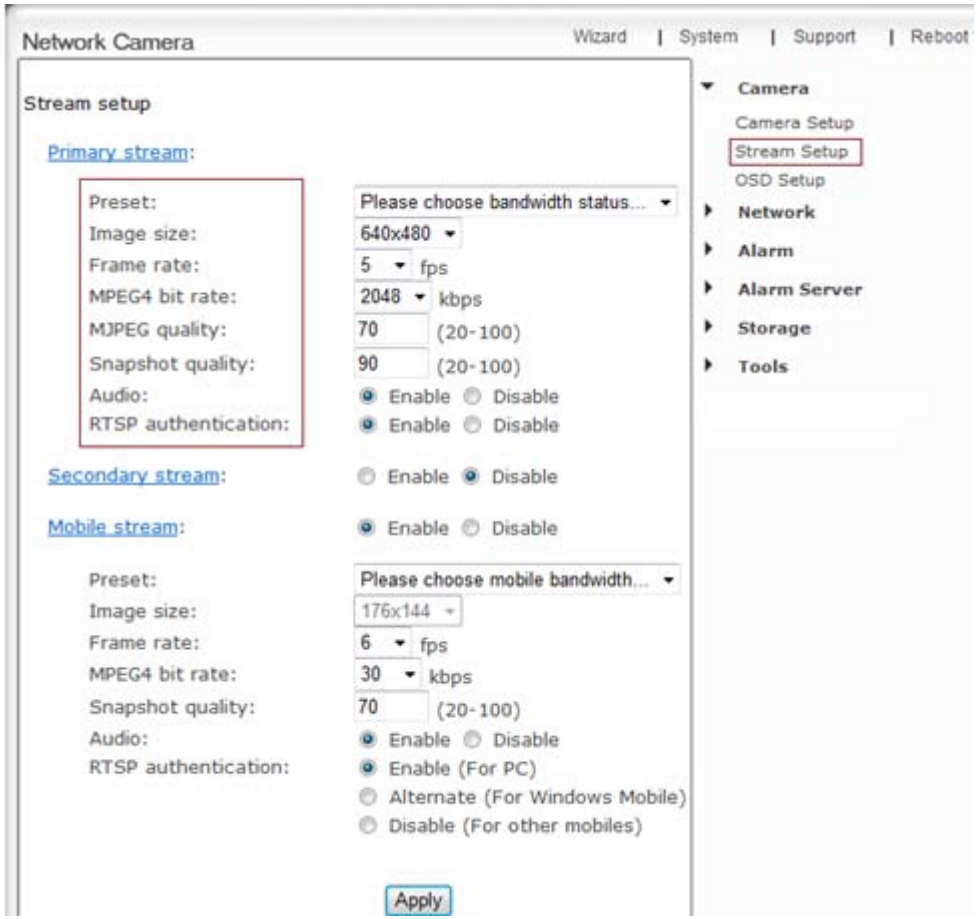
Primary stream- cannot be disabled. You can use RealPlayer, VLC Player or QuickTime Player to play the live stream from camera in Intranet or Internet.

Secondary stream- Enable or disable secondary it

Mobile stream- You can use mobile phone, RealPlayer and QuickTime Player to play the live stream from camera. The size of video is 176 x 144.

A stream list page will be shown after clicking the stream name such as “Primary stream”. A sample of primary stream list as left:

Camera Stream Setup (2)



Notes: Use Mobile phone to play the mobile stream from camera, but generally Mobile phone do not support authentication, so we have to disable the RTSP authentication.

Preset- choose bandwidth status at your place

Image size- Three image resolutions available: 640 x 480(VGA), 320 x 240(QVGA), 160 x 120.

Frame rate - Twelve options: 1/2/3/4/5/6/8/10/15/20/25/30 frames per second (fps).

MPEG4 bit rate - Select MPEG4 bit rate. Eight options: 64, 128, 256, 512, 768, 1024, 1536, 2048 (kbps).

MJPEG quality - Type in MJPEG video quality value (20 – 100), 20 is low quality, 100 is high quality.

Snapshot quality- Type snapshot quality. (20 – 100), 20 is low quality, 100 is high quality.

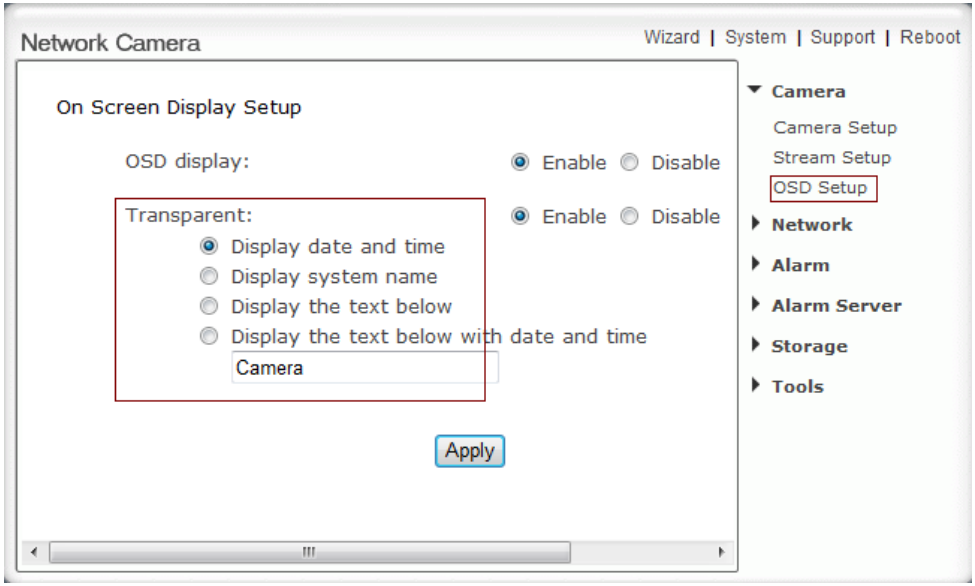
Audio- Enable or disable audio.

RTSP authentication- Enable or disable RTSP authentication.

TIPS: The above five settings determine the image quality, however higher bit rates require greater bandwidth. Please select the appropriate settings according to your connection speed and network traffic. If you are experiencing jerky video it may be necessary to decrease the bit rate.

Camera

OSD Setup



This function can display system name, date and time, or use-defined on screen.

OSD display - Enable or disable OSD function.

Transparent - Users can select whether change OSD to transparent or not.

Display date and time - OSD is date and time of camera.

Display system name - OSD is system name of camera.

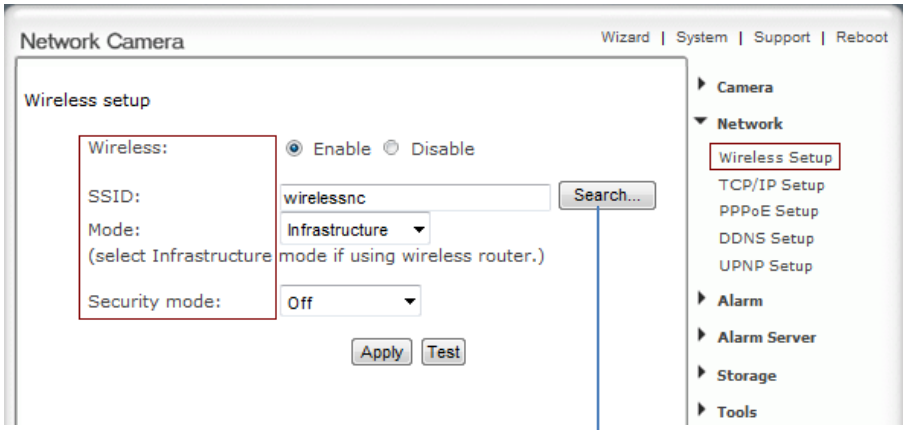
Display the text below - OSD is user-defined text.

Display the text below with date and time - OSD is user-defined text with date and time of camera.

Click ***Apply*** to confirm your settings.

Network

Wireless Setup



SSID list

	SSID	Mode	Channel	Auth	Encrypt	Signal
◉	test1	Infrastructure	4	WPA(2)-PSK	TKIP, AES	
○	test -1	Infrastructure	4	OPEN	NONE	
○	GW	Infrastructure	6	WPA-PSK	TKIP	
○	wirelessnc	Infrastructure	10	OPEN	NONE	
○	OTEST	Infrastructure	11	WPA2-PSK	AES	

Apply Back

The camera corresponds to the wireless system based on IEEE802.11b/g. Encryption establishes the security to prevent unauthorized users to access the wireless data communication.

Wireless Setup

Wireless- Enable or Disable the wireless function

SSID- Type the ID of the wireless network you want to connect to using up to 32 ASC Ⅱ characters or click ***Search*** to search for available networks.

Mode- Infrastructure mode and Adhoc mode

1) Adhoc Mode **-** Select ***Adhoc*** mode when the camera is directly connected to your computer.

2) Infrastructure Mode - Select ***Infrastructure*** mode when the camera is connected via an access point or router.

When click ***Search*** (see figure left)

SSID- selects the network name you searched.

Mode- Infrastructure mode and Adhoc mode

Channel - Wifi channel

Auth – security mode

Encryption – None, TKIP, AES

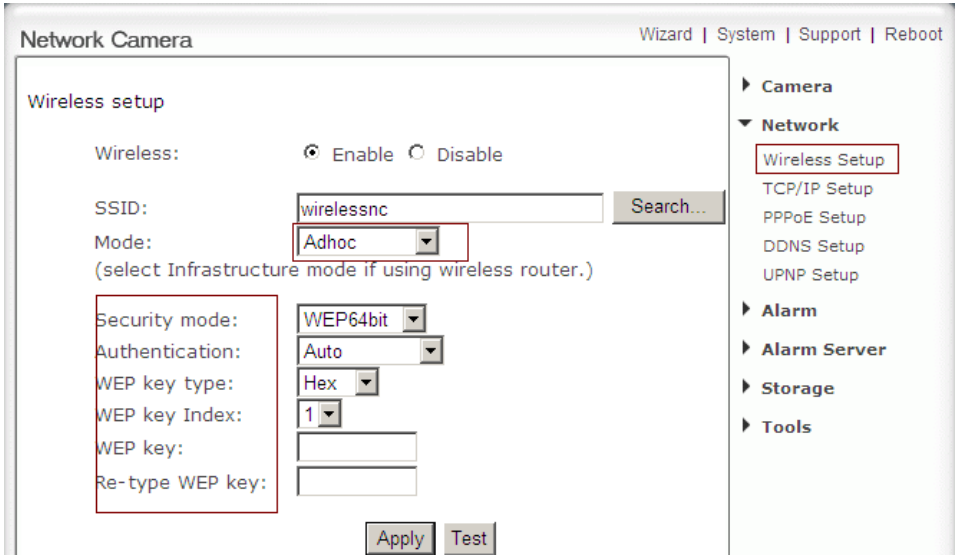
Signal - It show out the strength of signal

Notes: These settings have to match those of your access point or router. Please consult your access point or router manual on how to verify or modify these settings.

Network

Wireless Setup

Adhoc Mode



When you select ***Adhoc*** mode. (See figure left)

Security mode - WEP64bit or WEP 128bit

Authentication - Select WEP authentication mode.

WEP Key type - Select the WEP key type. Either in hexadecimal or ASC II characters.

WEP key Index - Specify up to 4 WEP keys.

WEP Key - Type the password.

Re-type WEP Key - Re-confirm the password.

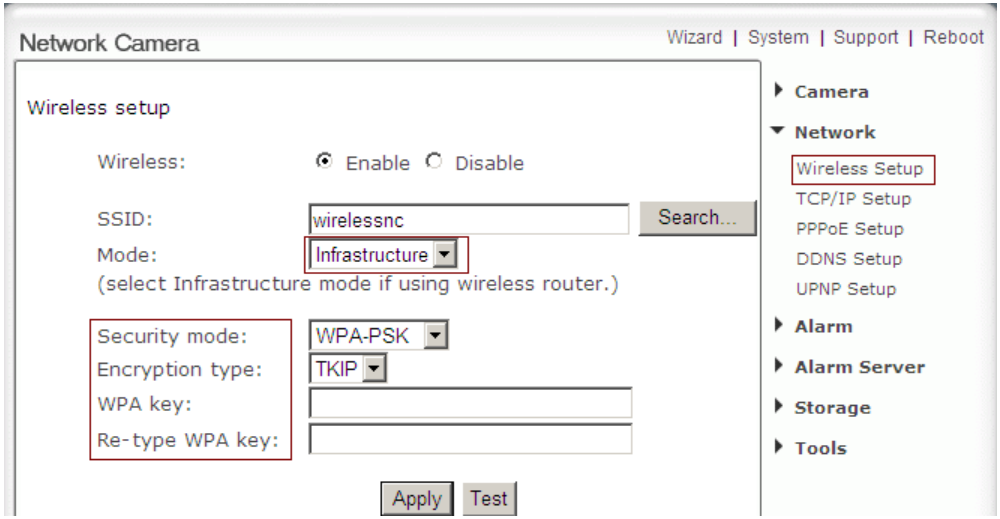
Click ***Apply*** to save changes.

Click ***Test*** to test whether connection is successful.

Network

Wireless Setup

Infrastructure mode



When you select ***Infrastructure*** mode. (See figure below)

Security mode- Security mode is not only WEP64bit or WEP128bit but also WPA-PSK or WPA2-PSK.

Encryption type- TKIP and AES.

WPA key-Type 8-63 characters as password.

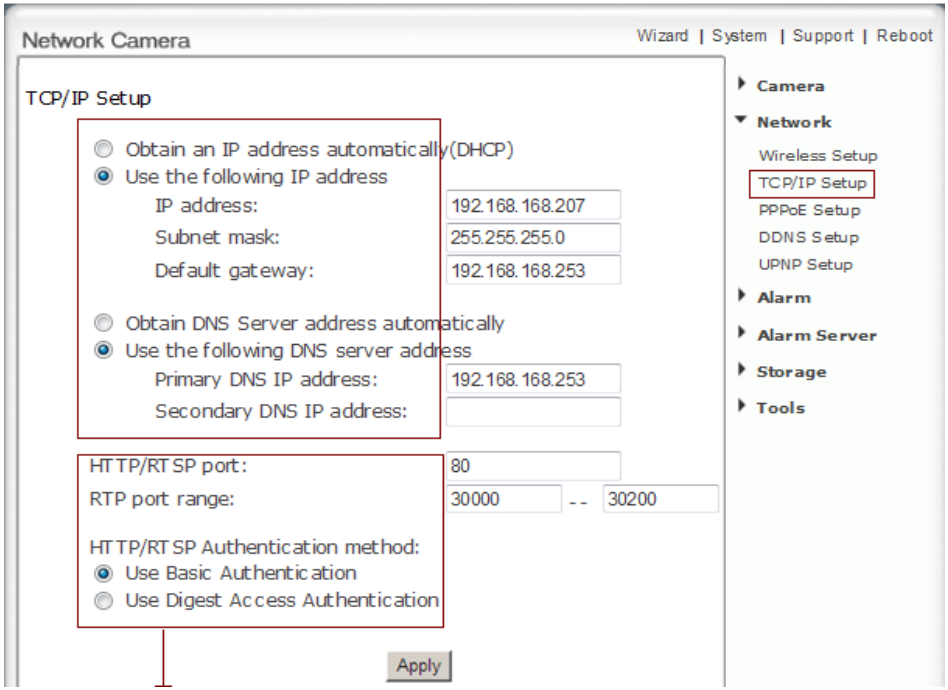
Re-type WPA key- Re-confirm the password.

Click ***Apply*** to save changes.

Click ***Test*** to test whether connection is successful.

Network

TCP/IP Setup



HTTP/RTSP port -The default HTTP port is 80, it is also be used as RTSP port.

RTP port range - It is for UPnP port forwarding, 1 camera actually use 2 RTP ports, one for video, the other for audio. (See UPnP setup)

HTTP/RTSP Authentication method - Select Basic Authentication or Digest Access Authentication.

The camera is set up to obtain the IP address automatically (DHCP) by default. Should you may wish to assign the IP address manually, use the ***TCP/IP Setup*** page to enter the address details.

Obtain an IP address automatically (DHCP):

1) If your network supports a DHCP server (e.g. router) select this option to have the IP address is assigned automatically.

2) If you select ***Obtain an IP address automatically*** and you should select ***Obtain a DNS Server address automatically*.**

Use the following IP address: Select this option when a fixed IP is required.

IP address - Type the IP address of your camera.

Subnet mask - Type the subnet mask.

Default gateway - Type the default gateway.

Obtain DNS Server address automatically:

If your network supports a DHCP server (e.g. router) select this option to have the DNS Server address is assigned automatically.

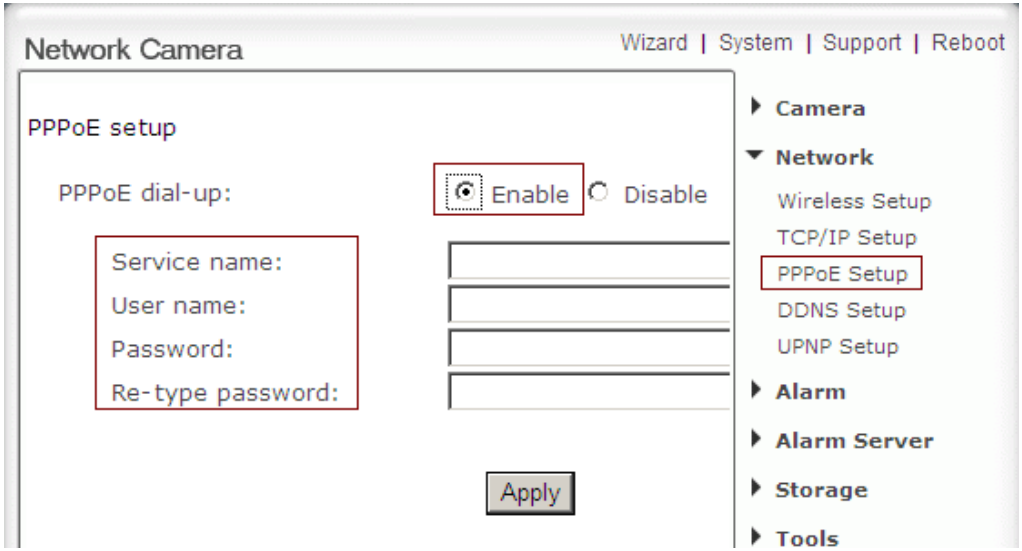
Use the following DNS server address:

Primary DNS IP address - Type the IP address of the primary DNS server.

Secondary DNS IP address - Type the IP address of the secondary DNS server, if necessary.

Network

PPPoE Setup



The camera can be installed without a PC on the network. Some XDSL services use PPPoE (Point-to-Point Protocol over Ethernet).

PPPoE dial-up - Enable or disable PPPoE connection.

Service name - Either an ISP name or a class of services that is configured on the PPPoE server. This field may be left empty.

User name - Type the user name.

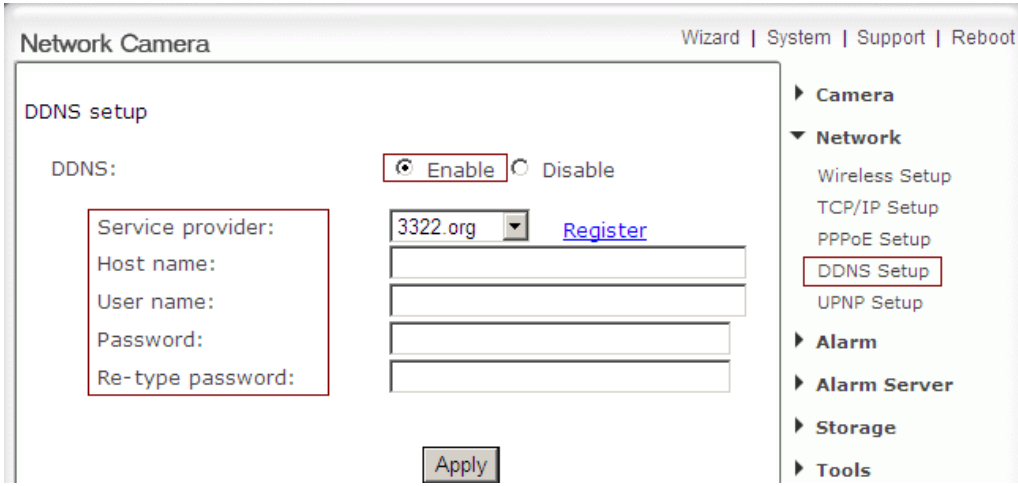
Password - Type the password.

Re-type password - Re-confirm the password.

Click ***Apply*** to confirm your settings.

Network

DDNS Setup



Dynamic DNS (DDNS) is simply a way of using a static hostname to connect to a dynamic IP address. When connected to your ISP, you are assigned a temporary IP address. DDNS services keep track of your IP address and route your Domain name to that address when you wish to connect to the camera from a remote location

DDNS - Enable or disable DDNS connection.

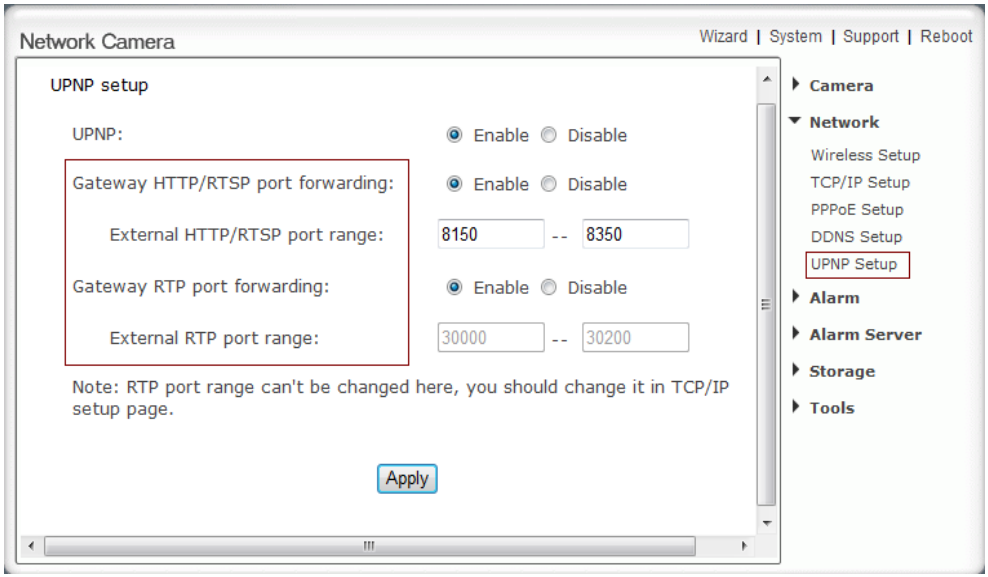
How to add DDNS

1. Enable the Dynamic DNS function.
2. Select your preferred DDNS service provider from the list then click Register.
3. Enter the Host Name details and password supplied by your DDNS service provider when you registered.

Click ***Apply*** to confirm your settings

Network

UPNP Setup



1. Tips: If set port range is 8150~8350, camera will ask router to add a port forwarding rule automatically. In this rule, the internal port is camera default port 80, the external port is 8150, and IP address is camera's IP. Use this setting, users can visit the camera from Internet through the router with this URL http://routeripaddress:8150.

2. Tips: If there are several cameras in Local Network, the first one which first be opened will use 8150 as external port, and second one will use 8151, third one use 8152 etc. Every camera will remember its port, it will preferentially use this port in next power on.

The camera supports UPnP which is enabled by default. This function requires a Windows XP/Vista operating system. It is a quick way to discover the camera on your network. Please make sure that the UPnP function is enabled on your PC.

UPnP - Enable or disable the UPnP function.

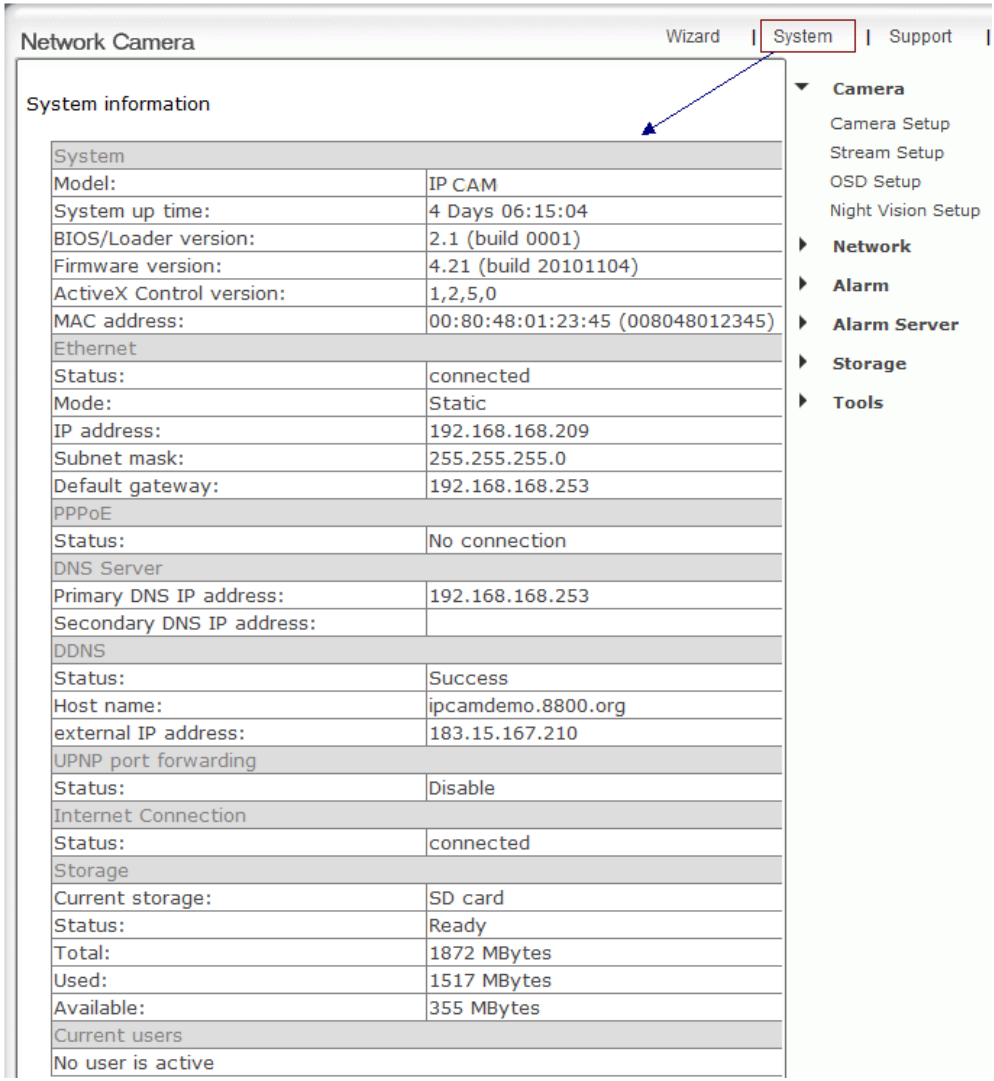
Gateway HTTP/RTSP port forwarding - Enable or disable this function.

External HTTP/RTSP port range - Using this port, automatically adds a port forwarding rule to a router via UPnP protocol. Please Notes that not all routers support this function. Refer to your router manual for further details.

Gateway RTP port forwarding - Enable this function, users can use mobile phone, RealPlayer or QuickTime Player to visit the camera from Internet through the router.

External RTP port range - 30000—30200 default. (See TCP/IP setup)

Click ***Apply*** to confirm your setting.



System	
Model:	IP CAM
System up time:	4 Days 06:15:04
BIOS/Loader version:	2.1 (build 0001)
Firmware version:	4.21 (build 20101104)
ActiveX Control version:	1,2,5,0
MAC address:	00:80:48:01:23:45 (008048012345)
Ethernet	
Status:	connected
Mode:	Static
IP address:	192.168.168.209
Subnet mask:	255.255.255.0
Default gateway:	192.168.168.253
PPPoE	
Status:	No connection
DNS Server	
Primary DNS IP address:	192.168.168.253
Secondary DNS IP address:	
DDNS	
Status:	Success
Host name:	ipcamdemo.8800.org
external IP address:	183.15.167.210
UPNP port forwarding	
Status:	Disable
Internet Connection	
Status:	connected
Storage	
Current storage:	SD card
Status:	Ready
Total:	1872 MBytes
Used:	1517 MBytes
Available:	355 MBytes
Current users	
No user is active	

System

System information

Click ***System*** at the top right of ***Settings*** page to show the ***System information***. *See figure*

This is a very useful screen as it shows you what parts of your Camera are properly or incorrectly setup.

Use it to find your DDNS address, static IP, internal IP, gateway and much more.

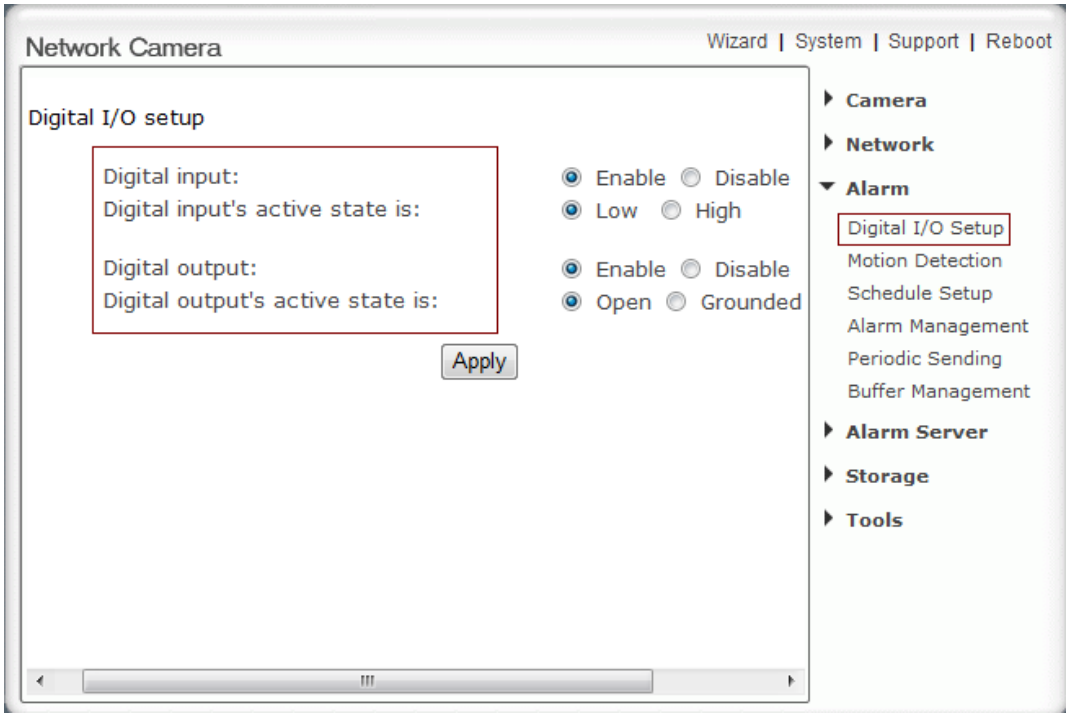
It also shows you which Users are currently viewing the camera, and from what IP address they come from.

If ***DDNS setup*** successfully and go into effect, ***Internet URL*** will show DDNS host name instead. (*See figure below for example)*

UPNP	
Status:	Success
Gateway external IP address:	121.35.132.14
Gateway external port:	8150
Internet URL:	http://mywireless.3322.org:8150

Alarm

Digital I/O Setup



Digital I/O Setup:

Digital input –Enable or Disable the function

Digital input's active state is:

Low – with low active method

High – with High active method

Digital output – Enable or Disable the function

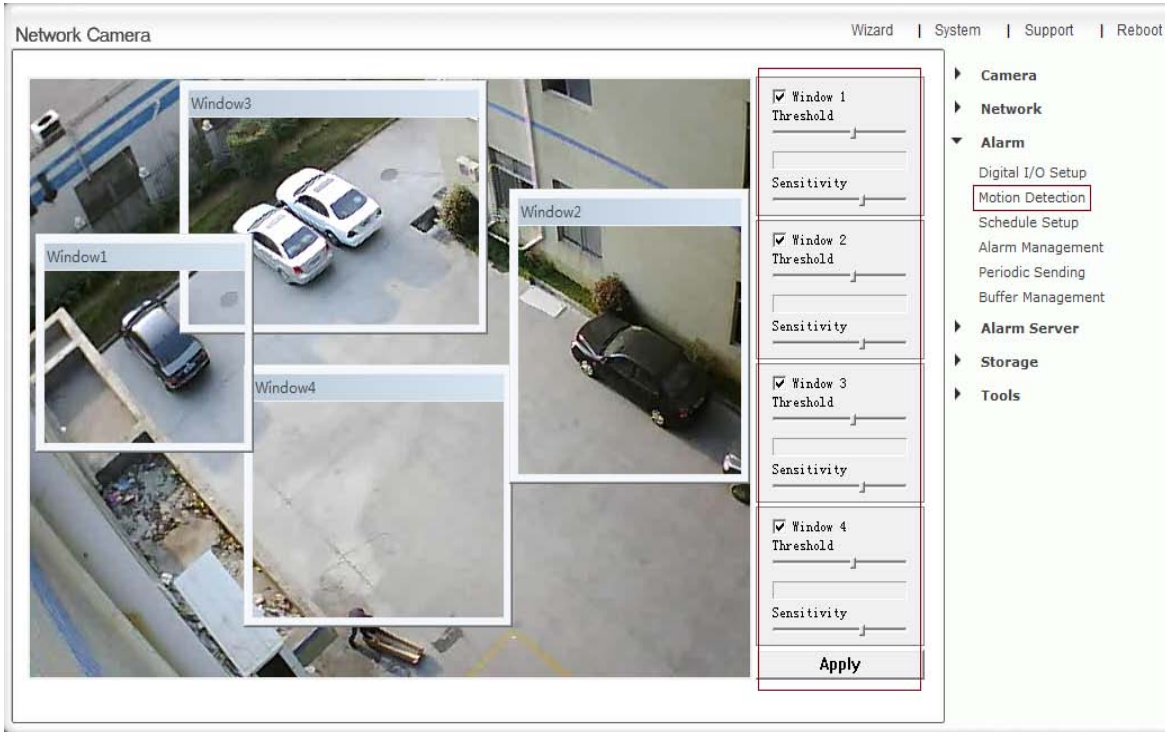
Digital output's active state is:

Open – open the circuit

Grounded – with grounded situation

Alarm

Motion Detection



Motion Detection can trigger an alarm that sends images or video feed via e-mail or FTP (File Transfer Protocol). You can set up to four different Motion Detection windows.

Window - Check this box to enable the window.

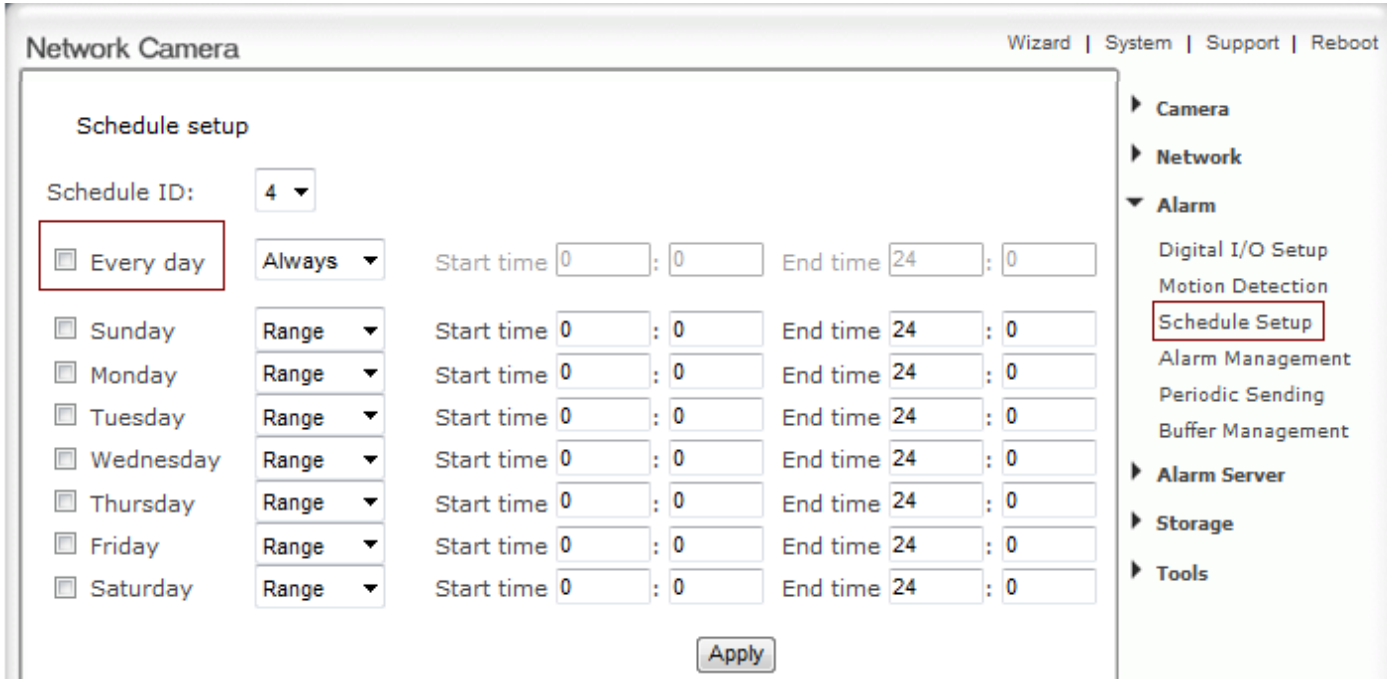
Threshold - Set the threshold bar to the amount of motion required to trigger the alarm.

Sensitivity- Set the measurable difference between two sequential images that would indicate motion.

Click ***Apply*** to confirm your setting.

Alarm

Schedule Setup



Alarm Sending, Periodical Sending and ***Buffer Sending*** sends images via e-mail or FTP according to schedule setup

Schedule ID – you could setup with 4 period of time

Every day- Select every day or not. ***Sunday ~ Saturday-*** Select Sunday ~ Saturday or not.

Always- Enable in any time.

Range- Enable between start time and end time.

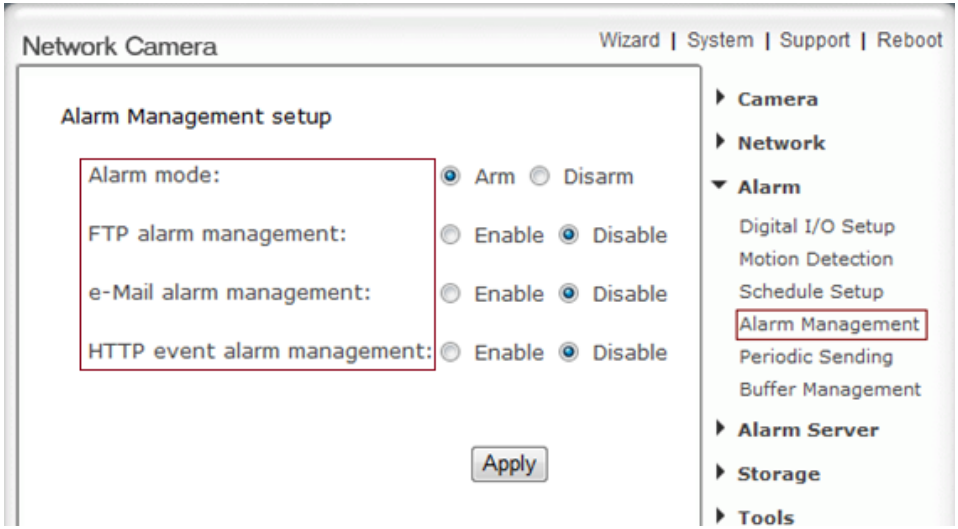
Except- Enable except start time to end time.

Click **Apply** to confirm your setting.

Alarm

Alarm Management

FTP alarm management



Motion Detection can trigger an alarm that sends images via FTP or e-mail and send URL via HTTP.

Alarm management setup:

Alarm mode - Enable or disable all alarm.

FTP alarm sending - Enable or disable FTP alarm sending function.

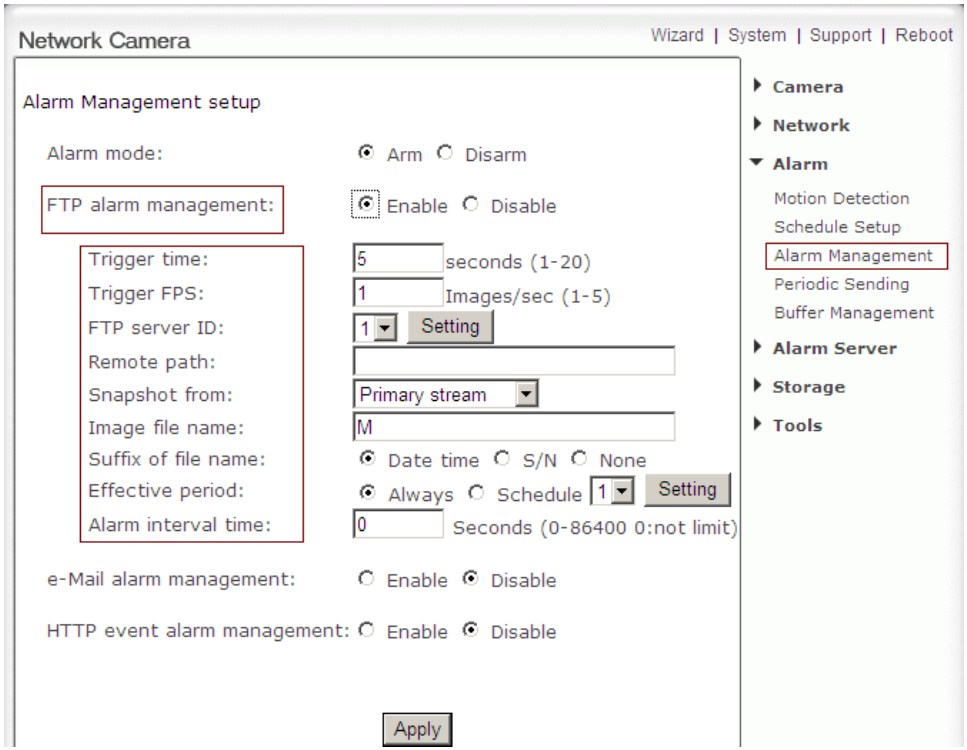
e-Mail alarm sending - Enable or disable e-Mail alarm sending function.

HTTP event alarm sending - Enable or disable HTTP event alarm function.

Alarm

Alarm Management

FTP alarm management



FTP alarm management:

Trigger time - How many seconds does camera keep snapshot the images after get a motion alarm.

Trigger FPS - How many images does camera snapshot every second after get a motion alarm.

FTP server ID - Select one FTP server, click ***Setting*** to set FTP server.

Remote path - Path where to save the image file on the FTP server.

Snapshot from - Select source stream that snapshot from.

Image file name - Type image file name.

Suffix of file name - Select suffix of file name.

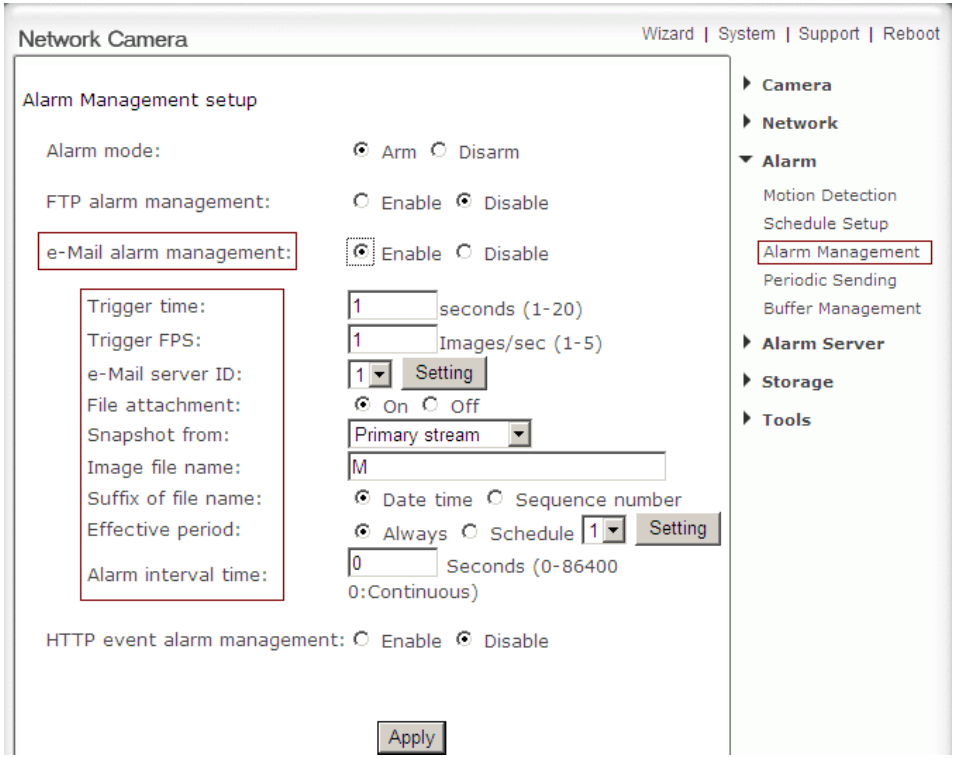
Effective period - Select Effective period. If select schedule, click ***Setting*** to set schedule.

Alarm interval time - Scope: 0-86400 sec, when the alarm time remains at 0 second, no alarm trigger restricted. Otherwise, the triggering interval will just be the setting alarm time. Alarm within the time will not be triggered.

Alarm

Alarm Management

e-Mail alarm management



e-Mail alarm management:

Trigger time - How many seconds does camera keep snapshot the images after get a motion alarm.

Trigger FPS - How many images does camera snapshot every second after get a motion alarm.

e-Mail server ID - Select one e-Mail server, click ***Setting*** to set e-Mail server.

File attachment - Switch file attachment on or off.

Snapshot from - Select source stream that snapshot from.

Image file name - Type image file name.

Suffix of file name - Select suffix of file name.

Effective period - Select Effective period. If select schedule, click ***Setting*** to set schedule.

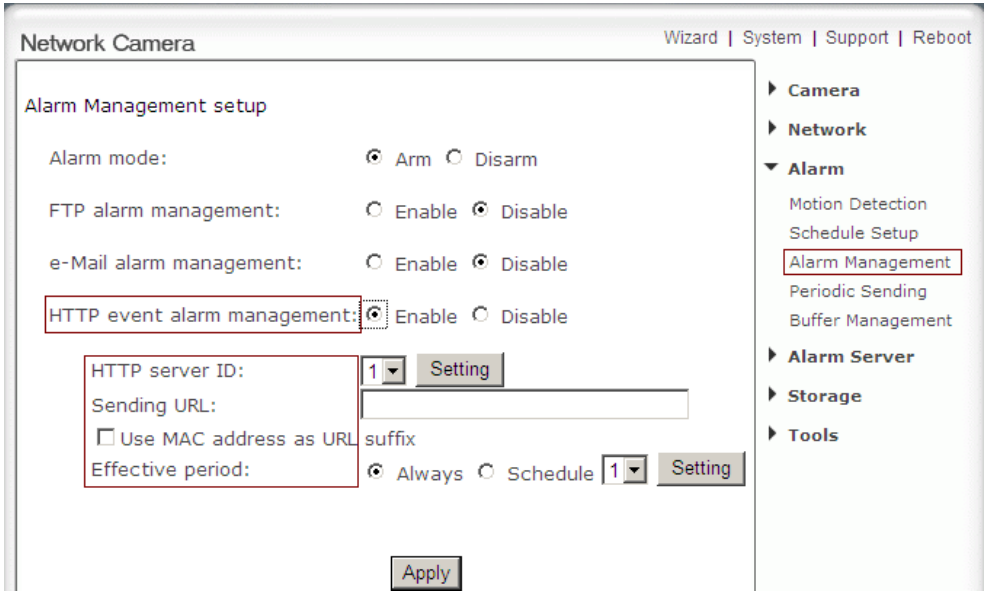
Alarm interval time - Scope: 0-86400 secs, when the alarm time remains at 0 second, no alarm trigger restricted. Otherwise, the triggering interval will just be the setting alarm time. Alarm within the time will not be triggered.

Click ***Apply*** to confirm your setting.

Alarm

Alarm Management

HTTP event alarm management



HTTP event alarm management

HTTP server ID - Select HTTP server ID, click ***Setting*** to set HTTP server.

Sending URL - Type URL which will be sent to HTTP server.

Use MAC address as URL suffix - Enable or disable this function.

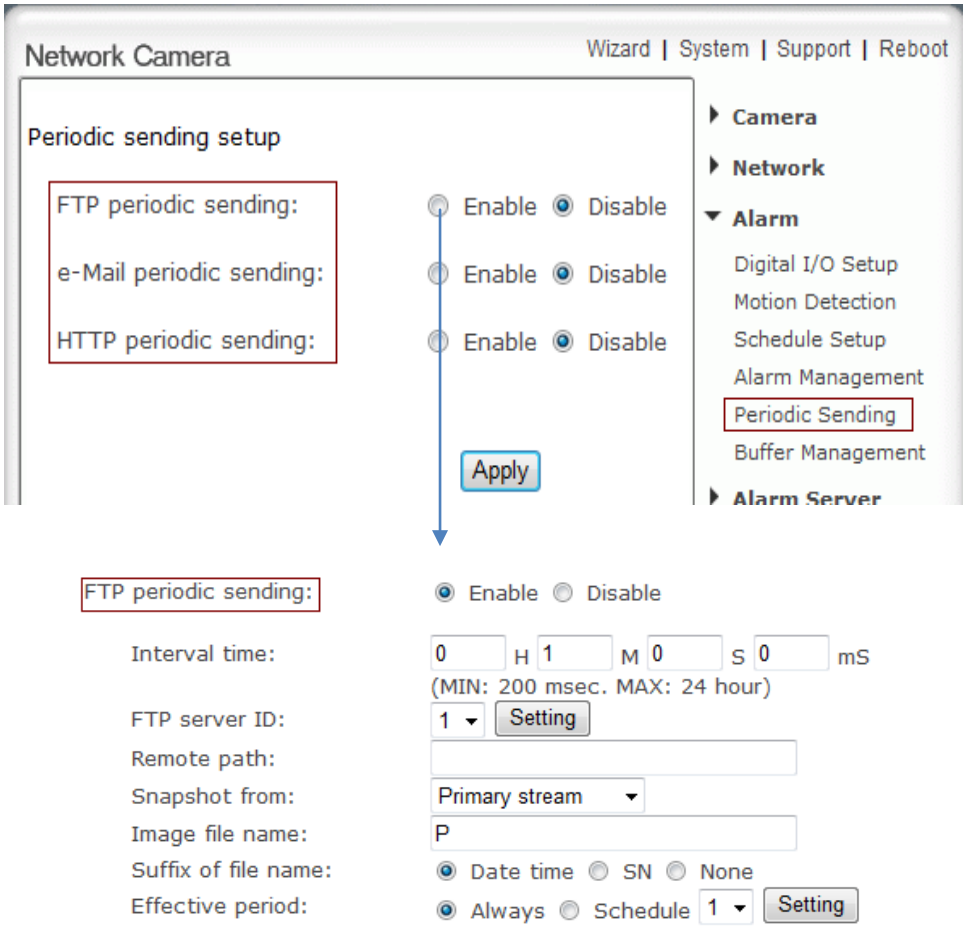
Effective period - Select effective period. If select schedule, click **Setting** to set schedule.

Click ***Apply*** to confirm your setting.

Alarm

Periodic Sending

FTP periodic sending



The camera can send images via FTP or e-mail and send URL via HTTP periodically.

Periodic sending setup:

FTP periodic sending - Enable or disable FTP upload periodically.

e-Mail periodic sending - Enable or disable e-Mail upload periodically.

HTTP periodic sending - Enable or disable HTTP upload periodically.

FTP periodic sending

Interval time - Type the interval at which you want to send the images periodically.

FTP server ID - Select one FTP server, click ***Setting*** to set FTP server.

Remote path - Path where to save the image file on the FTP server.

Snapshot from - Select stream that snapshot from.

Image file name - Type image file name.

Suffix of file name - Select suffix of file name.

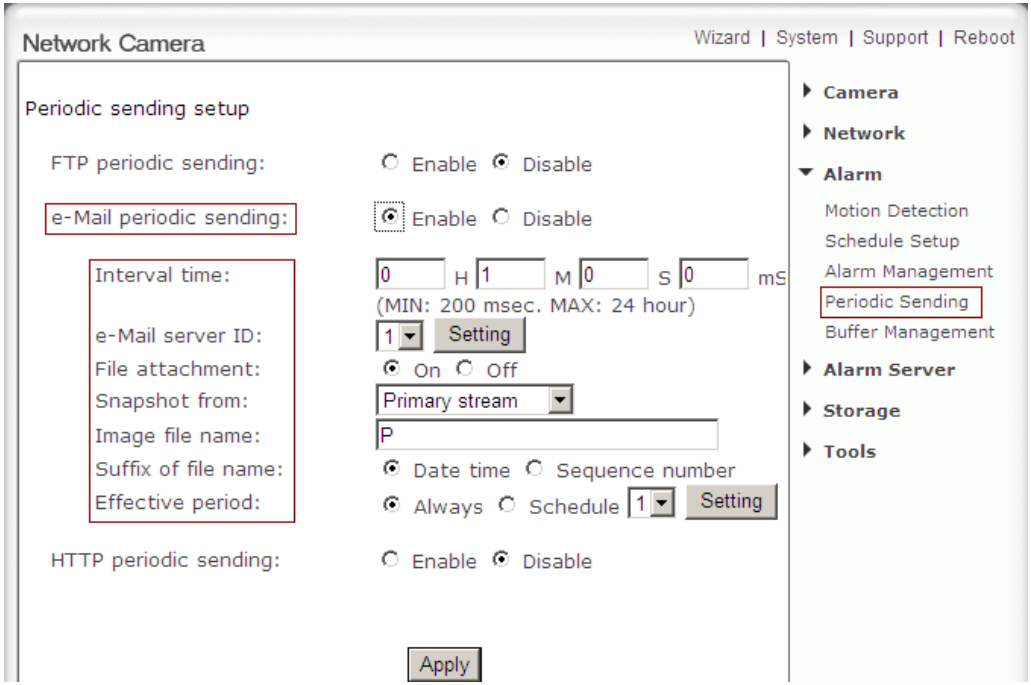
Effective period - Select Effective period. If select schedule, click ***Setting*** to set schedule.

Notes: The notifications use the camera's internal clock. Please make sure the camera's Date and Time are correct.

Alarm

Periodic Sending

e-Mail periodic sending



e-Mail periodic sending

Interval time - Type the interval at which you want to send the images periodically.

e-Mail server ID - Select one e-Mail server, click ***Setting*** to set e-Mail server.

File attachment - switch file attachment on or off.

Snapshot from - Select stream that snapshot from.

Image file name - Type image file name.

Suffix of file name - Select suffix of file name.

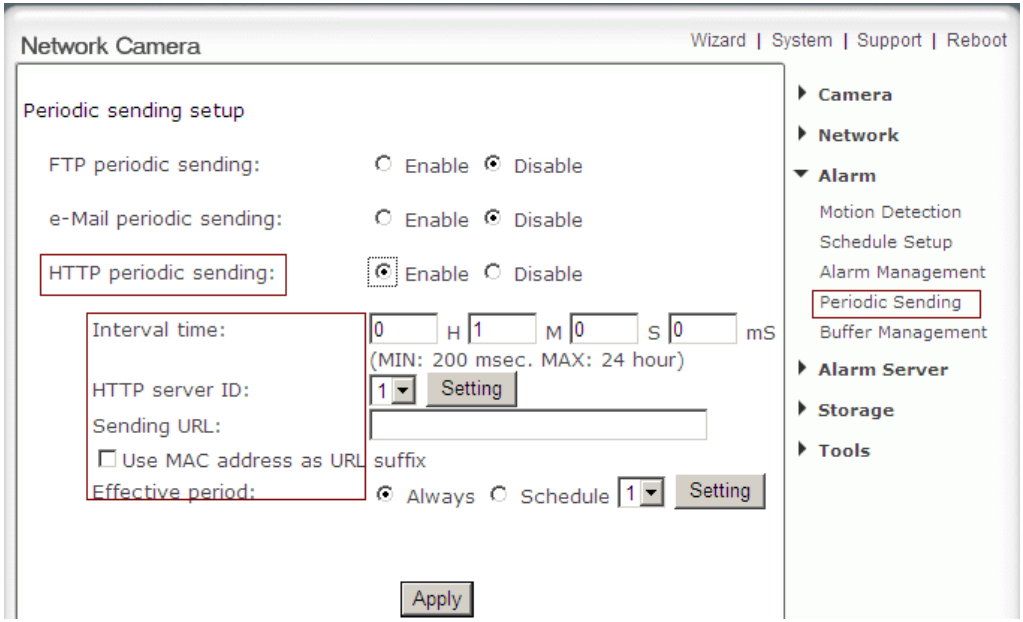
Effective period - Select Effective period. If select schedule, click ***Setting*** to set schedule.

Click ***Apply*** to confirm your setting

Alarm

Periodic Sending

HTTP Periodic sending



HTTP Periodic sending

Interval time - Type the interval at which you want to send the URL periodically.

HTTP server ID - Select HTTP server ID, click ***Setting*** to set HTTP server.

Sending URL - Type URL which can be sent to HTTP server..

Use MAC address as URL suffix - Enable or disable this function.

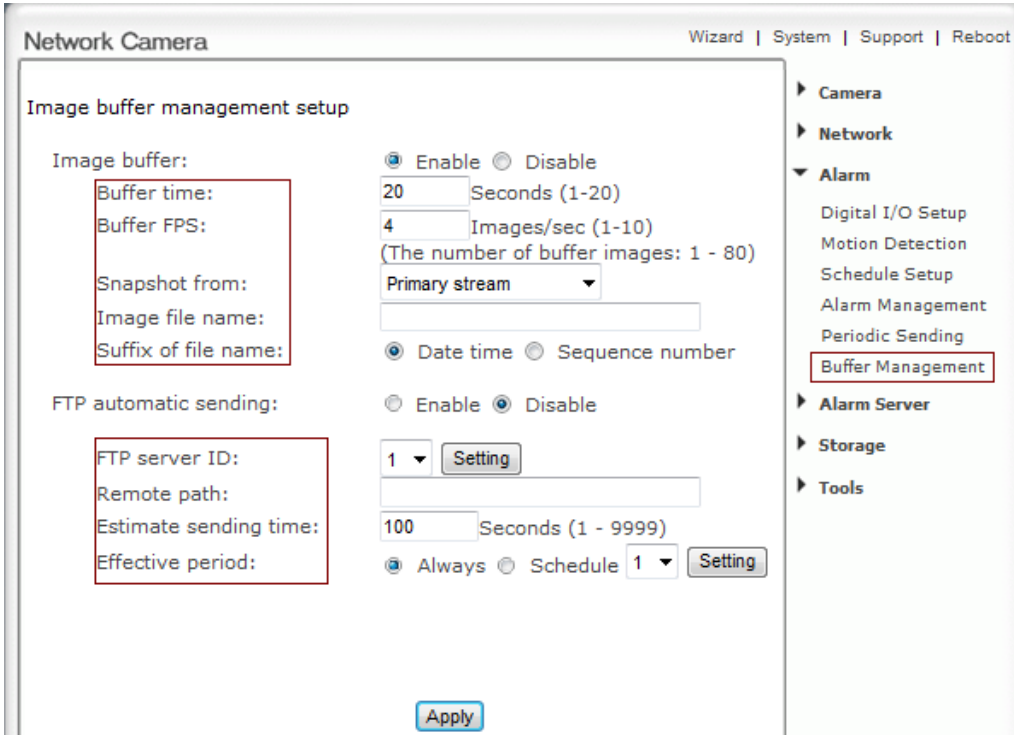
Effective period - Set Effective period. If select schedule, click ***Setting*** to set schedule.

Click ***Apply*** to confirm your setting

Alarm

Buffer Management

.



Notes: This function just can be used when SD card does not plug in the SD slot of cameras.

The camera can be configured to send images via FTP when the ***Motion Detection*** alarm is triggered

Image buffer - Enable or disable this function. Click **Browse** to preview images.

Buffer time - Type buffer time.

Buffer FPS - Type buffer FPS.

Snapshot from - Select stream that snapshot from.

Image file name - Type image file name.

Suffix of file name - Select suffix of file name.

FTP automatic sending - Enable or disable this function.

FTP server ID - Select one FTP server, click **Setting** to set FTP server.

Remote path - Path where to save the image file on the FTP server.

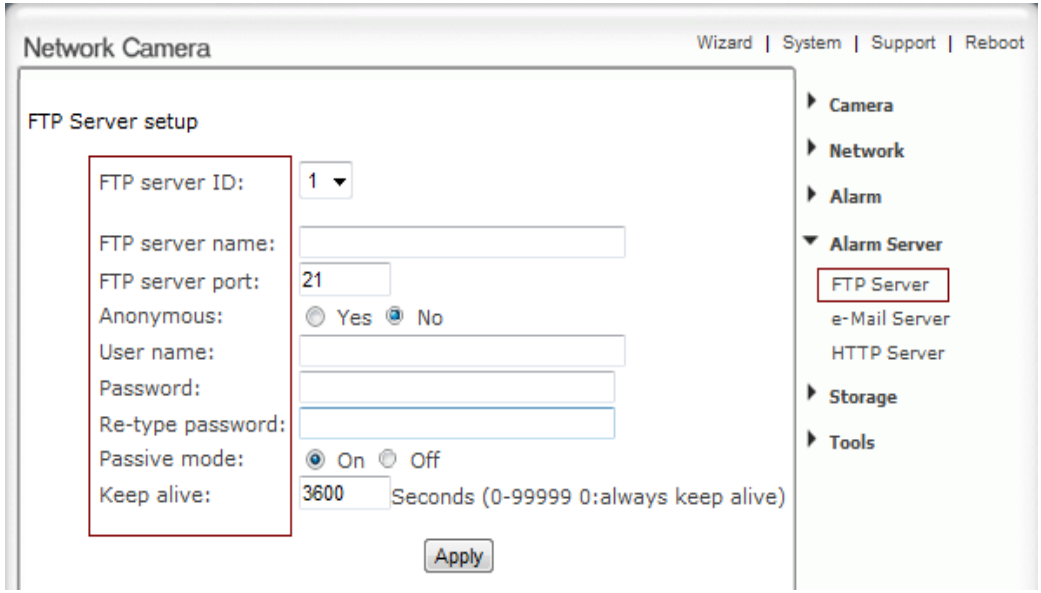
Estimate sending time - Type estimate time that all buffer images send completed.

Effective period - Select Effective period. If select schedule, click **Setting** to set schedule.

Click **Apply** to confirm your setting.

Alarm Server

FTP Server



FTP server setup

FTP server ID - Select FTP server ID.

FTP server name - Type the name or IP address of the FTP server.

FTP server port - The default port number is 21.

Anonymous - Enable or disable anonymous login.

User name - Type your user name.

Password - Type your password.

Re-type password - Re-type your password.

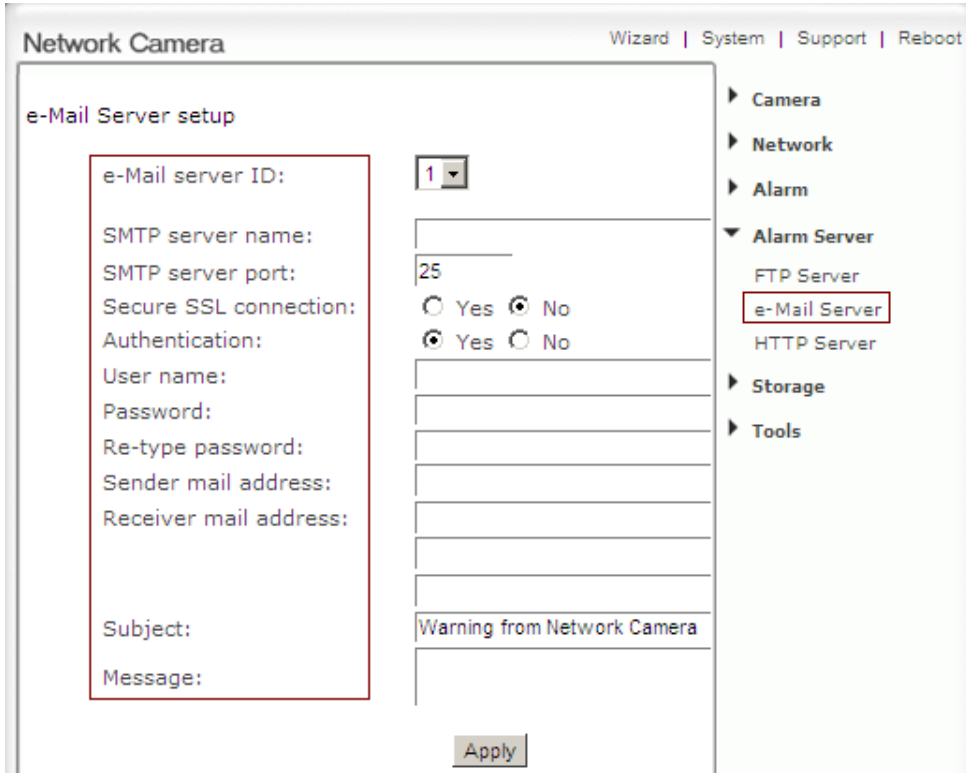
Passive mode - Switch passive mode on or off.

Keep alive - Type the time which keep alive with FTP server.

Click **Apply** to confirm your settings.

Alarm Server

e-Mail Server



Subject - Subject of the e-mail**,** entering a relevant subject will help identify the alarm better.

Message - Type the text you wish to appear in the e-mail.

e-Mail Server setup:

e-Mail server ID - Select e-Mail server ID.

SMTP server name - Type the name or IP address of the SMTP server you want to use for sending the e-Mails. Please Notes that networks do not allow e-mail relaying. Check with your system administrator for more details.

SMTP server port - The default value is 25.

Secure SSL connection - Select whether use SSL connection.

Authentication - Select the authentication required by the SMTP server.

User name- & Password - Type the user name and password of the e-Mail account you wish to use.

This field is required if your SMTP server requires authentication.

Re-type password - Re-type the password.

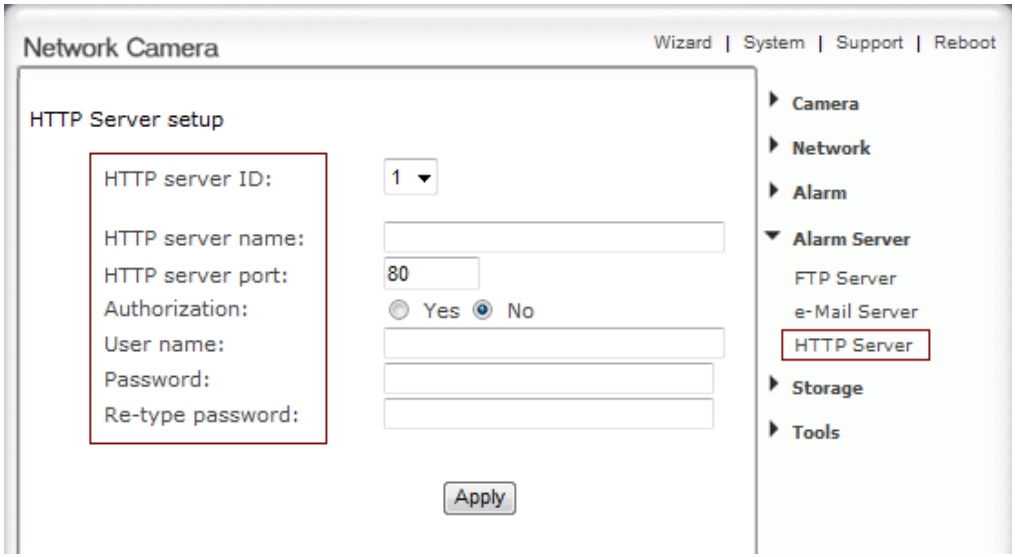
Sender e-mail address - Type the e-mail address of the account you are using to send the e-Mail.

Receiver e-mail address - Type the recipients' e-mail addresses (Up to 3 addresses can be entered).

Click **Apply** to confirm your settings.

Alarm Server

HTTP Server



HTTP Server setup:

HTTP server ID - Select HTTP server ID.

HTTP server name - Type the HTTP server name.

HTTP server port - Type the HTTP server port.

Authentication - Select the authentication required by the HTTP server.

User name - Type the user name.

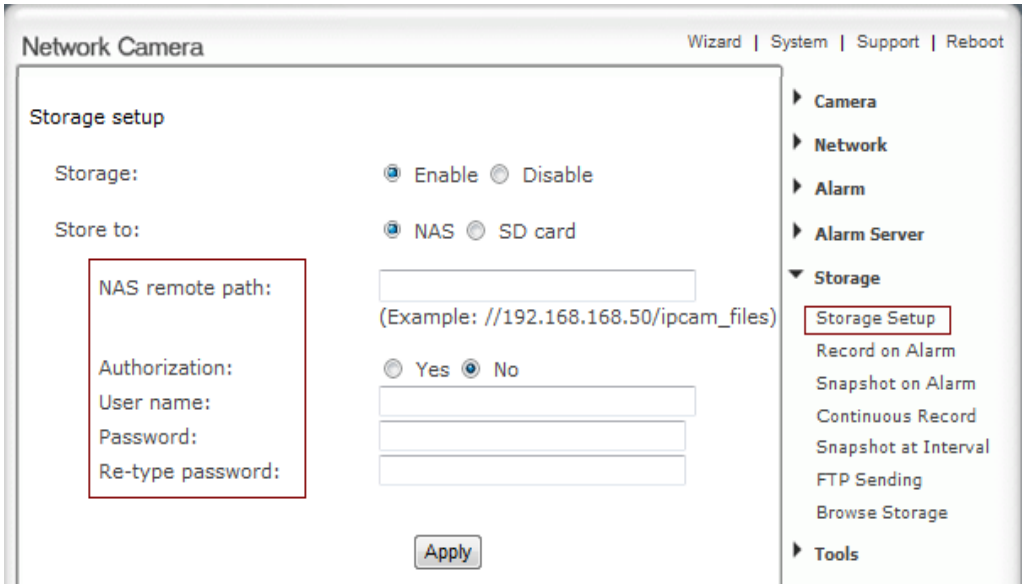
Password - Type the password.

Re-type password - Re-confirm the password.

Click **Apply** to confirm your settings.

Storage

Storage setup



Select storage destination to NAS or SD card.

Storage setup:

Storage - Enable or Disable the storage function.

Store to - When select storage destination for videotape and photograph, NAS (network attached storage) or SD card can be used. While choosing NAS, SMB/CIFS should be used as File transmission protocol.

NAS remote path - Appoint NAS remote link address and shared folders.

Authorization - Identity authentication of accessing shared folders in NAS.

User name - Type the user name.

Password - Type the password.

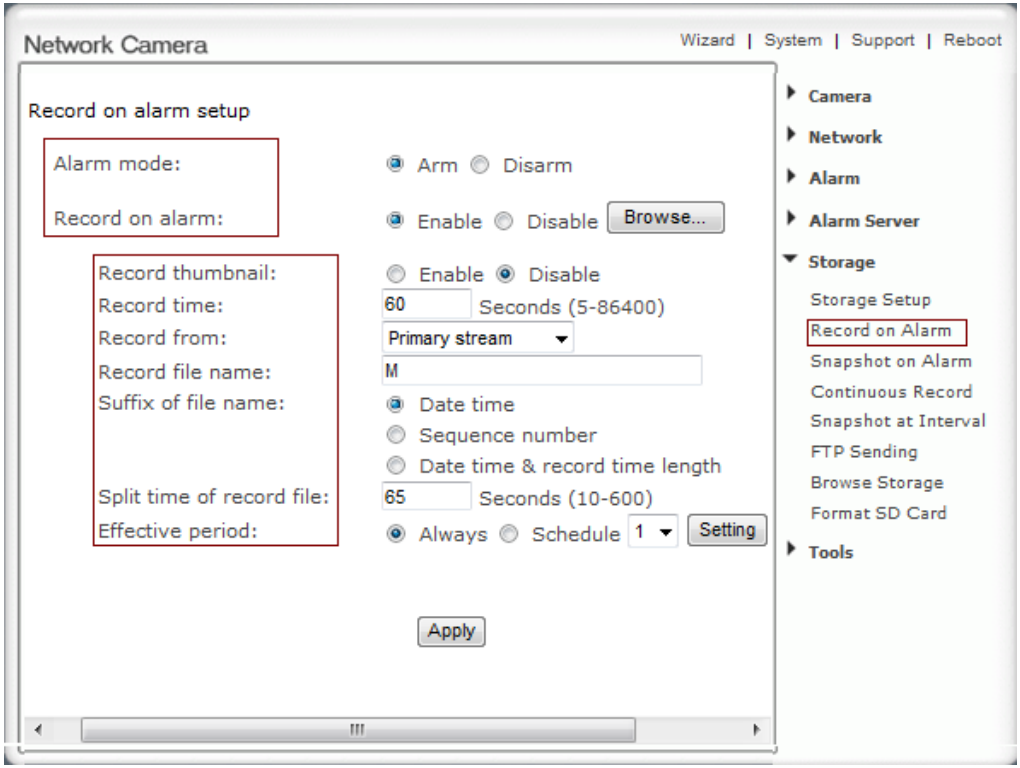
Re-type password - Re-confirm the password.

Notes: PC could serve as NAS as long as the PC support SMB/CIFS protocol and set shared folders.

Click **Apply** to confirm your settings.

Storage

Record on Alarm



Record on alarm setup:

Alarm mode - Enable or disable all alarm.

Record on alarm - Enable or disable alarm recording function.

Record thumbnail –this function will be able to view the thumbnail image of the .MOV files by .THM files created in the *browse storage*

Record time - how many seconds does camera keep recording after a motion alarm.

Record from - Select source stream that record from.

Record file name - Type record file name.

Suffix of file name - Select suffix of file name.

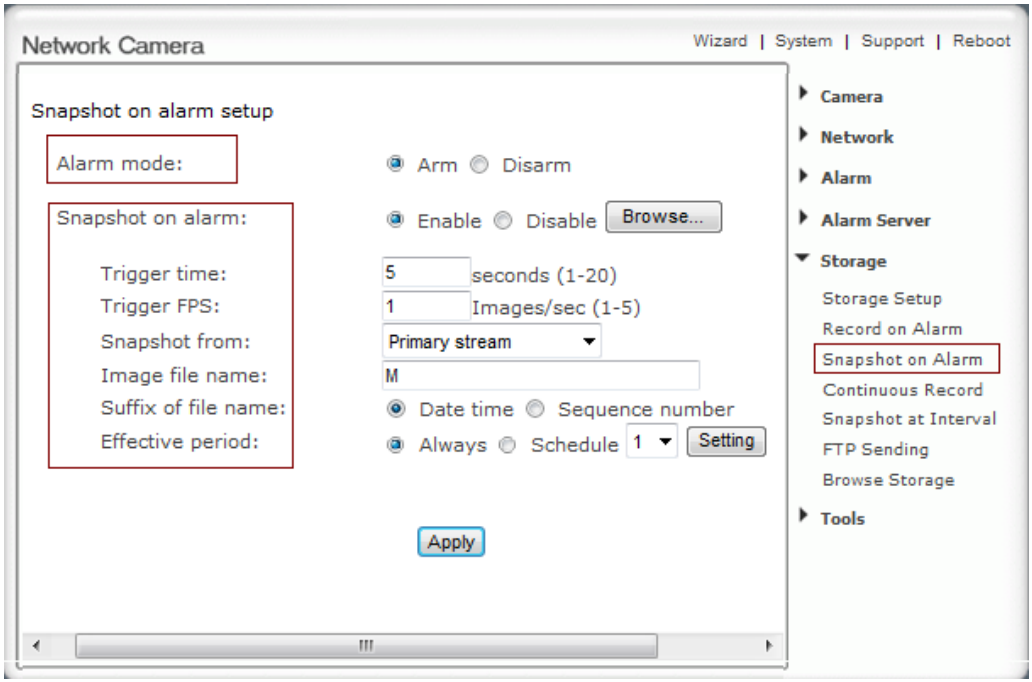
Split time of record file - How many seconds does every recording file save video and audio.

Effective period - Select Effective period. If select schedule, click "***Setting***" to set schedule

Click ***Apply*** to confirm your settings.

Storage

Snapshot on Alarm



Snapshot on alarm setup:

Alarm mode - Enable or disable all alarm.

Snapshot on alarm - Enable or disable alarm snapshot function.

Trigger time - How many seconds does camera keep snapshot the images after get a motion alarm.

Trigger FPS - How many images does camera snapshot every second after get a motion alarm.

Snapshot from - Select source stream that snapshot from.

Image file name - Type image file name.

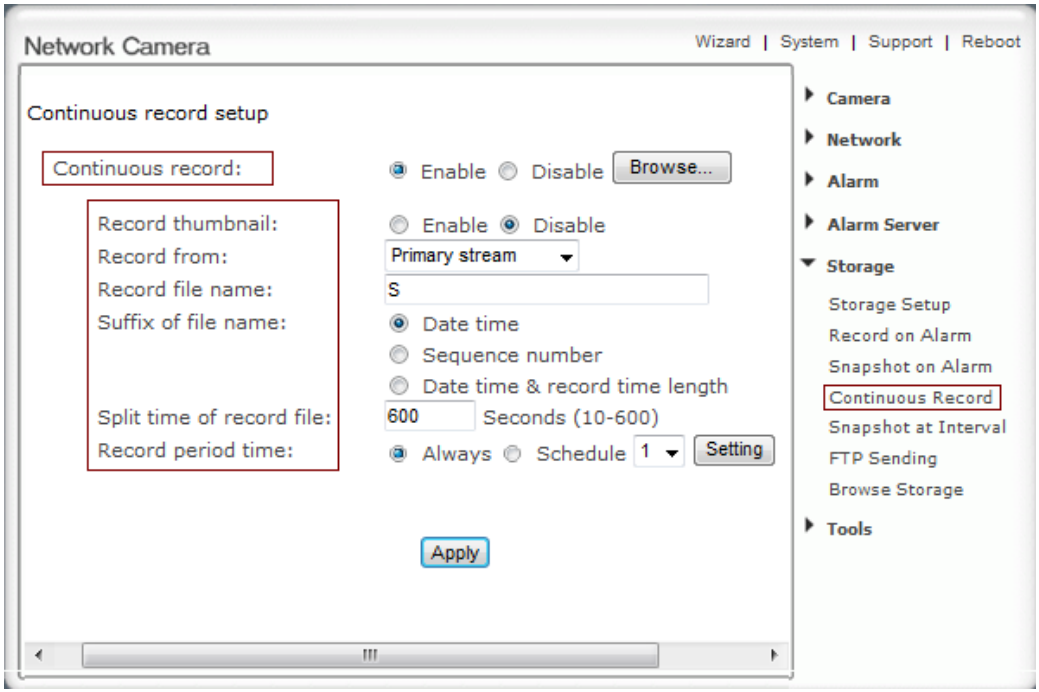
Suffix of file name- Select suffix of file name.

Effective period - Select Effective period. If select schedule, click "**Setting**" to set schedule.

Click **Apply** to confirm your settings.

Storage

Continuous Record



Continuous record setup

Continuous record - Enable or disable continuous recording function.

Record thumbnail – this function will be able to view the thumbnail image of the .MOV files by .THM files created in the *browse storage*

Record from - Select source stream that record from.

Record file name - Type record file name.

Suffix of file name - Select suffix of file name.

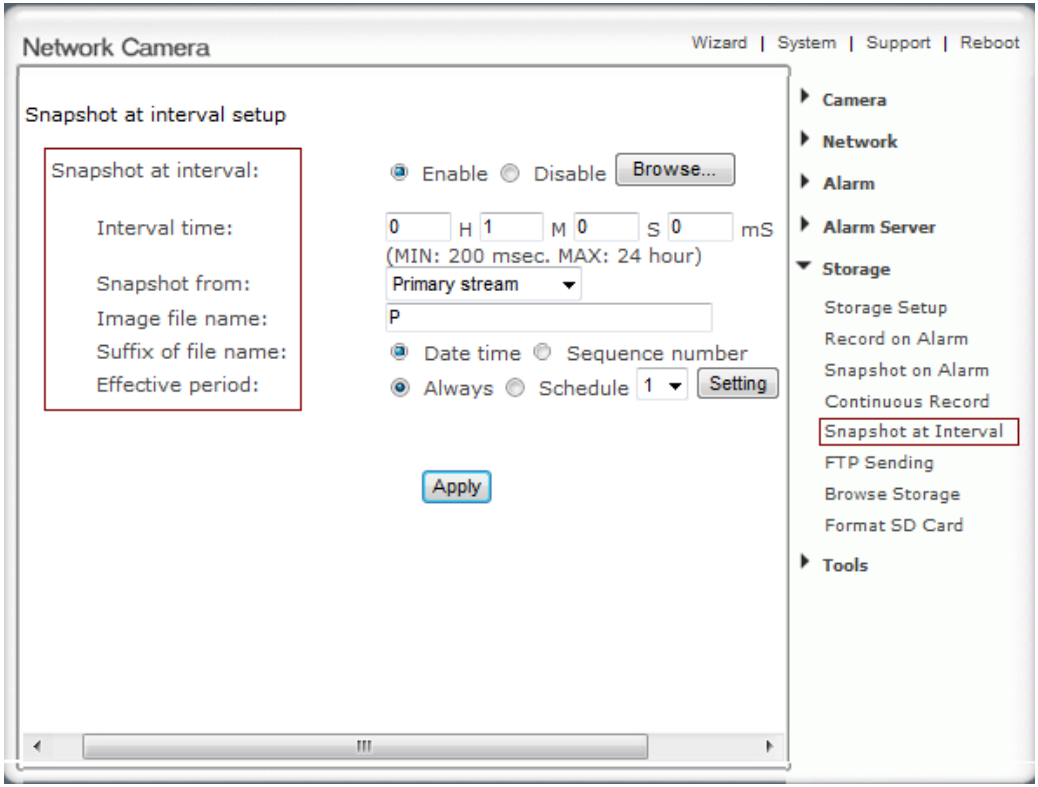
Split time of record file - How many seconds does every recording file save video and audio.

Record period time - Select record period time. If select schedule, click "**Setting**" to set schedule.

Click **Apply** to confirm your settings.

Storage

Snapshot at Interval



Snapshot at interval setup:

Snapshot at interval - enable or disable interval snapshot function

Interval time - Type the interval at which you want to save snapshot to SD card periodically.

Snapshot from - Select stream that snapshot from.

Image file name - Type image file name.

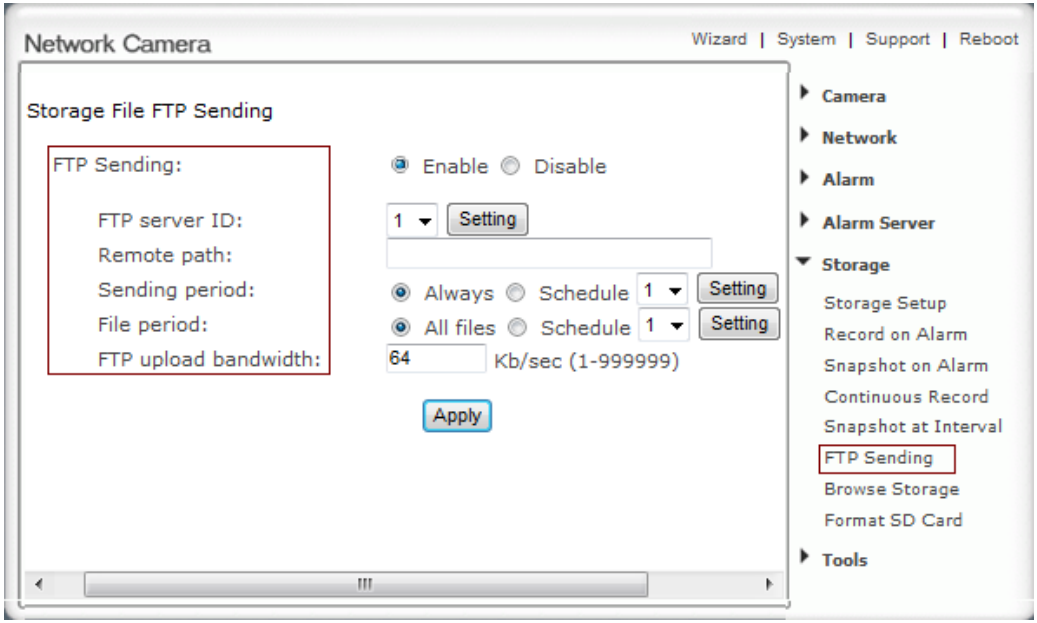
Suffix of file name - Select suffix of file name.

Effective period - Select Effective period. If select schedule, click "**Setting**" to set schedule.

Click **Apply** to confirm your settings.

Storage

FTP Sending



This function is used for sending the files to FTP server.

Storage File FTP Sending:

FTP Sending – Enable or Disable the FTP sending function

FTP server ID - Select one FTP server, click "Setting" to set FTP server.

Remote path - Path where to save the file on the FTP server.

Sending period - Select sending period. If select schedule, click "Setting" to set schedule.

File period - Select the files which creation time is in period to sending. If select schedule, click "Setting" to set schedule.

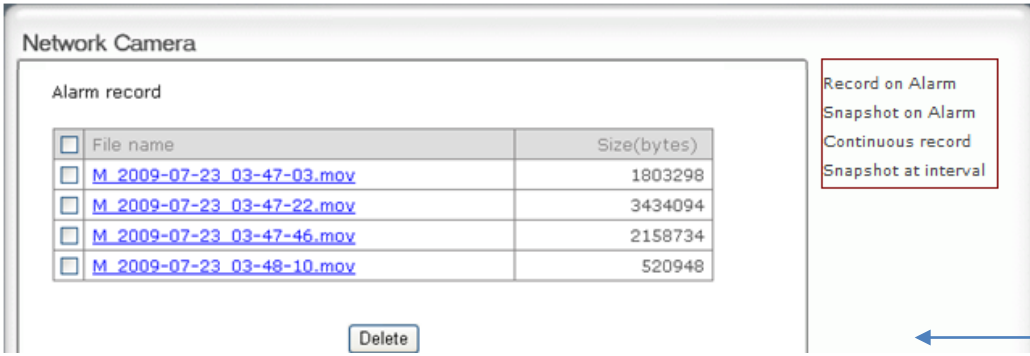
FTP upload bandwidth - Evaluate the uploading speed of FTP sending files.

.

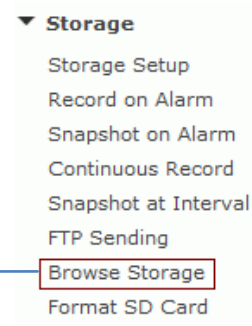
Notes: when users visit the video, uploading will automatically interrupt, and will restart when users stop visit the video

Click **Apply** to confirm your settings.

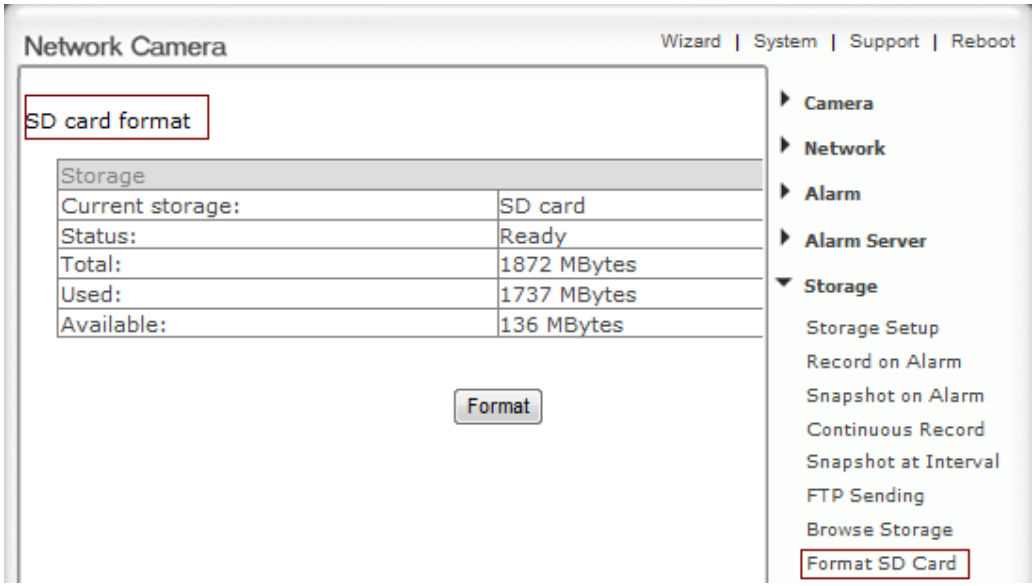
Browse Storage



When click ***Browse Storage*** and see figure left, you can browse, download, and delete the snapshot and recording files in it.



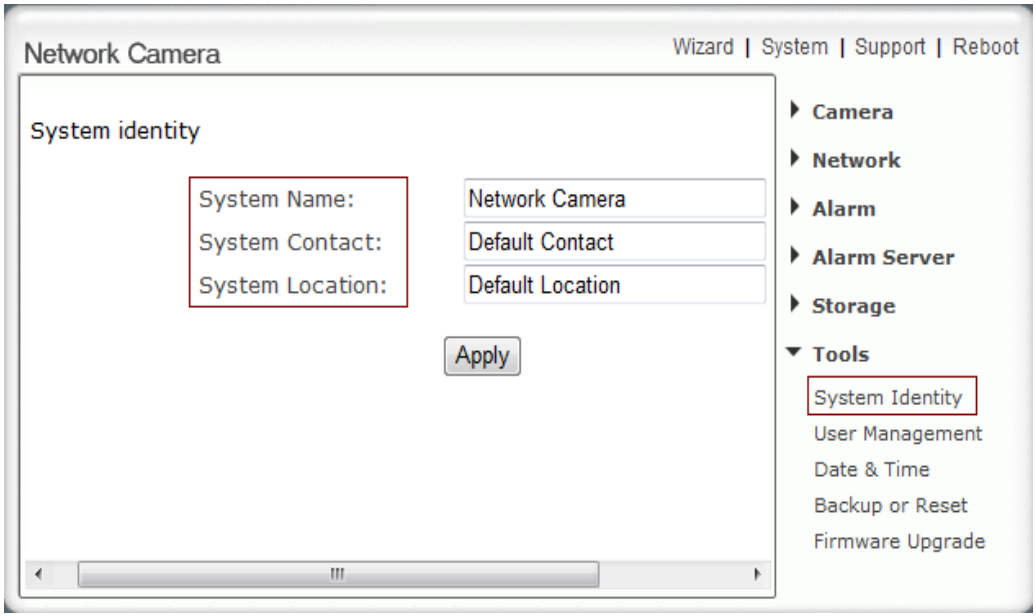
Format SD Card



To format SD card, all files will be lost after format

Tools

System Identity

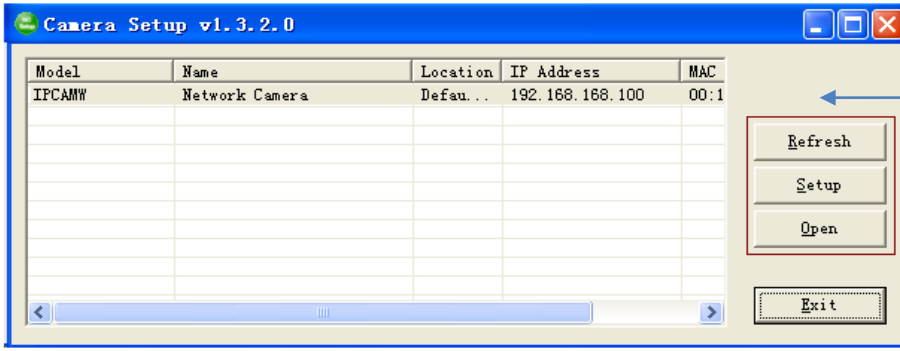


System identity:

System Name **-** Type a name to easily identify the camera.

System Contact **-** Type the contact name of the administrator of the camera.

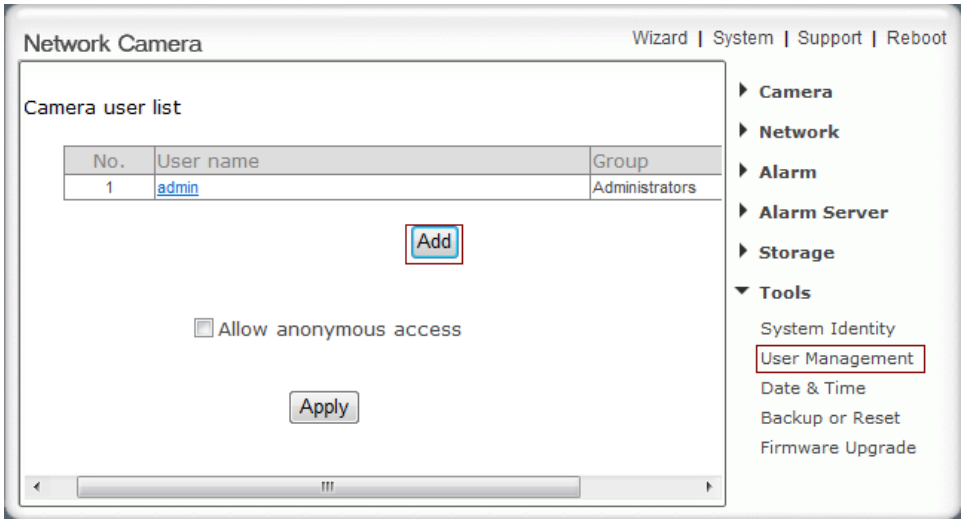
System Location **-** Type the location of the camera.

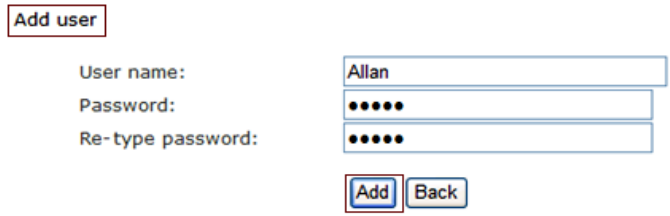


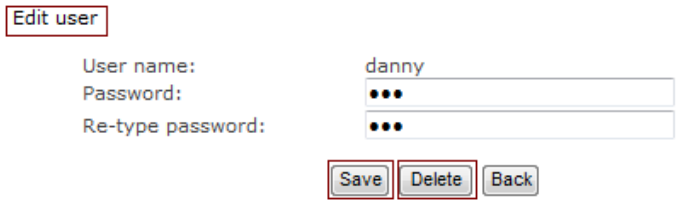
Tips: The information you fill in can be displayed on the camera. It can help to distinguish different Network Cameras in the network. (See figure left)

Tools

User Management







Notes:

1) A maximum of 16 users are allowed to access the camera simultaneously.

2) As the number of simultaneously users increase, the overall performance will decrease. This is dependent on the Network bandwidth.

Adding users

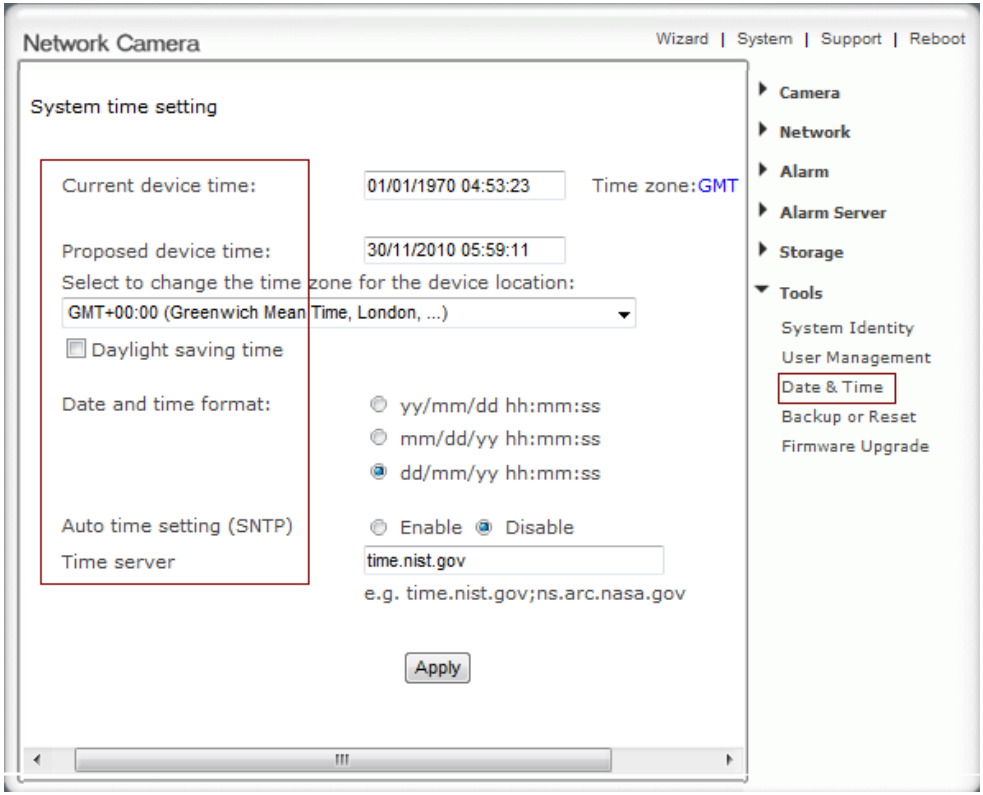
1. Click "***Add***" on the "***Camera User List***" page.
2. Enter the User name, Password and re-confirm the password then click "***Add***".

Edit user

To edit a user's password, click on the user name then enter the new password for that user twice and click "***Save***". To delete a user, click on the user name then click "***Delete***".

Tools

Date & Time



Notes:

1) If the SNTP server is not found the camera's time will be synchronized with the PC time.

2) The camera has a built-in RTC (Real-time Clock) that keeps track of the time even when power is disconnected.

System time setting:

Current device time – camera's Internal time.

Proposed device time - PC system time. On clicking Apply the camera's Internal time will be changed to this time.

Select to change the time zone for the device location - choose proper time zone.

Daylight saving time - Daylight Saving Time (or summertime as it is called in many countries) is a way of getting more light out of the day by advancing clocks by one hour during the summer.

Date and time format - Select date and time format.

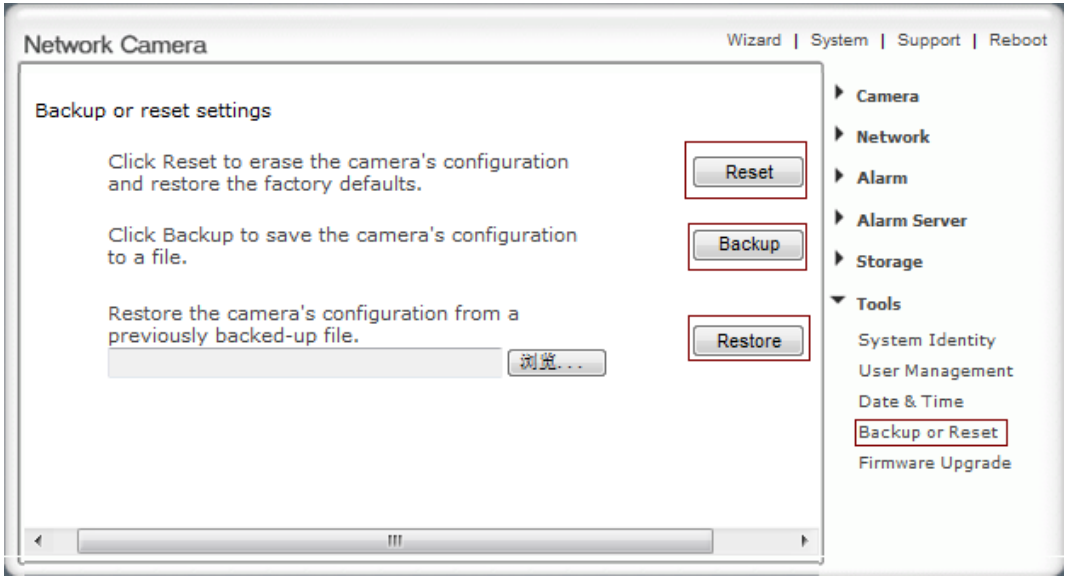
Auto time setting (SNTP) - Enable or disable this function.

Time server - Type one SNTP server name in the box.

Click ***Apply*** to confirm your settings.

Tools

Backup or Reset



Backup or reset settings

Reset - Click "**Reset**" to initialize the camera to default factory setting. All users and settings will be lost, requiring you to reconfigure the camera.

Backup - Click "**Backup**" to backup the current configuration of the camera for future reference.

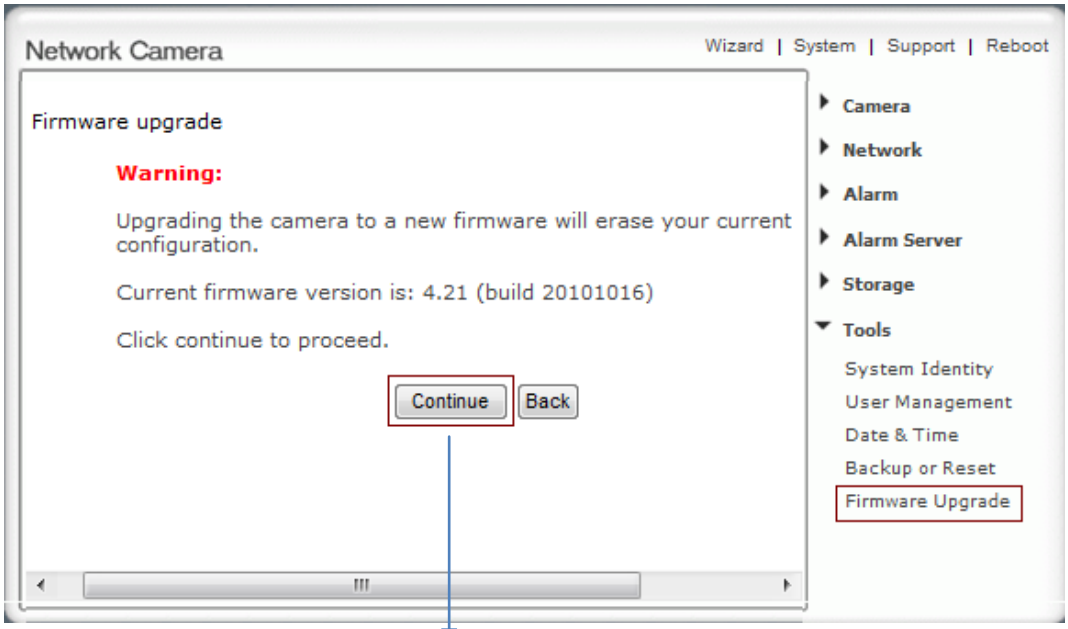
Restore - Click "**Browse**" to search for a backup configuration you wish to upload to the camera, and then click "**Restore**".

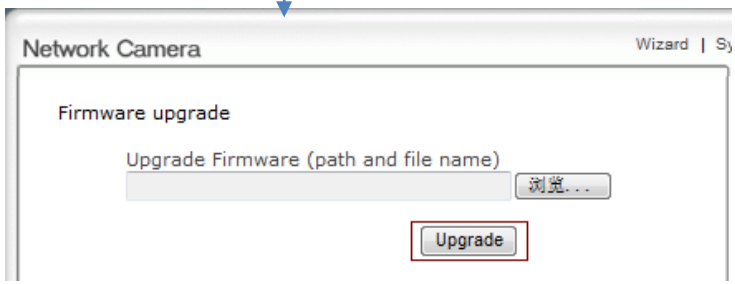
Notes: Do not turn off the power during the **Reset**, **Backup** or **Restore** functions since this might corrupt the camera's firmware

Tips: The camera can also be reset to the default settings by pressing the "**RESET**" switch on the side of the camera.

Tools

Firmware Upgrade





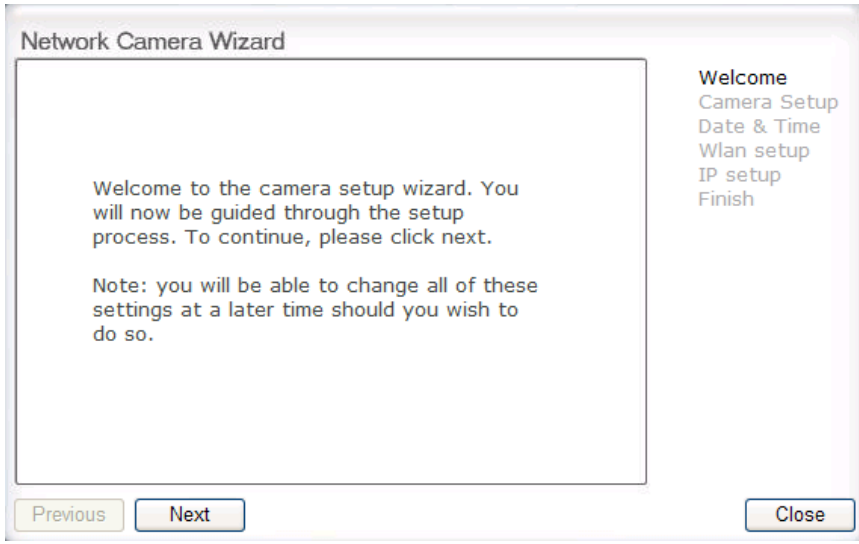
In order to upgrade your camera's firmware you first need to download this firmware from Network Camera Technical Support Site.

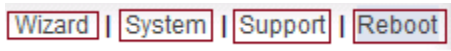
1) Click "*Continue*".

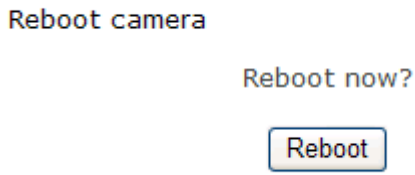
2) Click "*Browse...*" to search for the newest Firmware you downloaded, and then Click "*Upgrade*".

IMPORTANT:

Do not unplug or power off the camera while the upgrade is in progress.







Wizard, system, support & Reboot

Wizard

In order to facilitate the setup of the camera there is a Wizard that helps non technical users setup the camera easily. Click on *Wizard* at the top of the window to launch the wizard.

The Quick setup interface will pop up. Follow the simple instructions on the screen and enter the required details, clicking *next* to proceed to the Next page.

System

Click *System* to see over system information about your camera. The data of the software activity of the camera and recorded in here. It includes data that are useful when a problem occurs. (click here *system information to find details)*

Support

Click Support to see the support information

Reboot

Click Reboot to restart the camera. Rebooting the camera will retain all the settings and configurations.

ADVANCED SETTINGS

Port Forwarding

The UPnP Setup of camera show a method of Port Forwarding（see page 40 for details），but some routers maybe can’t support UPnP Port Forwarding, therefore, users need to configure Port Forwarding manually.

Firewall security features built into the router may prevent users from accessing the camera over the Internet. The router connects to the Internet over a series of “ports”. The default ports used by the camera are usually blocked from access over the Internet, therefore, these ports need to be made accessible. This is achieved using the Port Forwarding function on the router. The ports used by the camera must be opened through the router for remote access to your camera. Check your router’s user manual for specific instructions on how to open and route ports on you router.

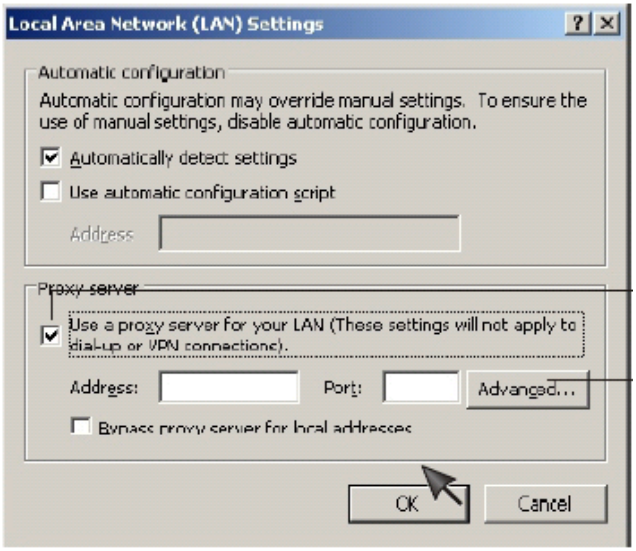
Important: Some ISPs block access to port 80 and other commonly used Internet ports. Check with your ISP in order to open the appropriate ports. If your ISP does not pass traffic on port 80, you will need to change the camera’s default port number from 80 to a different number such as 9000.

Viewing Your Camera

To access the camera from a computer on your local network, simply enter the IP Address of the Camera followed by a colon and the camera’s port number. It is not necessary to enter the colon and port number if you are using the camera’s default port 80.

To access the camera from the internet, type the external IP Address of the router, followed by a colon, and the port number of your camera (e.g., Http://210.118.166.68:9000).

Proxy Server Setting

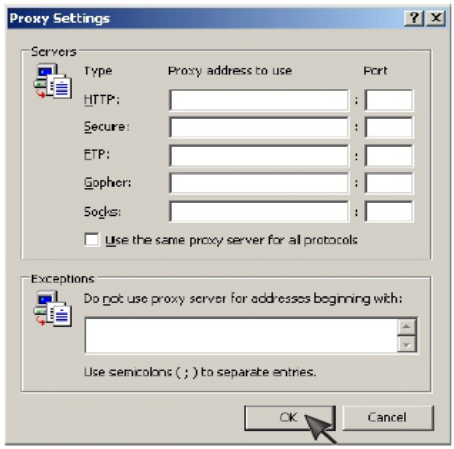


A proxy server may prevent you from connecting to the camera in some corporate environments. The web browser can set up the IP address communication without using a proxy server. Consult your ISP or network administrator for further details.

1. Start **Internet Explorer**.
2. Select **[Tools]** –> **[Internet Options...]** –> **[Connections]** tab and click **[LAN Settings]**.

Verify that the **Use a proxy server** check box is not checked. When checked, click **[Advanced...]**.

When not checked, click **[Cancel].** Your proxy server settings should not cause any problems.



Notes: A proxy server is generally used to maintain security on a network when connected to the internet. The proxy server may cause lack of image quality and delays in refresh intervals. Consult your ISP or network administrator for further details.

3. Enter the IP address of your camera into the **Do not use proxy server for addresses beginning with** data field

4. Click **[OK]** on all of the opened windows.

Specification

Camera		***Wireless LAN***	***(Optional)***
Image device	1/4" CMOS	*Wireless technology*	IEEE802.11b/g/n
Pixels	310000	*Frequency*	2.412-2.462GHz
White Balance	Auto	*Transmission speed*	54Mbps/22Mbps/11Mbps/5.5Mbps/2Mbps/1Mbps (Auto Switch)
Exposure mode	Auto	*Security*	WEP (64/128 bit), WPA-PSK(AES/TKIP), WPA2-PSK(AES/TKIP)
Gain	Auto	***External Port***	
Viewing angle	Horizontal:100°, Vertical:75°	*Built-in microphone*	Electret Condenser Microphone
Focal length	f=2.5mm	*Audio output*	Yes (2 way audio)
Aperture	F2.0	*SD slot*	Yes
Min.llumination	1.0 Lux	*Digital I/O*	1 input, 1 output
Network		***General***	
Image compression	MPEG-4 MJPEG	*Power requirements*	DC 12V
Image resolution	640x480(VGA),320x240(QVGA), 160x120(QQVGA)	*Power consumption* *Power over Ethernet (POE)*	2.5W Yes ***(optional)***
Max. frame rate	30fps @640x480	*Operating temperature*	-5 to +45 °C (+22 to +113 °F)
Audio compression	AMR(4.75 -- 12.2Kbps), G.726 (40/32/24/16Kbps)	*Supplied accessories*	AC adaptor (x1), CD-ROM(x1 setup program and user manual), Stand(x1),
Simultaneous viewers	16	*Storage temperature*	-20 to +60 °C (-4 to +140 °F)
Authentication	Administrator/General User (Up to 64)	*Operating humidity*	20～80%RH(Non-condensing)
Network protocols	TCP,UDP,IP,ARP,ICMP,DHCP,DNS,HTTP,FTP,SMTP,NTP,PPPoE,UPnP,DDNS	*Storage humidity*	20～95%RH(Non-condensing)
Stream type	RTSP/RTP/RTCP, 3GPP, ASF, HTTP	*Dimensions(W x D x H)*	90mm x 90mm x 90mm
Network connection	Ethernet (10BASE-T/100BASE-TX)	*Weight*	160g(Main Body)

Glossary of Terms

1. Network Camera: A stand-alone device which allows users to view live, full motion video from anywhere on a computer network, even over the Internet, using a standard web browser.

2. JPEG: A standard image format, used widely for photographs, also known as JPG.

3. IEEE 802.11b/g: The specifications developed by the IEEE for wireless network technology. It provides 11 Mbps transmission in the 2.4GHz band usage.

4. WEP: Wireless **E**quivalent **P**rivacy. A security protocol for wireless network defined in the IEEE 802.11b/g standard. WEP aims to provide security by encrypting data over radio waves so that it is protected as it is transmitted from one end point to another.

5. AdHoc Mode: A wireless network system in which devices communicate directly with each other, without the use of a wireless router.

6. Infrastructure Mode: One of the wireless network system in which devices communicate with each other by first going through the wireless router.

7. IP Address: The unique 32 bit number assigned to each computer connected to the Internet. IP numbers are used by the TCP/IP protocol to route packets of data to their destinations.

8. TCP/IP: The collection of "protocols" underlying the functioning of the Internet. Each computer connected to the Internet is identified by a unique IP Address.

9. SMTP: Simple Mail Transfer Protocol.

10. FTP: File Transfer Protocol. Network cameras equipped with an embedded operating system, such as Linux, can use FTP to send images to a website.

11. DHCP: Dynamic Host Configuration Protocol is a set of rules used by communications devices such as a computer, router or network adapter to allow the device to request and obtain an IP address from a server which has a list of addresses available for assignment.

12 UPnP: Universal Plug and Play is an architecture for pervasive peer-to-peer network connectivity of intelligent appliances and wireless devices.

13. DDNS: DDNS is a method of keeping a domain name linked to a dynamic IP address with your Network Camera. You can set up your DDNS service and the device will automatically update your DDNS server each time it alter a different IP address.

14. Time server: A time server consists of a computer networking device that reads the actual time from a reference clock and distributes this information to its clients using a computer network.

15. WPA: Wi-Fi Protected Access (WPA and WPA2) is a class of systems to secure wireless (Wi-Fi) computer networks. WPA implements the majority of the IEEE 802.11i standard, and was intended as an intermediate measure to take the place of WEP while 802.11i was prepared.

EU Environmental Protection

Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.

IPCAM 201012(V4.21)