

# **Network Fisheye Camera**

**User Manual**

**V5.0.9**

Thank you for purchasing our product. If there are any questions, or requests, please do not hesitate to contact the dealer.

This manual applies to **HNCA03-FE & HNCA06-FE** network fisheye camera.

This manual may contain several technical incorrect places or printing errors, and the content is subject to change without notice. The updates will be added to the new version of this manual. We will readily improve or update the products or procedures described in the manual.

#### DISCLAIMER STATEMENT

“Underwriters Laboratories Inc. (“UL”) has not tested the performance or reliability of the security or signaling aspects of this product. UL has only tested for fire, shock or casualty hazards as outlined in UL’s Standard(s) for Safety, UL60950-1. UL Certification does not cover the performance or reliability of the security or signaling aspects of this product. UL MAKES NO REPRESENTATIONS, WARRANTIES OR CERTIFICATIONS WHATSOEVER REGARDING THE PERFORMANCE OR RELIABILITY OF ANY SECURITY OR SIGNALING RELATED FUNCTIONS OF THIS PRODUCT.”

## Regulatory Information

### FCC Information

**FCC compliance:** This equipment has been tested and found to comply with the limits for a digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

#### FCC Conditions

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

### EU Conformity Statement



This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the Low Voltage Directive 2006/95/EC, the EMC Directive 2004/108/EC, the RoHS Directive 2011/65/EU.



2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: [www.recyclethis.info](http://www.recyclethis.info).



2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: [www.recyclethis.info](http://www.recyclethis.info).



## Safety Instruction

These instructions are intended to ensure that the user can use the product correctly to avoid danger or property loss.

The precaution measure is divided into ‘Warnings’ and ‘Cautions’:

**Warnings:** Serious injury or death may be caused if any of these warnings are neglected.

**Cautions:** Injury or equipment damage may be caused if any of these cautions are neglected.

	
<b>Warnings</b> Follow these safeguards to prevent serious injury or death.	<b>Cautions</b> Follow these precautions to prevent potential injury or material damage.



### Warnings:

- Please adopt the power adapter which can meet the safety extra low voltage (SELV) standard. And source with 12 VDC or 24 VAC (depending on models) according to the IEC60950-1 and Limited Power Source standard.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)
- To reduce the risk of fire or electrical shock, do not expose this product to rain or moisture.
- This installation should be made by a qualified service person and should conform to all the local codes.
- Please install blackouts equipment into the power supply circuit for convenient supply interruption.
- Please make sure that the ceiling can support more than 50(N) Newton gravities if the camera is fixed to the ceiling.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the camera yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)



**Cautions:**

- Make sure the power supply voltage is correct before using the camera.
- Do not drop the camera or subject it to physical shock.
- Do not touch sensor modules with fingers. If cleaning is necessary, use a clean cloth with a bit of ethanol and wipe it gently. If the camera will not be used for an extended period of time, put on the lens cap to protect the sensor from dirt.
- Do not aim the camera lens at the strong light such as sun or incandescent lamp. The strong light can cause fatal damage to the camera.
- The sensor may be burned out by a laser beam, so when any laser equipment is being used, make sure that the surface of the sensor not be exposed to the laser beam.
- Do not place the camera in extremely hot, cold temperatures (the operating temperature should be between  $-30^{\circ}\text{C} \sim 60^{\circ}\text{C}$ , or  $-40^{\circ}\text{C} \sim 60^{\circ}\text{C}$  if the camera model has an “H” in its suffix), dusty or damp environment, and do not expose it to high electromagnetic radiation.
- To avoid heat accumulation, good ventilation is required for a proper operating environment.
- Keep the camera away from water and any liquid.
- While shipping, the camera should be packed in its original packing.
- Improper use or replacement of the battery may result in hazard of explosion. Please use the manufacturer recommended battery type.

**Notes:**

For the camera supports IR, you are required to pay attention to the following precautions to prevent IR reflection:

- Dust or grease on the dome cover will cause IR reflection. Please do not remove the dome cover film until the installation is finished. If there is dust or grease on the dome cover, clean the dome cover with clean soft cloth and isopropyl alcohol.
- Make certain the installation location does not have reflective surfaces of objects too close to the camera. The IR light from the camera may reflect back into the lens causing reflection.
- The foam ring around the lens must be seated flush against the inner surface of the bubble to isolate the lens from the IR LEDS. Fasten the dome cover to camera body so that the foam ring and the dome cover are attached seamlessly.

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# Chapter 1 System Requirement

**Operating System:** Microsoft Windows XP SP1 and above version / Vista / Win7 /

Server 2003 / Server 2008 32bits

**CPU:** Intel Pentium IV 3.0 GHz or higher

**RAM:** 1G or higher

**Display:** 1024×768 resolution or higher

**Web Browser:** Internet Explorer 6.0 and above version, Safari 5.02 and above version, Mozilla Firefox 3.5 and above version and Google Chrome8 and above versions.



## Chapter 2 Network Connection

### *Before you start:*

- If you want to set the network camera via a LAN (Local Area Network), please refer to *Section 2.1 Setting the Network Camera over the LAN*.
- If you want to set the network camera via a WAN (Wide Area Network), please refer to *Section 2.2 Setting the Network Camera over the WAN*.

## 2.1 Setting the Network Camera over the LAN

### *Purpose:*

To view and configure the camera via a LAN, you need to connect the network camera in the same subnet with your computer, and install the SADP or iVMS-4200 software to search and change the IP of the network camera.

**Note:** For the detailed introduction of SADP, please refer to Appendix 1.

### 2.1.1 Wiring over the LAN

The following figures show the two ways of cable connection of a network camera and a computer:

### *Purpose:*

- To test the network camera, you can directly connect the network camera to the computer with a network cable as shown in Figure 2-1.
- Refer to the Figure 2-2 to set network camera over the LAN via a switch or a router.

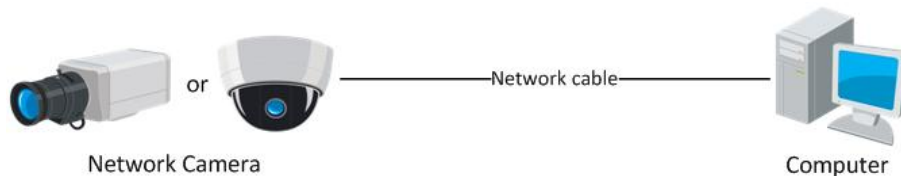


Figure 2-1 Connecting Directly

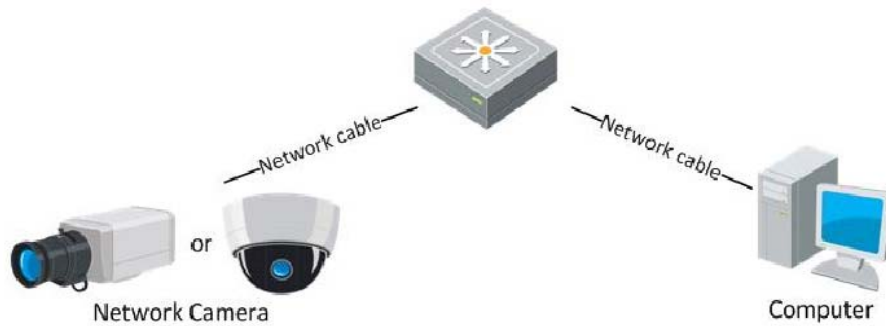


Figure 2-2 Connecting via a Switch or a Router

### 2.1.2 Detecting and Changing the IP Address

You need the IP address to visit the network camera.

**Steps:**

1. To get the IP address, you can choose either of the following methods:
  - ◆ Use SADP, a software tool which can automatically detect the online network cameras in the LAN and list the device information including IP address, subnet mask, port number, device serial number, device version, etc., shown in Figure 2-3.
  - ◆ Use the iVMS-4200 client software to list the online devices. Please refer to the user manual of iVMS-4200 client software for detailed information.
2. Change the IP address and subnet mask to the same subnet as that of your computer.
3. Enter the IP address of network camera in the address field of the web browser to view the live video.

**Notes:**

- The default IP address is 192.0.0.64 and the port number is 8000. The default user name is admin, and password is 12345.
- For accessing the network camera from different subnets, please set the gateway for the network camera after you logged in. For detailed information, please refer to *Section 5.3.1 Configuring TCP/IP Settings*.

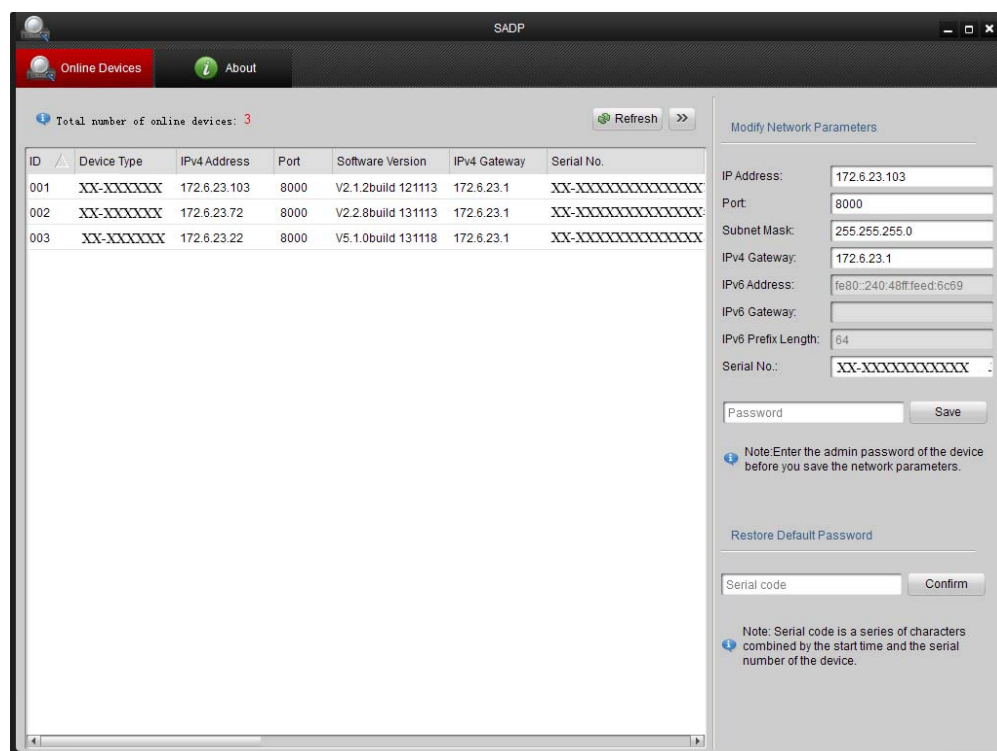


Figure 2-3 SADP Interface

## 2.2 Setting the Network Camera over the WAN

### *Purpose:*

This section explains how to connect the network camera to the WAN with a static IP or a dynamic IP.

### 2.2.1 Static IP Connection

#### *Before you start:*

Please apply a static IP from an ISP (Internet Service Provider). With the static IP address, you can connect the network camera via a router or connect it to the WAN directly.

- **Connecting the network camera via a router**

#### *Steps:*

1. Connect the network camera to the router.

2. Assign a LAN IP address, the subnet mask and the gateway. Refer to *Section 2.1.2 Detecting and Changing the IP Address* for detailed IP address configuration of the camera.
3. Save the static IP in the router.
4. Set port mapping, e.g., 80, 8000, and 554 ports. The steps for port mapping vary according to the different routers. Please call the router manufacturer for assistance with port mapping.

**Note:** Refer to Appendix 2 for detailed information about port mapping.

5. Visit the network camera through a web browser or the client software over the internet.

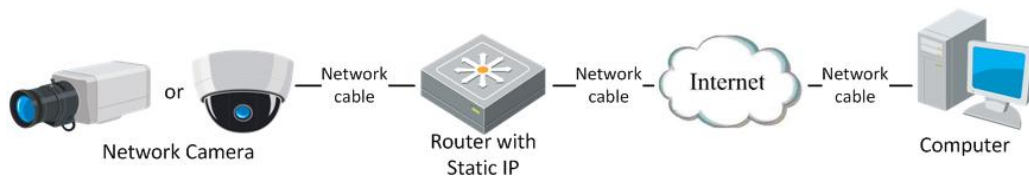


Figure 2-4 Accessing the Camera through Router with Static IP

- **Connecting the network camera with static IP directly**

You can also save the static IP in the camera and directly connect it to the internet without using a router. Refer to *Section 2.1.2 Detecting and Changing the IP Address* for detailed IP address configuration of the camera.

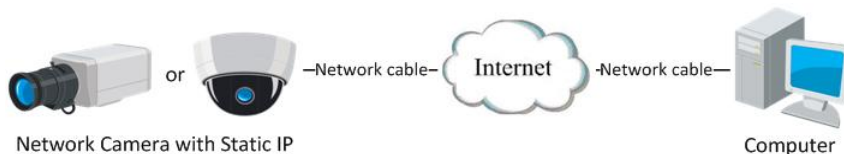


Figure 2-5 Accessing the Camera with Static IP Directly

## 2.2.2 Dynamic IP Connection

### *Before you start:*

Please apply a dynamic IP from an ISP. With the dynamic IP address, you can connect the network camera to a modem or a router.

- **Connecting the network camera via a router**

### *Steps:*

1. Connect the network camera to the router.
2. In the camera, assign a LAN IP address, the subnet mask and the gateway. Refer to *Section 2.1.2 Detecting and Changing the IP Address* for detailed LAN configuration.
3. In the router, set the PPPoE user name, password and confirm the password.
4. Set port mapping. E.g. 80, 8000, and 554 ports. The steps for port mapping vary depending on different routers. Please call the router manufacturer for assistance with port mapping.

**Note:** Refer to Appendix 2 for detailed information about port mapping.

5. Apply a domain name from a domain name provider.
6. Configure the DDNS settings in the setting interface of the router.
7. Visit the camera via the applied domain name.

#### ● Connecting the network camera via a modem

##### **Purpose:**

This camera supports the PPPoE auto dial-up function. The camera gets a public IP address by ADSL dial-up after the camera is connected to a modem. You need to configure the PPPoE parameters of the network camera. Refer to *Section 5.3.3 Configuring PPPoE Settings* for detailed configuration.

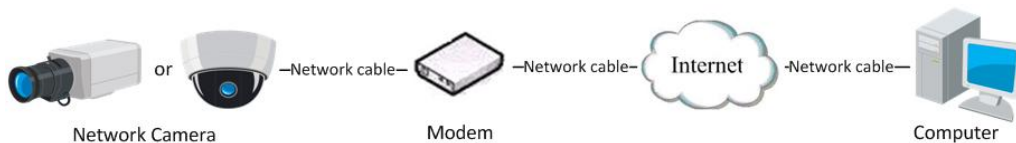


Figure 2-6 Accessing the Camera with Dynamic IP

**Note:** The obtained IP address is dynamically assigned via PPPoE, so the IP address always changes after rebooting the camera. To solve the inconvenience of the dynamic IP, you need to get a domain name from the DDNS provider (E.g. DynDns.com). Please follow the steps below for normal domain name resolution and private domain name resolution to solve the problem.

#### ◆ Normal Domain Name Resolution

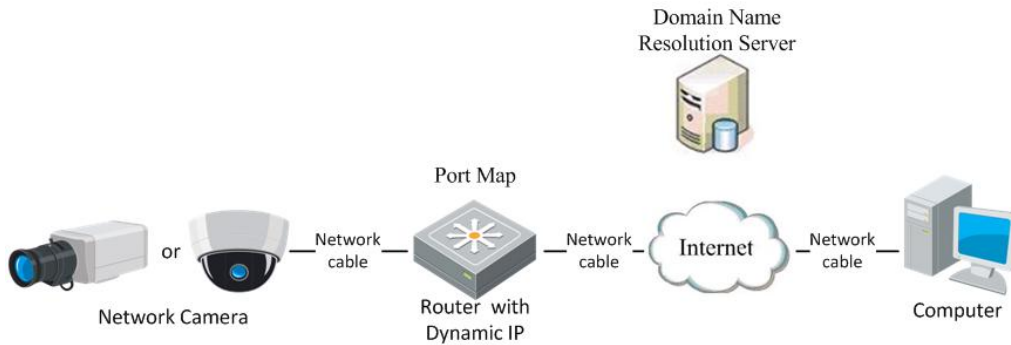


Figure 2-7 Normal Domain Name Resolution

**Steps:**

1. Apply a domain name from a domain name provider.
2. Configure the DDNS settings in the **DDNS Settings** interface of the network camera. Refer to *Section 5.3.4 Configuring DDNS Settings* for detailed configuration.
3. Visit the camera via the applied domain name.

◆ Private Domain Name Resolution

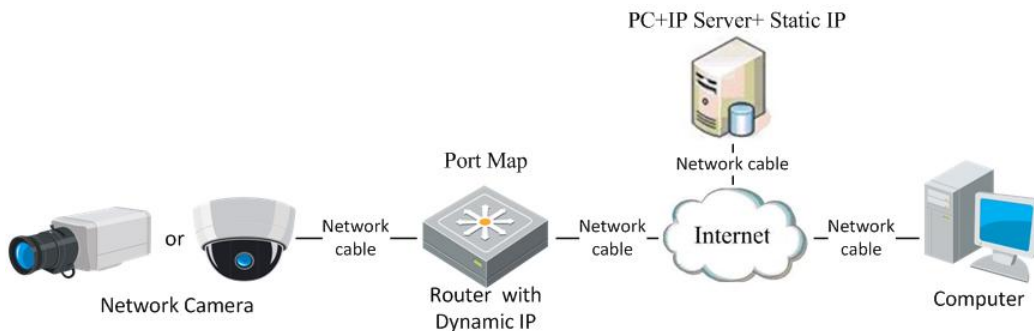


Figure 2-8 Private Domain Name Resolution

**Steps:**

1. Install and run the IP Server software in a computer with a static IP.
2. Access the network camera through the LAN with a web browser or the client software.
3. Enable DDNS and select IP Server as the protocol type. Refer to *Section 5.3.4 Configuring DDNS Settings* for detailed configuration.

## Chapter 3 Access to the Network Camera

### 3.1 Accessing by Web Browsers

*Steps:*

1. Open the web browser.
2. Input the IP address of the network camera in the address bar, e.g., 192.0.0.64 and press the **Enter** key to enter the login interface.
3. Input the user name and password and click **Login**.



Figure 3-1 Login Interface

*Notes:*

- The default user name is admin, and the default password is 12345.
  - Switch the display language from the upper-right corner between Chinese and English.
4. Install the plug-in before viewing the live video and operating the camera. Please follow the installation prompts to install the plug-in.

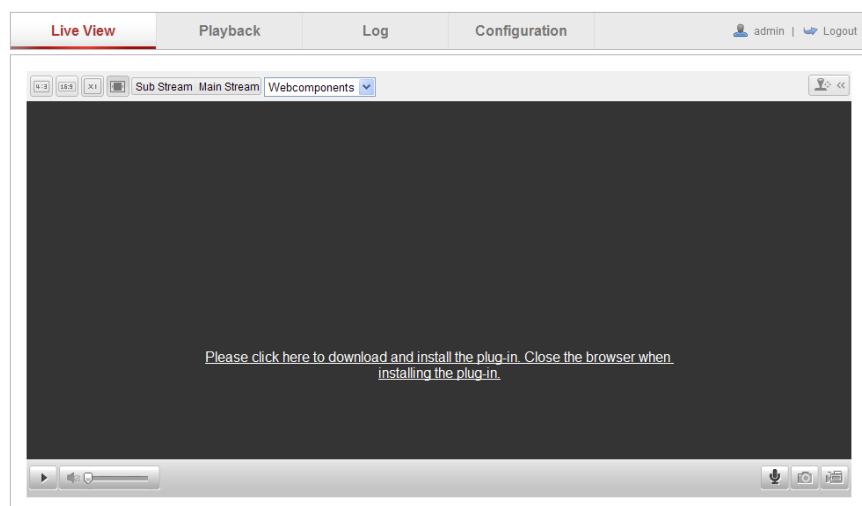


Figure 3-2 Download and Install Plug-in

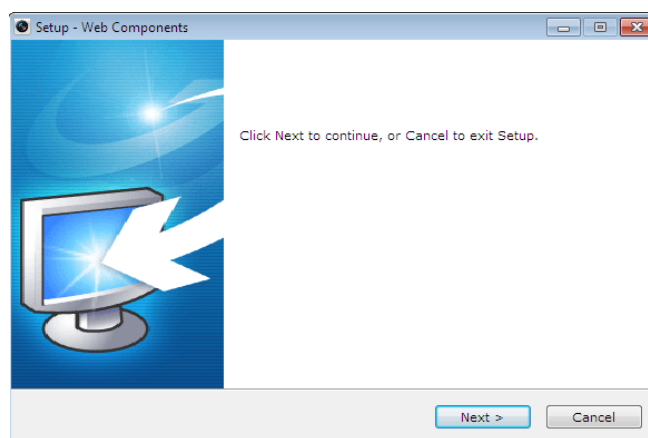


Figure 3-3 Install Plug-in (1)

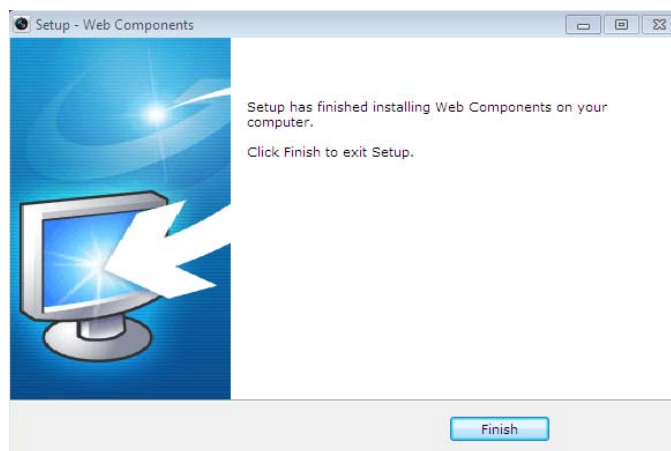


Figure 3-4 Install Plug-in (2)

**Note:** You may have to close the web browser to install the plug-in. Please reopen the web browser and log in again after installing the plug-in.



## 3.2 Accessing by Client Software

The product CD contains the iVMS-4200 client software. You can view the live video and manage the camera with the software.

Follow the installation prompts to install the software. The control panel and live view interface of iVMS-4200 client software are shown as bellow.

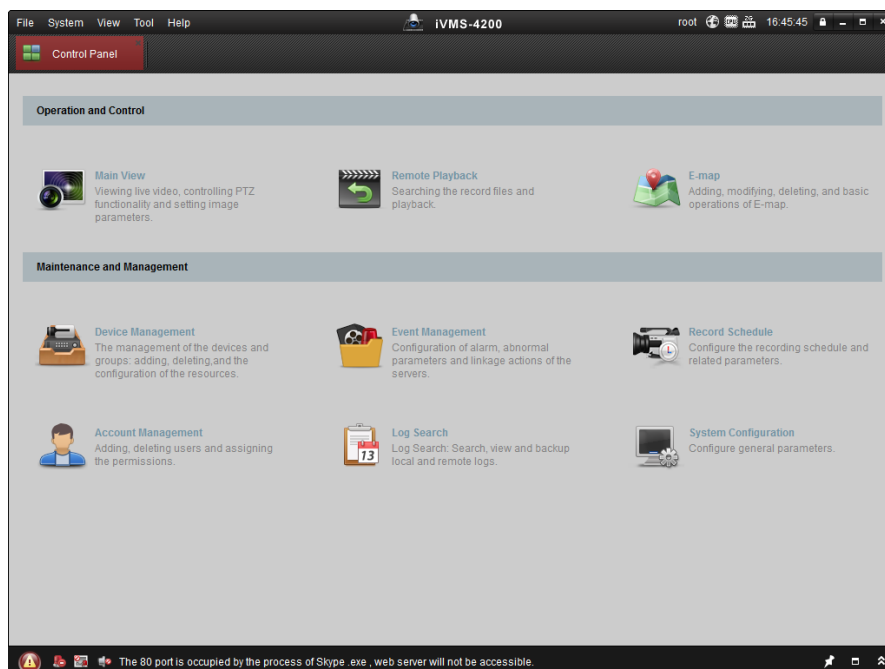


Figure 3-5 iVMS-4200 Client Software

**Note:** For detailed information about the software, please refer to the user manual of the iVMS-4200 Client Software.

## Chapter 4 Live View

### 4.1 Live View Page

#### *Purpose:*

The live view page allows you to view the real-time video, capture images, realize PTZ control, set/call presets and configure video parameters.

Log in the network camera to enter the live view page, or you can click **Live View** on the menu bar of the main page to enter the live view page.

#### **Descriptions of the live view page:**

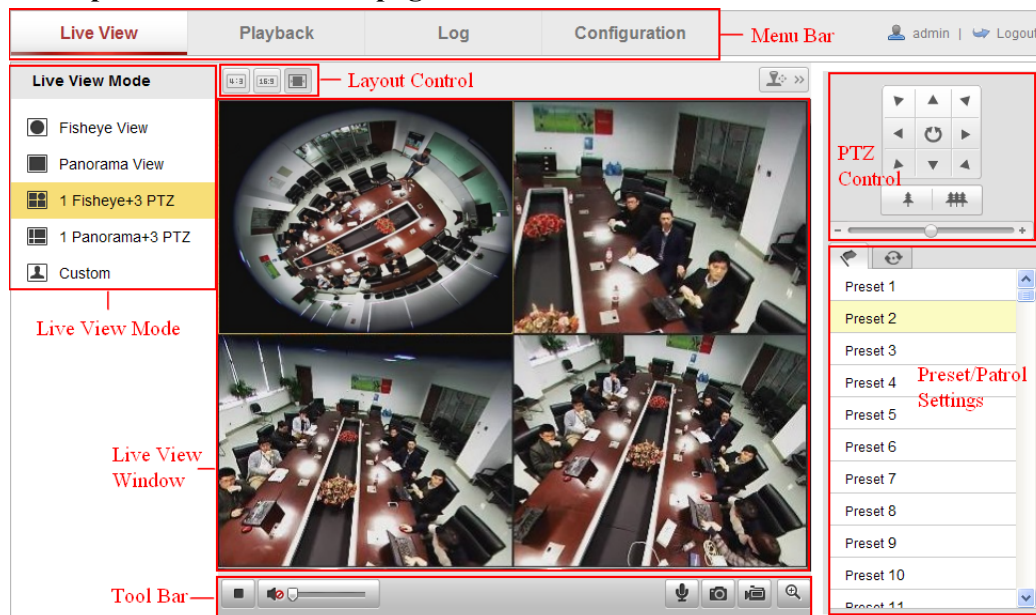


Figure 4-1 Live View Page

#### **Menu Bar:**

Click each tab to enter Live View, Playback, Log and Configuration page respectively.

#### **Layout Control:**

Click each tab to adjust the layout of the live view. 4:3, 16:9, and auto are selectable.

#### **Live View Window:**

Display the live view in fisheye mode, panorama mode, or PTZ mode.

#### **Toolbar:**

Operations on the live view page, e.g., live view, capture, record, audio on/off, two-way audio, etc.

#### PTZ Control:

Panning, tilting and zooming actions, and the PTZ speed of the camera.

#### Preset/Patrol Settings:

Set and call the preset/patrol for the camera.

## 4.2 Starting Live View










In the live view window as shown in Figure 4-2, click  on the toolbar to start the live view of the camera.





Figure 4-2 Live View Toolbar

Table 4-1 Descriptions of the Toolbar

Icon	Description
	Start/Stop live view.
	The window size is 4:3.
	The window size is 16:9.
	Self-adaptive window size.
	Manually capture the picture.
	Manually start/stop recording.
	Audio on and adjust volume /Mute.
	Turn on/off microphone.

## 4.3 Recording and Capturing Pictures Manually

In the live view interface, click  on the toolbar to capture the live pictures or click  to record the live view. The saving paths of the captured pictures and clips can be set on the **Configuration > Local Configuration** page. To configure remote scheduled recording, please refer to *Section 6.2*.

**Note:** The captured image will be saved as JPEG file or BMP file in your computer.



## 4.4 Operating PTZ Control

### *Purpose:*

In the live view interface, you can use the PTZ control buttons to realize pan/tilt/zoom control of the camera.

If the expand mode is 1 fisheye + 3 PTZ or 1 panorama + 3 PTZ, you can use the PTZ control interface to adjust the view angle and the PTZ speed.

### 4.4.1 PTZ Control Panel

On the live view page, click  to show the PTZ control panel or click  to hide it.

Click the direction buttons to control the pan/tilt movements.






Figure 4-3 PTZ Control Panel

### *Notes:*

There are 8 direction arrows (⬆,⬇,⬅,➡,⬆,⬇,⬅,➡) in the live view window when you click and drag the mouse in the relative positions.

Table 4-2 Descriptions of PTZ Control Panel

Icon	Description
	Auto Scan
	Zoom in/out
	Adjust speed of pan/tilt movements

### 4.4.2 Setting / Calling a Preset

#### ● Setting a Preset:

1. In the PTZ control panel, select a preset number from the preset list.

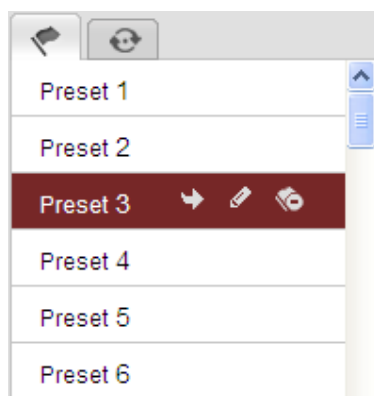




Figure 4-4 Setting a Preset


2. Use the PTZ control buttons to move the lens to the desired position.
  - Pan the camera to the right or left.
  - Tilt the camera up or down.
  - Zoom in or out.
3. Click  to finish the setting of the current preset.
4. You can click  to delete the preset.

**Note:** You can configure up to 128 presets.

### ● Calling a Preset:

This feature enables the camera to point to a specified preset scene manually when an event takes place.

For the defined preset, you can call it at any time to the desired preset scene.

In the PTZ control panel, select a defined preset from the list and click  to call the preset.

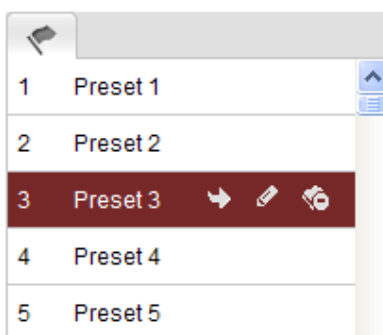




Figure 4-5 Calling a Preset

### 4.4.3 Setting / Calling a Patrol

**Note:**

No less than 2 presets have to be configured before you set a patrol.

**Steps:**

1. Click  to enter the patrol configuration interface.
2. Select a path No., and click  to add the configured presets.
3. Select the preset, and input the patrol duration and patrol speed.
4. Click OK to save the first preset.
5. Follow the steps above to add the other presets.

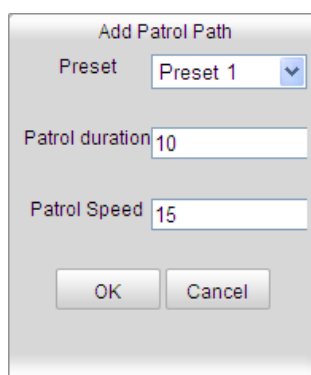






Figure 4-6 Add Patrol Path

6. Click  to save a patrol.
7. Click  to start the patrol, and click  to stop it.
8. (Optional) Click  to delete a patrol.

# Chapter 5 Network Camera Configuration

## 5.1 Configuring Local Parameters

**Note:** The local configuration refers to the parameters of the live view, record files and captured pictures. The record files and captured pictures are the ones you record and captured using the web browser and thus the saving paths of them are on the PC running the browser.

**Steps:**

1. Enter the Local Configuration interface:

### Configuration > Local Configuration

Live View Parameters				
Protocol	<input checked="" type="radio"/> TCP	<input type="radio"/> UDP	<input type="radio"/> MULTICAST	<input type="radio"/> HTTP
Live View Performance	<input type="radio"/> Shortest Delay	<input type="radio"/> Real Time	<input checked="" type="radio"/> Balanced	<input type="radio"/> Fluency
Rules	<input checked="" type="radio"/> Enable	<input type="radio"/> Disable		
Image Format	<input checked="" type="radio"/> JPEG	<input type="radio"/> BMP		

Record File Settings	
Record File Size	<input type="radio"/> 256M <input checked="" type="radio"/> 512M <input type="radio"/> 1G
Save record files to	C:\Documents and Settings\zhongqiuyue\Web\RecordFiles <input type="button" value="Browse"/>
Save downloaded files to	C:\Documents and Settings\zhongqiuyue\Web\DownloadFiles <input type="button" value="Browse"/>

Picture and Clip Settings	
Save snapshots in live view to	C:\Documents and Settings\zhongqiuyue\Web\CaptureFiles <input type="button" value="Browse"/>
Save snapshots when playback to	C:\Documents and Settings\zhongqiuyue\Web\PlaybackPics <input type="button" value="Browse"/>
Save clips to	C:\Documents and Settings\zhongqiuyue\Web\PlaybackFiles <input type="button" value="Browse"/>

Figure 5-1 Local Configuration Interface

2. Configure the following settings:

- **Live View Parameters:** Set the protocol type and live view performance.

- ◆ **Protocol Type:** TCP, UDP, MULTICAST and HTTP are selectable.

**TCP:** Ensures complete delivery of streaming data and better video quality, yet the real-time transmission will be affected.

**UDP:** Provides real-time audio and video streams.

**HTTP:** Allows the same quality as of TCP without setting specific ports for

streaming under some network environments.

**MULTICAST:** It's recommended to select MCAST type when using the Multicast function. For detailed information about Multicast, refer to *Section 5.3.1 TCP/IP Settings*.

- ◆ **Live View Performance:** Set the live view performance to Shortest Delay, Real Time, Balanced or Best Fluency.
- ◆ **Rules:** It refers to the rules on your local browser, select enable or disable to display or not display the colored marks when the motion detection, face detection, or intrusion detection is triggered. E.g.: enabled as the rules are, and the face detection is enabled as well, when a face is detected, it will be marked with a green rectangle on the live view.
- ◆ **Image Format:** Choose the image format for picture capture.
- **Record File Settings:** Set the saving path of the recorded video files. Valid for the record files you recorded with the web browser.
  - ◆ **Record File Size:** Select the packed size of the manually recorded and downloaded video files to 256M, 512M or 1G. After the selection, the maximum record file size is the value you selected.
  - ◆ **Save record files to:** Set the saving path for the manually recorded video files.
  - ◆ **Save downloaded files to:** Set the saving path for the downloaded video files in playback mode.
- **Picture and Clip Settings:** Set the saving paths of the captured pictures and clipped video files. Valid for the pictures you captured with the web browser.
  - ◆ **Save snapshots in live view to:** Set the saving path of the manually captured pictures in live view mode.
  - ◆ **Save snapshots when playback to:** Set the saving path of the captured pictures in playback mode.
  - ◆ **Save clips to:** Set the saving path of the clipped video files in playback mode.

**Note:** You can click **Browse** to change the directory for saving the clips and pictures.

3. Click **Save** to save the settings.



## 5.2 Configuring Time Settings

### *Purpose:*

You can follow the instructions in this section to configure the time synchronization and DST settings.

### *Steps:*

1. Enter the Time Settings interface:

**Configuration > Basic Configuration > System > Time Settings**

**Or Configuration > Advanced Configuration > System > Time Settings**

Figure 5-2 Time Settings

- Select the Time Zone.

Select the Time Zone of your location from the drop-down menu.

- ◆ Synchronizing Time by NTP Server.

- (1) Check the checkbox to enable the **NTP** function.

- (2) Configure the following settings:

**Server Address:** IP address of NTP server.

**NTP Port:** Port of NTP server.


**Interval:** The time interval between the two synchronizing actions with NTP server.

The screenshot shows the 'Time Sync.' section of a configuration interface. It features a radio button for 'NTP'. Below it are three input fields: 'Server Address' with the value 'time.windows.com', 'NTP Port' with the value '123', and 'Interval' with the value '1440' followed by a 'min.' label.

Figure 5-3 Time Sync by NTP Server

**Note:** If the camera is connected to a public network, you should use a NTP server that has a time synchronization function, such as the server at the National Time Center (IP Address: 210.72.145.44). If the camera is set in a customized network, NTP software can be used to establish a NTP server for time synchronization.

#### ◆ Synchronizing Time Synchronization Manually

Enable the **Manual Time Sync** function and then click  to set the system time from the pop-up calendar.

**Note:** You can also check the **Sync with computer time** checkbox to synchronize the time of the camera with that of your computer.

The screenshot shows the 'Manual Time Sync.' section. On the left is a calendar for February 2014, with the 13th highlighted. Below the calendar is a time picker showing '22 : 39 : 33'. To the right, there are two input fields: 'Device Time' with the value '2014-02-13T22:41:04' and 'Set Time' with the value '2014-02-13T22:39:33'. A checkbox labeled 'Sync. with computer time' is also present.

Figure 5-4 Time Sync Manually

- Click the **DST** tab page to enable the DST function and Set the date of the DST period.

The screenshot shows the 'DST' section of a configuration interface. It includes a checkbox for 'Enable DST' which is checked. Below this are two rows of settings: 'Start Time' set to 'Apr', 'First', 'Sun', '02' o'clock, and 'End Time' set to 'Oct', 'Last', 'Sun', '02' o'clock. At the bottom, 'DST Bias' is set to '30min'.

Figure 5-5 DST Settings

2. Click **Save** to save the settings.

## 5.3 Configuring Network Settings

### 5.3.1 Configuring TCP/IP Settings

**Purpose:**

TCP/IP settings must be properly configured before you operate the camera over network. The camera supports both the IPv4 and IPv6. Both versions may be configured simultaneously without conflicting to each other, and at least one IP version should be configured.

**Steps:**

1. Enter TCP/IP Settings interface:

**Configuration > Basic Configuration > Network > TCP/IP**

**Or Configuration > Advanced Configuration > Network > TCP/IP**

The screenshot displays the 'TCP/IP' settings page. At the top, there is a navigation bar with tabs: TCP/IP, Port, DDNS, PPPoE, SNMP, 802.1X, QoS, FTP, UPnP™, Email, and NAT. The 'TCP/IP' tab is selected. Below the navigation bar, the 'NIC Settings' section is visible. It includes a 'NIC Type' dropdown menu set to 'Auto'. There is an unchecked checkbox for 'DHCP'. The 'IPv4' section contains fields for 'IPv4 Address' (172.6.23.123), 'IPv4 Subnet Mask' (255.255.255.0), and 'IPv4 Default Gateway' (172.6.23.1). The 'IPv6' section has an 'IPv6 Mode' dropdown set to 'Route Advertisement', a 'View Route Advertisement' button, and fields for 'IPv6 Address' (empty), 'IPv6 Subnet Mask' (0), and 'IPv6 Default Gateway' (empty). The 'Mac Address' field is populated with '44:19:b7:09:a9:7f'. The 'MTU' field is set to '1500', and the 'Multicast Address' field is empty. Below the 'NIC Settings' section is the 'DNS Server' section, which includes a 'Preferred DNS Server' field set to '8.8.8.8' and an empty 'Alternate DNS Server' field.

Figure 5-6 TCP/IP Settings

2. Configure the basic network settings, including the NIC Type, IPv4 or IPv6 Address, IPv4 or IPv6 Subnet Mask, IPv4 or IPv6 Default Gateway, MTU settings and Multicast Address.

**Notes:**

- The valid value range of MTU is 500 ~ 1500.
  - The Multicast sends a stream to the multicast group address and allows multiple clients to acquire the stream at the same time by requesting a copy from the multicast group address. Before utilizing this function, you have to enable the Multicast function of your router.
3. Click **Save** to save the above settings.

**Note:** A reboot is required for the settings to take effect.

### 5.3.2 Configuring Port Settings

**Purpose:**

You can set the port No. of the camera, e.g. HTTP port, RTSP port and HTTPS port.

**Steps:**

1. Enter the Port Settings interface:

**Configuration > Basic Configuration > Network > Port**

Or **Configuration > Advanced Configuration > Network > Port**

TCP/IP	Port	DDNS	PPPoE	SNMP	802.1X	QoS	FTP	UPnP™	Email	NAT
HTTP Port		<input type="text" value="80"/>								
RTSP Port		<input type="text" value="554"/>								
HTTPS Port		<input type="text" value="443"/>								
Server Port		<input type="text" value="8000"/>								

---

Figure 5-7 Port Settings

2. Set the HTTP port, RTSP port and HTTPS port of the camera.

**HTTP Port:** The default port number is 80, and it can be changed to any port No. which is not occupied.

**RTSP Port:** The default port number is 554 and it can be changed to any port No. ranges from 1024 to 65535.

**HTTPS Port:** The default port number is 443, and it can be changed to any port

No. which is not occupied.

**Server Port:** The default server port number is 8000, and it can be changed to any port No. ranges from 2000 to 65535.

3. Click **Save** to save the settings.

**Note:** A reboot is required for the settings to take effect.

### 5.3.3 Configuring PPPoE Settings

**Steps:**

1. Enter the PPPoE Settings interface:

**Configuration > Advanced Configuration > Network > PPPoE**



Figure 5-8 PPPoE Settings

2. Check the **Enable PPPoE** checkbox to enable this feature.
3. Enter **User Name**, **Password**, and **Confirm** password for PPPoE access.

**Note:** The User Name and Password should be assigned by your ISP.

4. Click **Save** to save and exit the interface.

**Note:** A reboot is required for the settings to take effect.

### 5.3.4 Configuring DDNS Settings

**Purpose:**

If your camera is set to use PPPoE as its default network connection, you can use the Dynamic DNS (DDNS) for network access.

**Before you start:**

Registration on the DDNS server is required before configuring the DDNS settings of

the camera.

**Steps:**

1. Enter the DDNS Settings interface:

**Configuration > Advanced Configuration > Network > DDNS**

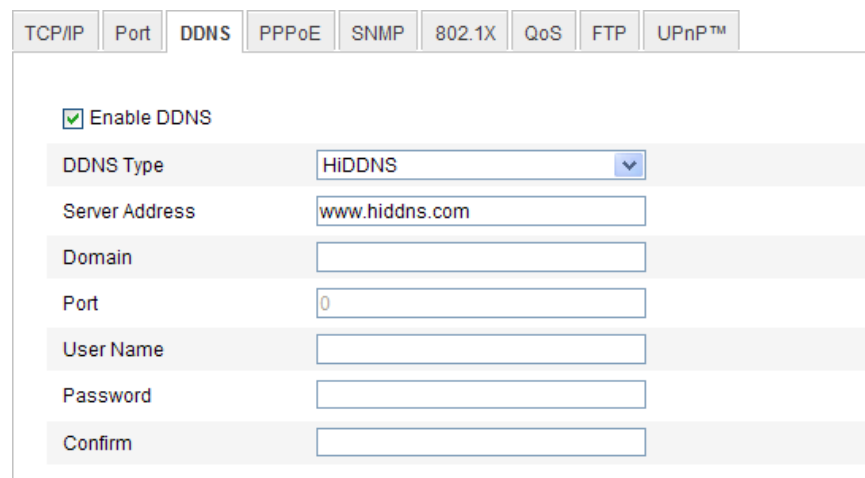


Figure 5-9 DDNS Settings

2. Check the **Enable DDNS** checkbox to enable this feature.
3. Select **DDNS Type**. Four DDNS types are selectable: HiDDNS, IPServer, DynDNS, and NO-IP.

- DynDNS:

**Steps:**

- (1) Enter **Server Address** of DynDNS (e.g. members.dyndns.org).
- (2) In the **Domain** text field, enter the domain name obtained from the DynDNS website.
- (3) Enter the **Port** of DynDNS server.
- (4) Enter the **User Name** and **Password** registered on the DynDNS website.
- (5) Click **Save** to save the settings.

TCP/IP	Port	<b>DDNS</b>	PPPoE	SNMP	802.1X	QoS	FTP	UPnP™	Email	NAT
--------	------	-------------	-------	------	--------	-----	-----	-------	-------	-----

☒ Enable DDNS

DDNS Type	DynDNS
Server Address	members.dyndns.org
Domain	123.dyndns.com
Port	0
User Name	Test
Password	•••••
Confirm	•••••

Figure 5-10 DynDNS Settings

- IP Server:

**Steps:**

(1) Enter the Server Address of the IP Server.

(2) Click **Save** to save the settings.

**Note:** For the IP Server, you have to apply a static IP, subnet mask, gateway and preferred DNS from the ISP. The **Server Address** should be entered with the static IP address of the computer that runs the IP Server software.

<input checked="" type="checkbox"/> Enable DDNS
DDNS Type
Server Address
Domain
Port
User Name
Password
Confirm

Figure 5-11 IPServer Settings

**Note:** For the US and Canada area, you can enter 173.200.91.74 as the server address.

- NO-IP:

**Steps:**

(1) Choose the DDNS Type as NO-IP.

The screenshot shows a web interface with a top navigation bar containing tabs: TCP/IP, Port, DDNS, PPPoE, SNMP, 802.1X, QoS, FTP, UPnP™, Email, and NAT. The 'DDNS' tab is selected. Below the tabs, there is a section for DDNS settings. A checkbox labeled 'Enable DDNS' is checked. Below this, there is a dropdown menu for 'DDNS Type' set to 'NO-IP'. Below the dropdown are input fields for 'Server Address', 'Domain', 'Port' (set to 0), 'User Name', 'Password', and 'Confirm'.

Figure 5-12 NO-IP DNS Settings

- (2) Enter the Server Address as [www.noip.com](http://www.noip.com)
- (3) Enter the Domain name you registered.
- (4) Enter the Port number, if needed.
- (5) Enter the User Name and Password.
- (6) Click **Save** and then you can view the camera with the domain name.

- HiDDNS

**Steps:**

- (1) Choose the DDNS Type as HiDDNS.

The screenshot shows the same web interface as Figure 5-12, but with the 'DDNS Type' dropdown set to 'HiDDNS'. The 'Server Address' field is filled with 'www.hiddns.com' and the 'Domain' field is filled with '417233523'. The 'Port' field is still 0. The 'User Name', 'Password', and 'Confirm' fields are empty.

Figure 5-13 HiDDNS Settings

- (2) Enter the Server Address *www.hiddns.com*.
- (3) Enter the Domain name of the camera. The domain is the same with the device alias in the HiDDNS server.
- (4) Click **Save** to save the new settings.

**Note:** A reboot is required for the settings to take effect.



### 5.3.5 Configuring SNMP Settings

***Purpose:***

You can set the SNMP function to get camera status, parameters and alarm related information and manage the camera remotely when it is connected to the network.

***Before you start:***

Before setting the SNMP, please download the SNMP software and manage to receive the camera information via SNMP port. By setting the Trap Address, the camera can send the alarm event and exception messages to the surveillance center.

**Note:** The SNMP version you select should be the same as that of the SNMP software. And you also need to use the different version according to the security level you required. SNMP v1 provides no security and SNMP v2 requires password for access. And SNMP v3 provides encryption and if you use the third version, HTTPS protocol must be enabled.

***Steps:***

1. Enter the SNMP Settings interface:

**Configuration > Advanced Configuration > Network > SNMP**

TCP/IP	Port	DDNS	PPPoE	SNMP	802.1X	QoS	FTP	UPnP™	Email	NAT
--------	------	------	-------	------	--------	-----	-----	-------	-------	-----

SNMP v1/v2	
Enable SNMPv1	<input type="checkbox"/>
Enable SNMP v2c	<input type="checkbox"/>
Write SNMP Community	private
Read SNMP Community	public
Trap Address	
Trap Port	162
Trap Community	public

SNMP v3	
Enable SNMPv3	<input type="checkbox"/>
Read UserName	
Security Level	no auth, no priv
Authentication Algorithm	<input checked="" type="radio"/> MD5 <input type="radio"/> SHA
Authentication Password	
Private-key Algorithm	<input checked="" type="radio"/> DES <input type="radio"/> AES
Private-key password	
Write UserName	
Security Level	no auth, no priv
Authentication Algorithm	<input checked="" type="radio"/> MD5 <input type="radio"/> SHA
Authentication Password	
Private-key Algorithm	<input checked="" type="radio"/> DES <input type="radio"/> AES
Private-key password	

SNMP Other Settings	
SNMP Port	161

Figure 5-14 SNMP Settings

2. Check the corresponding version checkbox ( Enable SNMPv1 , Enable SNMP v2c , Enable SNMPv3 ) to enable the feature.

3. Configure the SNMP settings.

**Note:** The settings of the SNMP software should be the same as the settings you configure here.

4. Click **Save** to save and finish the settings.

**Note:** A reboot is required for the settings to take effect.

### 5.3.6 Configuring 802.1X Settings

**Purpose:**

The IEEE 802.1X standard is supported by the network cameras, and when the feature is enabled, the camera data is secured and user authentication is needed when

connecting the camera to the network protected by the IEEE 802.1X.

**Before you start:**

The authentication server must be configured. Please apply and register a user name and password for 802.1X in the server.

**Steps:**

1. Enter the 802.1X Settings interface:

**Configuration > Advanced Configuration > Network > 802.1X**

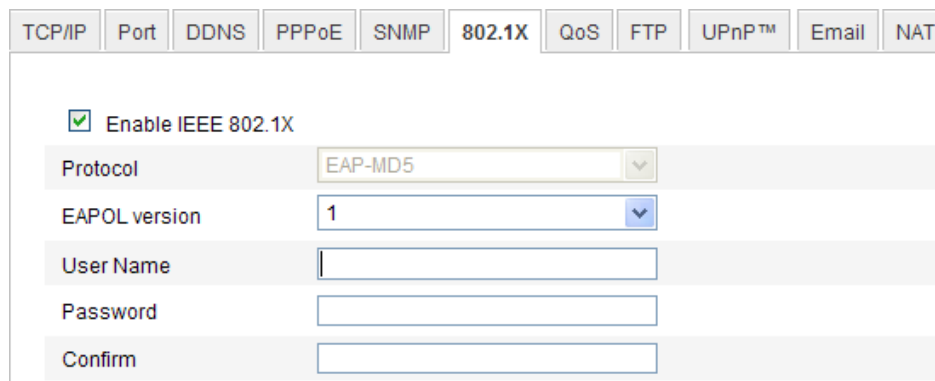


Figure 5-15 802.1X Settings

2. Check the **Enable IEEE 802.1X** checkbox to enable the feature.
3. Configure the 802.1X settings, including EAPOL version, user name and password.

**Note:** The EAPOL version must be identical with that of the router or the switch.

4. Enter the user name and password to access the server.
5. Click **Save** to finish the settings.

**Note:** A reboot is required for the settings to take effect.

### 5.3.7 Configuring QoS Settings

**Purpose:**

QoS (Quality of Service) can help solve the network delay and network congestion by configuring the priority of data sending.

**Steps:**

1. Enter the QoS Settings interface:

**Configuration > Advanced Configuration > Network > QoS**

TCP/IP	Port	DDNS	PPPoE	SNMP	802.1X	QoS	FTP	UPnP™	Email	NAT
--------	------	------	-------	------	--------	-----	-----	-------	-------	-----

Video/Audio DSCP

Event/Alarm DSCP

Management DSCP

Figure 5-16 QoS Settings

- Configure the QoS settings, including video / audio DSCP, event / alarm DSCP and Management DSCP.

The valid value range of the DSCP is 0-63. The bigger the DSCP value is, the higher the priority is.

**Note:** DSCP refers to the Differentiated Service Code Point; and the DSCP value is used in the IP header to indicate the priority of the data.

- Click **Save** to save the settings.

**Note:** A reboot is required for the settings to take effect.

### 5.3.8 Configuring UPnP™ Settings

Universal Plug and Play (UPnP™) is a networking architecture that provides compatibility among networking equipment, software and other hardware devices. The UPnP protocol allows devices to connect seamlessly and to simplify the implementation of networks in the home and corporate environments.

With the function enabled, you don't need to configure the port mapping for each port, and the camera is connected to the Wide Area Network via the router.

#### Steps:

- Enter the UPnP™ settings interface.

#### **Configuration > Advanced Configuration > Network > UPnP**

- Check the checkbox to enable the UPnP™ function.

The name of the device when detected online can be edited.



Figure 5-17 Configure UPnP Settings

### 5.3.9 Email Sending Triggered by Alarm

***Purpose:***

The system can be configured to send an Email notification to all designated receivers if an alarm event is detected, e.g., motion detection event, video loss, video tampering, etc.

***Before you start:***

Please configure the DNS Server settings under **Basic Configuration > Network > TCP/IP** or **Advanced Configuration > Network > TCP/IP** before using the Email function.

***Steps:***

1. Enter the TCP/IP Settings (**Configuration > Basic Configuration > Network > TCP/IP** or **Configuration > Advanced Configuration > Network > TCP/IP**) to set the IPv4 Address, IPv4 Subnet Mask, IPv4 Default Gateway and the Preferred DNS Server.

**Note:** Please refer to *Section 5.3.1 Configuring TCP/IP Settings* for detailed information.

2. Enter the Email Settings interface:

**Configuration > Advanced Configuration > Network > Email**

TCP/IP	Port	DDNS	PPPoE	SNMP	802.1X	QoS	FTP	UPnP™	Email	NAT
--------	------	------	-------	------	--------	-----	-----	-------	-------	-----

**Sender**

Sender   
Sender's Address   
SMTP Server   
SMTP Port   
☐ Enable SSL  
Interval  ☐ Attached Image  
☐ Authentication  
User Name   
Password   
Confirm

**Receiver**

Receiver1   
Receiver1's Address   
Receiver2   
Receiver2's Address   
Receiver3   
Receiver3's Address

Save

Figure 5-18 Email Settings

3. Configure the following settings:

**Sender:** The name of the email sender.

**Sender's Address:** The email address of the sender.

**SMTP Server:** The SMTP Server IP address or host name (e.g., smtp.263xmail.com).

**SMTP Port:** The SMTP port. The default TCP/IP port for SMTP is 25 (not secured). And the SSL SMTP port is 465.

**Enable SSL:** Check the checkbox to enable SSL if it is required by the SMTP server.

**Attached Image:** Check the checkbox of Attached Image if you want to send emails with attached alarm images.

**Interval:** The interval refers to the time between two actions of sending attached pictures.

**Authentication (optional):** If your email server requires authentication, check

this checkbox to use authentication to log in to this server and enter the login user Name and password.

**Choose Receiver:** Select the receiver to which the email is sent. Up to 2 receivers can be configured.

**Receiver:** The name of the user to be notified.

**Receiver's Address:** The email address of user to be notified.

4. Click **Save** to save the settings.

### 5.3.10 Configuring NAT (Network Address Translation) Settings

**Purpose:**

1. Enter the NAT settings interface.

**Configuration > Advanced Configuration > Network > NAT**

2. Choose the port mapping mode.

**To port mapping with the default port numbers:**

Choose **Port Mapping Mode.** Port Mapping Mode Auto

**To port mapping with the customized port numbers:**

Choose Port Mapping Mode Manual

And for manual port mapping, you can customize the value of the port number by yourself.

☒ Enable Port Mapping

Port Mapping Mode Manual

	Port Type	External Port	External IP Address	Status
<input checked="" type="checkbox"/>	HTTP	80	0.0.0.0	Not Valid
<input checked="" type="checkbox"/>	RTSP	554	0.0.0.0	Not Valid
<input checked="" type="checkbox"/>	Server Port	8000	0.0.0.0	Not Valid

**Save**

Figure 5-19 Configure NAT Settings

3. Click **Save** to save the settings.

### 5.3.11 Configuring FTP Settings

**Purpose:**

You can configure the FTP server related information to enable the uploading of the captured pictures to the FTP server. The captured pictures can be triggered by events or a timing snapshot task.

**Steps:**

1. Enter the FTP Settings interface:

**Configuration > Advanced Configuration > Network > FTP**

The screenshot shows the FTP Settings configuration page. It includes the following fields and options:

- Server Address:** 172.9.4.12
- Port:** 21
- User Name:** admin
- Anonymous:** ☒ Anonymous
- Password:** [masked with dots]
- Confirm:** [masked with dots]
- Directory Structure:** Save in the child directory. (dropdown menu)
- Parent Directory:** Use Device Name (dropdown menu)
- Child Directory:** Use Camera Number (dropdown menu)
- Upload Type:** ☒ Upload Picture

A **Save** button is located at the bottom right of the form.

Figure 5-20 FTP Settings

2. Configure the FTP settings; and the user name and password are required for login the FTP server.

**Directory:** In the **Directory Structure** field, you can select the root directory, parent directory and child directory. When the parent directory is selected, you have the option to use the Device Name, Device Number or Device IP for the name of the directory; and when the Child Directory is selected, you can use the Camera Name or Camera No. as the name of the directory.

**Upload type:** To enable uploading the captured picture to the FTP server.

**Anonymous Access to the FTP Server (in which case the user name and password won't be required.):** Check the **Anonymous** checkbox to enable the anonymous access to the FTP server.



TCP/IP	Port	DDNS	PPPoE	SNMP	802.1X	QoS	FTP	UPnP™	Email	NAT
Server Address		0.0.0.0								
Port		21								
User Name									<input checked="" type="checkbox"/> Anonymous	
Password										
Confirm										
Directory Structure		Save in the root directory. ▼								
Parent Directory		Use Device Name ▼								
Child Directory		Use Camera Name ▼								
Upload Type		<input type="checkbox"/> Upload Picture								

Figure 5-21 FTP Settings

**Note:** The anonymous access function must be supported by the FTP server.

- Click **Save** to save the settings.

**Note:** If you want to upload the captured pictures to FTP server, you have to enable the continuous snapshot or event-triggered snapshot on **Snapshot** page. For detailed information, please refer to the *Section 6.3*.

## 5.4 Configuring Video and Audio Settings

### 5.4.1 Configuring Video Settings

**Steps:**

- Enter the Video Settings interface:

**Configuration > Basic Configuration > Video / Audio > Video**

Or **Configuration > Advanced Configuration > Video / Audio > Video**

Setting	Value
Stream Type	Main Stream(Normal)
Video Type	Video&Audio
Resolution	1920*1080P
Bitrate Type	Variable
Video Quality	Medium
Frame Rate	25
Max. Bitrate	4096 Kbps
Video Encoding	H.264
Profile	High Profile
I Frame Interval	50
SVC	OFF

Figure 5-22 Configure Video Settings

2. Select the **Stream Type** of the camera to main stream (normal), sub-stream or third stream.

The main stream is usually for recording and live viewing with good bandwidth, and the sub-stream and third stream can be used for live viewing when the bandwidth is limited.

3. You can customize the following parameters for the selected main stream or sub-stream:

**Video Type:**

Select the stream type to video stream, or video & audio composite stream. The audio signal will be recorded only when the **Video Type** is **Video & Audio**.

**Resolution:**

Select the resolution of the video output.

**Bitrate Type:**

Select the bitrate type to constant or variable.

**Video Quality:**

When bitrate type is selected as **Variable**, 6 levels of video quality are selectable.

**Frame Rate:**

Set the frame rate to 1/16~25 fps. The frame rate is to describe the frequency at which the video stream is updated and it is measured by frames per second (fps). A higher frame rate is advantageous when there is movement in the video stream, as it maintains image quality throughout.

**Max. Bitrate:**

Set the max. bitrate to 32~16384 Kbps. The higher value corresponds to the higher video quality, but the higher bandwidth is required.

**Video Encoding:**

If the **Stream Type** is set to main stream, H.264 and MJPEG are selectable, and if the stream type is set to sub stream, H.264, MJPEG, and MPEJ4 are selectable.

**Note:** The supported video encoding may differ according to the different platform.

**Profile:**

Basic profile, Main Profile and High Profile for coding are selectable.

**I Frame Interval:**

Set the I-Frame interval to 1~400.

**SVC:**

Scalable Video Coding is an extension of the H.264/AVC standard. Set it OFF or ON according to your actual needs.

4. Click **Save** to save the settings.

## 5.4.2 Configuring Audio Settings

**Steps:**

1. Enter the Audio Settings interface

**Configuration > Basic Configuration > Video / Audio > Audio**

**Or Configuration > Advanced Configuration > Video / Audio > Audio**

The screenshot shows the 'Audio' settings tab. It includes dropdown menus for 'Audio Encoding' (set to G.711ulaw) and 'Audio Input' (set to MicIn). There is a slider for 'Input Volume' with a numeric input field showing 50. Below that is a dropdown for 'Environmental Noise Filter' set to OFF. A 'Save' button is at the bottom right.

Figure 5-23 Audio Settings

2. Configure the following settings.

**Audio Encoding:** G.711 ulaw, G.711alaw, G.726, and MP2L2 are selectable. And 32kbps, 64kbps, and 128kbps are supported if MP2L2 is selected.

**Audio Input:** MicIn and Linein are selectable for the connected microphone and pickup respectively.

**Input Volume:** 0-100

**Environmental Noise Filter:** Set it as OFF or ON. When you set the function on the noise detected can be filtered.

3. Click **Save** to save the settings.

### 5.4.3 Configuring ROI Encoding

ROI stands for the region of interest. And the ROI encoding enables you to discriminate the ROI and background information in compression, that is to say, the technology assigns more encoding resource to the region of interest to increase the quality of the ROI whereas the background information is less focused.

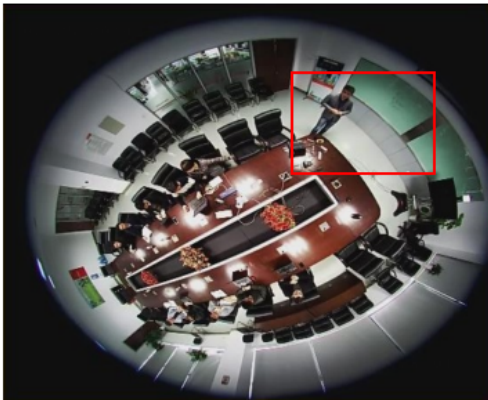
#### *Steps:*

1. Enter the ROI settings interface

**Configuration > Advanced Configuration > Video / Audio > ROI**

Video
Audio
ROI

Channel No.
IP Camera1



Stop Drawing
Clear All

Stream Type
Main Stream(Normal)

Fixed Region
☒ Enable
Region No.
1
ROI Level
3
Region Name
Meeting Room

Figure 5-24 Region of Interest Settings

2. Draw the region of interest on the image. There are four regions can be drawn.
3. Choose the stream type to set the ROI encoding.
4. Choose the ROI type.

There are two options for ROI encoding, the fixed region encoding and the dynamic tracking.

- The fixed region encoding is the ROI encoding for the manually configured area. And you can choose the Image Quality Enhancing level for ROI encoding, and you can also name the ROI area.
  - The dynamic region refers to the ROI defined by intelligent analysis such as human face detection. You can choose the Image Quality Enhancing level for the ROI encoding.
5. Click **Save** to save the settings.

## 5.5 Configuring Image Parameters

### 5.5.1 Configuring Display Settings

**Purpose:**

You can set the image quality of the camera, including brightness, contrast, saturation, hue, sharpness, etc.

**Note:**

The display parameters vary according to the different camera model. Please refer to the actual interface for details.

**Steps:**

1. Enter the Display Settings interface:

**Configuration > Basic Configuration> Image> Display Settings**

**Or Configuration > Advanced Configuration> Image> Display Settings**

2. Set the image parameters of the camera.

**Note:**

In order to guarantee the image quality in the different illumination, it provides two sets of parameters for user to configure.

#### Day/night Auto-switch

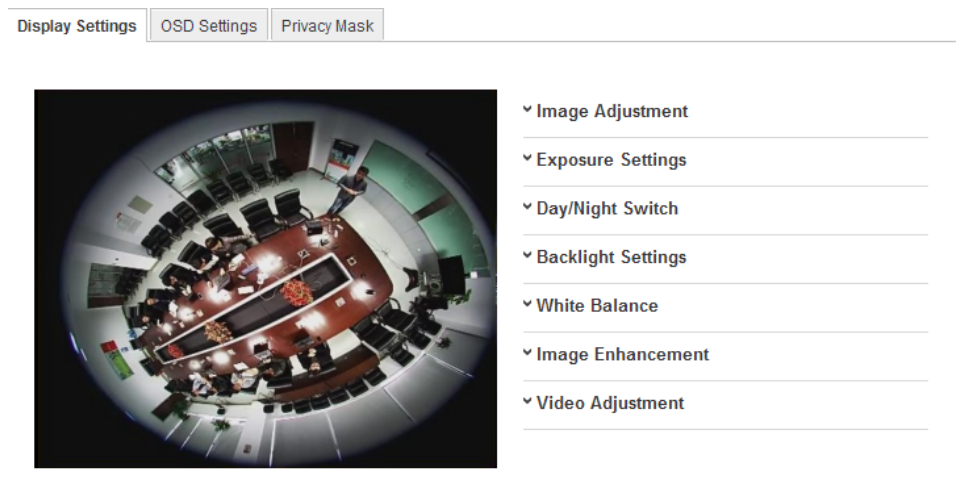


Figure 5-25 Display Settings of Day/night Auto-switch

#### ◆ Image Adjustment

**Brightness** describes bright of the image, which ranges from 1~100, and the default value is 50.

**Contrast** describes the contrast of the image, which ranges from 1~100, and the default value is 50.

**Hue** adjusts color of the image.

**Saturation** describes the colorfulness of the image color, which ranges from 1~100, and the default value is 50.

**Sharpness** describes the edge contrast of the image, which ranges from 1~100, and the default value is 50.

#### ◆ Exposure Settings

If the camera is equipped with the fixed lens, only **Manual** is selectable, and the iris mode is not configurable.

The exposure time refers to the electronic shutter time, which ranges from 1 ~ 1/100,000s. Adjust it according to the actual luminance condition.

#### ◆ Day/Night Switch

Select the day/night switch mode, and configure the smart IR settings from this option.



Figure 5-26 Day/Night Switch

**Day:** the camera stays at day mode.

**Night:** the camera stays at night mode.

**Auto:** the camera switches between the day mode and the night mode according to the illumination automatically. The sensitivity ranges from 0~7, the higher the value is, the easier the mode switches. The filtering time refers to the interval time between the day/night switch. You can set it from 5s to 120s.

**Schedule:** The camera switches between the day mode and the night mode according

to the configured time period.

**Triggered by Alarm Input:** The camera switches to the day mode or the night mode after the alarm is triggered.

#### ◆ Backlight Settings

**BLC:** If you focus on an object against strong backlight, the object will be too dark to be seen clearly. BLC compensates light to the object in the front to make it clear. OFF, Up, Down, Left, Right, Center and customize are selectable.

**WDR:** Wide Dynamic Range can be used when there is a high contrast of the bright area and the dark area of the scene.

#### ◆ White Balance

White balance is the white rendition function of the camera used to adjust the color temperature according to the environment.

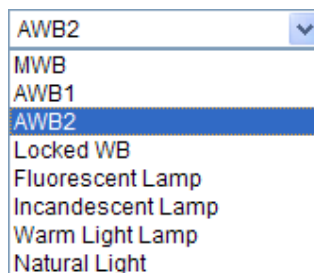


Figure 5-27 White Balance

#### ◆ Image Enhancement

**Digital Noise Reduction:** DNR reduces the noise in the video stream. OFF, Normal Mode and Expert Mode are selectable. Set the DNR level from 0~100, and the default value is 50 in Normal Mode. Set the DNR level from both space DNR level [0~100] and time DNR level [0~100] in Expert Mode.

**Grey Scale:** You can choose the range of the grey scale as [0-255] or [16-235].

#### ◆ Video Adjustment

**Scene Mode:** Choose the scene as indoor or outdoor according to the real environment.

**Video Standard:** 50 Hz and 60 Hz are selectable. Choose according to the different video standards; normally 50 Hz for PAL standard and 60 Hz for NTSC standard.



## 5.5.2 Configuring OSD Settings

### *Purpose:*

You can customize the camera name and time on the screen.

### *Steps:*

1. Enter the OSD Settings interface:

**Configuration > Advanced Configuration > Image > OSD Settings**

Figure 5-28 OSD Settings

2. Check the corresponding checkbox to select the display of camera name, date or week if required.
3. Edit the camera name in the text field of **Camera Name**.
4. Select from the drop-down list to set the time format, date format, display mode and the OSD font size.
5. You can use the mouse to click and drag the text frame **Camera 01** in the live view window to adjust the OSD position.



Figure 5-29 Adjust OSD Location

6. Click **Save** to activate above settings.

### 5.5.3 Configuring Privacy Mask

#### *Purpose:*

Privacy mask enables you to cover certain areas on the live video to prevent certain spots in the surveillance area from being live viewed and recorded.

#### *Steps:*

1. Enter the Privacy Mask Settings interface:

**Configuration > Advanced Configuration > Image > Privacy Mask**

2. Check the checkbox of **Enable Privacy Mask** to enable this function.
3. Click **Draw Area**.

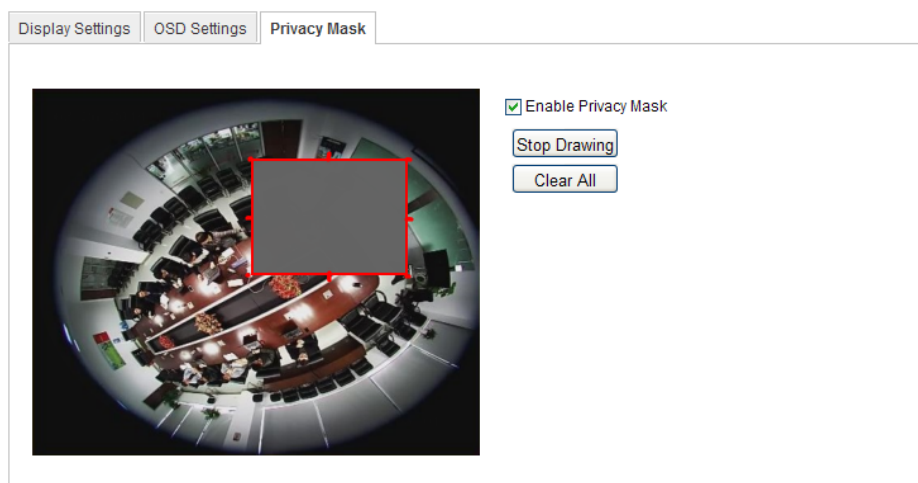


Figure 5-30 Privacy Mask Settings

4. Click and drag the mouse in the live video window to draw the mask area.

**Note:** You are allowed to draw up to 4 areas on the same image.

5. Click **Stop Drawing** to finish drawing or click **Clear All** to clear all of the areas you set without saving them.
6. Click **Save** to save the settings.

## 5.6 Configuring and Handling Alarms

This section explains how to configure the network camera to respond to alarm events, including motion detection, video tampering, alarm input, alarm output, exception, face detection, audio exception detection, intrusion detection, defocus detection, and scene change detection, etc. These events can trigger the linkage methods, such as Notify Surveillance Center, Send Email, Trigger Alarm Output, etc.

**Note:**

Check the checkbox of Notify Surveillance Center if you want to the alarm information pushed to your mobile phone as soon as the alarm is triggered.

### 5.6.1 Configuring Motion Detection

**Purpose:**

Motion detection is a feature which can take alarm response actions and record the video for the motion occurred in the surveillance scene.

**Tasks:**

1. Set the Motion Detection Area.

**Steps:**

- (1) Enter the motion detection settings interface

**Configuration > Advanced Configuration > Events > Motion Detection**

- (2) Check the checkbox of Enable Motion Detection.

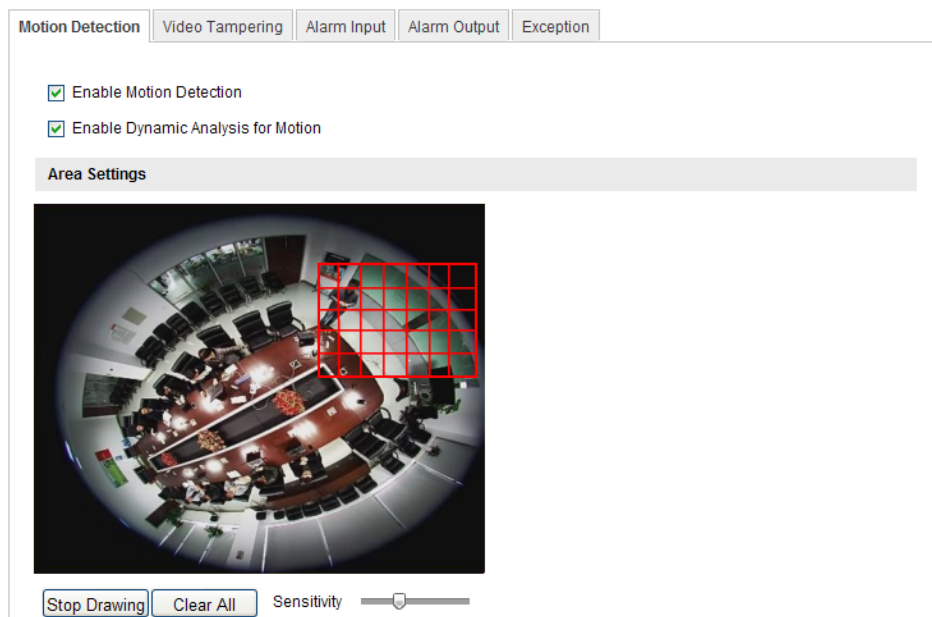


Figure 5-31 Enable Motion Detection

(3) Click **Draw Area**. Click and drag the mouse on the live video image to draw a motion detection area.

**Note:** You can draw up to 8 motion detection areas on the same image.

(4) Click **Stop Drawing** to finish drawing.

**Note:** You can click **Clear All** to clear all of the areas.

(5)(Optional) Move the slider **Sensitivity** to set the sensitivity of the detection.

2. Set the Arming Schedule for Motion Detection.

**Steps:**

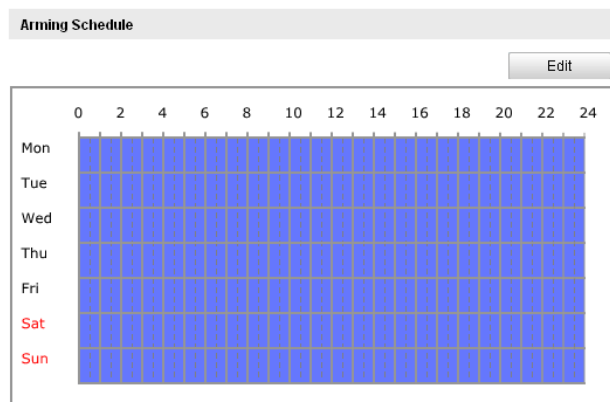


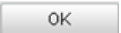
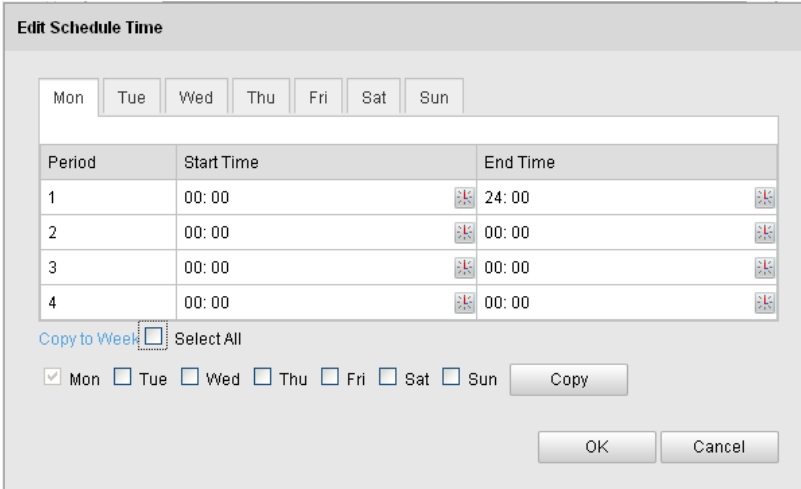


Figure 5-32 Arming Time

- (1) Click  to edit the arming schedule. The Figure 5-28 shows the editing interface of the arming schedule.
- (2) Choose the day you want to set the arming schedule.
- (3) Click  to set the time period for the arming schedule.
- (4) After you set the arming schedule, you can copy the schedule to other days (Optional).
- (5) Click  to save the settings.

**Note:** The time of each period can't be overlapped. Up to 4 periods can be configured for each day.



The dialog box titled "Edit Schedule Time" contains a day selection bar at the top with buttons for Mon, Tue, Wed, Thu, Fri, Sat, and Sun. Below this is a table with four rows, each representing a time period. Each row has columns for Period, Start Time, and End Time, with time pickers at the end of each time field. At the bottom, there is a "Copy to Week" checkbox, a "Select All" checkbox, and a row of checkboxes for each day of the week. A "Copy" button is located to the right of the day checkboxes. At the very bottom are "OK" and "Cancel" buttons.

Period	Start Time	End Time
1	00:00	24:00
2	00:00	00:00
3	00:00	00:00
4	00:00	00:00

Copy to Week ☐ Select All

☒ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat ☐ Sun

Copy

OK Cancel

Figure 5-33 Arming Time Schedule

### 3. Set the Alarm Actions for Motion Detection.

**Purpose:**

You can specify the linkage method when an event occurs. The following contents are about how to configure the different types of linkage method.

Linkage Method	
Normal Linkage	Other Linkage
<input type="checkbox"/> Audible Warning <input type="checkbox"/> Notify Surveillance Center <input type="checkbox"/> Send Email <input checked="" type="checkbox"/> Upload to FTP <input type="checkbox"/> Trigger Channel	Trigger Alarm Output <input type="checkbox"/> Select All <input type="checkbox"/> A->1

Figure 5-34 Linkage Method

**Steps:**

- (1) Check the checkbox to select the linkage method. Notify surveillance center, send email, upload to FTP, trigger channel and trigger alarm output are selectable (Optional).

- **Notify Surveillance Center**

Send an exception or alarm signal to remote management software when an event occurs.

- **Send Email**

Send an email with alarm information to a user or users when an event occurs.

**Note:** To send the Email when an event occurs, you need to refer to *Section 5.3.9* to set the related parameters.

- **Upload to FTP**

Capture the image when an alarm is triggered and upload the picture to a FTP server.

**Note:** Set the FTP address and the remote FTP server first. Refer to *Section 5.3.11* for detailed information.

- **Trigger Channel**

The video will be recorded when the motion is detected. You have to set the recording schedule to realize this function. Please refer to *Section 6.2* for detailed information.

- **Trigger Alarm Output**

Trigger one or more external alarm outputs when an event occurs.

**Note:** To trigger an alarm output when an event occurs, please refer to *Section 5.6.4* to set the related parameters.

## 5.6.2 Configuring Video Tampering Alarm

### **Purpose:**

You can configure the camera to trigger the alarm when the lens is covered and take alarm response action.

### **Steps:**

1. Enter the Tamper-proof Settings interface:

**Configuration > Advanced Configuration > Events > Video Tampering**

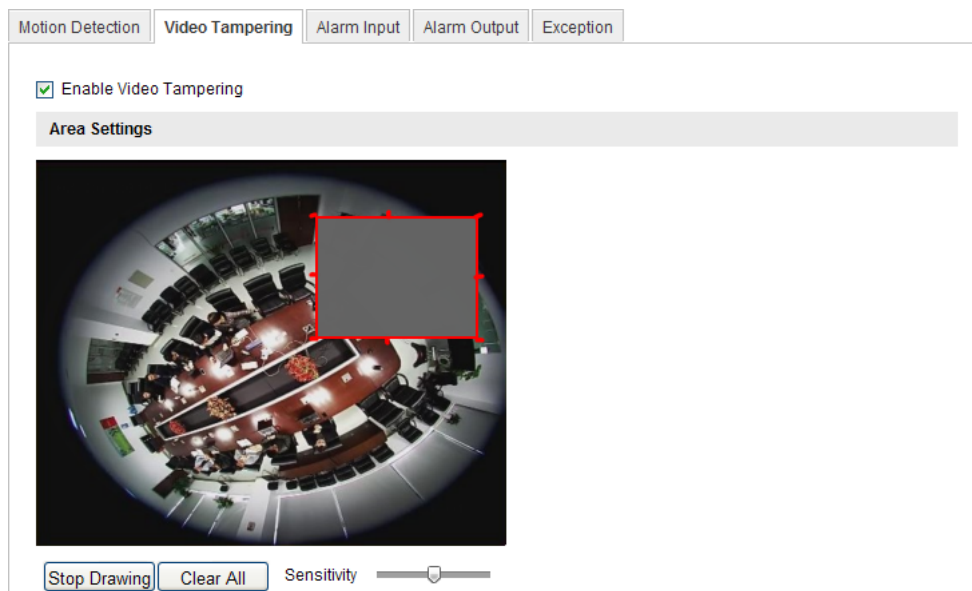


Figure 5-35 Tamper-proof Alarm

2. Check **Enable Tamper-proof** checkbox to enable the tamper-proof detection.
3. Set the tamper-proof area; refer to *Task 1 Set the Motion Detection Area* in *Section 5.6.1*.
4. Click **Edit** to edit the arming schedule for tamper-proof. The arming schedule configuration is the same as the setting of the arming schedule for motion detection. Refer to *Task 2 Set the Arming Schedule for Motion Detection* in *Section*

## 5.6.1.

5. Check the checkbox to select the linkage method taken for the tamper-proof. Audible warning, notify surveillance center, send email and trigger alarm output are selectable. Please refer to *Task 3 Set the Alarm Actions for Motion Detection* in *Section 5.6.1*.

6. Click  to save the settings.

### 5.6.3 Configuring Alarm Input

**Steps:**

1. Enter the Alarm Input Settings interface:

**Configuration > Advanced Configuration > Events > Alarm Input:**

2. Choose the alarm input No. and the Alarm Type. The alarm type can be NO (Normally Open) and NC (Normally Closed). Edit the name to set a name for the alarm input (optional).

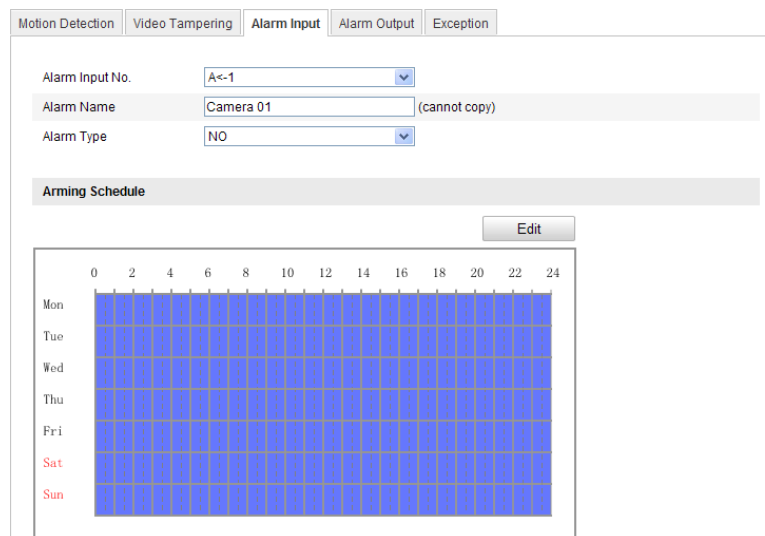


Figure 5-36 Alarm Input Settings

3. Click **Edit** to set the arming schedule for the alarm input. Refer to *Task 2: Set the Arming Schedule for Motion Detection* in *Section 5.6.1*.
4. Check the checkbox to select the linkage method taken for the alarm input. Refer to *Task 3: Set the Alarm Actions for Motion Detection* in *Section 5.6.1*.
5. You can also choose the PTZ linking for the alarm input if your camera is



installed with a pan/tilt unit. Check the relative checkbox and select the No. to enable Preset Calling, Patrol Calling or Pattern Calling.

6. You can copy your settings to other alarm inputs.
7. Click **Save** to save the settings.

### 5.6.4 Configuring Alarm Output

#### *Steps:*

1. Enter the Alarm Output Settings interface:

**Configuration>Advanced Configuration> Events > Alarm Output**

2. Select one alarm output channel in the **Alarm Output** drop-down list. You can also set a name for the alarm output (optional).
3. The **Delay** time can be set to **5sec, 10sec, 30sec, 1min, 2min, 5min, 10min** or **Manual**. The delay time refers to the time duration that the alarm output remains in effect after alarm occurs.
4. Click **Edit** to enter the **Edit Schedule Time** interface. The time schedule configuration is the same as the settings of the arming schedule for motion detection. Refer to *Task 2: Set the Arming Schedule for Motion Detection* in Section 5.6.1.
5. You can copy the settings to other alarm outputs.
6. Click **Save** to save the settings.

Motion Detection Video Tampering Alarm Input **Alarm Output** Exception

Alarm Output

Alarm Name

Delay

**Arming Schedule**

	0	2	4	6	8	10	12	14	16	18	20	22	24
Mon	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Tue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Wed	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Thu	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Fri	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Sat	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
Sun	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue

Figure 5-37 Alarm Output Settings

### 5.6.5 Handling Exception

The exception type can be HDD full, HDD error, network disconnected, IP address conflicted and illegal login to the cameras.

**Steps:**

1. Enter the Exception Settings interface:

**Configuration > Advanced Configuration > Events > Exception**

2. Check the checkbox to set the actions taken for the Exception alarm. Refer to

**Task 3: Set the Alarm Actions Taken for Motion Detection** in Section 5.6.1.

Motion Detection Video Tampering Alarm Input Alarm Output **Exception**

Exception Type

Normal Linkage	Other Linkage
<input checked="" type="checkbox"/> Notify Surveillance Center	Trigger Alarm Output <input type="checkbox"/> Select All
<input checked="" type="checkbox"/> Send Email	<input type="checkbox"/> A->1

Figure 5-38 Exception Settings

3. Click **Save** to save the settings.

## Chapter 6 Storage Settings

### *Before you start:*

To configure record settings, please make sure that you have the network storage device within the network or the SD card inserted in your camera.

### 6.1 Configuring NAS Settings

#### *Before you start:*

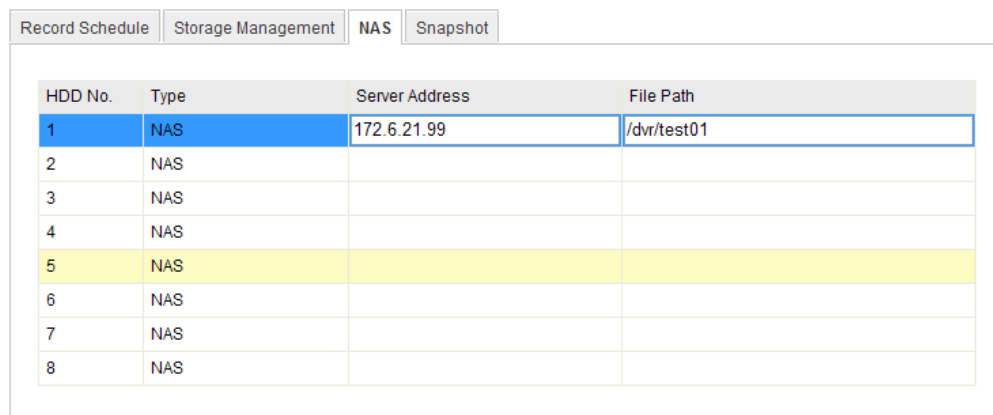
The network disk should be available within the network and properly configured to store the recorded files, log files, etc.

#### *Steps:*

1. Add the network disk

(1) Enter the NAS (Network-Attached Storage) Settings interface:

**Configuration > Advanced Configuration > Storage > NAS**



HDD No.	Type	Server Address	File Path
1	NAS	172.6.21.99	/dvr/test01
2	NAS		
3	NAS		
4	NAS		
5	NAS		
6	NAS		
7	NAS		
8	NAS		

**Figure 6-1** Add Network Disk

(2) Enter the IP address of the network disk, and enter the default file.

**Note:** Please refer to the *User Manual of NAS* for creating the file path.

(3) Click  to add the network disk.

**Note:** After having saved successfully, you need to reboot the camera to activate the settings.

1. Initialize the added network disk.

(1) Enter the HDD Settings interface (**Advanced Configuration > Storage >**

**Storage Management**), in which you can view the capacity, free space, status, type and property of the disk.

Record Schedule **Storage Management** NAS Snapshot

HDD Device List Format

<input type="checkbox"/>	HDD No.	Capacity	Free space	Status	Type	Property	Progress
<input type="checkbox"/>	g	20.00GB	0.00GB	Uninitialized	NAS	R/W	

Quota

Max. Picture Capacity

Free Size for Picture

Max. Record Capacity

Free Size for Record

Percentage of Picture  %

Percentage of Record  %

Figure 6-2 Storage Management Interface

- (2) If the status of the disk is **Uninitialized**, check the corresponding checkbox to select the disk and click **Format** to start initializing the disk.

When the initialization completed, the status of disk will become **Normal**.

HDD Device List Format

<input type="checkbox"/>	HDD No.	Capacity	Free space	Status	Type	Property	Progress
<input type="checkbox"/>	g	20.00GB	19.75GB	Normal	NAS	R/W	

Figure 6-3 View Disk Status

2. Define the quota for record and pictures.

- (1) Input the quota percentage for picture and for record.
- (2) Click **Save** and refresh the browser page to activate the settings.

Quota

Max. Picture Capacity

Free Size for Picture

Max. Record Capacity

Free Size for Record

Percentage of Picture  %

Percentage of Record  %

Figure 6-4 Quota Settings

**Notes:**

- Up to 8 NAS disks can be connected to the camera.

- To initialize and use the SD card after insert it to the camera, please refer to the steps of NAS disk initialization.

## 6.2 Configuring Recording Schedule

### *Purpose:*

There are two kinds of recording for the cameras: manual recording and scheduled recording. For the manual recording, refer to *Section 4.3 Recording and Capturing Pictures Manually*. In this section, you can follow the instructions to configure the scheduled recording. By default, the record files of scheduled recording are stored in the SD card (if supported) or in the network disk.

### *Steps:*

1. Enter the Record Schedule Settings interface:

**Configuration > Advanced Configuration > Storage > Record Schedule**

The screenshot shows the 'Record Schedule' configuration page. At the top, there are four tabs: 'Record Schedule' (selected), 'Storage Management', 'NAS', and 'Snapshot'. Below the tabs, there are three dropdown menus: 'Pre-record' set to '5s', 'Post-record' set to '5s', and 'Overwrite' set to 'Yes'. Below these is a checkbox labeled 'Enable Record Schedule' which is checked. To the right of the checkbox is an 'Edit' button. The main part of the interface is a grid representing the recording schedule. The grid has 7 rows for the days of the week (Mon, Tue, Wed, Thu, Fri, Sat, Sun) and 25 columns for hours (0 to 24). The grid is color-coded: green for 'Motion Detection', light blue for 'Motion & Alarm', purple for 'Other', and dark blue for 'Continuous'. A legend on the right side of the grid explains these colors: Continuous (dark blue), Motion Detection (green), Alarm (red), Motion | Alarm (orange), Motion & Alarm (light blue), and Other (purple). At the bottom right of the interface is a 'Save' button.

Figure 6-5 Recording Schedule Interface

2. Check the checkbox of **Enable Record Schedule** to enable scheduled recording.
3. Set the record parameters of the camera.

Pre-record	5s	▼
Post-record	5s	▼
Overwrite	Yes	▼

Figure 6-6 Record Parameters

- **Pre-record:** The time you set to start recording before the scheduled time or the event. For example, if an alarm triggers recording at 10:00, and the pre-record time is set as 5 seconds, the camera starts to record at 9:59:55.  
The Pre-record time can be configured as No Pre-record, 5 s, 10 s, 15 s, 20 s, 25 s, 30 s or not limited.
- **Post-record:** The time you set to stop recording after the scheduled time or the event. For example, if an alarm triggered recording ends at 11:00, and the post-record time is set as 5 seconds, the camera records until 11:00:05.  
The Post-record time can be configured as 5 s, 10 s, 30 s, 1 min, 2 min, 5 min or 10 min.

**Note:** The record parameter configurations vary depending on the camera model.

4. Click **Edit** to edit the record schedule.

**Edit Schedule**

Mon Tue Wed Thu Fri Sat Sun

☐ All Day

☒ Customize

Period	Start Time	End Time	Record Type
1	00:00	00:00	Continuous
2	00:00	00:00	Continuous
3	00:00	00:00	Continuous
4	00:00	00:00	Continuous
5	00:00	00:00	Continuous
6	00:00	00:00	Continuous
7	00:00	00:00	Continuous
8	00:00	00:00	Continuous

Copy to Week ☐ Select All

☒ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐ Sat ☐ Sun

Figure 6-7 Record Schedule

5. Choose the day to set the record schedule.

(1) Set all-day record or segment record:

- ◆ If you want to configure the all-day recording, please check the **All Day** checkbox.
- ◆ If you want to record in different time sections, check the **Customize** checkbox. Set the **Start Time** and **End Time**.

**Note:** The time of each segment can't be overlapped. Up to 4 segments can be configured.

(2) Select a **Record Type**. The record type can be Continuous, Motion Detection, Alarm, Motion | Alarm, Motion & Alarm, etc.

◆ **Continuous**

If you select **continuous**, the video will be recorded automatically according to the time of the schedule.

◆ **Record Triggered by Motion Detection**

If you select **Motion Detection**, the video will be recorded when the motion is detected.

Besides configuring the recording schedule, you have to set the motion detection area and check the checkbox of **Trigger Channel** in the **Linkage Method** of Motion Detection Settings interface. For detailed information, please refer to the *Task 1: Set the Motion Detection Area in the Section 5.6.1.*

◆ **Record Triggered by Alarm**

If you select **Alarm**, the video will be recorded when the alarm is triggered via the external alarm input channels.

Besides configuring the recording schedule, you have to set the **Alarm Type** and check the checkbox of **Trigger Channel** in the **Linkage Method** of **Alarm Input Settings** interface. For detailed information, please refer to *Section 5.6.3.*

◆ **Record Triggered by Motion & Alarm**

If you select **Motion & Alarm**, the video will be recorded when the motion

and alarm are triggered at the same time.

Besides configuring the recording schedule, you have to configure the settings on the **Motion Detection** and **Alarm Input Settings** interfaces.

Please refer to *Section 5.6.1* and *Section 5.6.3* for detailed information.

#### ◆ Record Triggered by Motion | Alarm

If you select **Motion | Alarm**, the video will be recorded when the external alarm is triggered or the motion is detected.

Besides configuring the recording schedule, you have to configure the settings on the **Motion Detection** and **Alarm Input Settings** interfaces.

Please refer to *Section 5.6.1* and *Section 5.6.3* for detailed information.

The screenshot shows the 'Edit Schedule' window. At the top, there are tabs for days of the week: Mon, Tue, Wed, Thu, Fri, Sat, Sun. Below these are two radio buttons: 'All Day' (selected) and 'Customize'. To the right of 'All Day' is a dropdown menu showing 'Continuous'. Below the radio buttons is a table with 8 rows. The table has four columns: 'Period', 'Start Time', 'End Time', and 'Record Type'. The 'Record Type' column contains dropdown menus. Below the table, there are checkboxes for 'Copy to Week' (checked) and 'Select All'. Below these are checkboxes for each day of the week: Mon, Tue, Wed, Thu, Fri, Sat, Sun, all of which are checked. To the right of these checkboxes is a 'Copy' button. At the bottom right are 'OK' and 'Cancel' buttons.

Period	Start Time	End Time	Record Type
1	00:00	09:00	Motion Detection
2	09:00	14:00	Motion & Alarm
3	14:00	20:00	Continuous
4	20:00	24:00	Continuous
5	00:00	00:00	Continuous
6	00:00	00:00	Continuous
7	00:00	00:00	Continuous
8	00:00	00:00	Continuous

Figure 6-8 Edit Record Schedule

- (3) Check the checkbox of **Select All** and click **Copy** to copy settings of this day to the whole week. You can also check any of the checkboxes before the date and click **Copy**.
- (4) Click **OK** to save the settings and exit the **Edit Record Schedule** interface.
6. Click **Save** to save the settings.



## 6.3 Configuring Snapshot Settings

### *Purpose:*

You can configure the scheduled snapshot and event-triggered snapshot. The captured picture can be stored in the SD card (if supported) or the netHDD (For detailed information about netHDD, please refer to *Section 6.1 Configuring NAS Settings*).

You can also upload the captured pictures to a FTP server.

### **Basic Settings**

#### *Steps:*

1. Enter the Snapshot Settings interface:

**Configuration > Advanced Configuration > Storage > Snapshot**

2. Check the **Enable Timing Snapshot** checkbox to enable continuous snapshot.  
Check the **Enable Event-triggered Snapshot** checkbox to check event-triggered snapshot.
3. Select the quality of the snapshot.
4. Set the time interval between two snapshots.
5. Click **Save** to save the settings.

### **Uploading to FTP**

You can follow below configuration instructions to upload the snapshots to FTP.

- Upload continuous snapshots to FTP

#### *Steps:*

- 1) Configure the FTP settings and check **Upload Picture** checkbox in FTP Settings interface. Please refer to *Section 5.3.11 Configuring FTP Settings* for more details to configure FTP parameters.

- 2) Check the **Enable Timing Snapshot** checkbox.

- Upload event-triggered snapshots to FTP

#### *Steps:*

- 1) Configure the FTP settings and check **Upload Picture** checkbox in FTP Settings interface. Please refer to *Section 5.3.11 Configuring FTP Settings* for more details to configure FTP parameters.

- 2) Check **Upload Picture** checkbox in Motion Detection Settings or Alarm Input interface. Please refer to *Task 3: Set the Alarm Actions Taken for Motion Detection* in Section 5.6.1.
- 3) Check the **Enable Event-triggered Snapshot** checkbox.

The screenshot displays the 'Snapshot' configuration page. At the top, there are four tabs: 'Record Schedule', 'Storage Management', 'NAS', and 'Snapshot'. The 'Snapshot' tab is selected. The page is divided into two main sections: 'Timing' and 'Event-Triggered'. Both sections have a checkbox to 'Enable' their respective snapshot types, both of which are checked. Each section contains settings for 'Format' (JPEG), 'Resolution' (1920\*1080), 'Quality' (High), and 'Interval' (0 milliseconds). The 'Event-Triggered' section also includes a 'Capture Number' setting set to 4. A 'Save' button is located at the bottom right of the interface.

Section	Option	Value
Timing	Enable Timing Snapshot	<input checked="" type="checkbox"/>
	Format	JPEG
	Resolution	1920*1080
	Quality	High
	Interval	0 milliseconds
Event-Triggered	Enable Event-Triggered Snapshot	<input checked="" type="checkbox"/>
	Format	JPEG
	Resolution	1920*1080
	Quality	High
	Interval	0 milliseconds
	Capture Number	4

**Figure 6-9** Snapshot Settings

## Chapter 7 Playback

### Purpose:

This section explains how to view the remotely recorded video files stored in the network disks or SD cards.

### Steps:

1. Click **Playback** on the menu bar to enter playback interface.

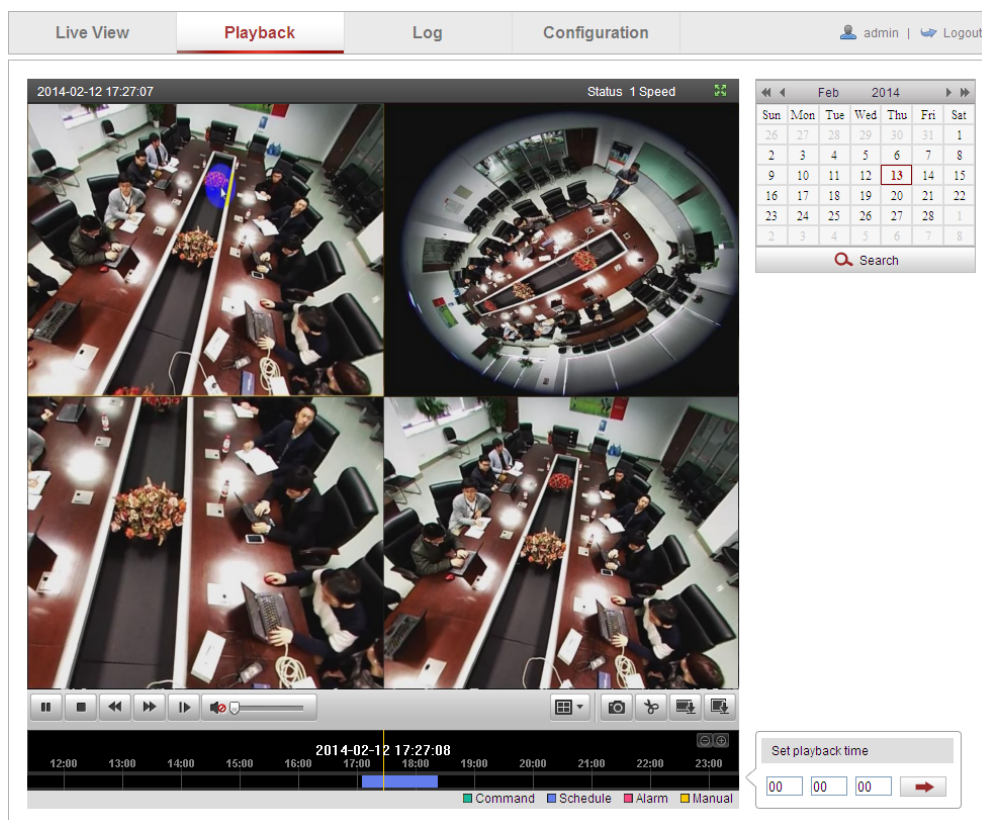


Figure 7-1 Playback Interface

2. Select the date and click **Search**.

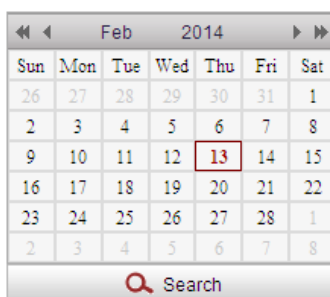



Figure 7-2 Search Video

3. Click  to play the video files found on this date.

The toolbar on the bottom of Playback interface can be used to control playing process.



Figure 7-3 Playback Toolbar

Table 7-1 Description of the buttons

Button	Operation	Button	Operation
	Play		Capture a picture
	Pause		Start/Stop clipping video files
	Stop		Audio on and adjust volume/Mute
	Speed down		Download video files
	Speed up		Download captured pictures
	Playback by frame		Select the layout mode

**Note:** You can choose the file paths locally for downloaded playback video files and pictures in Local Configuration interface. Please refer to *Section 5.1* for details.

Drag the progress bar with the mouse to locate the exact playback point. You can also input the time and click to locate the playback point in the **Set playback time** field. You can also click to zoom out/in the progress bar.

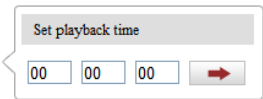


Figure 7-4 Set Playback Time

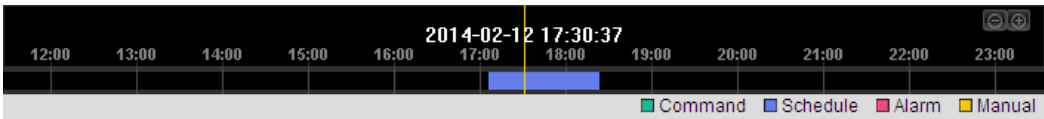


Figure 7-5 Progress Bar

The different colors of the video on the progress bar stand for the different video types.

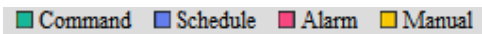


Figure 7-6 Video Types

## Chapter 8 Log Searching

### **Purpose:**

The operation, alarm, exception and information of the camera can be stored in log files. You can also export the log files on your demand.

### **Before you start:**

Please configure network storage for the camera or insert a SD card in the camera.

### **Steps:**

1. Click **Log** on the menu bar to enter log searching interface.

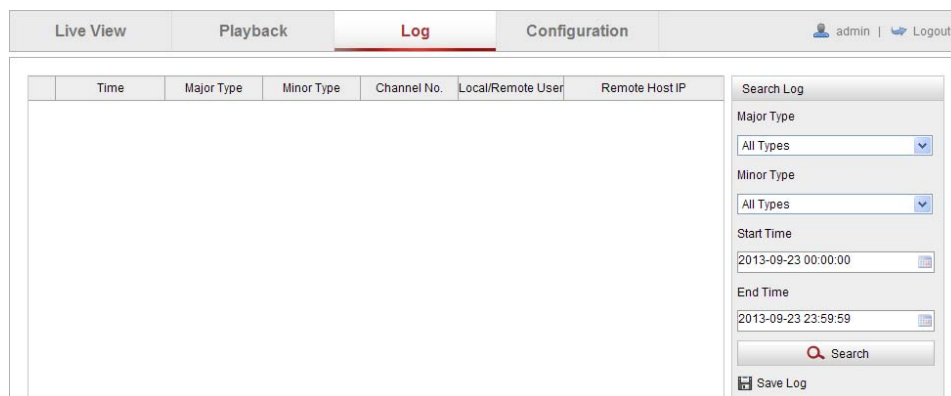


Figure 8-1 Log Searching Interface

2. Set the log search conditions to specify the search, including the Major Type, Minor Type, Start Time and End Time.
3. Click **Search** to search log files. The matched log files will be displayed on the **Log** interface.

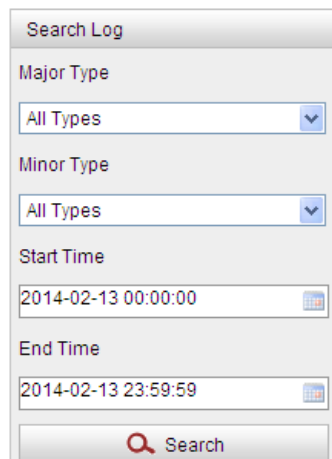


Figure 8-2 Log Searching

4. To export the log files, click **Save log** to save the log files in your computer.

# Chapter 9 Others

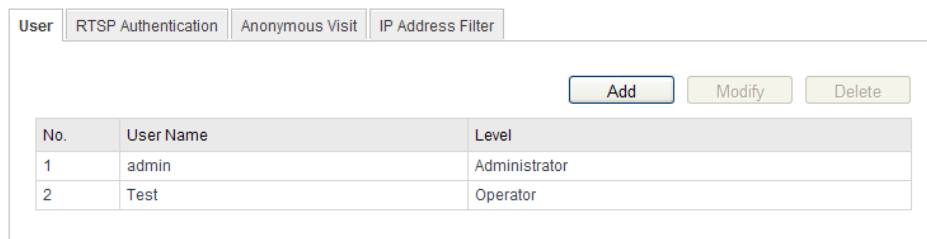
## 9.1 Managing User Accounts

Enter the User Management interface:

**Configuration > Basic Configuration > Security > User**

Or **Configuration > Advanced Configuration > Security > User**

The **admin** user has access to create, modify or delete other accounts. Up to 15 user accounts can be created.



No.	User Name	Level
1	admin	Administrator
2	Test	Operator

Figure 9-1 User Information

- Add a User

**Steps:**

1. Click **Add** to add a user.
2. Input the new **User Name**, select **Level** and input **Password**.

**Note:** The level indicates the permissions you give to the user. You can define the user as **Operator** or **User**.

3. In the **Basic Permission** field and **Camera Configuration** field, you can check or uncheck the permissions for the new user.
4. Click **OK** to finish the user addition.

Add user	
User Name	Test
Level	Operator
Password	•••••
Confirm	•••••
<b>Basic Permission</b> <input checked="" type="checkbox"/> Remote: Parameters Settings <input checked="" type="checkbox"/> Remote: Log Search / Interrogate Working Status <input type="checkbox"/> Remote: Upgrade / Format <input checked="" type="checkbox"/> Remote: Two-way Audio <input type="checkbox"/> Remote: Shutdown / Reboot <input type="checkbox"/> Remote: Notify Surveillance Center / Trigger Alarm Output <input type="checkbox"/> Remote: Video Output Control <input type="checkbox"/> Remote: Serial Port Control	<b>Camera Configuration</b> <input checked="" type="checkbox"/> Remote: Live View <input checked="" type="checkbox"/> Remote: PTZ Control <input checked="" type="checkbox"/> Remote: Manual Record <input checked="" type="checkbox"/> Remote: Playback
<div>OK Cancel</div>	

Figure 9-2 Add a User

- Modify a User

**Steps:**

1. Left-click to select the user from the list and click **Modify**.
2. Modify the **User Name**, **Level** or **Password**.
3. In the **Basic Permission** field and **Camera Configuration** field, you can check or uncheck the permissions.
4. Click **OK** to finish the user modification.

Modify user	
User Name	Test 01
Level	Operator
Password	•••••
Confirm	•••••
<b>Basic Permission</b> <input checked="" type="checkbox"/> Remote: Parameters Settings <input checked="" type="checkbox"/> Remote: Log Search / Interrogate Working Status <input checked="" type="checkbox"/> Remote: Upgrade / Format <input checked="" type="checkbox"/> Remote: Two-way Audio <input checked="" type="checkbox"/> Remote: Shutdown / Reboot <input checked="" type="checkbox"/> Remote: Notify Surveillance Center / Trigger Alarm Output <input checked="" type="checkbox"/> Remote: Video Output Control <input checked="" type="checkbox"/> Remote: Serial Port Control	<b>Camera Configuration</b> <input checked="" type="checkbox"/> Remote: Live View <input checked="" type="checkbox"/> Remote: PTZ Control <input checked="" type="checkbox"/> Remote: Manual Record <input checked="" type="checkbox"/> Remote: Playback
<div>OK Cancel</div>	

Figure 9-3 Modify a User

- Delete a User

**Steps:**

1. Click to select the user you want to delete and click **Delete**.
2. Click **OK** on the pop-up dialogue box to delete the user.

## 9.2 Configuring RTSP Authentication

**Purpose:**

You can specifically secure the stream data of live view.

**Steps:**

1. Enter the RTSP Authentication interface:

**Configuration> Advanced Configuration> Security > RTSP Authentication**

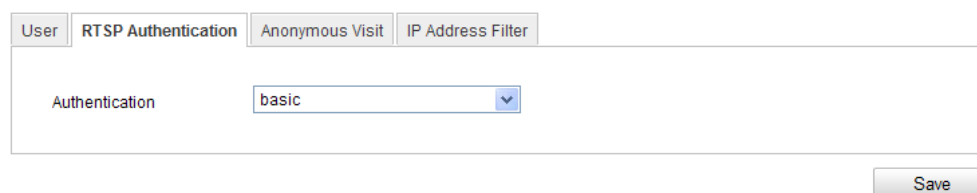


Figure 9-4 RTSP Authentication

2. Select the **Authentication** type **basic** or **disable** in the drop-down list to enable or disable the RTSP authentication.

**Note:** If you disable the RTSP authentication, anyone can access the video stream by the RTSP protocol via the IP address.

3. Click **Save** to save the settings.

## 9.3 Anonymous Visit

**Purpose:**

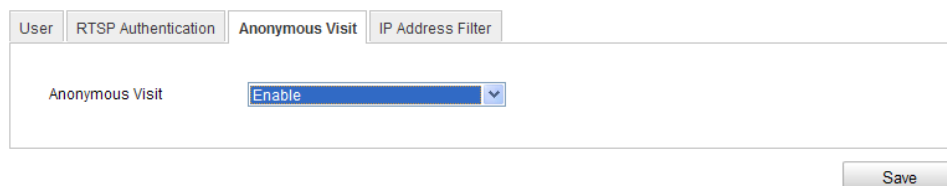
Enabling this function allows visit for whom doesn't have the user name and password of the device.

**Steps:**

1. Enter the Anonymous Visit interface:

**Configuration> Advanced Configuration> Security > Anonymous Visit**



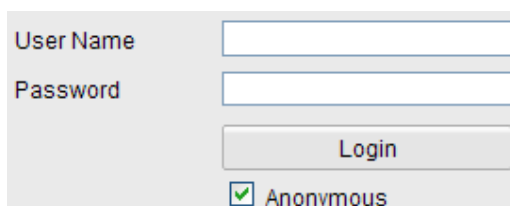


The screenshot shows a web interface for configuring a Network Fisheye Camera. At the top, there are four tabs: 'User', 'RTSP Authentication', 'Anonymous Visit', and 'IP Address Filter'. The 'Anonymous Visit' tab is selected. Below the tabs, there is a label 'Anonymous Visit' followed by a dropdown menu currently showing 'Enable'. At the bottom right of the configuration area, there is a 'Save' button.

Figure 9-5 Anonymous Visit

2. Set the **Anonymous Visit** permission **Enable** or **Disable** in the drop-down list to enable or disable the anonymous visit.
3. Click **Save** to save the settings.

There will be a checkbox of Anonymous by the next time you logging in.



The screenshot shows a login form. It has two input fields: 'User Name' and 'Password'. Below these fields is a 'Login' button. At the bottom, there is a checkbox that is checked, with the label 'Anonymous' next to it.

Figure 9-6 Login Interface with an Anonymous Checkbox

4. Check the checkbox of **Anonymous** and click **Login**.

**Note:** Only live view is available for the anonymous user.

## 9.4 IP Address Filter

### **Purpose:**

This function makes it possible for access control.

### **Steps:**

1. Enter the IP Address Filter interface:

**Configuration> Advanced Configuration> Security > IP Address Filter**

User RTSP Authentication Anonymous Visit IP Address Filter

☒ Enable IP Address Filter

IP Address Filter Type: Forbidden

IP Address Filter

No.	IP
1	172.6.23.2

Add Modify Delete Clear

Save

Figure 9-7 IP Address Filter Interface

2. Check the checkbox of **Enable IP Address Filter**.
3. Select the type of IP Address Filter in the drop-down list, **Forbidden** and **Allowed** are selectable.
4. Set the IP Address Filter list.

- Add an IP Address

**Steps:**

- (1) Click the **Add** to add an IP.
- (2) Input the IP Address.

Add IP Address

IP Address: 172.6.23.2

OK Cancel

Figure 9-8 Add an IP

- (3) Click the **OK** to finish adding.

- Modify an IP Address

**Steps:**

- (1) Left-click an IP address from filter list and click **Modify**.

(2) Modify the IP address in the text filed.

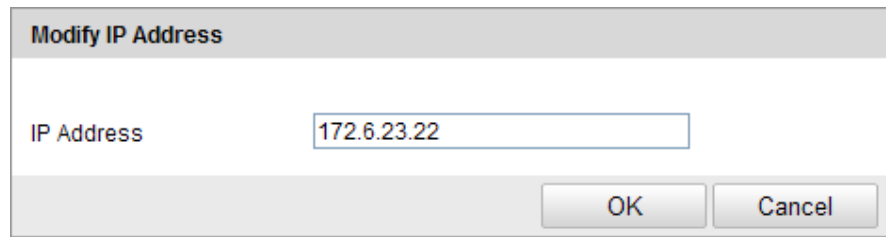


Figure 9-9 Modify an IP

(3) Click the **OK** to finish modifying.

- Delete an IP Address  
Left-click an IP address from filter list and click **Delete**.
- Delete all IP Addresses  
Click **Clear** to delete all the IP addresses.

5. Click **Save** to save the settings.

## 9.5 Viewing Device Information

Enter the Device Information interface:

**Configuration > Basic Configuration> System > Device Information**

Or **Configuration > Advanced Configuration> System > Device Information**

In the **Device Information** interface, you can edit the Device Name.

Other information of the network camera, such as Model, Serial No., Firmware Version, Encoding Version, Number of Channels, Number of HDDs, Number of Alarm Input and Number of Alarm Output are displayed. The information cannot be changed in this menu. It is the reference for maintenance or modification in future.

Device Information		Time Settings	Maintenance	RS232	RS485	DST	Fisheye Parameters
<b>Basic Information</b>							
Device Name	IP CAMERA						
Device No.	88						
Model	XX-XXXXXXXX-X						
Serial No.	XXXXXXXXXXXXXXXXXXXX						
Firmware Version	V5.0.9 build 140108						
Encoding Version	V4.0 build 140108						
Number of Channels	5						
Number of HDDs	1						
Number of Alarm Input	1						
Number of Alarm Output	1						

Figure 9-10 Device Information

## 9.6 Maintenance

### 9.6.1 Rebooting the Camera

**Steps:**

1. Enter the Maintenance interface:

**Configuration > Basic Configuration> System > Maintenance**

Or **Configuration > Advanced Configuration> System > Maintenance:**

2. Click **Reboot** to reboot the network camera.



Figure 9-11 Reboot the Device

### 9.6.2 Restoring Default Settings

**Steps:**

1. Enter the Maintenance interface:

**Configuration > Basic Configuration> System > Maintenance**

Or **Configuration > Advanced Configuration> System > Maintenance**

2. Click **Restore** or **Default** to restore the default settings.

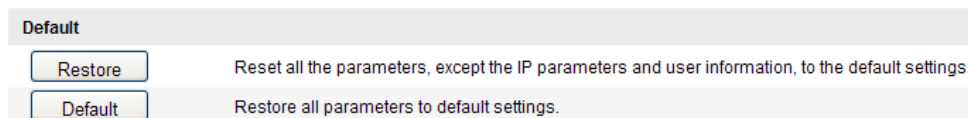


Figure 9-12 Restore Default Settings

**Note:** After restoring the default settings, the IP address is also restored to the default IP address, please be careful for this action.

### 9.6.3 Exporting / Importing Configuration File

**Purpose:**

Configuration file is used for the batch configuration of the camera, which can simplify the configuration steps when there are a lot of cameras needing configuring.

**Steps:**

Enter the Maintenance interface:

**Configuration > Basic Configuration > System > Maintenance**

Or **Configuration > Advanced Configuration > System > Maintenance**

1. Click **Export** to export the current configuration file, and save it to the certain place.
2. Click **Browse** to select the saved configuration file and then click **Import** to start importing configuration file.

**Note:** You need to reboot the camera after importing configuration file.

3. Click **Export** and set the saving path to save the configuration file in local storage.

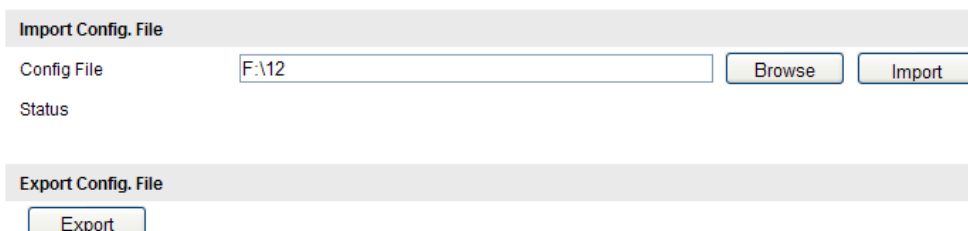


Figure 9-13 Import/Export Configuration File

## 9.6.4 Upgrading the System

### *Steps:*

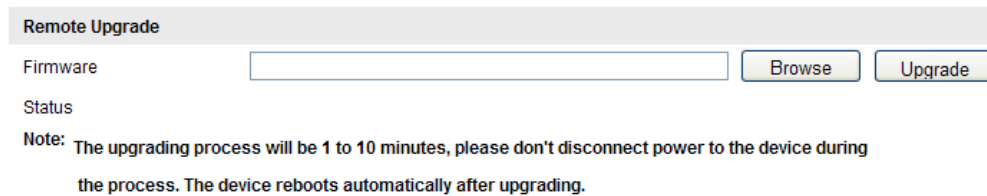
1. Enter the Maintenance interface:

**Configuration > Basic Configuration> System > Maintenance**

Or **Configuration > Advanced Configuration> System > Maintenance**

2. Click **Browse** to select the local upgrade file and then click **Upgrade** to start remote upgrade.

**Note:** The upgrading process will take 1 to 10 minutes. Please don't disconnect power of the camera during the process. The camera reboots automatically after upgrading.



Remote Upgrade

Firmware

Status

Note: The upgrading process will be 1 to 10 minutes, please don't disconnect power to the device during the process. The device reboots automatically after upgrading.

Figure 9-14 Remote Upgrade

## 9.7 RS-232 Settings

### *Purpose:*

The RS-232 port can be used in two ways:

- Parameters Configuration: Connect a computer to the camera through the serial port. Device parameters can be configured by using software such as HyperTerminal. The serial port parameters must be the same as the serial port parameters of the camera.
- Transparent Channel: Connect a serial device directly to the camera. The serial device will be controlled remotely by the computer through the network.

### *Steps:*

1. Enter RS-232 Port Setting interface:

**Configuration> Advanced Configuration> System > RS232**

Device Information	Time Settings	Maintenance	RS232	RS485	DST	Fisheye Parameters
Baud Rate	115200 bps					
Data Bit	8					
Stop Bit	1					
Parity	None					
Flow Ctrl	None					
Usage	Console					

Figure 9-15 RS-232 Settings

**Note:** If you want to connect the camera by the RS-232 port, the parameters of the RS-232 should be exactly the same with the parameters you configured here.

- Click **Save** to save the settings.

## 9.8 RS-485 Settings

### **Purpose:**

The RS-485 serial port is used to control the PTZ of the camera. The configuring of the PTZ parameters should be done before you control the PTZ unit.

### **Steps:**

- Enter RS-485 Port Setting interface:

**Configuration> Advanced Configuration> System > RS485**

Device Information	Time Settings	Maintenance	RS232	RS485	DST	Fisheye Parameters
Baud Rate	9600 bps					
Data Bit	8					
Stop Bit	1					
Parity	None					
Flow Ctrl	None					
PTZ Protocol	PELCO-D					
PTZ Address	0					

Figure 9-16 RS-485 Settings

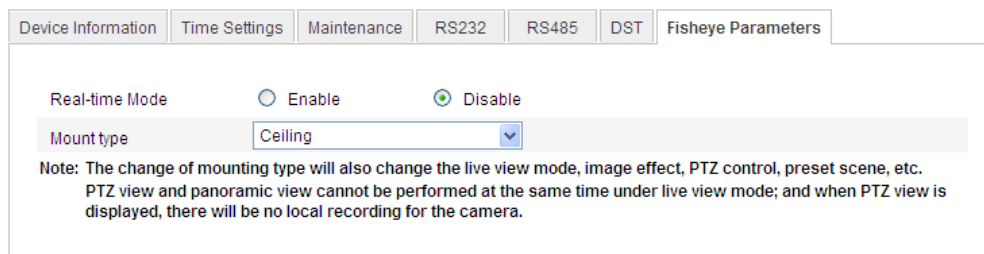
- Set the RS-485 parameters and click **Save** to save the settings.

By default, the Baud Rate is set as 9600 bps, the Data Bit is 8, the stop bit is 1 and the Parity and Flow Control is None.

**Note:** The Baud Rate, PTZ Protocol and PTZ Address parameters should be exactly the same as the PTZ camera parameters.

## 9.9 Fisheye Parameters

Fisheye parameters configuration enables you to select the real-time mode, and the mounting type, etc.



Device Information Time Settings Maintenance RS232 RS485 DST Fisheye Parameters

Real-time Mode ☐ Enable ☒ Disable

Mount type Ceiling

Note: The change of mounting type will also change the live view mode, image effect, PTZ control, preset scene, etc.  
PTZ view and panoramic view cannot be performed at the same time under live view mode; and when PTZ view is displayed, there will be no local recording for the camera.

Figure 9-17 Fisheye Parameters

Enable or disable the real-time mode by clicking the checkbox in front of the each option.

Ceiling mounting, table mounting, and wall mounting are selectable for the mounting type. Select the proper mounting type according to your actual environment and demand.



# Appendix

## Appendix 1 SADP Software Introduction

### ● Description of SADP V 2.0

SADP (Search Active Devices Protocol) is a kind of user-friendly and installation-free online device search tool. It searches the active online devices within your subnet and displays the information of the devices. You can also modify the basic network information of the devices using this software.

### ● Search active devices online

#### ◆ Search online devices automatically

After launch the SADP software, it automatically searches the online devices every 15 seconds from the subnet where your computer locates. It displays the total number and information of the searched devices in the Online Devices interface. Device information including the device type, IP address, port number, gateway, etc. will be displayed.

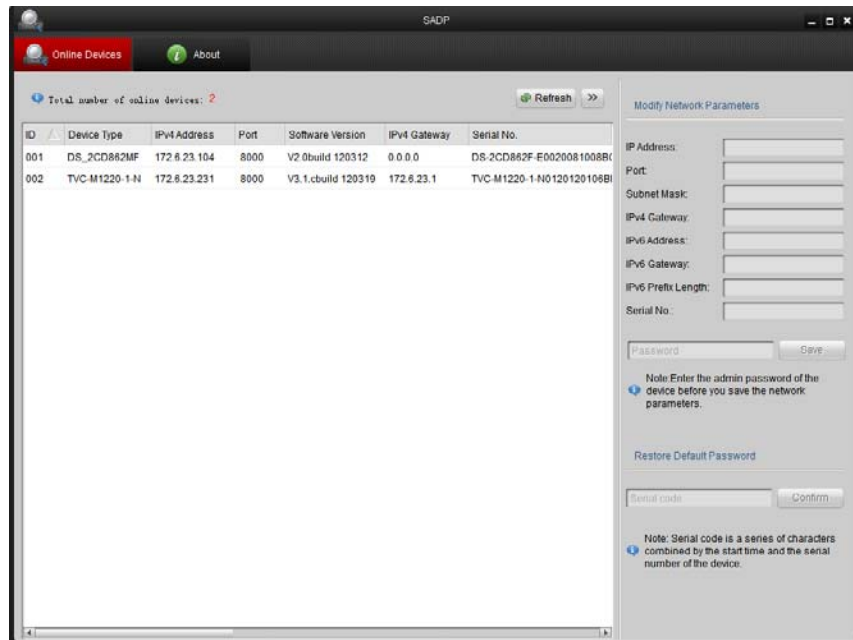


Figure A.1.1 Search Online Devices

**Note:** Device can be searched and displayed in the list in 15 seconds after it went online; it will be removed from the list in 45 seconds after it went offline.

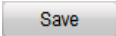
### ◆ Search online devices manually

You can also click **Refresh** to refresh the online device list manually. The newly searched devices will be added to the list.

**Note:** You can click ▲ or ▼ on each column heading to order the information; you can click >> to expand the device table and hide the network parameter panel on the right side, or click << to show the network parameter panel.

### ● Modify network parameters

#### Steps:

1. Select the device to be modified in the device list and the network parameters of the device will be displayed in the **Modify Network Parameters** panel on the right side.
2. Edit the modifiable network parameters, e.g. IP address and port number.
3. Enter the password of the admin account of the device in the **Password** field and click  to save the changes.

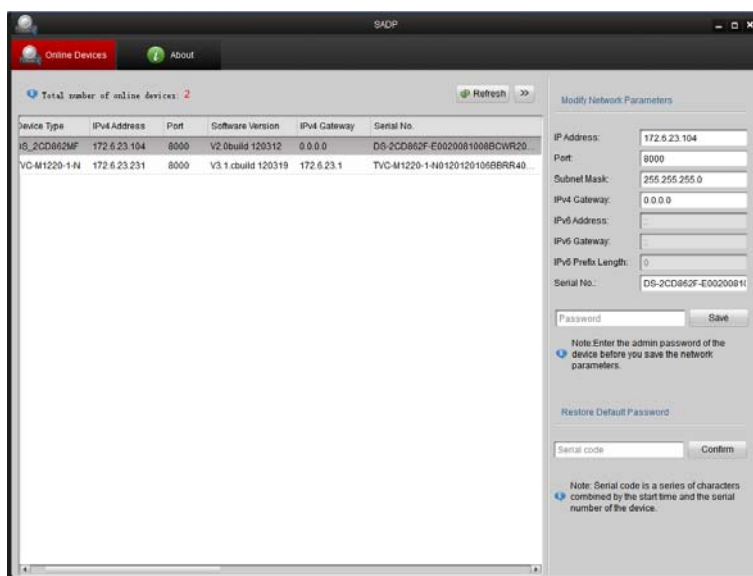


Figure A.1.2 Modify Network Parameters

### ● Restore default password

#### Steps:

1. Contact our technical engineers to get the serial code.
2. Input the code in the **Serial code** field and click **Confirm** to restore the default password.

## Appendix 2 Port Mapping

The following settings are for TP-LINK router (TL-WR641G). The settings vary depending on different models of routers.

### Steps:

1. Select the **WAN Connection Type**, as shown below:

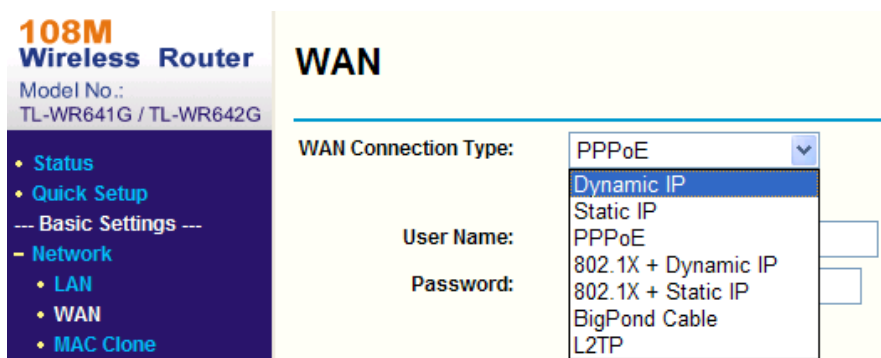


Figure A.2.1 Select the WAN Connection Type

2. Set the **LAN** parameters of the router as in the following figure, including IP address and subnet mask settings.

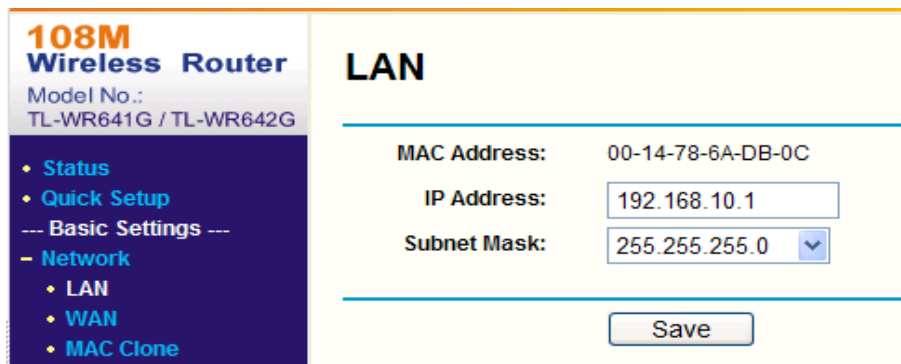


Figure A.2.2 Set the LAN parameters

3. Set the port mapping in the virtual servers of **Forwarding**. By default, camera uses port 80, 8000 and 554. You can change these ports value with web browser or client software.

### Example:

When the cameras are connected to the same router, you can configure the ports of a camera as 80, 8000, and 554 with IP address 192.168.1.23, and the ports of

another camera as 81, 8001, 555, 8201 with IP 192.168.1.24. Refer to the steps as below:

**Steps:**

1. As the settings mentioned above, map the port 80, 8000, 554 and 8200 for the network camera at 192.168.1.23
2. Map the port 81, 8001, 555 and 8201 for the network camera at 192.168.1.24.
3. Enable **ALL** or **TCP** protocols.
4. Check the **Enable** checkbox and click **Save**.

**108M Wireless Router**  
Model No.:  
TL-WR641G / TL-WR642G

- Status
- Quick Setup
- Basic Settings
- Network
- Wireless
- Advanced Settings
- DHCP
- Forwarding
  - Virtual Servers
  - Port Triggering
  - DMZ
  - UPnP
- Security
  - Static Routing
  - Dynamic DNS
- Maintenance
- System Tools

### Virtual Servers

ID	Service Port	IP Address	Protocol	Enable
1	80	192.168.10.23	ALL	<input checked="" type="checkbox"/>
2	8000	192.168.10.23	ALL	<input checked="" type="checkbox"/>
3	554	192.168.10.23	ALL	<input checked="" type="checkbox"/>
4	8200	192.168.10.23	ALL	<input checked="" type="checkbox"/>
5	81	192.168.10.24	ALL	<input checked="" type="checkbox"/>
6	8001	192.168.10.24	ALL	<input checked="" type="checkbox"/>
7	555	192.168.10.24	ALL	<input checked="" type="checkbox"/>
8	8201	192.168.10.24	ALL	<input checked="" type="checkbox"/>

Common Service Port: DNS(53) Copy to ID 1

Previous Next Clear All Save

Figure A.2.3 Port Mapping

**Note:** The port of the network camera cannot conflict with other ports. For example, some web management port of the router is 80. Change the camera port if it is the same as the management port.