HiLook

Network Speed Dome
User Manual

User Manual

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About this Manual

This Manual is applicable to Network Speed Dome.

The Manual includes instructions for using and managing the product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version in the company website (http://overseas.hikvision.com/en/).

Please use this user manual under the guidance of professionals.

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Regulatory Information

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.

Warnings Follow these safeguards to prevent serious injury or death.	**Cautions** Follow these precautions to prevent potential injury or material damage.

Warnings:

- Adopt the power adapter which can meet the safety extra low voltage (SELV) standard. The power consumption cannot be less than the required value.
- Do not connect several devices to one power adapter as an adapter overload may cause over-heating and can be a fire hazard.
- When the product is installed on a wall or ceiling, the device should be firmly fixed.
- To reduce the risk of fire or electrical shock, do not expose the indoor used product to rain or moisture.
- This installation should be made by a qualified service person and should conform to all the local codes.
- Install blackouts equipment into the power supply circuit for convenient supply interruption.
- If the product does not work properly, contact your dealer or the nearest service center. Never attempt to disassemble the product yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)

Cautions:

- If the camera fails to synchronize local time with that of the network, you need to set up camera time manually. Visit the camera (via web browser or client software) and enter system settings interface for time settings.
- Make sure the power supply voltage is correct before using the product.
- Do not drop the product or subject it to physical shock. Do not install the product on vibratory surface or places.
- Do not expose it to high electromagnetic radiating environment.
- Do not aim the lens at the strong light such as sun or incandescent lamp. The strong light can

cause fatal damage to the product.

- 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.
- For working temperature, refer to the specification manual for details.
- To avoid heat accumulation, good ventilation is required for a proper operating environment.
- While shipping, the product should be packed in its original packing.
- Use the provided glove when open up the product cover. Do not touch the product cover with fingers directly, because the acidic sweat of the fingers may erode the surface coating of the product cover.
- Use a soft and dry cloth when clean inside and outside surfaces of the product cover. Do not use alkaline detergents.
- Improper use or replacement of the battery may result in hazard of explosion. Use the manufacturer recommended battery type.

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Chapter 1 Overview

1.1 System Requirement

System requirement of web browser accessing is as follows:
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 8 to 11, Google Chrome 31 to 44, and Mozilla Firefox 30 to 51

1.2 Functions

NOTE

The functions vary depending on different speed dome models.

- **PTZ Limits**

The camera can be programmed to move within the PTZ limits (left/right, up/down).

- **Scan Modes**

The camera provides 5 scan modes: auto scan, tilt scan, frame scan, random scan and panorama scan.

- **Presets**

A preset is a predefined image position. When the preset is called, the camera will automatically move to the defined position. The presets can be added, modified, deleted and called.

- **Label Display**

The on-screen label of the preset title, azimuth/elevation, zoom, time and camera name can be displayed on the monitor. The displays of time and camera name can be programmed.

- **Auto Flips**

In manual tracking mode, when a target object goes directly beneath the camera, the video will automatically flips 180 degrees in horizontal direction to maintain continuity of tracking. This function can also be realized by auto mirror image depending on different speed dome models.

- **Privacy Mask**

This function allows you to block or mask certain area of a scene, for preventing the personal privacy from recording or live viewing. A masked area will move with pan and tilt functions and automatically adjust in size as the lens zooms telephoto and wide.

- **3D Positioning**

In the client software, use the left key of mouse to click on the desired position in the video image and drag a rectangle area in the lower right direction, then the camera system will move the position to the center and allow the rectangle area to zoom in. Use the left key of mouse to drag a rectangle area in the upper left direction to move the position to the center and allow the

rectangle area to zoom out.

- **Proportional Pan/Tilt**

Proportional pan/tilt automatically reduces or increases the pan and tilt speeds according to the amount of zoom. At telephoto zoom settings, the pan and tilt speeds will be slower than at wide zoom settings. This keeps the image from moving too fast on the live view image when there is a large amount of zoom.

- **Auto Focus**

The auto focus enables the camera to focus automatically to maintain clear video images.

- **Day/Night Auto Switch**

The cameras deliver color images during the day. And as light diminishes at night, the cameras switch to night mode and deliver black and white images with high quality.

- **Slow Shutter**

In slow shutter mode, the shutter speed will automatically slow down in low illumination conditions to maintain clear video images by extending the exposure time. The feature can be enabled or disabled.

- **Backlight Compensation (BLC)**

If you focus on an object against strong backlight, the object will be too dark to be seen clearly. The BLC (Backlight Compensation) function can compensate light to the object in the front to make it clear, but this causes the over-exposure of the background where the light is strong.

- **Wide Dynamic Range (WDR)**

The wide dynamic range (WDR) function helps the camera provide clear images even under back light circumstances. When there are both very bright and very dark areas simultaneously in the field of view, WDR balances the brightness level of the whole image and provide clear images with details.

- **White Balance (WB)**

White balance can remove the unrealistic color casts. White balance is the white rendition function of the camera to adjust the color temperature according to the environment automatically.

- **Power Off Memory**

The camera supports the power off memory capability with the predefined resume time. It allows the camera to resume its previous position after power is restored.

- **Scheduled Task**

A time task is a preconfigured action that can be performed automatically at a specific date and time. The programmable actions include: auto scan, random scan, preset 1-8,frame scan, panorama scan, tilt scan, day, night, reboot, PT adjust, Aux Output, etc.

- **Park Action**

This feature allows the camera to start a predefined action automatically after a period of inactivity.

- **User Management**

The camera allows you to edit users with different levels of permission, in the admin login status. Multiple users are allowed to access and control the same network camera via network simultaneously.

- **3D Digital Noise Reduction**

Comparing with the general 2D digital noise reduction, the 3D digital noise reduction function

processes the noise between two frames besides processing the noise in one frame. The noise will be much less and the video will be clearer.

Chapter 2 Network Connection

NOTE

- You shall acknowledge that the use of the product with Internet access might be under network security risks. For avoidance of any network attacks and information leakage, strengthen your own protection. If the product does not work properly, contact with your dealer or the nearest service center.
- To ensure the network security of the network camera, we recommend you to have the network camera assessed and maintained termly. You can contact us if you need such service.

Before you start:

- If you want to set the network camera via a LAN (Local Area Network), 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), 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 camera in the same subnet with your computer, and install the SADP or client software to search and change the IP of the network camera.

NOTE

For the detailed introduction of SADP, refer to Appendix.

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 the network camera over the LAN via a switch or a router.

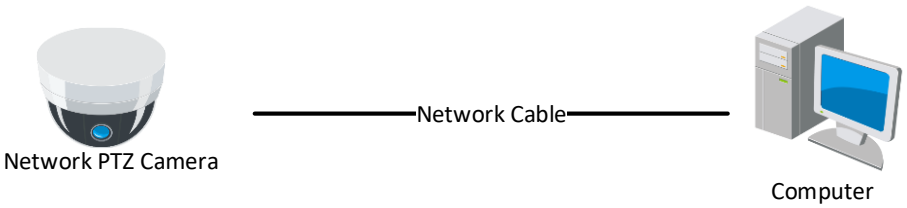

Figure 2-1 Connecting Directly

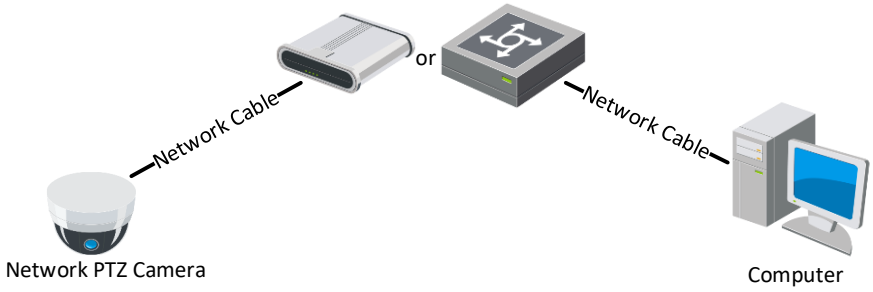

Figure 2-2 Connecting via a Switch or a Router

2.1.2 Activating the Camera

Purpose:

You are required to activate the camera first before you can use the camera.

Activation via web browser, activation via SADP, and activation via client software are supported.

◆ Activation via Web Browser

Steps:

1. Power on the camera, and connect the camera to the network.
2. Input the IP address into the address bar of the web browser, and enter the activation interface.

NOTE

The default IP address of the camera is 192.168.1.64.

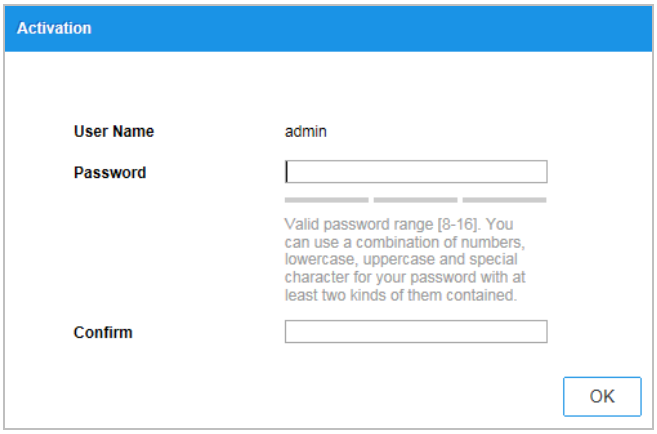

Figure 2-3 Activation Interface (Web)

3. Create a password and input the password into the password field.

- *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*

- *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*

4. Confirm the password.
5. Click **OK** to activate the camera and enter the live view interface.

◆ Activation via SADP Software

SADP software is used for detecting the online device, activating the device, and resetting the password.

Get the SADP software from the supplied disk or the official website, and install the SADP according to the prompts. Follow the steps to activate the camera.

Steps:

1. Run the SADP software to search the online devices.
2. Check the device status from the device list, and select an inactive device.

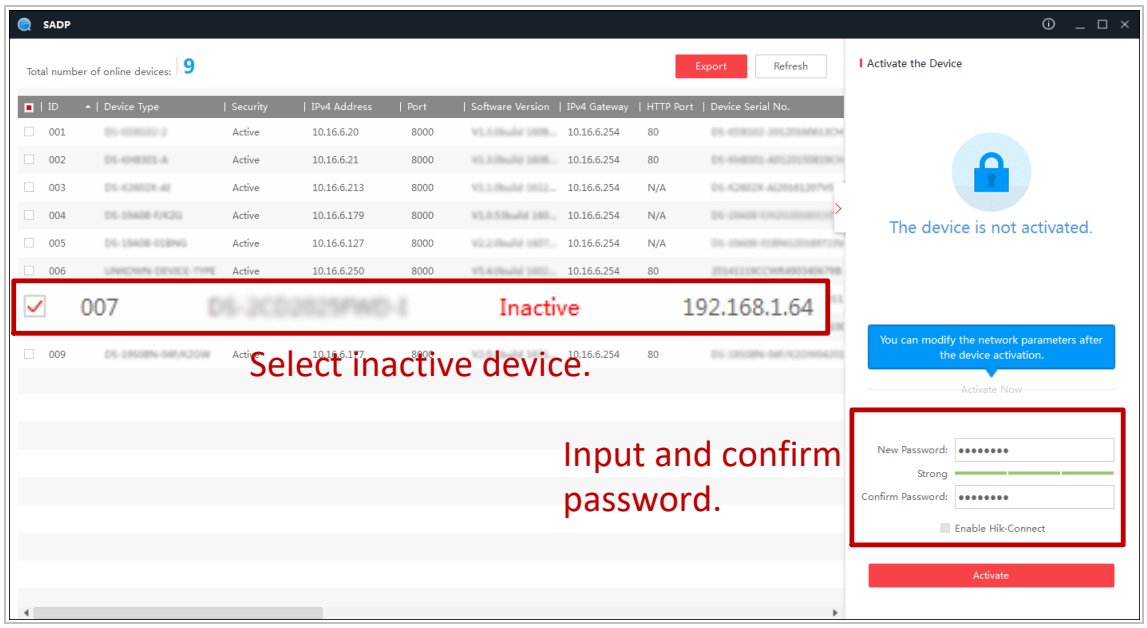

Figure 2-4 SADP Interface

NOTE

The SADP software supports activating the camera in batch. Refer to the user manual of SADP software for details.

3. Create a password and input the password in the password field, and confirm the password.

- *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*
- *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*

4. Click **Activate** to start activation. You can check whether the activation is completed on the

popup window. If activation failed, make sure that the password meets the requirement and then try again.

5. Change the device IP address to the same subnet with your computer by either modifying the IP address manually or checking **Enable DHCP**.

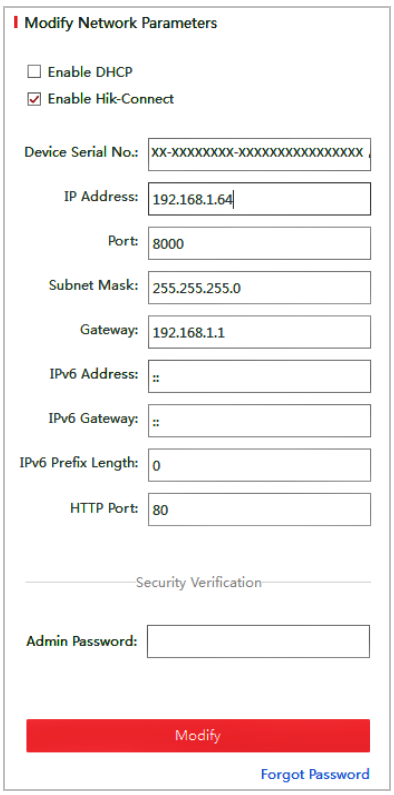

Figure 2-5 Modify the IP Address

6. Input the password and click **Modify** to activate your IP address modification.
   The batch IP address modification is supported by the SADP. Refer to the user manual of SADP for details.

◆ Activation via Client Software

The client software is versatile video management software for multiple kinds of devices.

Get the client software from the supplied disk or the official website, and install the software according to the prompts. Follow the steps to activate the camera.

Steps:

1. Run the client software and the control panel of the software pops up, as shown in Figure 2-6.

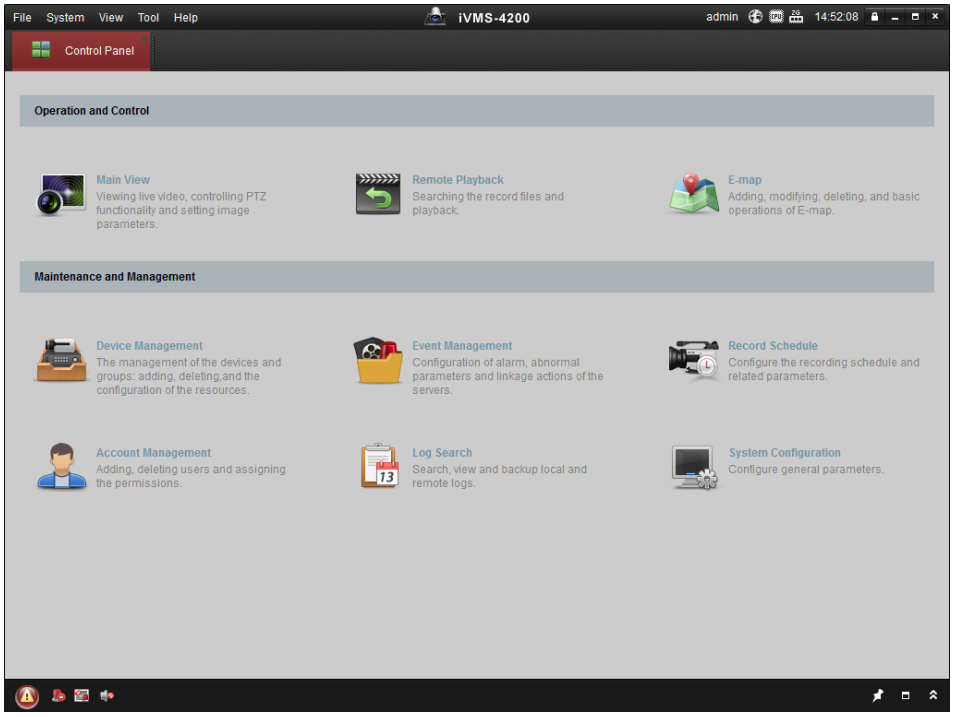

Figure 2-6 iVMS-4200 Control Panel

2. Click **Device Management** to enter the Device Management interface, as shown in Figure 2-7.

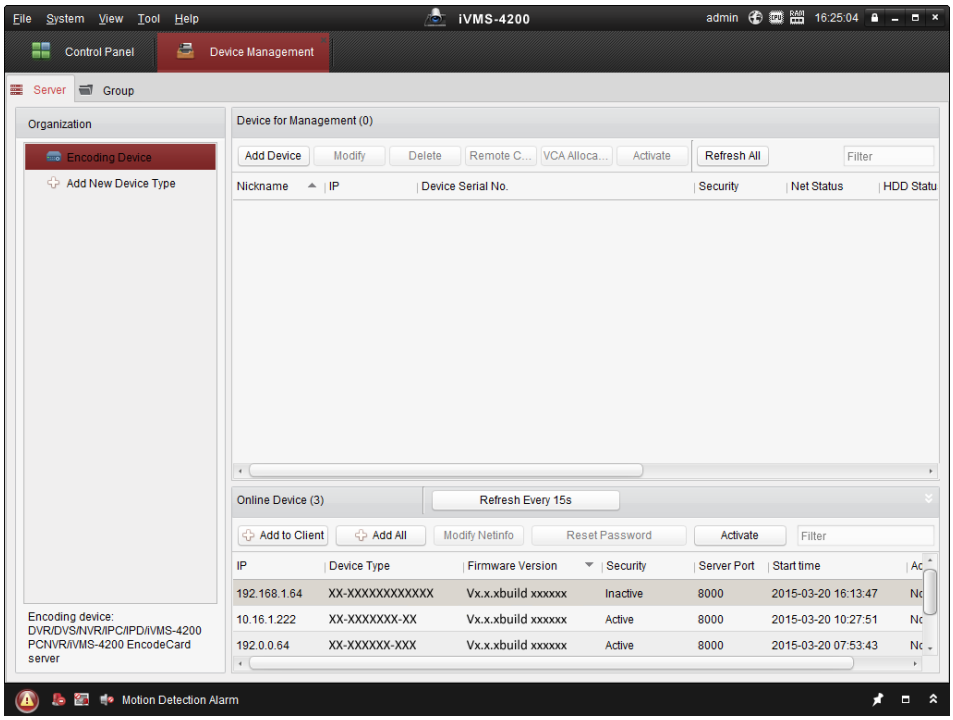

Figure 2-7 Device Management Interface

3. Check the device status from the device list, and select an inactive device.
4. Click **Activate** to pop up the Activation interface.
5. Create a password and input the password in the password field, and confirm the password.

- *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*
- *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*

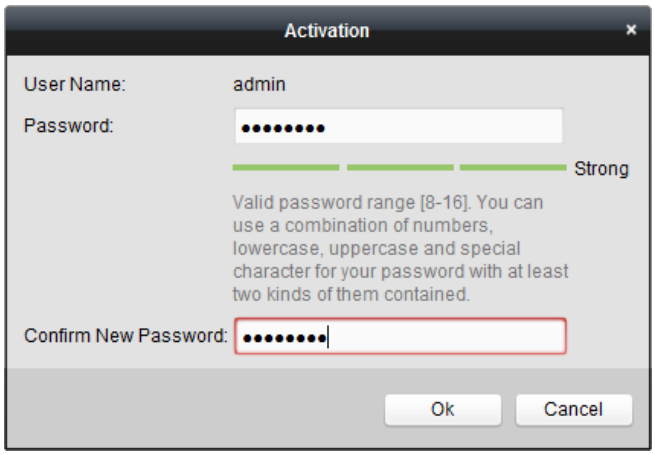

Figure 2-8 Activation Interface

6. Click **OK** to start activation.
7. Click **Modify Netinfo** to pop up the Network Parameter Modification interface, as shown in Figure 2-9.

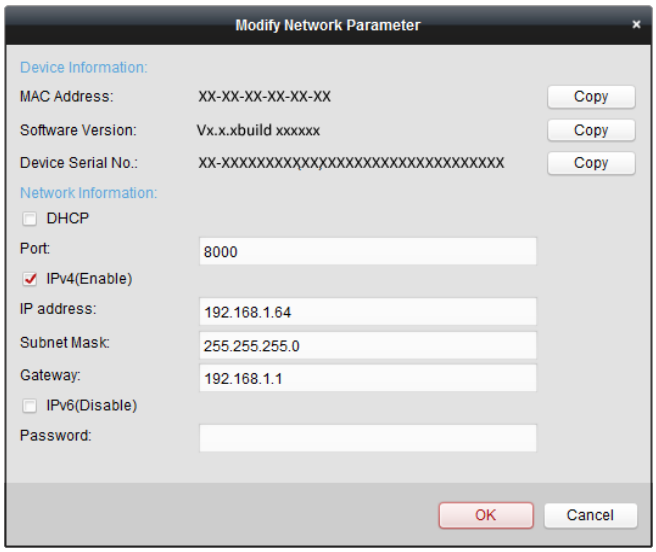

Figure 2-9 Modifying the Network Parameters

8. Change the device IP address to the same subnet with your computer by either modifying the IP address manually or checking **Enable DHCP**.
9. Input the password to activate your IP address modification.

2.1.3 (Optional) Setting Security Question

Security question is used to reset the admin password when admin user forgets the password. Admin user can follow the pop-up window to complete security question settings during camera activation. Or, admin user can go to User Management interface to set up the function.

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:

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*** 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 depending on different routers. Call the router manufacturer for assistance with port mapping.
5. Visit the network camera through a web browser or the client software over the internet.

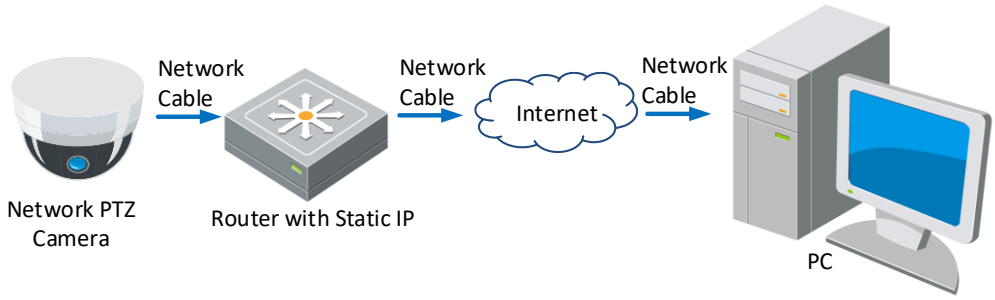

Figure 2-10 Accessing the Camera through Router with Static IP

- **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*** for detailed IP address configuration of the camera.

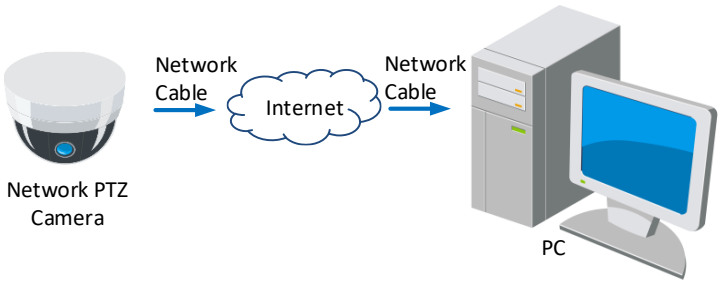

Figure 2-11 Accessing the Camera with Static IP Directly

2.2.2 Dynamic IP Connection

Before you start:

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*** for detailed LAN configuration.
3. In the router, set the PPPoE user name, password and confirm the password.

   - *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*
   - *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*
4. Set port mapping. E.g. 80, 8000 and 554 ports. The steps for port mapping vary depending on different routers. Call the router manufacturer for assistance with 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 6.1.1 Configuring PPPoE Settings*** for detailed configuration.

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). Follow the steps below for normal domain name resolution and private domain name resolution to solve the problem.

♦ 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 6.1.1 Configuring DDNS Settings*** for detailed configuration.
3. Visit the camera via the applied domain name.

Chapter 3 Accessing to the Network Speed Dome

3.1 Accessing by Web Browsers

Steps:

1. Open the web browser.
2. In the address field, input the IP address of the network camera, e.g., 192.168.1.64 and enter the login interface.
3. Activate the camera for the first time using, refer to the ***section 2.1.2 Activating the Camera***.
4. Select English as the interface language on the top-right of login interface.
5. Input the user name and password and click **Login**.

   The admin user should configure the device accounts and user/operator permissions properly. Delete the unnecessary accounts and user/operator permissions.

   NOTE

   The device IP address gets locked if the admin user performs 7 failed password attempts (5 attempts for the user/operator).

Figure 3-1 Login Interface

6. Install the plug-in before viewing the live video and operating the camera. Follow the installation prompts to install the plug-in.

   NOTE

   You may have to close the web browser to install the plug-in. Reopen the web browser and log in again after installing the plug-in.

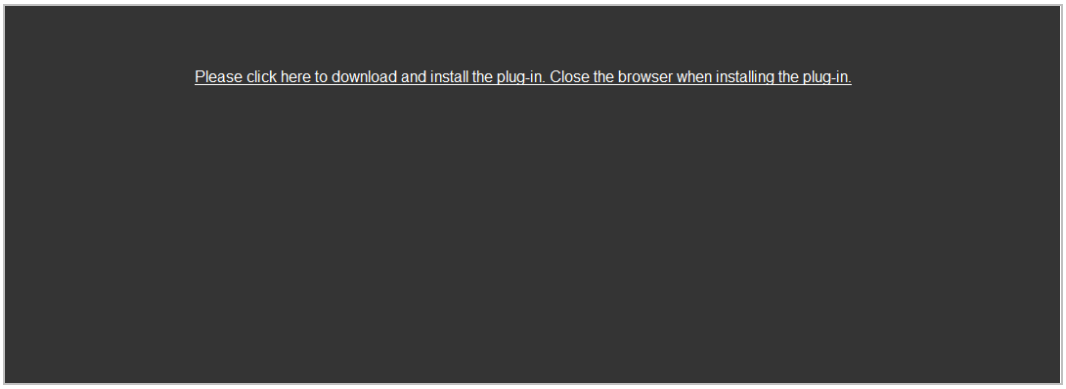

Figure 3-2 Download and Install Plug-in

3.2 Accessing by Client Software

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

Follow the installation prompts to install the client software and WinPcap. The configuration interface and live view interface of client software are shown in Figure 3-3.

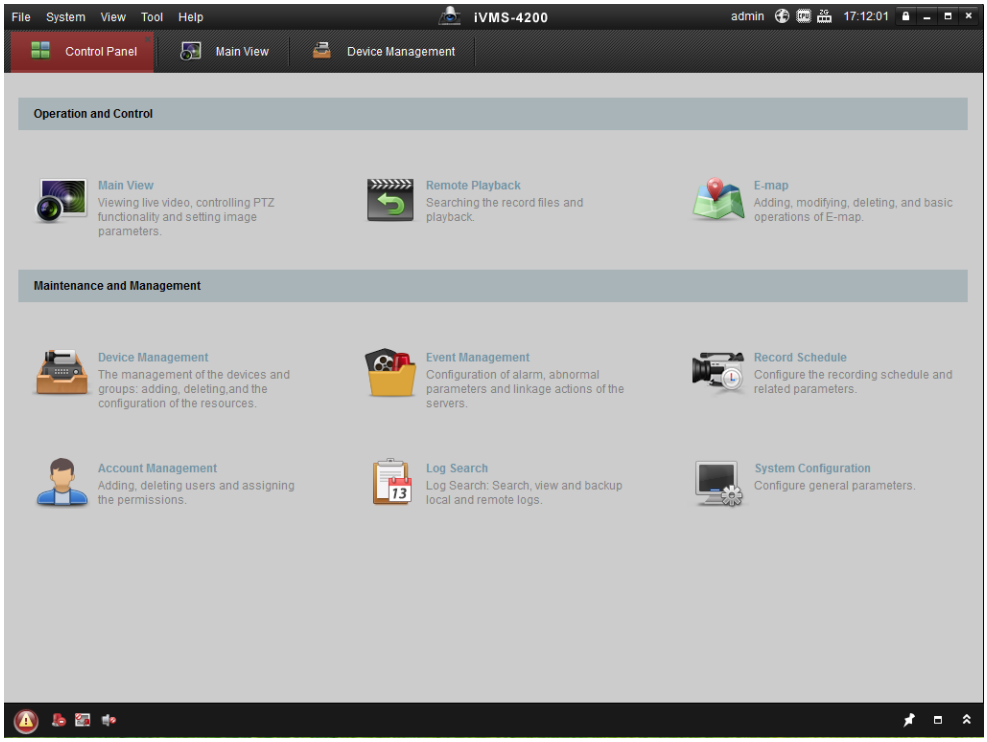

Figure 3-3 iVMS-4200 Control Panel

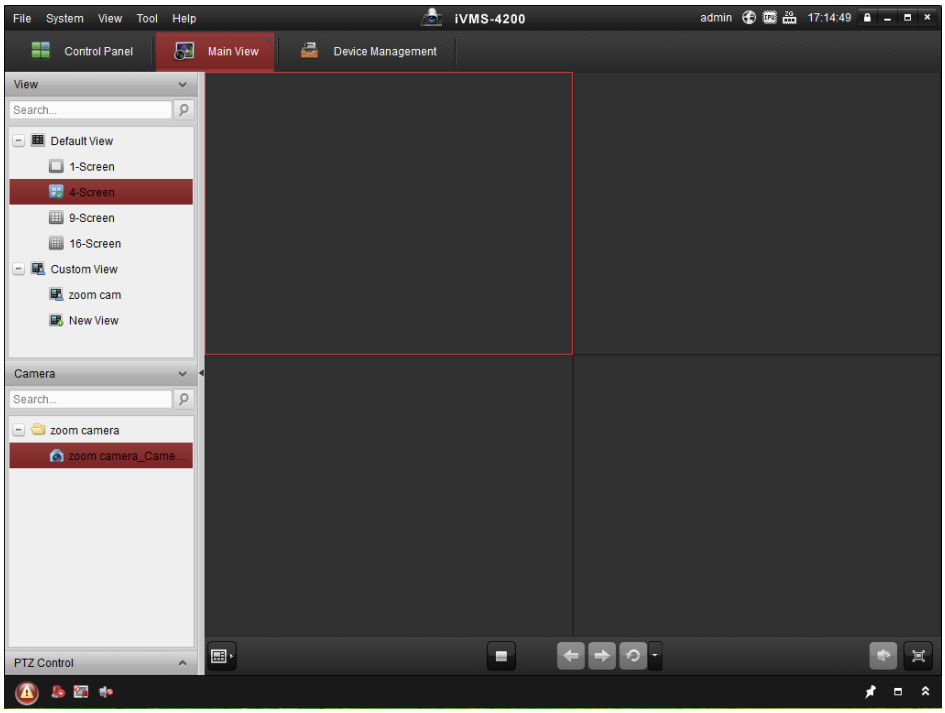

Figure 3-4 iVMS-4200 Live View Interface

NOTE

- If you use third party VMS software, contact technical support of our branch for camera firmware.
- For detailed information about client software of our company, refer to the user manual of the software. This manual mainly introduces accessing to the network camera by web browser.

Chapter 4 Basic Operations

In this and the following chapters, operation of the camera by the web browser will be taken as an example.

4.1 Configuring Local Parameters

NOTE

The local configuration refers to the parameters of the live view and other operations using the web browser.

Steps:

1. Enter the Local Configuration interface:

   Configuration > Local

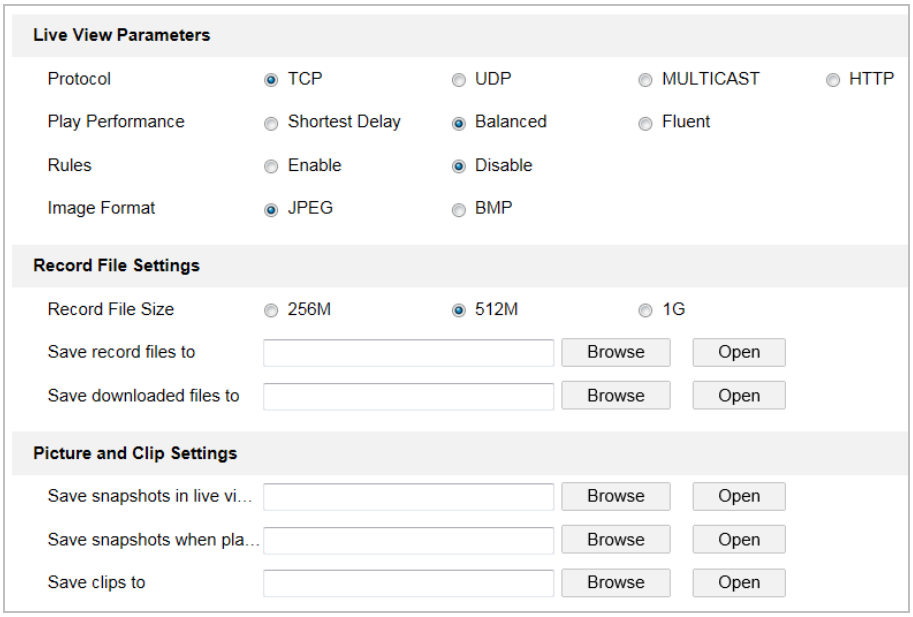

Figure 4-1 Local Configuration Interface

2. Configure the following settings:

- **Live View Parameters:** Set the protocol type, play performance, rules and image format.
  - **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.

    MULTICAST: It's recommended to select the protocol type to **MULTICAST** when using the Multicast function.

    HTTP: Allows the same quality as of TCP without setting specific ports for streaming under some network environments.
  - **Play Performance:** Set the live view performance to Shortest Delay, Balanced, or Fluent.
  - **Rules:** You can enable or disable the rules of dynamic analysis for motion here.

- **Image Format:** The captured pictures can be saved as different format. JPEG and BMP are available.

- **Record File Settings:** Set the saving path of the video files.
  - **Record File Size:** Select the packed size of manually recorded and downloaded video files. The size can be set to 256 M, 512 M or 1 G.
  - **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** interface.
- **Picture and Clip Settings:** Set the saving paths of the captured pictures and clipped video files.
  - **Save snapshots in live view to:** Set the saving path of the manually captured pictures in **Live View** interface.
  - **Save snapshots when playback to:** Set the saving path of the captured pictures in **Playback** interface.
  - **Save clips to:** Set the saving path of the clipped video files in **Playback** interface.

NOTE

- You can click **Browse** to change the directory for saving video files, clips and pictures.
- You can click **Open** to directly open the video files, clips and pictures.

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

4.2 Live View Page

Purpose:

The live video page allows you to view live 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.

NOTE

The functions vary depeding on different speed dome models. Refer to the actual interface as standard.

Descriptions of the live view page:

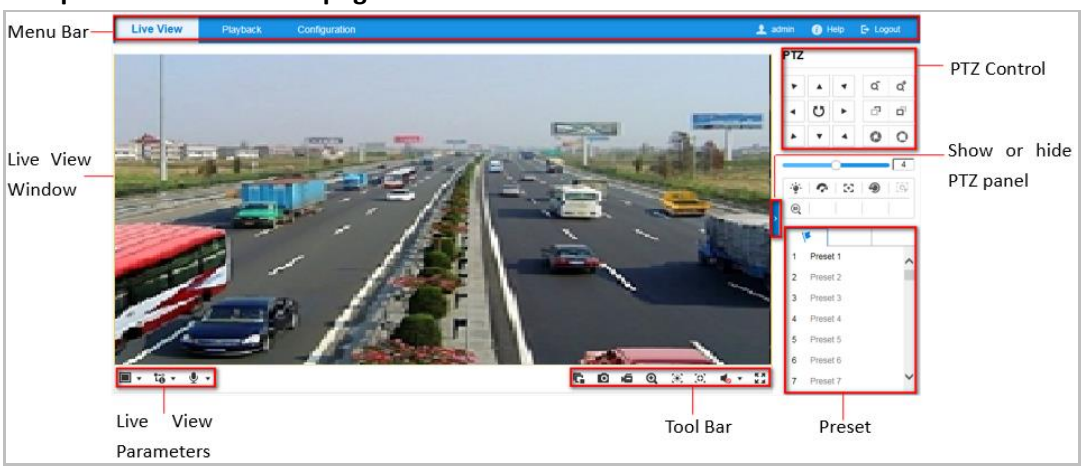

Figure 4-2 Live View Page

Menu Bar:

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

Click to display the help file of the network camera.

Click to logout the system.

Live View Window:

Display the live video.

Camera Channel:

Camera 01: Tracking PTZ Camera

Camera 02: Panoramic Camera

Camera 03: Panoramic Camera (not supported by all camera models)

Camera 04: Panoramic Camera (not supported by all camera models)

Toolbar:

Operations on the live view page, e.g., live view, capture, record, audio on/off, regional exposure, regional focus, etc.

PTZ Control:

Panning, tilting, focusing and zooming actions of the network. The lighter, wiper, one-touch focus and lens initialization control.

Preset:

Set and call the preset for the camera.

Live View Parameters:

Configure the image size, stream type, plug-in type, and two-way audio of the live video.

4.3 Starting Live View

In the live view window as shown in Figure 4-3, click on the toolbar to start the live view of the network.

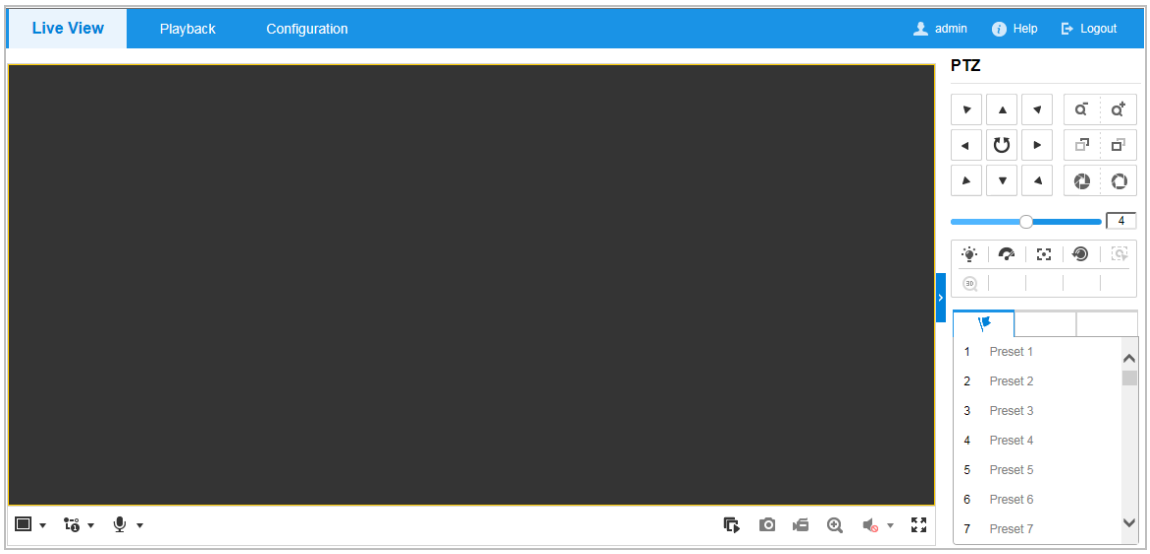

Figure 4-3 Start Live View

Table 4-1 Descriptions of the Toolbar

Icon	Description	Icon	Description
/ /	Display in 1*1/2*2/PIP (Picture in Picture.)	/	Live view with the main/sub stream. (Sub-stream is not supported by all camera models.)
/	Start/stop two-way audio.	/	Start/stop all live view.
	Manually capture the pictures.	/	Manually start/stop all recording.
/	Start/stop digital zoom.	/	Enable/disable regional exposure
/	Mute/audio on and adjust volume	/	Enable/disable regional focus
	Display in full screen mode.		

- Double-click on the live video to switch the current live view into full-screen or return to normal mode from the full-screen.
- Click to select the stream type and display live video with the main stream/sub-stream. The main stream is with a relatively high resolution and needs much bandwidth. The default setting of stream type is . Sub-stream is not supported by all camera models.
- Click and it displays . Click to enable two-way audio and the icon turns into . Click the icon again to stop two-way audio.

- Click to enable digital zoom function and the icon turns into . Then drag the mouse towards low right direction to draw a rectangle on the image as the desired zoom. After viewing it you can click any place of the picture to get back to normal picture.
- Click the on the toolbar to enter the regional exposure operation mode and the icon turns into . Then drag the mouse to draw a rectangle on the image as the desired exposure region.
- Click to display the . Drag the slider to adjust the volume.

NOTE

Before using the two-way audio or recording with audio functions, set the **Stream Type** to **Video & Audio** referring to ***Section 6.2.1 Configuring Video Settings***.

Refer to the following sections for more information:

- Configuring remote recording in ***Section 5.1.1 Configuring Recording Schedule***.
- Setting the image quality of the live video in ***Section 6.3 Configuring Image Settings*** and ***Section 6.2.1 Configuring Video Settings***.
- Setting the OSD text on live video in ***Section 6.3.2 Configuring OSD Settings***.

4.4 Operating PTZ Control

Purpose:

In the live view interface, you can use the PTZ control buttons to control panning, tilting and zooming.

NOTE

PTZ functions vary depending on different speed dome models.

4.4.1 PTZ Control Panel

- Click to show the PTZ control panel or click to hide it.
- Click the direction buttons to control the pan/tilt movements.
- Click the zoom/iris/focus buttons to realize lens control.

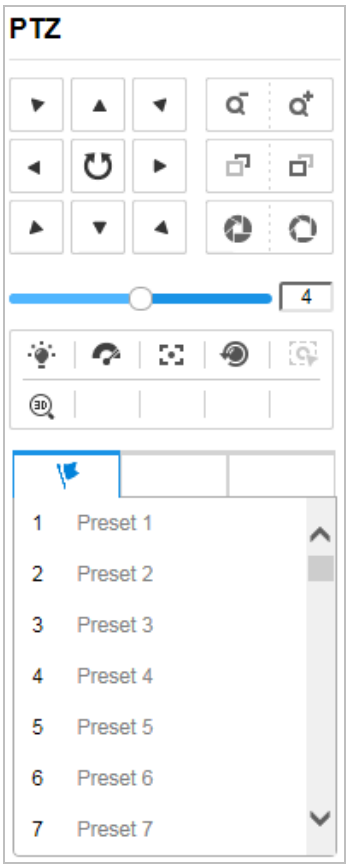

Figure 4-4 PTZ Control Panel

Table 4-2 Descriptions of PTZ Control Panel

Button	Name	Description
	PTZ Control Panel	Hold and press the direction button to pan/tilt the camera. Click and the camera keeps panning, the icon turns into . Click the icon again to stop the camera. ***Note:*** This type of camera model does not support auto scanning.
	Zoom out/in	Click , the lens zooms in, click , and the lens zooms out.
	Focus near/far	Click , the lens focus far and the items far away gets clear. Click , the lens focus near and the items nearby gets clear.

Button	Name	Description
	Iris close/open	When the image is too dark, click to open the iris. When the image is too bright, click to close the iris.
	Auxiliary Functions	The auxiliary functions include light, wiper, auxiliary focus, lens initialization, manual tracking, and 3D positioning,etc.
4	Speed Adjustment	Adjust speed of pan/tilt movements.
	Preset	Refer to ***4.4.3*** for detailed information of setting preset.

- **Buttons on the Preset interface:**

Table 4-3 Descriptions of Buttons

Buttons	Description
	Call the selected preset.
	Set the selected preset.
	Delete the selected preset.

4.4.2 Auxiliary Functions

The Auxiliary functions panel is shown in Figure 4-5.

Figure 4-5 Auxiliary Functions

- Light

  Click to enable/disable the light supplement of the camera. This function is reserved.

- Wiper

  Click to move the wiper once.

- Auxiliary Focus

  The auxiliary focus function is reserved.

- Lens Initialization

  Click to initialize the lens. The function varies depending on differen camera models.

- 3D Positioning

Steps:

1. Click on the toolbar of live view interface.
2. Operate the 3D positioning function:
   - Click a position of the live video. The corresponding position will be moved to the center of the live video.
   - Hold down the left mouse button and drag the mouse to the lower right on the live video. The corresponding position will be moved to the center of the live video and zoomed in.
   - Hold down the left mouse button and drag the mouse to the upper left on the live video. The corresponding position will be moved to the center of the live video and zoomed out.

Note:

For the multichannel camera that supports panorama lingkage, the operations to panoramic camera channels are displayed in PTZ camera channel.

4.4.3 Setting/Calling a Preset

Purpose:

A preset is a predefined image position. For the defined preset, you can click the calling button to quickly view the desired image position.

- **Setting a Preset:**

Steps:

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

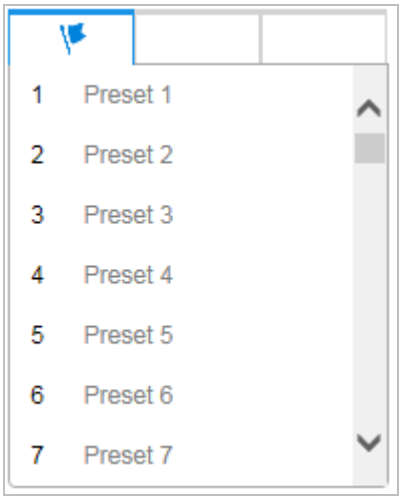

Figure 4-6 Setting a Preset

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.
- Refocus the lens.

3. Click to finish the setting of the current preset.
4. Edit a preset name by double clicking on the default name such as preset 1. (The pre-defined presets are named already and not configurable. Refer to the user manual for detailed function description.)
5. You can click to delete the preset.

NOTE

You can configure up to 300 presets.

- **Calling a Preset:**

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

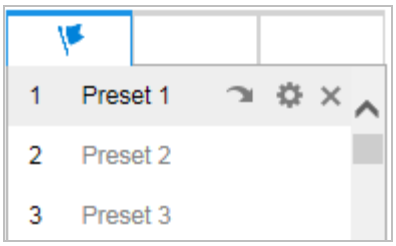

Figure 4-7 Calling a Preset

For convenient preset selection, refer to the following steps to navigate to the preset you want.

Steps:

1. Select any preset from the list.
2. Click the preset number you need on the keyboard.

NOTE

- The following presets are predefined with special commands. You can only call them but not configure them. For instance, preset 39 is the "Day mode". If you call the preset 39, the camera turns on day mode.

Table 4-4 Special Presets

Preset	Function	Preset	Function
34	Back to origin	92	Set manual limits
39	Day mode	93	Set manual limits
40	Night mode	94	Remote reboot

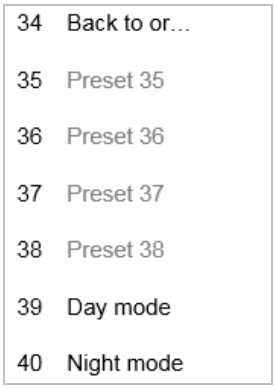

Figure 4-8 Special Preset

4.5 Playback

Purpose:

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

4.5.1 Play Back Video Files

Steps:

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

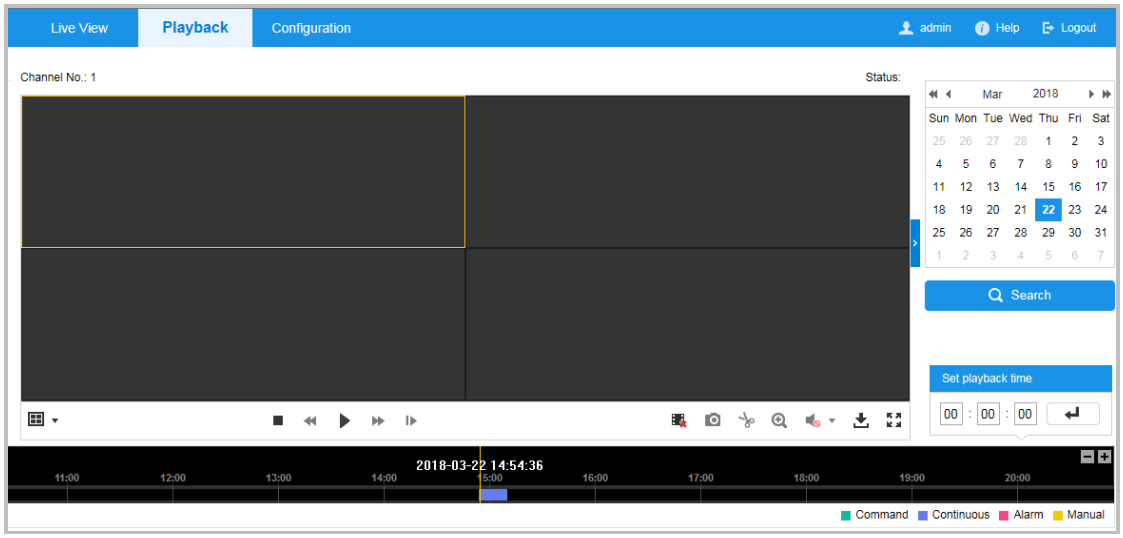

Figure 4-9 Playback Interface

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

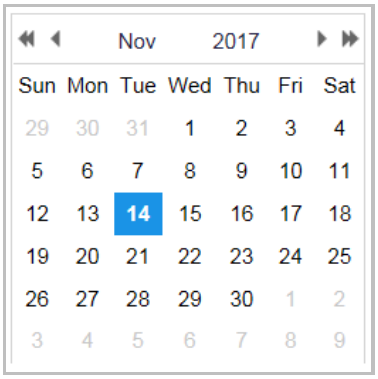

Figure 4-10 Search Video

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 4-11 Playback Toolbar

Table 4-5 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
▶▶	Speed up	❚▶	Playback by frame

NOTE

You can choose the file paths locally for downloaded playback video files and pictures in Local Configuration interface. Refer to ***Section 4.1 Configuring Local Parameters*** 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.

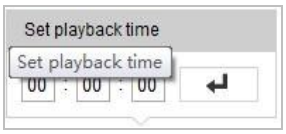

Figure 4-12 Set Playback Time

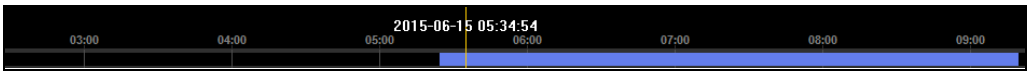

Figure 4-13 Progress Bar

The different colors of the video on the progress bar stand for the different video types as shown in Figure 4-14.

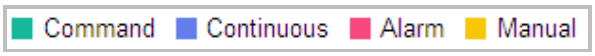

Figure 4-14 Video Types

4.5.2 Downloading Video Files

Steps:

1. Click on the playback interface. The pop-up menu is shown in Figure 4-15.
2. Set the start time and end time. Click **Search**. The corresponding video files are listed on the left.

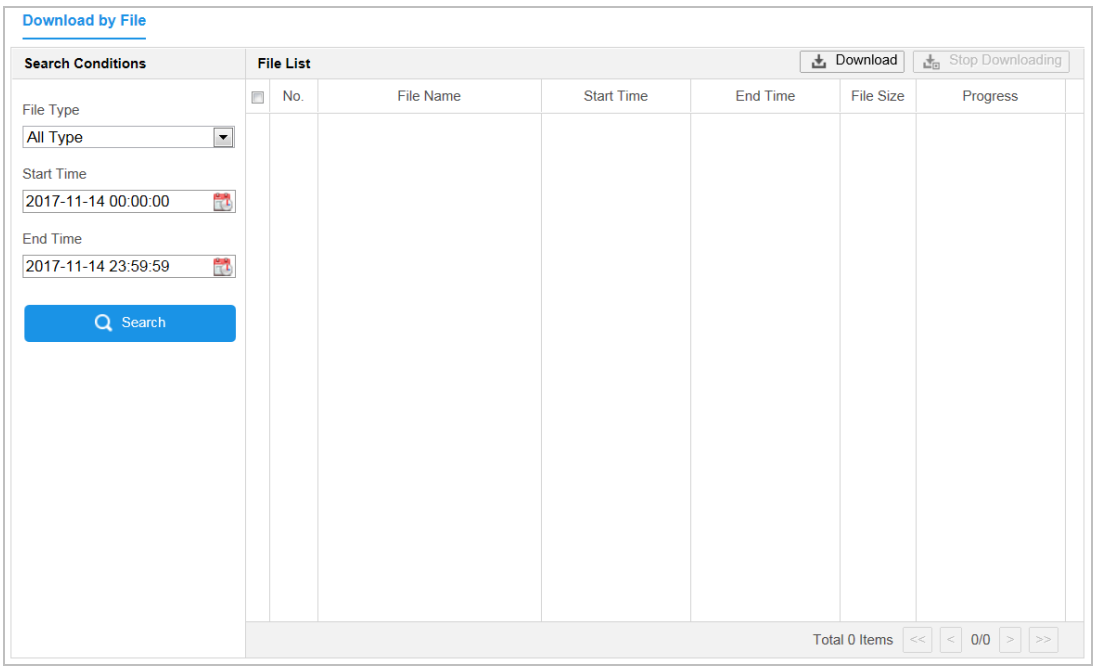

Figure 4-15 Video Downloading interface

3. Check the checkbox in front of the video files that you need to download.
4. Click **Download** to download the video files.

Chapter 5 System Configuration

5.1 Storage Settings

Before you start:

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

5.1.1 Configuring Recording Schedule

Purpose:

There are two kinds of recording for the camera: manual recording and scheduled recording. 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 memory card (if supported) or in the network disk.

Steps:

1. Enter the Record Schedule settings interface:
   Configuration > Storage > Schedule Settings > Record Schedule

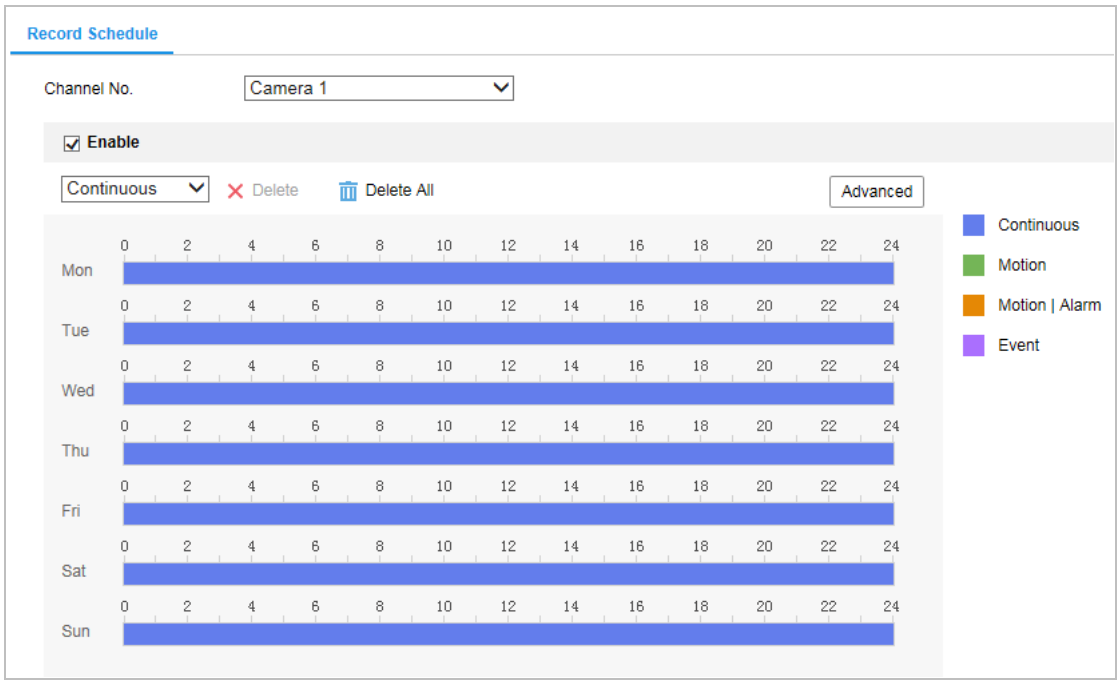

Figure 5-1 Recording Schedule Interface

2. Select the camera channel to configure.
3. Check **Enable** to enable scheduled recording.
4. To set the advanced settings of the camera, click **Advanced** to enter the advanced settings

interface.

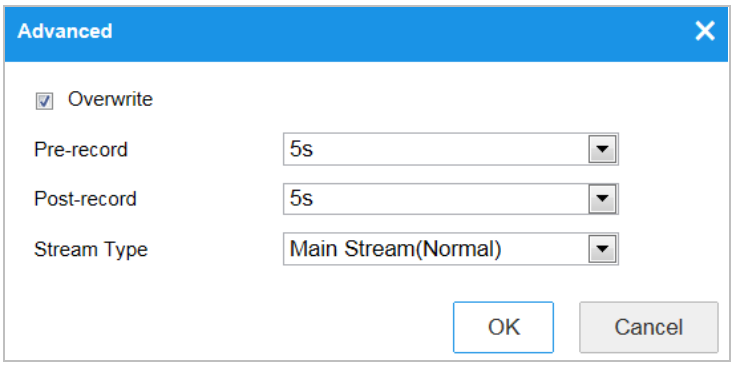

Figure 5-2 Record Parameters

- **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.

  NOTE

  The pre-record time changes according to the video bitrate.
- **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.
- **Stream Type**: You can select the stream type for recording; Main stream and Sub-stream are selectable. If you select the sub-stream, you can record for a longer time with the same storage capacity.

  NOTE

  The Pre-record and Post-record parameters vary depending on different speed dome models.

5. Click **OK** to save the advanced setting.
6. Select a Record Type. The record type can be Continuous, Motion, Motion | Alarm, and Event.

   NOTE

   Record type varies depending on different speed dome models.
   - Normal: 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, 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 **Trigger Channel** in the Linkage Method of Motion Detection settings interface. For detailed information, refer to Section ***Motion Detection***.
   - Record Triggered by Event: If you select to record by event, the video will be recorded

when any of the events is triggered.

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

5.1.2 Configuring Capture Schedule

Purpose:

You can configure the scheduled snapshot and event-triggered snapshot. The captured picture can be stored in the local storage or network storage.

Note:

FTP is invalid when sub-stream is enabled.

Steps:

1. Enter the Snapshot settings interface:
   Configuration > Storage > Storage Settings > Capture

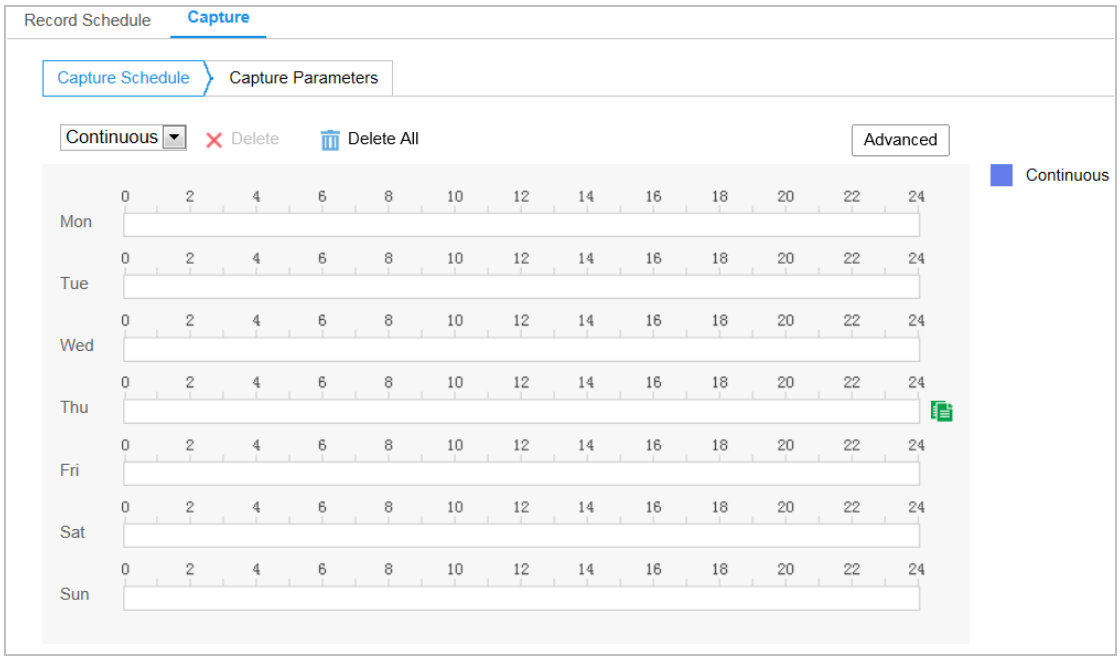

Figure 5-3 Snapshot Settings

2. Click **Capture Schedule** to enter the capture schedule interface.
3. Select the timeline of a certain day, and drag the left button of the mouse to set the capture schedule (the start time and end time of the recording task).
4. After you set the scheduled task, you can click and copy the task to other days (optional).
5. After setting the capture schedule, you can click a capture segment to display the segment capture settings interface to edit the segment capture parameters. (optional)

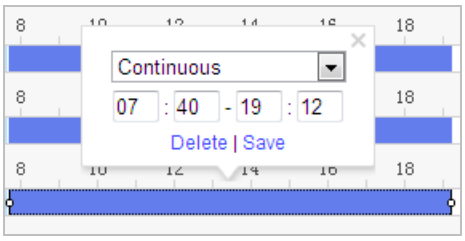

Figure 5-4 Segment Snapshot Settings

6. Click **Advanced** to enter the advanced setting interface. You can select the stream type of the capture.
7. Click **Capture Parameters** to enter the capture parameters Interface.
8. Check **Enable Timing Snapshot** to enable continuous snapshot, and configure the schedule of timing snapshot. Check **Enable Event-triggered Snapshot** to enable event-triggered snapshot.
9. Select the format, resolution, quality of the snapshot.
10. Set the time interval between two snapshots.
11. Click **Save** to save the settings.

Uploading to FTP

NOTE

Make sure that the FTP server is online.

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** in FTP Settings interface. Refer to ***Section 6.1.2 Configuring FTP Settings*** for more details to configure FTP parameters.
2) Check **Enable Timing Snapshot**.
3) Click **Edit** to set the snapshot schedule. Refer to ***Section 5.2.1 Configuring Motion Detection***.

- **Upload event-triggered snapshots to FTP**

Steps:

1) Configure the FTP settings and check **Upload Picture** in FTP Settings interface. Refer to ***Section 6.1.2 Configuring***
2) ***Settings*** for more details to configure FTP parameters.
3) Check **Upload to FTP** in Motion Detection Settings interface. Refer to ***Section 5.2.1 Configuring Motion Detection***.
4) Check **Enable Event-triggered Snapshot**.

5.1.3 Configuring Net HDD

Before you start:

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

Steps:

- **Add the network disk**

1. Enter the NAS (Network-Attached Storage) settings interface:
   Configuration > Storage > Storage Management > Net HDD

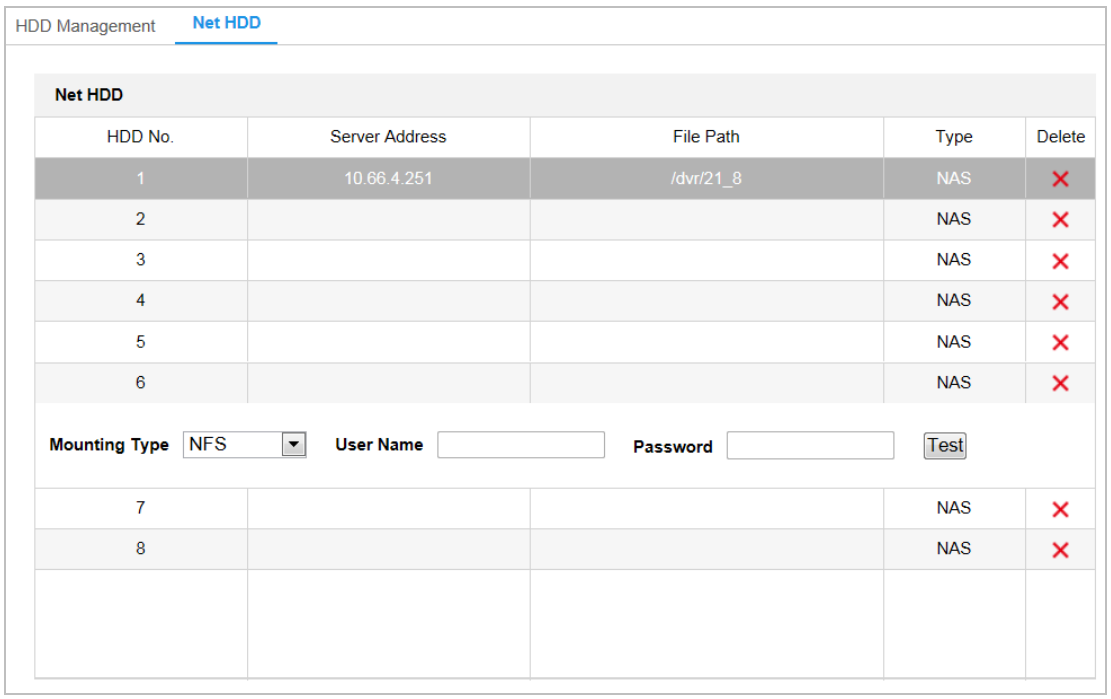

Figure 5-5 Select Net HDD Type

2. Enter the IP address and the file path of the network disk.
3. Select the mounting type. NFS and SMB/CIFS are selectable. You can set the user name and password to guarantee the security if SMB/CIFS is selected.

   NOTE

   Refer to the *NAS User Manual* for creating the file path.

   - *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*
   - *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*
4. Click **Save** to save the settings.

- **Initialize the added network disk.**

1. Enter the HDD settings interface (**Configuration > Storage > Storage Management > HDD Management**), in which you can view the capacity, free space, status, type and property of the disk.

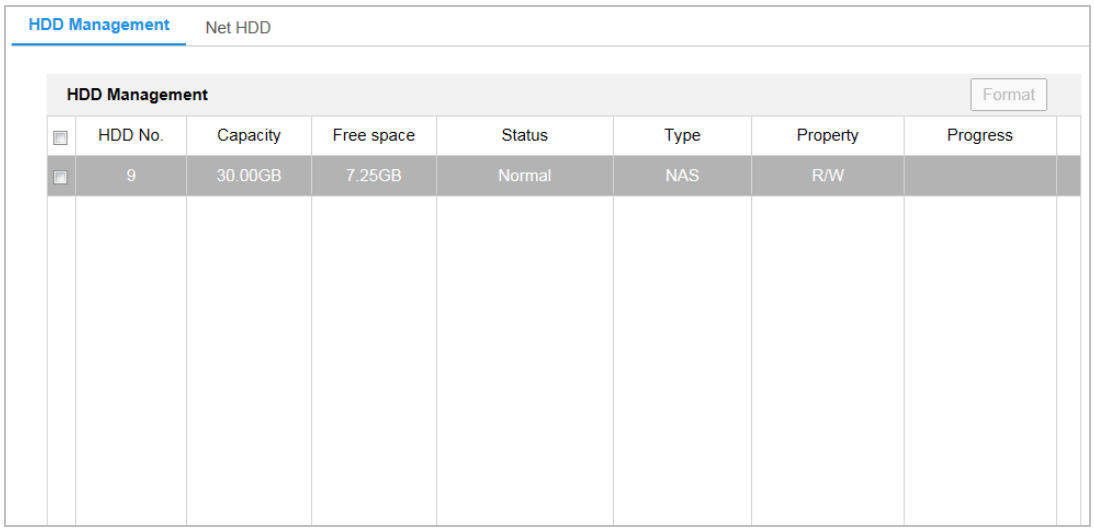

Figure 5-6 Storage Management Interface

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.
3. When the initialization completed, the status of disk will become **Normal** as shown in Figure 5-7.

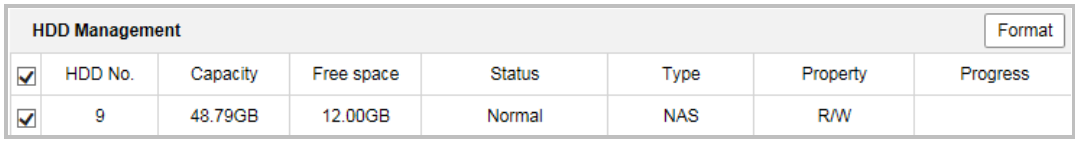

Figure 5-7 View Disk Status

- **Define the Quota for Record and Pictures**

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

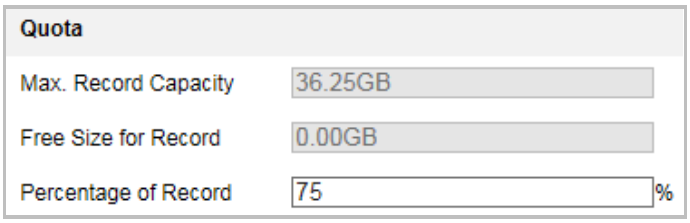

Figure 5-8 Quota Settings

NOTE

- Up to 8 NAS disks can be connected to the camera.
- To initialize and use the memory card after insert it to the camera, refer to the steps of NAS disk initialization.

5.2 Basic Event Configuration

Purpose:

This section explains how to configure the network camera to respond to alarm events, including motion detection, video tampering, and exception. These events can trigger the alarm actions, such as Send Email, Notify Surveillance Center, etc.

For example, when motion detection is triggered, the network camera sends a notification to an e-mail address.

NOTE

- Click to show the PTZ control panel or click to hide it.
- Click the direction buttons to control the pan/tilt movements.
- Click the zoom/iris/focus buttons to realize lens control.
- The functions vary depending on different speed dome models.

5.2.1 Configuring Motion Detection

Purpose:

Motion detection is a feature which can trigger alarm actions and actions of recording videos when the motion occurred in the surveillance scene.

Steps:

1. Enter the Motion Detection settings interface:
   Configuration > Event > Basic Event > Motion Detection
2. Select the Channel No. from the dropdown list.
3. Set the Motion Detection Area.
   i. Check the **Enable Motion Detection** checkbox.
   ii. Check the **Enable Dynamic Analysis for Motion** checkbox.
4. Select the configuration mode as *Normal* or *Expert* and set the corresponding motion detection parameters.
   - **Normal:**

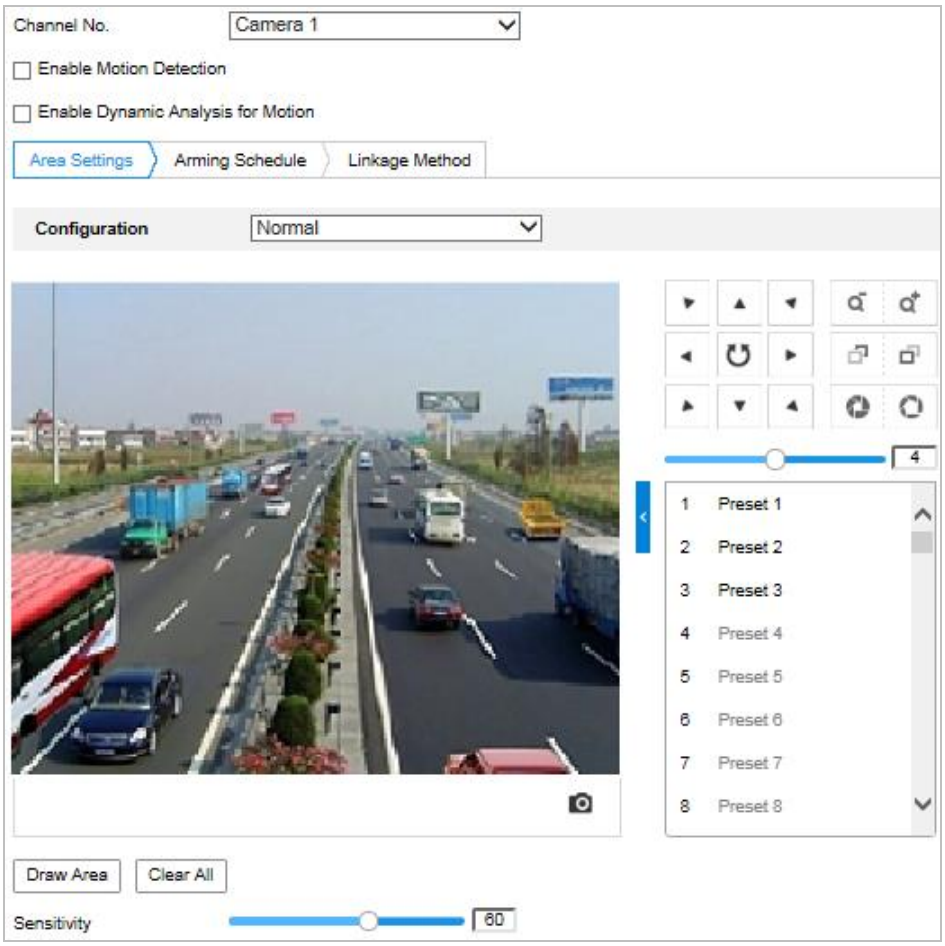

Figure 5-9 Motion Detection Settings-Normal

i. Click **Draw Area**. Drag the mouse on the live view image to draw a motion detection area.

ii. Click **Stop Drawing** to finish drawing.

iii. Move the slider to set the sensitivity of the detection.

- **Expert:**

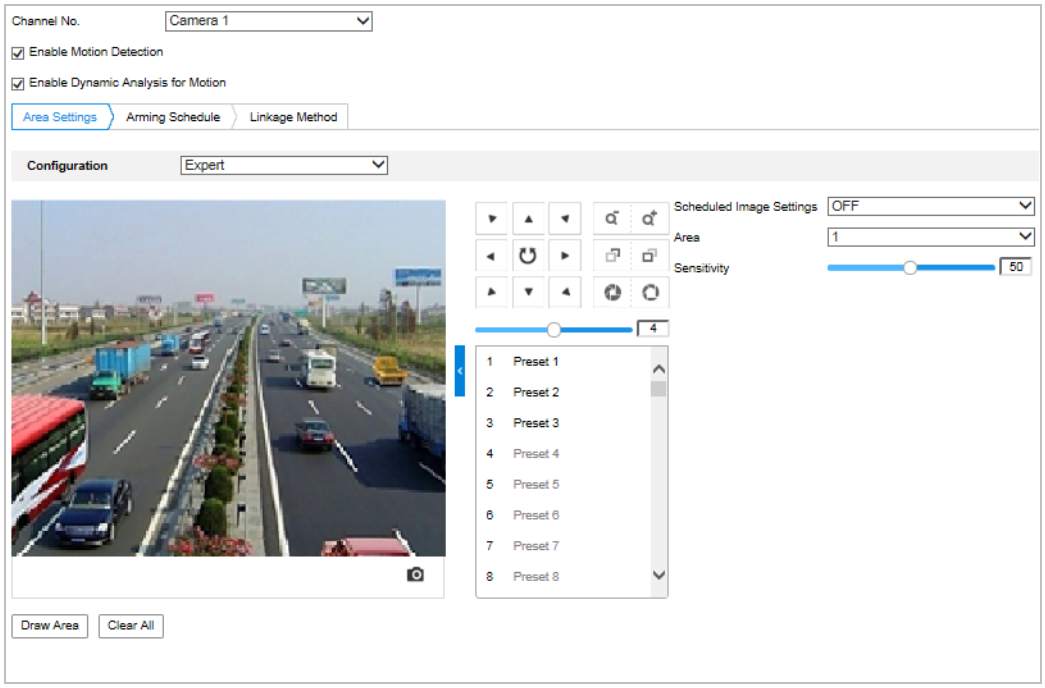

Figure 5-10 Motion Detection Settings-Expert

i. Set the **Scheduled Image Settings** switch mode, there are OFF, Auto-Switch and Scheduled-Switch selectable. If the **Scheduled Image Settings** switch mode is enabled, you can configure the detection rule for the day and night separately.
   - **OFF:** Disable the day and night switch.
   - **Auto-Switch:** Switch the day and night mode according to the illumination automatically.
   - **Scheduled-Switch:** Switch to the day mode at 6:00 a.m., and switch to the night mode at 18:00 p.m.

ii. Select Area No. to configure in the dropdown list.

iii. Set the values of sensitivity.
   Sensitivity: The greater the value is, the easier the alarm will be triggered.

5. Set the **Arming Schedule** for Motion Detection.
   i. Choose the day you want to set the arming schedule.
   ii. Click **Save** to set the time period for the arming schedule.
   iii. After you set the arming schedule, you can click Copy to **copy** the schedule to other days (Optional).
   iv. Click **Save** to save the settings.
   Note:
   The time of each period cannot be overlapped.

6. Set the **Linkage Method** for Motion Detection.
   Motion detection is a feature which can trigger alarm actions and actions of recording videos when the motion occurred in the surveillance scene.
   Check the checkbox to select the linkage method. Supported linkage types may vary according to different camera models.
   - **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 Configuring FTP Settings***

Purpose:

You can set a FTP server and configure the following parameters for uploading captured pictures.

Note:

FTP function is invalid when the sub-stream is enabled

Steps:

1. Enter the FTP settings interface:

   Configuration > Network > Advanced Settings > FTP

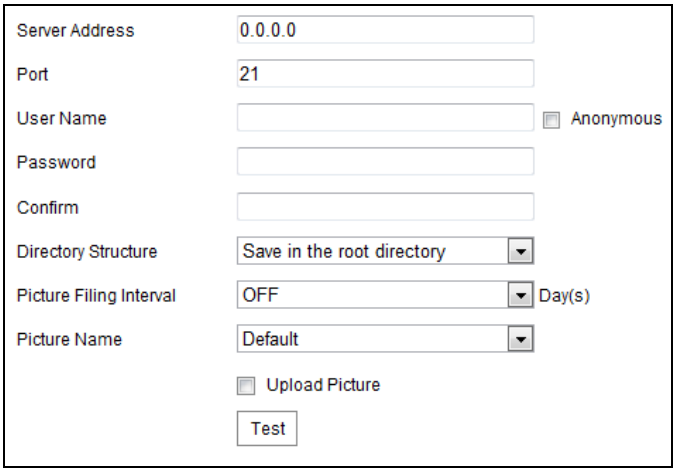

Figure 5-11 FTP Settings

2. Configure the FTP settings, including server address, port, user name, password, directory, and upload type.

   NOTE

   The server address supports both the domain name and IP address formats.

- *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*
- *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*

- **Setting the directory in FTP server for saving files**:

  In the **Directory Structure** field, you can select the root directory, parent directory and child directory.

  - **Root directory**: The files will be saved in the root of FTP server.
  - **Parent directory**: The files will be saved in a folder in FTP server. The name of folder can

be defined as shown in Figure 6-9.

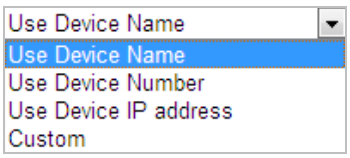

Figure 5-12 Parent Directory

- **Child directory**: It is a sub-folder which can be created in the parent directory. The files will be saved in a sub-folder in FTP server. The name of folder can be defined as shown in Figure 6-10.

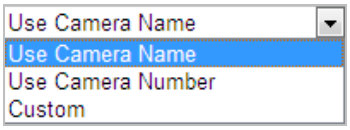

Figure 5-13 Child Directory

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

3. Click **Save** to save the settings.
4. You can click **Test** to confirm the configuration.

NOTE

If you want to upload the captured pictures to FTP server, you also have to enable the continuous snapshot or event-triggered snapshot in **Snapshot** interface.

Configuring Email Settings to set the Email parameters.

- **Trigger Recording:** Record a video when an event occurs.

  Note: You have to set the recording schedule to realize this function. Refer to ***Section 5.1.1 Configuring Recording Schedule*** for settings the recording schedule.

- **PTZ Linking:**

  Target Linkage: The PT camera channel moves to capture the detected motion and upload captured picture to surveillance center. **Response Time** here means the time interval between two linkage actions. You can specify the **Response Time** to avoid too frequent camera movement.

  Note: When motions are detected in multiple camera channels, the response order is that Camera 2 is prior to Camera 3, then Camera 4. Camera 1 comes last.

5.2.2 Configuring Video Tampering Alarm

Purpose:

You can configure the camera to trigger the alarm actions when the lens is covered.

Steps:

1. Enter the Video Tampering settings interface:

   Configuration > Event > Basic Event > Video Tampering

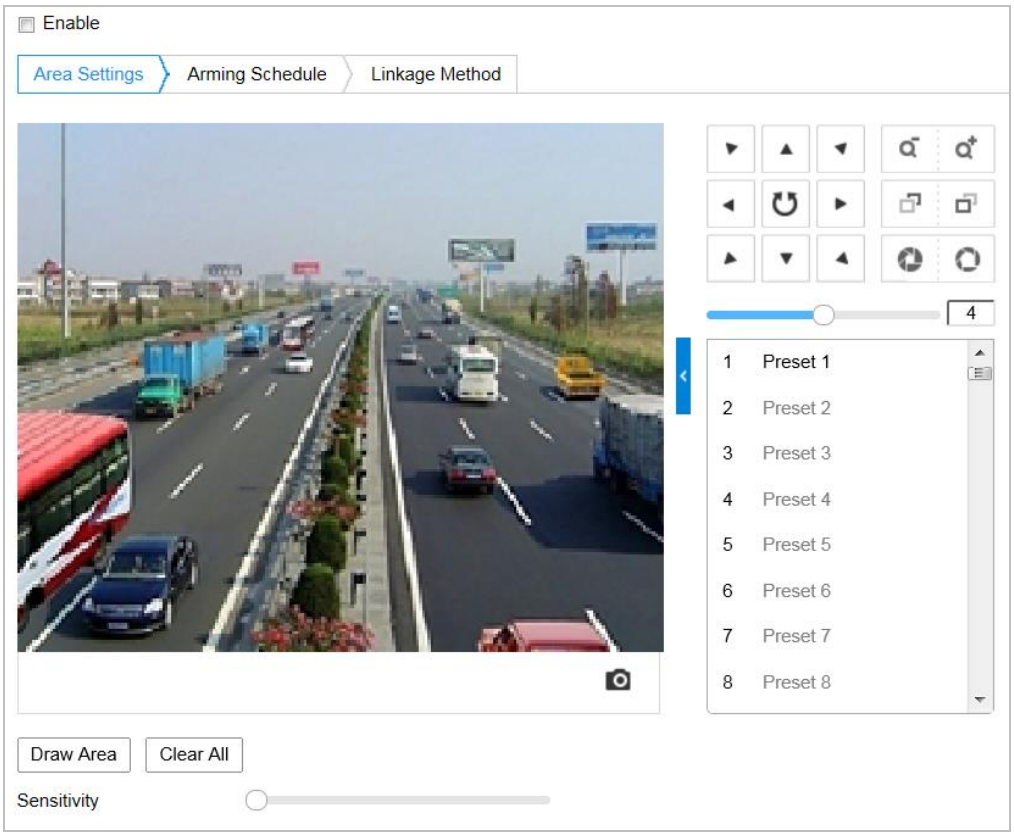

Figure 5-14 Tampering Alarm

2. Check **Enable** to enable the tampering detection.
3. Click **Draw Area**. Drag the mouse on the live view image to draw a motion detection area.
4. Click **Stop Drawing** to finish drawing or click **Clear All** to clear all of the areas you set without saving them.
5. **Sensitivity**: Move the slider to set the sensitivity of alarm action. The levels of sensitivity can be set as **Low**, **Medium**, and **High**. The higher the value is, the easier the alarm will be triggered.
6. Click **Arming Schedule** to enter the arming schedule setting interface. The arming schedule configuration is the same as the setting of the arming schedule for motion detection. Refer to ***Section 5.2.1 Configuring Motion Detection***.
7. Click **Linkage Method** to select the linkage method taken for tampering. Refer to ***Section 5.2.1 Configuring Motion Detection***.
8. Click **Save** to save the settings.

5.2.3 Configuring Alarm Input

Note:

This function varies depending on different models.

Steps:

1. Enter the Alarm Input settings interface:
   Configuration > Event > Basic Event > Alarm Input
2. Choose the Alarm Input No. and the Alarm Type. The alarm type can be NO (Normally Open)

and NC (Normally Closed).

3. Edit the name in Alarm Name (cannot copy) to set a name for the alarm input (optional).

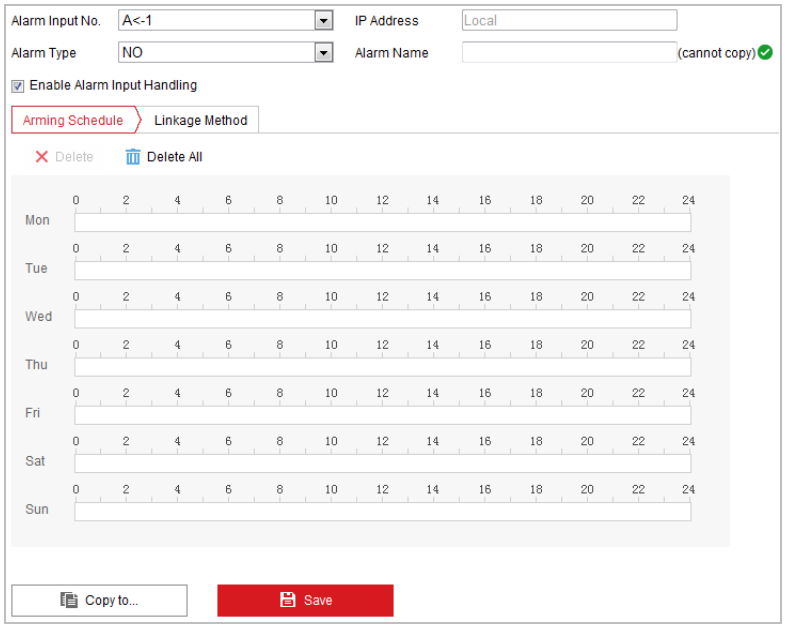

Figure 5-15 Alarm Input Settings

4. Click Arming Schedule tab to enter the arming schedule setting interface. The arming schedule configuration is the same as the setting of the arming schedule for motion detection. Refer to ***Section 5.2.1 Configuring Motion Detection***.

5. Click Linkage Method tab to select the linkage method taken for tampering, notify surveillance center, and send email are selectable. Refer to ***Section 5.2.1 Configuring Motion Detection***.

6. You can also choose the PTZ linking for the alarm input. Check the relative checkbox and select the No. to enable Preset Calling, Patrol Calling or Pattern Calling.

7. You can copy your settings to other alarm inputs.

8. Click Save to save the settings.

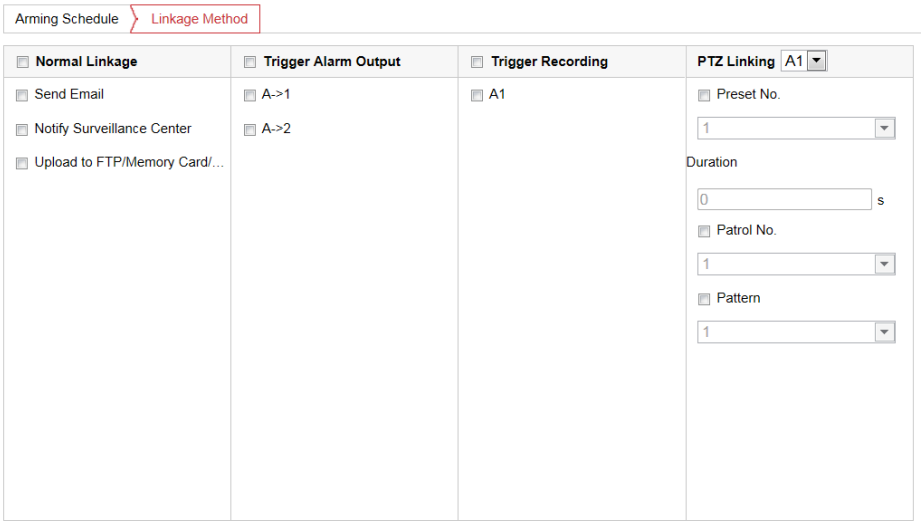

Figure 5-16 Linkage Method

5.2.4 Configuring Alarm Output

Note:

This function varies depending on different models.

Steps:

1. Enter the Alarm Output settings interface:
   Configuration> Event > Basic Event > Alarm Output
2. Select one alarm output channel in the **Alarm Output** dropdown list.
3. Set a name in

for the alarm output (optional).
4. 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.
5. Click

tab to enter the arming schedule setting interface. The arming schedule configuration is the same as the setting of the arming schedule for motion detection. Refer to ***Section 5.2.1 Configuring Motion Detection***.

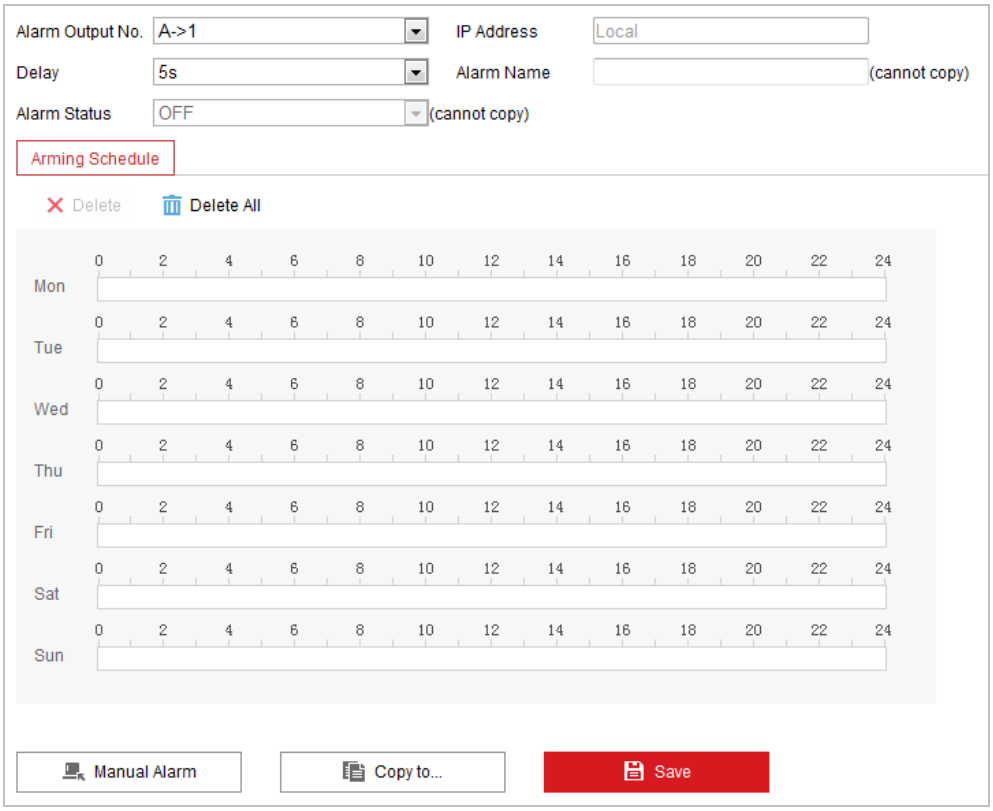

Figure 5-17 Alarm Output Settings

6. You can copy the settings to other alarm outputs.
7. Click to save the settings.

5.2.5 Handling Exception

The exception type can be HDD full, HDD error, and illegal login to the cameras.

Steps:

1. Enter the Exception settings interface:
   Configuration > Event > Basic Event > Exception
2. Check the checkbox to set the actions taken for the Exception alarm. Refer to ***Section 5.2.1 Configuring Motion Detection***.

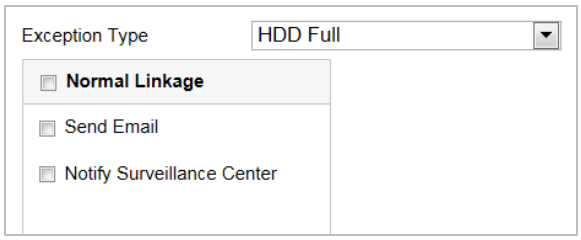

Figure 5-18 Exception Settings

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

5.3 Smart Event Configuration

NOTE

The functions vary depending on different speed dome models.

5.3.1 Detecting Audio Exception

Purpose:

When you enable this function and audio exception occurs, the alarm actions will be triggered.

Steps:

1. Enter Audio Exception Detection interface:

   Configuration > Event > Smart Event > Audio Exception Detection

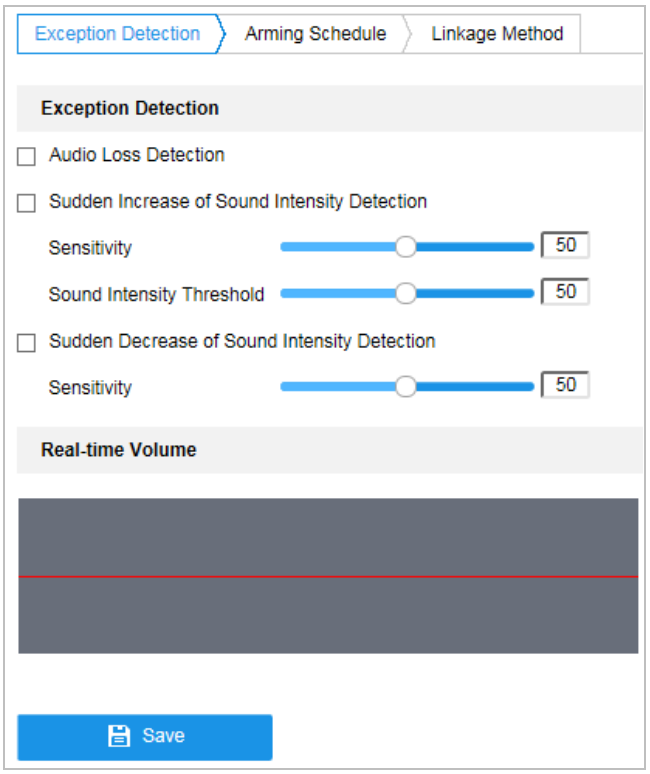

Figure 5-19 Audio Exception Detection

2. Check **Audio Loss Detection** to enable the audio input exception detection.
3. Check **Sudden Increase of Sound Intensity Detection** to enable the sudden rise detection.
   - **Sensitivity**: Range [1-100], the smaller the value the more severe the sound change will trigger the detection.
   - **Sound Intensity Threshold**: Range [1-100], it can filter the sound in the environment, the louder the environment sound, the higher the value should be. You can adjust it according to the actual environment.
4. Check **Sudden Decrease of Sound Intensity Detection** to enable the sudden drop detection.
   - Sensitivity: Range [1-100], the smaller the value the more severe the sound change will

trigger the detection.

5. Click **Arming Schedule** tab to enter the arming schedule setting interface. The time schedule configuration is the same as the settings of the arming schedule for motion detection. Refer to ***Section 5.2.1 Configuring Motion Detection***.
6. Click **Linkage Method** tab to select the linkage method taken for the audio input exception, Notify Surveillance Center, Send Email, and Trigger Recording are selectable. Refer to ***Section 5.2.1 Configuring Motion Detection***.
7. Click **Save** to save the settings.

5.3.2 Configuring Intrusion Detection

Intrusion detection can set an area in the surveillance scene and once the area is entered, a set of alarm action is triggered.

Steps:

1. Enter the Intrusion Detection interface:
   Configuration > Events > Smart Event >Intrusion Detection
2. Check **Enable**.

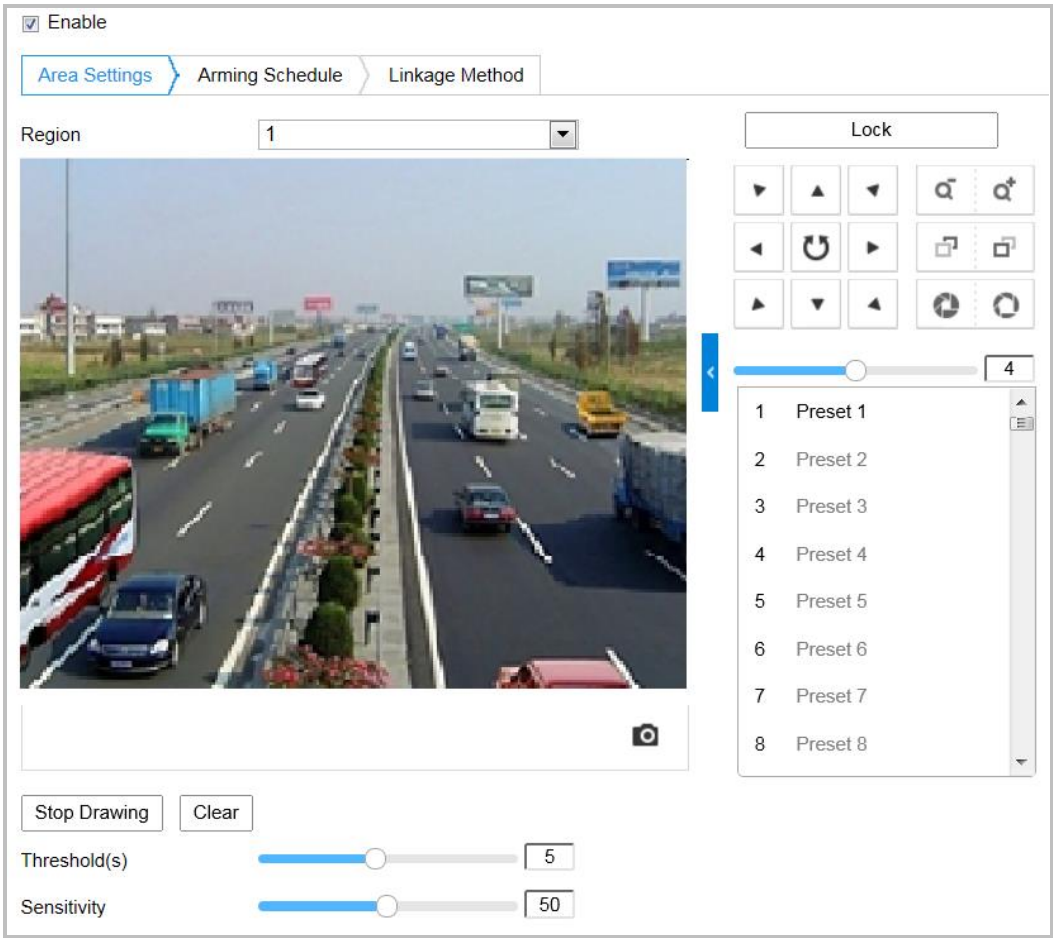

Figure 5-20 Configuring Intrusion Area

3. The event triggered and park action related PTZ movement will be locked for 180 seconds after you enter the intrusion detection interface. Optionally, you can click Unlock(69s) to manually activate the movement, or lock the movement when the

button turns to Lock by clicking it.

4. Draw area.
   1) Select the Region No.in drop-down list.
   2) Click **Draw Area** to draw a rectangle on the image as a defense region.
   3) Click on the image to specify a corner of the rectangle, and right-click the mouse after four corners are configured.
5. Configure the parameters for each defense region separately.
   - **Threshold:** Range [0-10s], the threshold for the time of the object loitering in the region. If you set the value as 0, alarm is triggered immediately after the object entering the region.
   - **Sensitivity:** Range [1-100]. The value of the sensitivity defines the size of the object which can trigger the alarm, when the sensitivity is high, a very small object can trigger the alarm.
6. Click **Arming Schedule** to enter the arming schedule setting interface. The time schedule configuration is the same as the settings of the arming schedule for motion detection. Refer to ***Section 5.2.1 Configuring Motion Detection***.
7. Click **Linkage Method** to select the linkage method taken for intrusion detection. Refer to ***Section 5.2.1 Configuring Motion Detection***.
8. Click **Save** to save the settings.

5.3.3 Configuring Line Crossing Detection

The virtual plane detection can be adopted for the intrusion detection. Once the virtual plane is detected being traversed according to the configured direction, a set of alarm action is triggered.

Steps:

1. Enter the Line Crossing Detection interface:
   Configuration >Event > Smart Event > Line Crossing Detection
2. Check **Enable** to enable the line crossing detection function.
3. Select the Line in drop-down list to configure.
4. The event triggered and park action related PTZ movement will be locked for 180 seconds after you enter the line crossing detection interface. Optionally, you can click Unlock(69s) to manually activate the movement, or lock the movement when the button turns to Lock by clicking it.

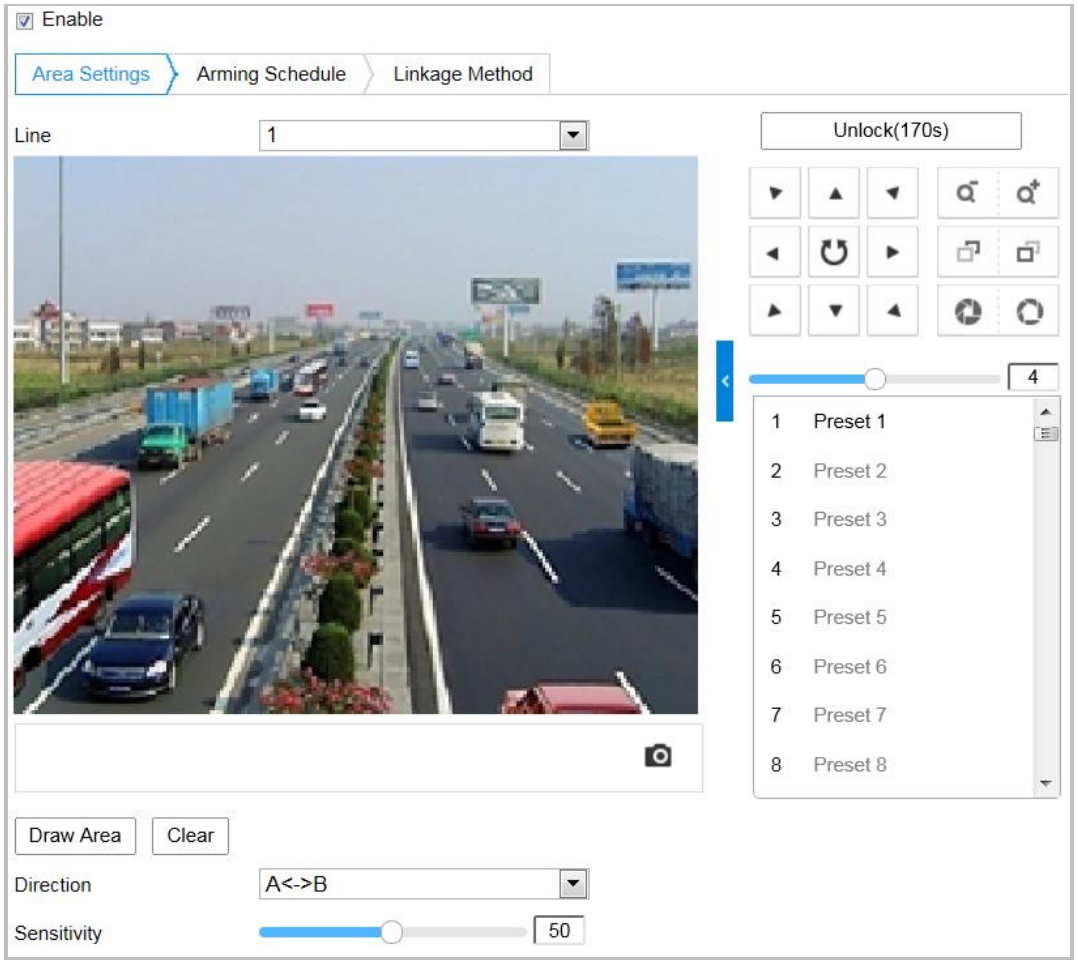

Figure 5-21 Configuring Line

5. Draw area.
   1) Click **Draw Area** to draw a line on the image.
   2) Click the line to switch to the editing mode.
      Drag an end to the desired place to adjust the length and angle of the line. And drag the line to adjust the location.
6. Configure the parameters for each defense region separately.
   - **Direction:** Select the detection direction in the drop-down list, there are A<->B, A->B and B->A selectable.
   - **Sensitivity:** Range [1-100]. The value of the sensitivity defines the size of the object which can trigger the alarm, when the sensitivity is high, a very small object can trigger the alarm.
7. Click **Arming Schedule** to enter the arming schedule setting interface. The time schedule configuration is the same as the settings of the arming schedule for motion detection. Refer to ***Section 5.2.1 Configuring Motion Detection***.
8. Click **Linkage Method** to select the linkage method taken for the line crossing detection. Refer to ***Section 5.2.1 Configuring Motion Detection***.
9. Click **Save** to save the settings.

5.4 PTZ Configuration

NOTE

- Click to show the PTZ control panel or click to hide it.
- Click the direction buttons to control the pan/tilt movements.
- Click the zoom/iris/focus buttons to realize lens control.
- The functions vary depending on different speed dome models.

5.4.1 Configuring Basic PTZ Parameters

You can configure the basic PTZ parameters, including proportional pan, preset freezing, preset speed, etc.

1. Enter the Basic Settings interface:
   Configuration > **PTZ** > **Basic Settings**

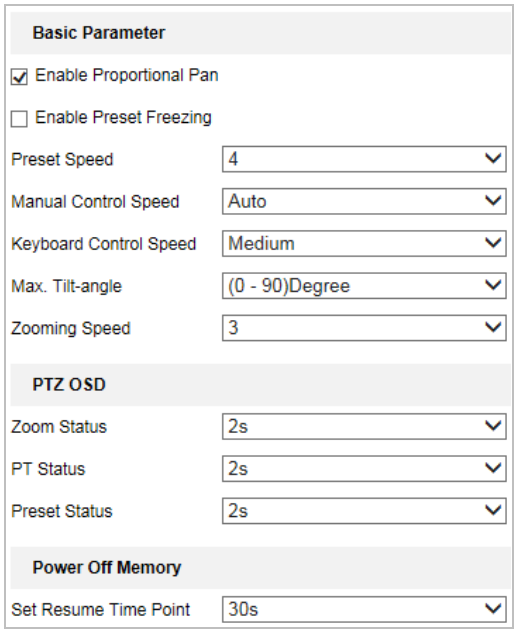

Figure 5-22 Basic Settings

2. Configure the following settings:

- **Basic Parameters:** Set the basic parameters of PTZ.
  - **Proportional Pan:** If you enable this function, the pan/tilt speeds change according to the amount of zoom. When there is a large amount of zoom, the pan/tilt speed will be slower for keeping the image from moving too fast on the live view image.
  - **Preset Freezing:** This function enables the live view to switch directly from one scene defined by a preset to another, without showing the middle areas between these two, to ensure the surveillance efficiency. It can also reduce the use of bandwidth in a digital network system.

- **Preset Speed:** You can set the speed of a defined preset from 1 to 8.
- **Manual Control Speed**: The manual control speed can be set as Compatible, Pedestrian, Non-motor Vehicle, Motor Vehicle or Auto.
  - Compatible: The control speed is same as the Keyboard Control Speed.
  - Pedestrian: Choose the **Pedestrian** when you monitor the pedestrians.
  - Non-motor Vehicle: Choose the **Non-motor Vehicle** when you monitor the non-motor vehicles.
  - Motor Vehicle: Choose the **Motor Vehicle** when you monitor the motor vehicles.
  - Auto: You are recommended to set it as **Auto** when the application scene of the speed dome is complicated.
- **Keyboard Control Speed:** Define the speed of PTZ control by a keyboard as Low, Medium or High.
- **Max. Tilt-angle**: Set the tilt-angle of the speed dome from the drop-down list.
- **Zooming Speed**: The zoom speed is adjustable from level 1 to 3.

- **PTZ OSD:** Set the on-screen display duration of the PTZ status.
  - **Zoom Status:** Set the OSD duration of zooming status as 2 seconds, 5 seconds, 10 seconds, NC (Normally Closed), or NO (Normally Open).
  - **PT Status:** Set the azimuth angle display duration while panning and tilting as 2 seconds, 5 seconds, 10 seconds, NC (Normally Closed), or NO (Normally Open).
  - **Preset Status:** Set the preset name display duration while calling the preset as 2 seconds, 5 seconds, 10 seconds, NC (Normally Closed), or NO (Normally Open).
- **Power-off Memory:** The speed dome can resume its previous PTZ status or actions after it restarted from a power-off. You can set the time point of which the dome resumes its PTZ status. You can set it to resume the status of 30 seconds, 60 seconds, 300 seconds or 600 seconds before power-off.

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

5.4.2 Configuring PTZ Limits

Purpose:

The speed dome can be programmed to move within the configurable PTZ limits (left/right, up/down).

Steps:

1. Enter the Limit configuration interface:
   Configuration > **PTZ** > **Limit**

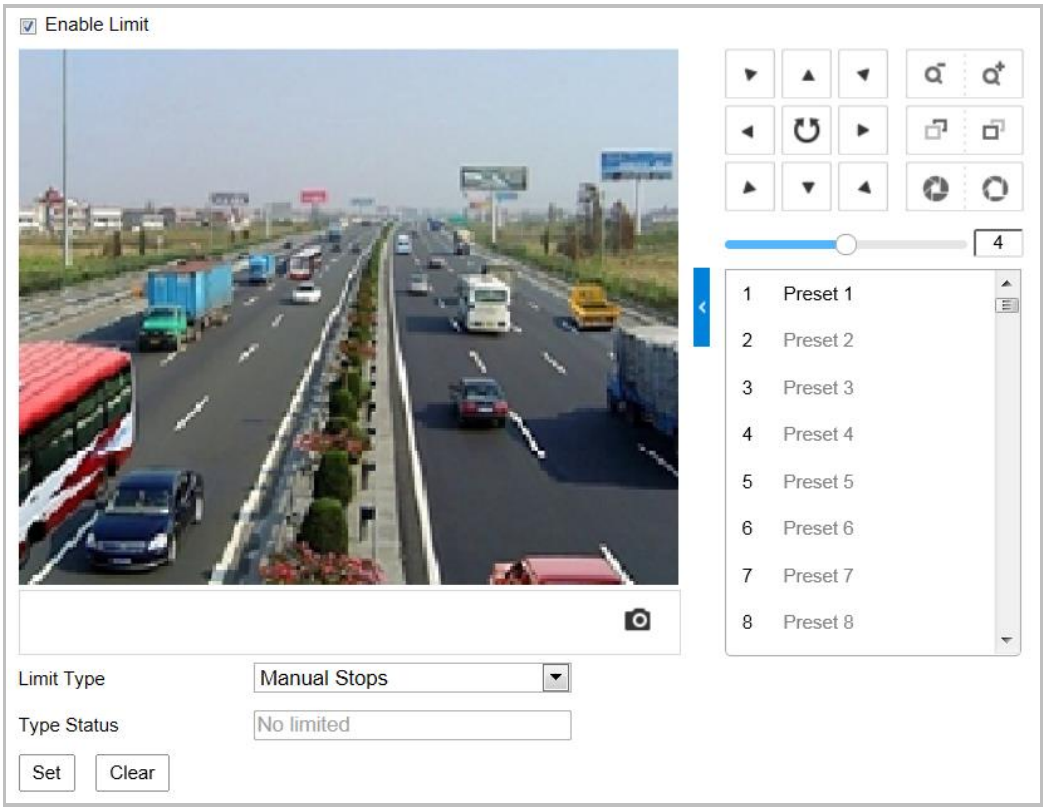

Figure 5-23 Configure the PTZ Limit

2. Click **Enable Limit** and choose the limit type as manual stops or scan stops.

- **Manual Stops:**

  When manual limit stops are set, you can operate the PTZ control panel manually only in the limited surveillance area.

3. Click the PTZ control buttons to find the left/right/up/down limit stops; you can also call the defined presets and set them as the limits of the speed dome.
4. Click **Set** to save the limits or click **Clear** to clear the limits.
5. Click **Save** to save the settings.

5.4.3 Configuring Initial Position

Purpose:

The initial position is the origin of PTZ coordinates. It can be the factory default initial position. You can also customize the initial position according to your own demand.

- **Customize an Initial Position:**

Steps:

1. Enter the Initial Position configuration interface:

   Configuration > **PTZ** > **Initial Position**

Figure 5-24 PTZ Configuration

2. Click the PTZ control buttons to find a position as the initial position of the speed dome; you can also call a defined preset and set it as the initial position of the speed dome.
3. Click **Set** to save the position.

- **Call/delete an Initial Position:**

You can click to call the initial position. You can click to delete the initial position and restore the factory default initial position.

5.4.4 Configuring Park Actions

Purpose:

This feature allows the camera to start a predefined park action (scan, preset and etc.) automatically after a period of inactivity (park time).

NOTE

- **Scheduled Tasks** function is prior to **Park Action** function. When these two functions are set at the same time, only the **Scheduled Tasks** function takes effect.
- Park function varies depending on different speed dome models.

Steps:

1. Enter the Park Action settings interface:
   Configuration > **PTZ** > **Park Action**

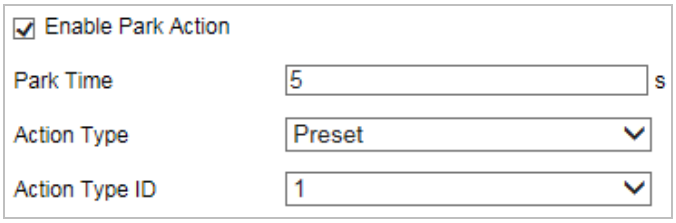

Figure 5-25 Set the Park Action

2. Check **Enable Park Action**.
3. Set the **Park Time** as the inactivity time of the camera before it starts the park actions.
4. Choose **Action Type** from the drop-down list.
5. If you select Preset as Action Type, you need to select Action Type ID from the drop-down list.
6. Click **Save** to save the settings.

5.4.5 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 > **PTZ** > **Privacy Mask**

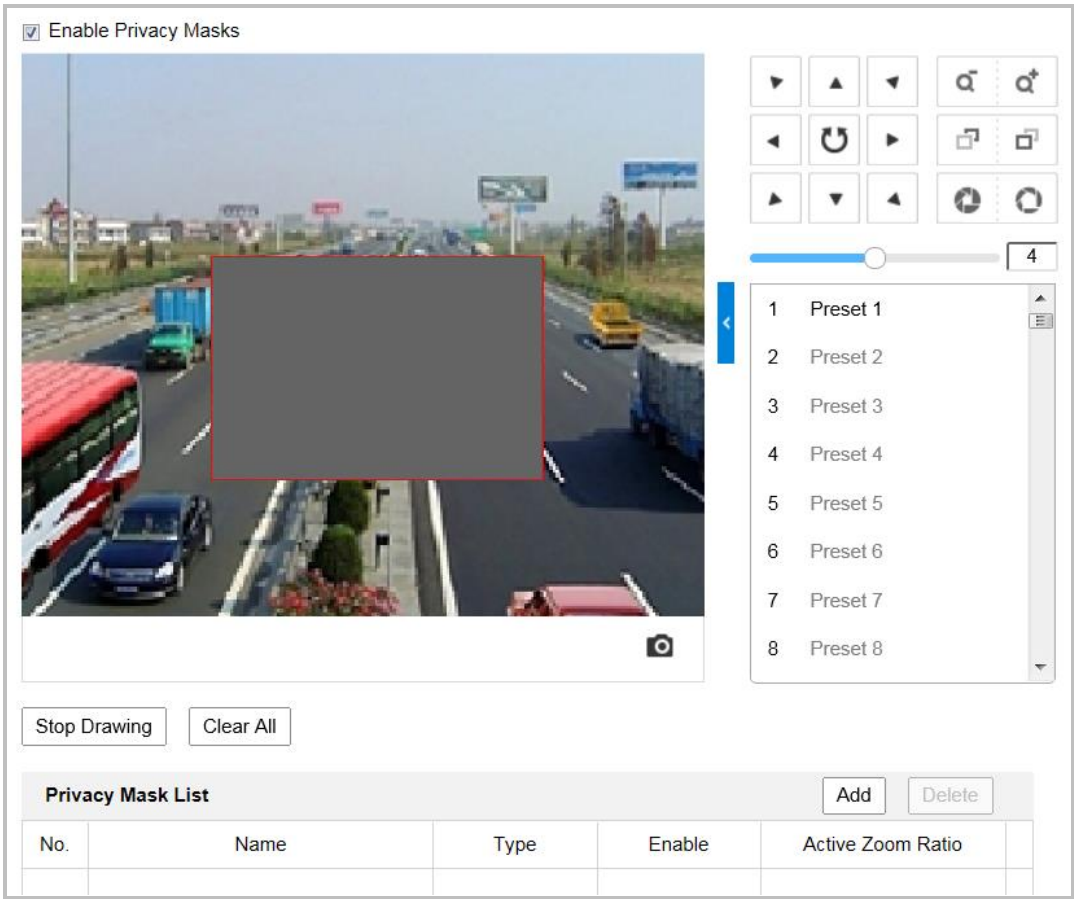

Figure 5-26 Draw the Privacy Mask

2. Click the PTZ control buttons to find the area you want to set the privacy mask.
3. Click **Draw Area**; drag the mouse in the live video window to draw the area.
4. You can drag the corners of the red rectangle area to draw a polygon mask.
5. Click **Stop Drawing** to finish drawing or click **Clear All** to clear all of the areas you set without saving them.
6. Click **Add** to save the privacy mask, and it will be listed in the **Privacy Mask List** area; set the value of **Active Zoom Ratio** on your demand, and then the mask will only appear when the zoom ratio is greater than the predefined value.

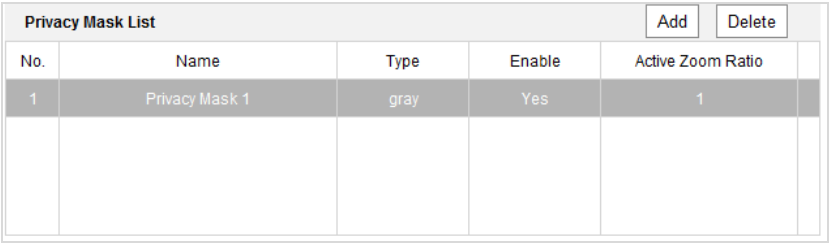

Figure 5-27 Privacy Mask List

7. Check **Enable Privacy Mask** to enable this function.
8. Click **Save** to save the settings.

5.4.6 Configuring Panorama Linkage

Purpose:

Panorama linkage builds up the connection between the panoramic camera channel and the PTZ camera channel of a multi-channel camera. Once the connection set up, certain live view operations to panoramic camera channels can be displayed in PTZ camera channel.

To use the function, see the operations of 3D positioning on live view page.

To set up the connection, complete calibration. Manual calibration and auto calibration are selectable.

Note:

Panorama linkage function varies depending on different camera models. For indoor camera model, panorama linkage function does not show on the interface. It is set with default parameters. Outdoor camera model supports panorama linkage configuration interface.

- Auto Calibration

  Steps:

  a) Enter **Panorama Linkage** setting interface. Configuration > PTZ > Panorama Linkage.

  b) Click **Start Calibration** and enter the auto calibration interface.

  c) Match up the PTZ camera channel with panoramic camera channels.

     i. Select a panoramic camera channel.

     ii. Adjust PTZ in PTZ control panel or click 3D positioning to find the same scene in PTZ camera channel.

     iii. Click **Adjusting succeeded**.

     iv. Repeat to complete matching for other panoramic camera channels.

  d) Click **Next**.

e) Click **One-touch Calibration** or **Single Scene Calibration** and auto calibration starts.

Notes:

- When you select **One-touch Calibration**, the camera performs calibration one by one starting from panorama view 1 automatically.
- When you select **Single Scene Calibration**, the camera only perform calibration for the selected panoramic camera channel.

f) Click **Auto Calibrating Succeeded** and exit the auto calibration interface.

- Manual Calibration

Steps:

1. Enter **Panorama Linkage** setting interface. Configuration > PTZ > Panorama Linkage.
2. Select a panoramic camera channel.
3. Click **Add** in Calibration Parameter panel to add a new calibration point.
   A numbered green cross displayed on the panoramic image. Drag the green cross to adjust its position.
4. Adjust PTZ to place the green cross in the PTZ camera channel to the same position of the green cross in panoramic camera channel. 1× is recommended.
5. Click **Get PTZ Position**, and the PTZ position is displayed in Calibration Parameter list.
6. Click **Start Calibration**. Repeat the steps above to add more calibration points for the selected panoramic camera channel.

   Notes:

   - Up to 12 calibration points are supported. At least 4 points should be added. More calibration points can increase the rate for successful calibration.
   - Scatter the calibration points equably in live view image for better calibration effect.
7. Repeat above steps to complete calibration for other panoramic camera channel.

5.4.7 Configuring Scheduled Tasks

Purpose:

You can configure the network speed dome to perform a certain action automatically in a user-defined time period.

Steps:

1. Enter the Scheduled Task settings interface:
   Configuration> **PTZ** > **Scheduled Tasks**

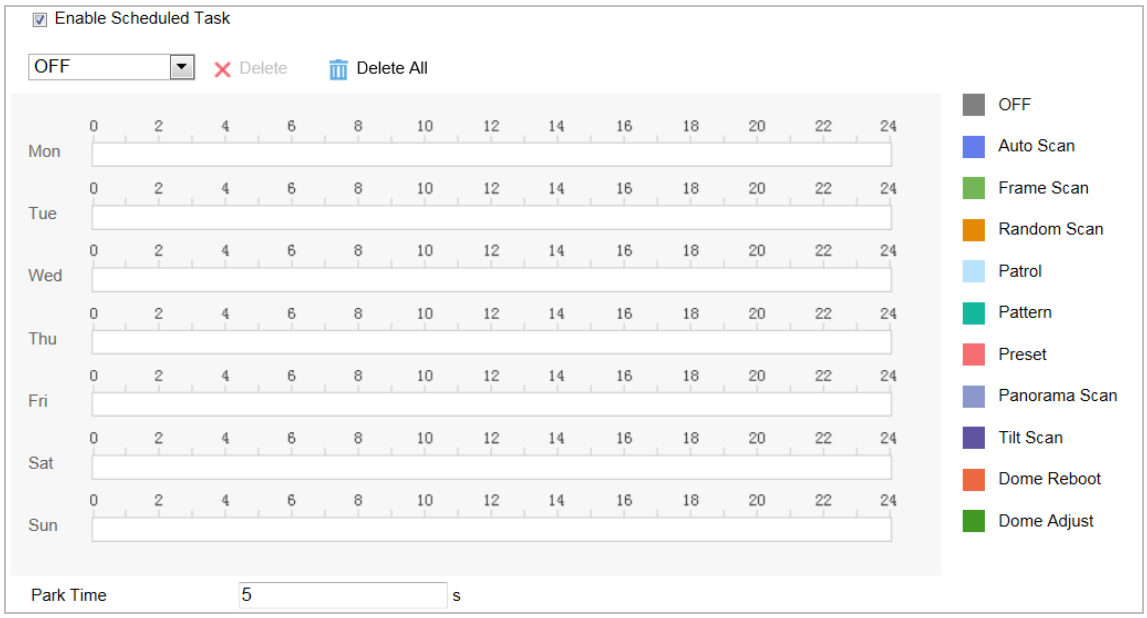

Figure 5-28 Configure Scheduled Tasks

2. Check **Enable Scheduled Task**.
3. Set the **Park Time**. You can set the park time (a period of inactivity) before the speed dome starts the scheduled tasks.
4. Select the task type from the drop-down list.
5. Select the timeline of a certain day, and drag the mouse to set the recording schedule (the start time and end time of the recording task).
6. After you set the scheduled task, you can click and copy the task to other days (optional).

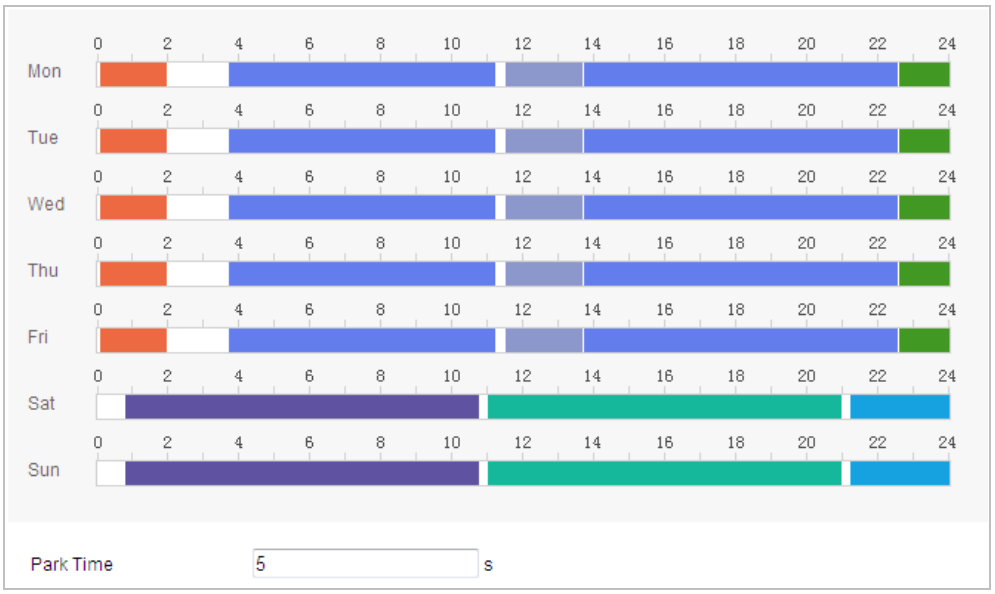

Figure 5-29 Edit the Schedule and Task Type

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

5.4.8 Clearing PTZ Configuration

Purpose:

You can clear PTZ configurations in this interface, including all presets, privacy masks, PTZ limits, scheduled tasks and park actions.

Steps:

1. Enter the Clearing Configuration interface:
   Configuration > PTZ > Clear Config
2. Check the checkbox of the items you want to clear.

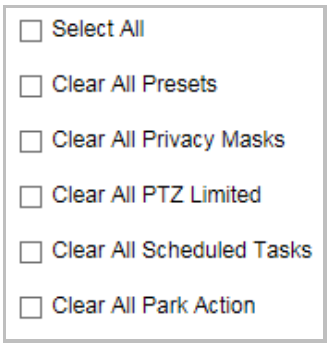

Figure 5-30 Clear Config

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

Chapter 6 Speed Dome Configuration

6.1 Configuring Network Settings

NOTE

The functions vary depending on different speed dome models.

6.1.1 Basic Settings

Configuring TCP/IP Settings

Purpose:

TCP/IP settings must be properly configured before you operate the camera over network. IPv4 and IPv6 are both supported.

Steps:

1. Enter TCP/IP settings interface:

   Configuration > Network > Basic Settings > TCP/IP

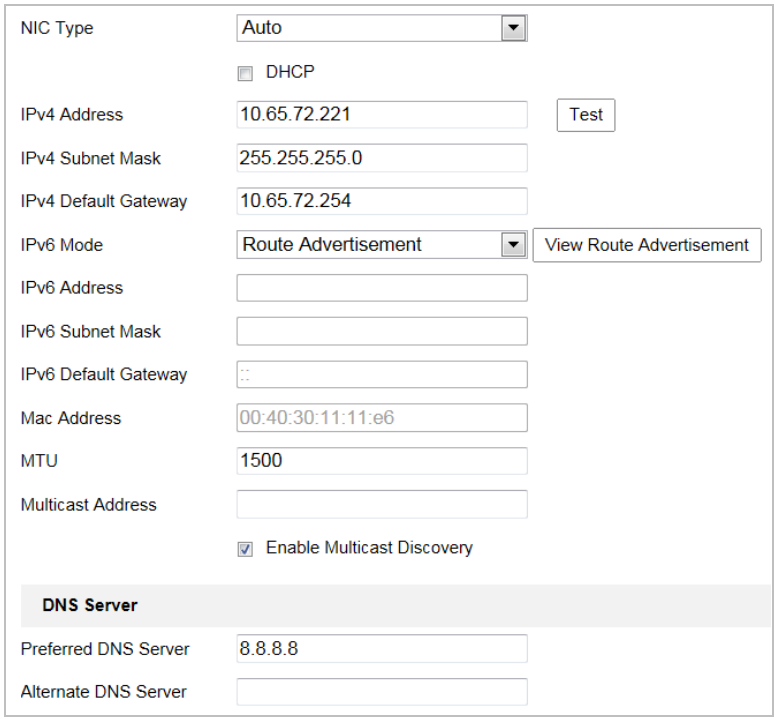

Figure 6-1 TCP/IP Settings

2. Configure the NIC settings, including the **IPv4(IPv6) Address**, **IPv4(IPv6) Subnet Mask** and **IPv4(IPv6) Default Gateway**.
3. Click **Save** to save the above settings.

You can click **Test** to make sure that the IP address is valid.

NOTE

- If the DHCP server is available, you can check ☐ DHCP to automatically obtain an IP address and other network settings from that server.
- The valid value range of Maximum Transmission Unit (MTU) is 1280 to 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 and configure the gateway of the network camera.
- If the DNS server settings are required for some applications (e.g., sending email), you should properly configure the **Preferred DNS Server** and **Alternate DNS server**.

Figure 6-2 DNS Server Settings

NOTE

The router must support the route advertisement function if you select **Route Advertisement** as the IPv6 mode.

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.

- *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*
- *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*

Steps:

1. Enter the DDNS settings interface:
   Configuration > Network > Basic Settings > DDNS
2. Check **Enable DDNS** to enable this feature.
3. Select **DDNS Type**. Two DDNS types are selectable: DynDNS and NO-IP.
   - **DynDNS:**

Steps:

(1) Input **Server Address** of DynDNS (e.g. members.dyndns.org).

(2) In the **Domain** text field, input the domain name obtained from the DynDNS website.

(3) Input the **Port** of DynDNS server.

(4) Input the **User Name** and **Password** registered on the DynDNS website.

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

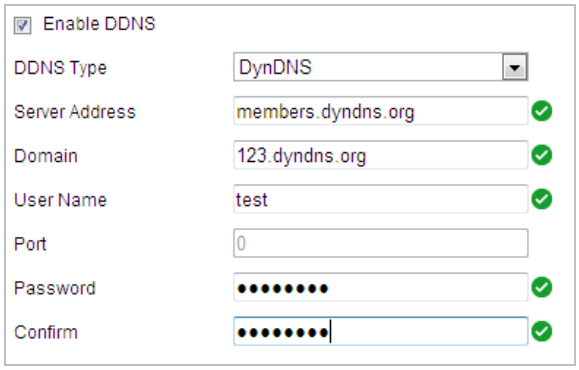

Figure 6-3 DynDNS Settings

- **NO-IP:**

Steps:

(1) Input **Server Address** of NO-IP.

(2) In the **Domain** text field, Input the domain name obtained from the NO-IP website.

(3) Input the **Port** of NO-IP server.

(4) Input the **User Name** and **Password** registered on the NO-IP website.

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

Configuring PPPoE Settings

Purpose:

If you have no router but only a modem, you can use Point-to-Point Protocol over Ethernet (PPPoE) function.

Steps:

1. Enter the PPPoE settings interface:

   Configuration > Network > Basic Settings > PPPoE

Figure 6-4 PPPoE Settings

2. Check **Enable PPPoE** 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.

- *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*
- *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*

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

Configuring Port Settings

Purpose:

If there is a router and you want to access the camera through Wide Area Network (WAN), you need to forward the 3 ports for the camera.

Steps:

1. Enter the Port settings interface:

   Configuration > Network > Basic Settings > Port

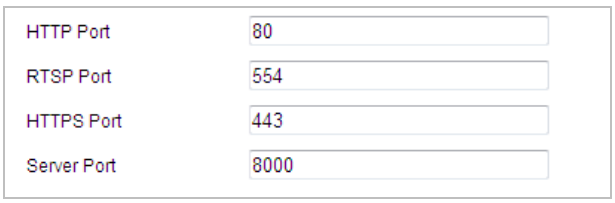

Figure 6-5 Port Settings

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

   HTTP Port: The default port number is 80.

   RTSP Port: The default port number is 554.

   HTTPS Port: The default port number is 443.

   Server Port: The default port number is 8000.

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

Configuring NAT (Network Address Translation) Settings

Purpose:

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 house 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:

1. Enter the UPnP™ settings interface.

Configuration >Network > Basic Settings > NAT

2. Check the checkbox to enable the UPnP™ function.

NOTE

You can edit the Friendly Name of the camera. This name can be detected by corresponding device, such as a router.

3. Set the port mapping mode:

To port mapping with the default port numbers:

Choose Port Mapping Mode Auto

To port mapping with the customized port numbers:

Choose Port Mapping Mode Manual

And you can customize the value of the port number by yourself.

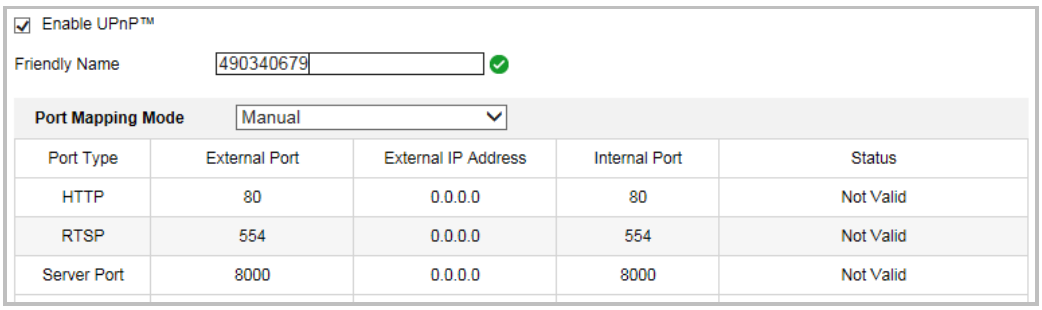

Figure 6-6 Port Mapping Mode

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

6.1.2 Advanced Settings

Configuring SNMP Settings

Purpose:

You can use SNMP to get camera status and parameters related information.

Before you start:

Before setting the SNMP, use 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.

Steps:

1. Enter the SNMP settings interface:

Configuration > Network > Advanced Settings > SNMP

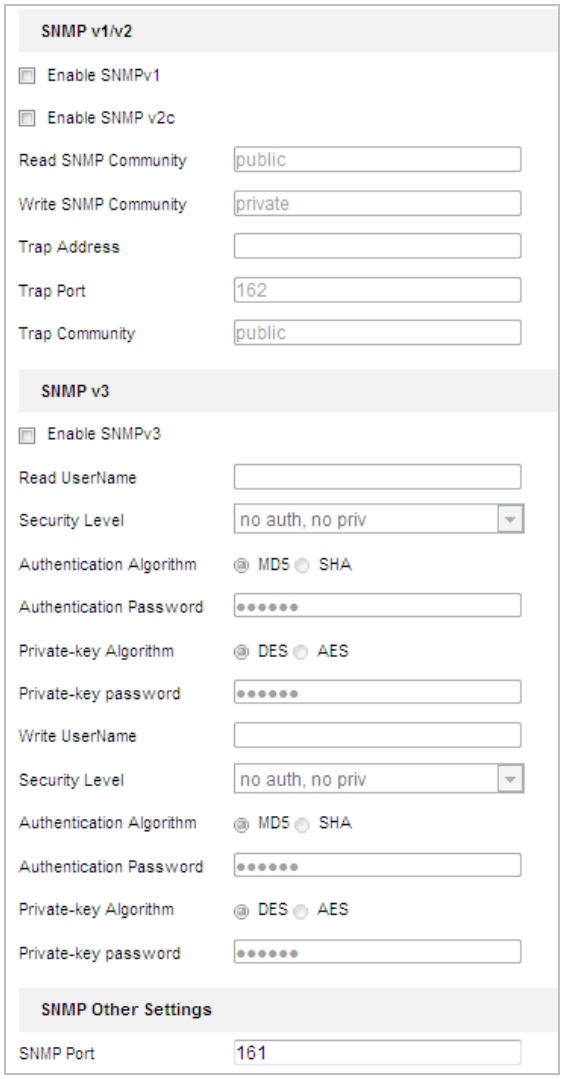

Figure 6-7 SNMP Settings

2. Check the corresponding version checkbox (**Enable SNMP v1**, **Enable SNMP v2c**, **Enable SNMP v3**) to enable the feature.
3. Configure the SNMP settings.

   NOTE

   The configuration of the SNMP software should be the same as the settings you configure here.
4. Click **Save** to save and finish the settings.

Configuring FTP Settings

Purpose:

You can set a FTP server and configure the following parameters for uploading captured pictures.

Note:

FTP function is invalid when the sub-stream is enabled

Steps:

5. Enter the FTP settings interface:

Configuration > Network > Advanced Settings > FTP

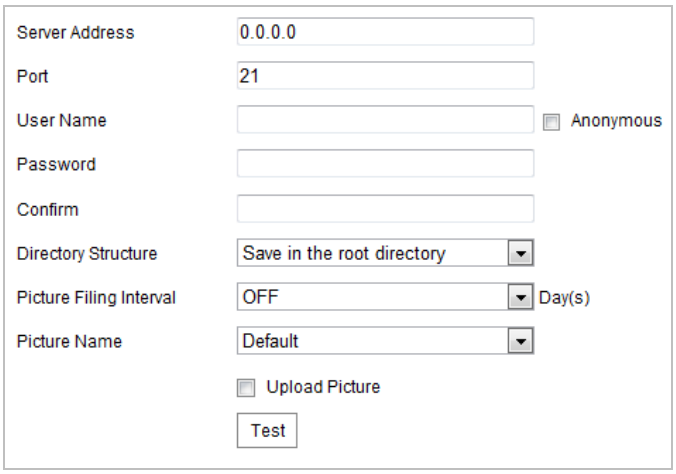

Figure 6-8 FTP Settings

6. Configure the FTP settings, including server address, port, user name, password, directory, and upload type.

The server address supports both the domain name and IP address formats.

- *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*
- *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*

- **Setting the directory in FTP server for saving files**:

  In the **Directory Structure** field, you can select the root directory, parent directory and child directory.

  - **Root directory**: The files will be saved in the root of FTP server.
  - **Parent directory**: The files will be saved in a folder in FTP server. The name of folder can be defined as shown in Figure 6-9.

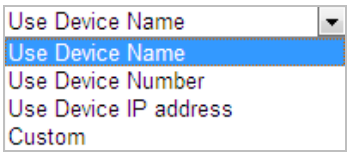

Figure 6-9 Parent Directory

  - **Child directory**: It is a sub-folder which can be created in the parent directory. The files will be saved in a sub-folder in FTP server. The name of folder can be defined as shown in Figure 6-10.

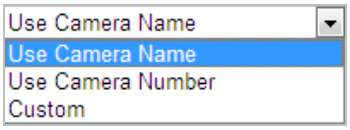

Figure 6-10 Child Directory

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

7. Click **Save** to save the settings.
8. You can click **Test** to confirm the configuration.

NOTE

If you want to upload the captured pictures to FTP server, you also have to enable the continuous snapshot or event-triggered snapshot in **Snapshot** interface.

Configuring Email Settings

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:

Configure the DNS Server settings under **Configuration> Network > Basic Settings > TCP/IP** before using the Email function.

Steps:

1. Enter the Email settings interface:
   Configuration> Network > Advanced Settings > Email

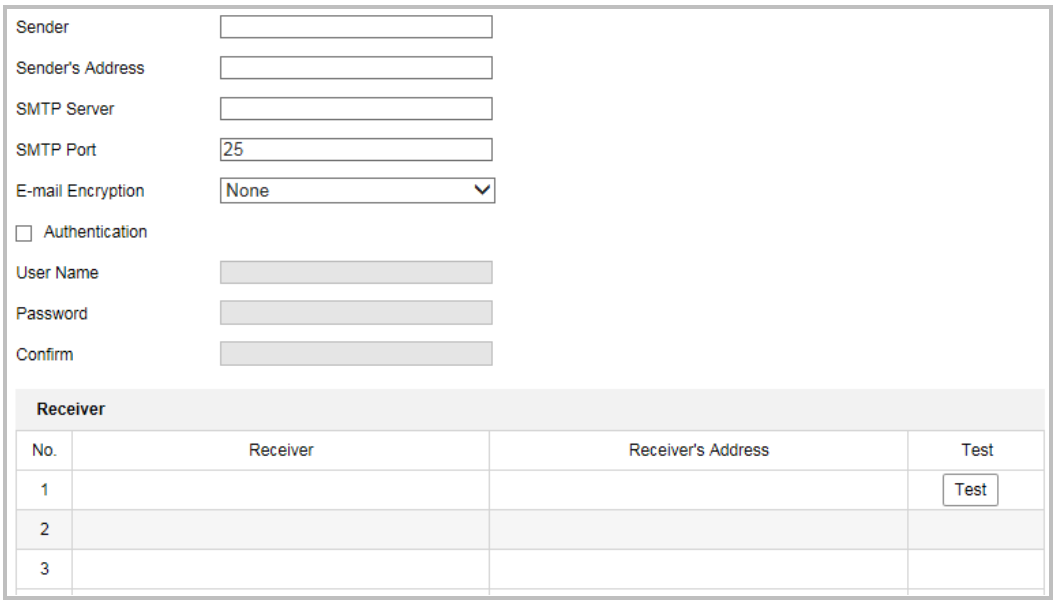

Figure 6-11 Email Settings

2. 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.

E-mail encryption: None, SSL, and TLS are selectable. When you select SSL or TLS and disable STARTTLS, e-mails will be sent after encrypted by SSL or TLS. The SMTP port should be set as 465 for this encryption method. When you select SSL or TLS and enable STARTTLS, emails will be sent after encrypted by STARTTLS, and the SMTP port should be set as 25.

NOTE

STARTTLS protocol must be supported by the email server for e-mail encryption with STARTTLS. When it is not supported by the email server and the checkbox of Enable STARTTLS is checked, the email will not be encrypted.

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

NOTE

Attached Image function is invalid when sub-stream is enabled.

Authentication (optional): If your email server requires authentication, check this checkbox to use authentication to log in to this server and input the login user name and password.

- *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*
- *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*

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. (Optional: click **Test** to make sure that the email server can send email out.)

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

Configuring Platform Settings

Purpose:

Platform access provides you an option to manage the devices via platform.

Steps:

1. Enter Platform settings interface:
   Configuration> Network > Advanced Settings > Platform Access
2. Check the checkbox of **Enable** to enable the platform access function of the device.
3. Select the access type, and set the related parameters.
4. Click Save to save the settings.

Configuring HTTPS Settings

Purpose:

HTTPS is consisted by SSL&HTTP. It is used for encryption transmission, identity authentication network protocol which enhances the security of WEB accessing.

- *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*
- *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*

Steps:

1. Enter the HTTPS settings interface.
   Configuration > Network > Advanced Settings > HTTPS
2. Create the self-signed certificate or authorized certificate.

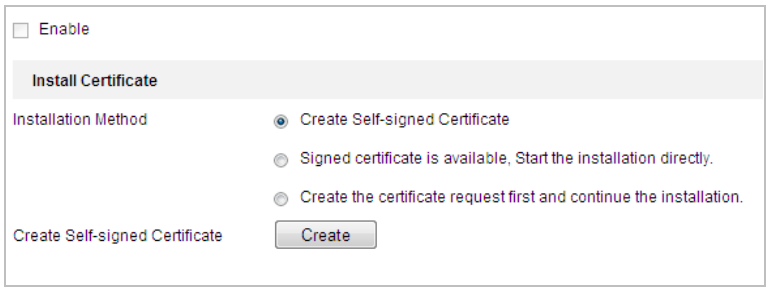

Figure 6-12 Create Certificate

OPTION 1: Create the self-signed certificate

1) Select Create Self-signed Certificate.
2) Click **Create** to create the following dialog box.

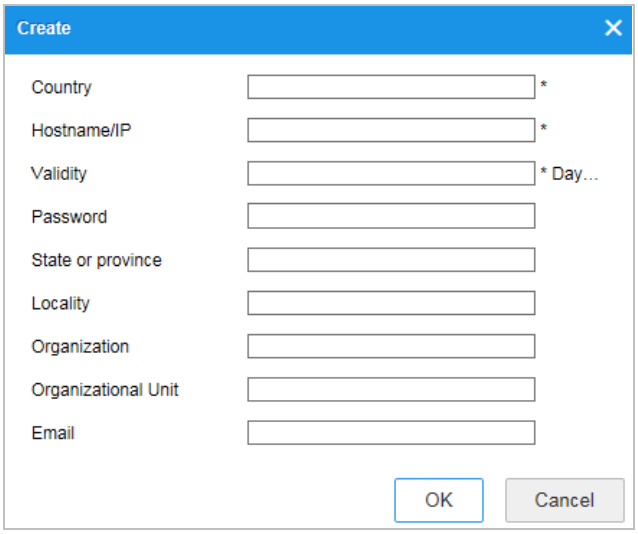

Figure 6-13 Create Self-signed Certificate

3) Input the country, host name/IP, validity and other information.
4) Click **OK** to save the settings.

OPTION 2: Start the installation when signed certificate is available.

1) Select Signed certificate is available, Start the installation directly.
2) Click **Browse** to upload the available certificate.
3) Click **Install** to install the certificate.
4) Click **OK** to save the settings.

OPTION 3: Create certificate request first and continue the installation.

1) Select Create certificate request first and continue the installation.
2) Click **Create** to create the certificate request, and fulfill the required information.
3) Download the certificate request and submit it to the trusted certificate authority for signature.
4) After receiving the signed valid certificate, import the certificate to the device.
5) Click **OK** to save the settings.

3. There will be the certificate information after you successfully create and install the certificate.

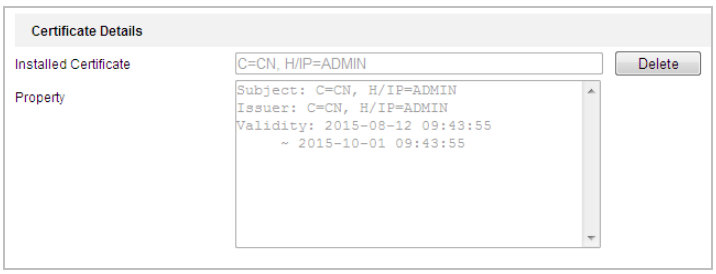

Figure 6-14 Installed Certificate Property

NOTE

- The default port number of HTTPS is 443. The port value ranges from 1 to 65535.
- When the port number is the default number 443, the format of the URL is ***https://IP address,*** eg., https://192.168.1.64.
- When the port number is not the default number 443, the format of the URL is ***https://IP address:port number***, eg., https://192.168.1.64:81.

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

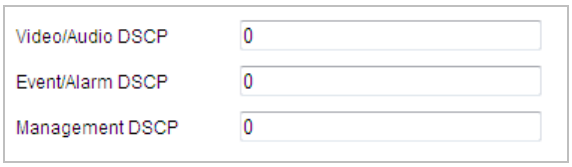

Figure 6-15 QoS Settings

2. Configure the QoS settings, including video / audio DSCP, event / alarm DSCP and Management DSCP.
   The valid DSCP value ranges from 0 to 63. The DSCP value is bigger, the priority is higher.
3. Click **Save** to save the settings.

NOTE

- Make sure that you enable the QoS function of your network device (such as a router).
- It will ask for a reboot for the settings to take effect.

Configuring 802.1X Settings

Purpose:

The camera supports IEEE 802.1X standard.

IEEE 802.1X is a port-based network access control. It enhances the security level of the LAN. When devices connect to this network with IEEE 802.1X standard, the authentication is needed. If the authentication fails, the devices don't connect to the network.

The protected LAN with 802.1X standard is shown in Figure 6-16.

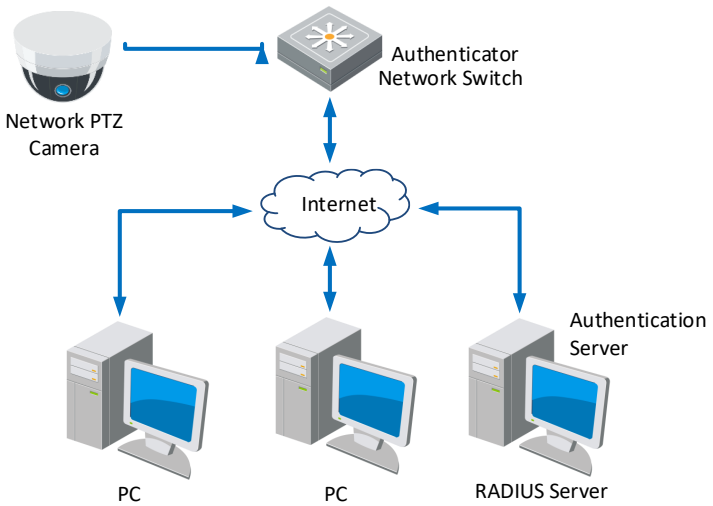

Figure 6-16 Protected LAN

- Before connecting the Network Camera to the protected LAN, apply a digital certificate from a Certificate Authority.
- The network camera requests access to the protected LAN via the authenticator (a switch).
- The switch forwards the identity and password to the authentication server (RADIUS server).
- The switch forwards the certificate of authentication server to the network camera.
- If all the information is validated, the switch allows the network access to the protected network.

- *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*
- *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*

Steps:

1. Connect the network camera to your PC directly with a network cable.
2. Enter the 802.1X settings interface:
   Configuration > Network > Advanced Settings > 802.1X

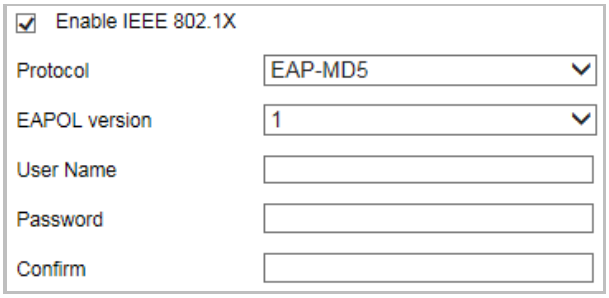

Figure 6-17 802.1X Settings

3. Check **Enable IEEE 802.1X** to enable it.
4. Configure the 802.1X settings, including user name and password.

   NOTE

   The EAP-MD5 version must be identical with that of the router or the switch.
5. Click **Save** to finish the settings.

   NOTE

   The camera reboots when you save the settings.
6. After the configuration, connect the camera to the protected network.

6.2 Configuring Video and Audio Settings

6.2.1 Configuring Video Settings

Steps:

1. Enter the Video settings interface:
   Configuration > Video/Audio > Video

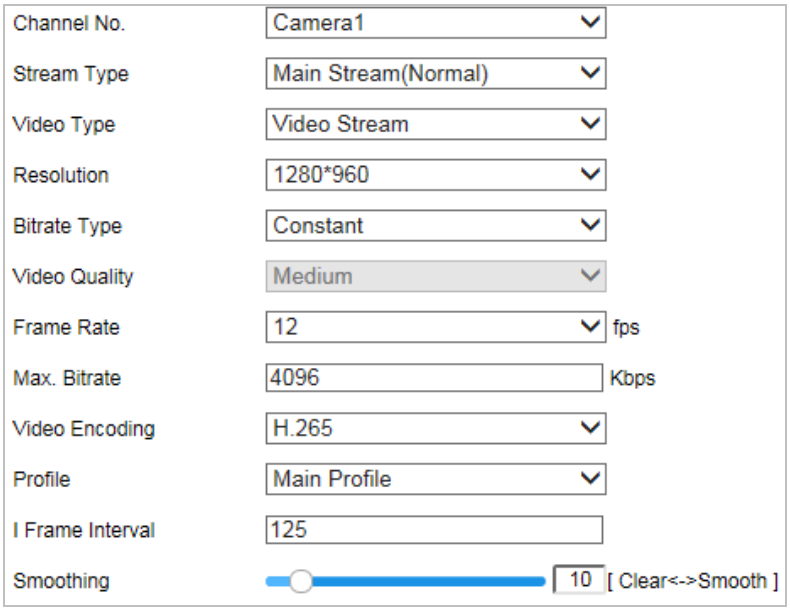

Figure 6-18 Configure Video Settings

2. Select the camera channel to configure.
3. Select the **Stream Type** of the camera to main stream (normal) or sub-stream. The main stream is usually for recording and live viewing with good bandwidth, and the sub-stream can be used for live viewing when the bandwidth is limited. Refer to the ***Section 4.1 Configuring Local Parameters*** for switching the main stream and sub-stream for live viewing.
4. You can customize the following parameters for the selected stream.

NOTE

The parameters vary depending on different speed dome models.

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:

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. The higher value corresponds to the higher video quality, but the higher bandwidth is required.

Video Encoding:

Select **Video Encoding** from the drop-down list for different stream type.

Profile:

Basic Profile, Main Profile and High Profile are selectable.

I Frame Interval:

Set the I-Frame interval from 1 to 250.

SVC:

Scalable Video Coding is an extension of the H.264/AVC standard. Select OFF/ON to disable/enable the SVC function. Select Auto, and the device will automatically extract frames from the original video when the network bandwidth is insufficient.

Smoothing:

It refers to the smoothness of the stream. The higher value of the smoothing, the better fluency of the stream, though, the video quality may not be so satisfied. The lower value of the smoothing, the higher quality of the stream, though it may appear not fluent.

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

6.2.2 Configuring Audio Settings

Steps:

1. Enter the Audio settings interface

   Configuration > Video/Audio > Audio

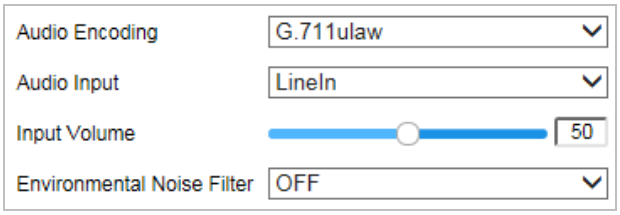

Figure 6-19 Audio Settings

2. Configure the following settings.

   Audio Encoding: G.722.1, G.711ulaw, G.711alaw, MP2L2, and G.726 are selectable.

   Audio Input: When an intercom is connected to the camera, you need to set this option to **LineIn**.

   Audio Stream Bitrate: When the Audio Encoding is selected as MP2L2, you can configure the Audio Stream Bitrate in the drop-down list. The greater the value is, the better the audio quality will be.

   Sampling Rate: When the Audio Encoding is selected as MP2L2, you can configure the Sampling Rate in the drop-down list. The greater the value is, the better the audio quality will be.

   Input Volume: Slid the **bar** to turn up/down the volume. The value ranges from 0 to 100.

   Environmental Noise Filter: Select ON or OFF in the drop-down list to enable or disable the function. It's recommended to enable the function when sampling rate is lower than 32 kHz.

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

NOTE

Audio function varies depending on different speed dome models.

6.2.3 Configuring ROI Settings

Purpose:

ROI (Region of Interest) encoding is used to enhance the quality of images which are specified in advance. There are two different ROI methods: **Fixed Region** and **Dynamic Region**. When **Fixed Region** is enabled, image quality of ROI area will be enhanced and image quality of other areas will be reduced. When **Dynamic Region** is enabled, image quality of tracking target will be enhanced. These two functions vary according to different camera models.

NOTE

ROI function varies depending on different speed dome models.

Enter the ROI settings interface:

Configuration >Video/Audio > ROI

Figure 6-20 Region of Interest (1)

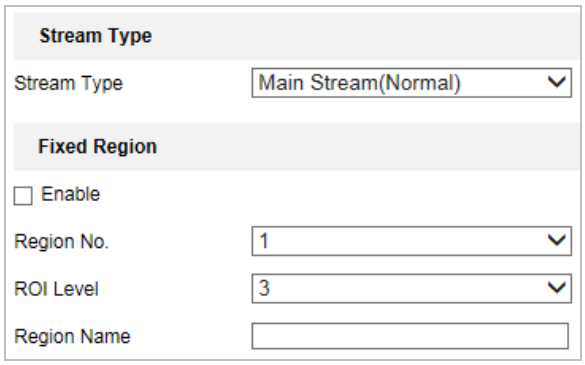

Figure 6-21 Region of Interest (2)

- **ROI for Fixed Region**

Steps:

1. Select the camera channel to configure.
2. Check **Enable** to enable the **Fixed Region** function.

3. Select a stream type. You can set the ROI function for main stream or sub-stream.
4. Click **Draw Area** and then drag the mouse to draw a red frame in the live view image. You can click **Clear** to clear it.

   NOTE

   The number of areas supported in ROI function varies depending on different speed dome models.
5. Select the **Region No.** from the drop-down list.
6. Adjust the **ROI level** from 1 to 8. The higher the value, the better image quality in the red frame.
7. Input a **Region Name**.

6.2.4 Configuring Info. on Stream

Check **Enable Dual-VCA**, and the information of the objects (e.g. human, vehicle, etc.) will be marked in the video stream. Then, you can set rules on the connected rear-end device to detect the events including line crossing, intrusion, etc.

6.3 Configuring Image Settings

NOTE

- Click > to show the PTZ control panel or click < to hide it.
- Click the direction buttons to control the pan/tilt movements.
- Click the zoom/iris/focus buttons to realize lens control.
- The functions vary depending on different speed dome models.

6.3.1 Configuring Display Settings

Purpose:

Configure the image adjustment, exposure settings, focus, day/night switch, backlight settings, white balance, and image enhancement in display settings.

NOTE

- The parameters in **Display Settings** interface vary depending on different speed dome models.
- You can double click the live view to enter full screen mode and double click it again to exit.

Steps:

1. Enter the Display settings interface:

   Configuration > Image> Display Settings

2. You can select the **Scene** in the drop-down list with different predefined image parameters.
3. Set the image parameters of the speed dome.

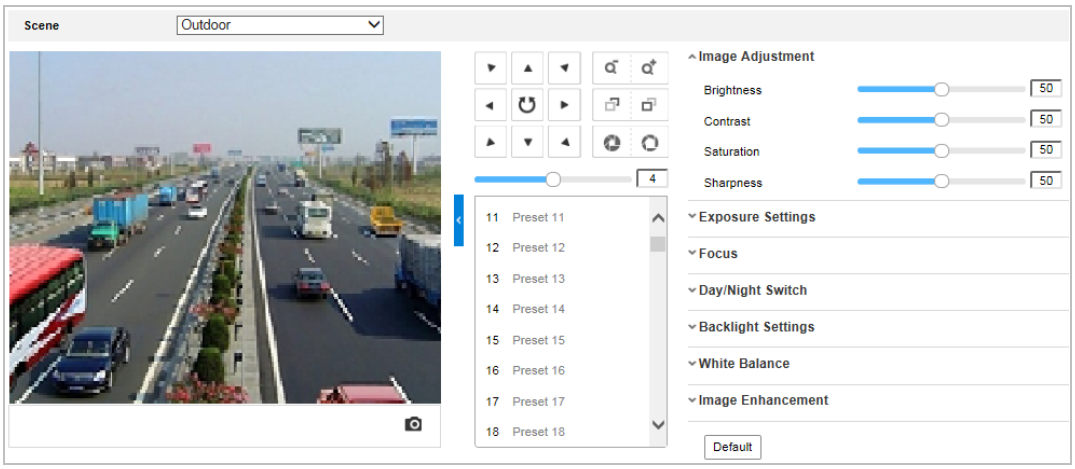

Figure 6-22 Display Settings

Image Adjustment

- **Brightness**

This feature is used to adjust brightness of the image. The value ranges from 0 to 100.

- **Contrast**

This feature enhances the difference in color and light between parts of an image. The value ranges from 0 to 100.

- **Saturation**

This feature is used to adjust color saturation of the image. The value ranges from 0 to 100.

- **Sharpness**

Sharpness function enhances the detail of the image by sharpening the edges in the image. The value ranges from 0 to 100.

Exposure Settings

- **Exposure Mode**

The **Exposure Mode** can be set to **Auto,** and **Manual.**

◆ Auto:

The iris, shutter and gain values will be adjusted automatically according to the brightness of the environment.

◆ Manual:

In **Manual** mode, you can adjust the values of **Shutter**, **Gain**, and **Limit Gain** manually.

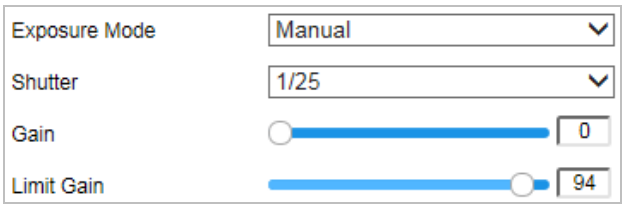

Figure 6-23 Manual Mode

Focus Settings

- **Focus Mode**

The **Focus Mode** can be set to **Manual**, and **Semi-auto**.

◆ Semi-auto:

The speed dome focuses automatically only once after panning, tilting and zooming.

◆ Manual**:**

In **Manual** mode, you need to use on the control panel to focus manually.

Day/Night Switch

- **Day/Night Switch**

The **Day/Night Switch** mode can be set to **Auto, Day, Night** and **Scheduled-Switch**.

NOTE

This function varies depending on different speed dome models.

◆ **Auto**:

In **Auto** mode, the day mode and night mode can switch automatically according to the light condition of environment.

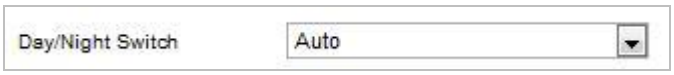

Figure 6-24 Auto Mode Sensitivity

◆ **Day**:

In **Day** mode, the speed dome displays color image. It is used for normal lighting conditions.

◆ **Night**:

In **Night** mode, the image is black and white. **Night** mode can increase the sensitivity in low light conditions.

◆ **Scheduled-Switch:**

In **Schedule** mode, you can set the time schedule for day mode as shown in Figure 6-25. The rest time out of the schedule is for night mode.

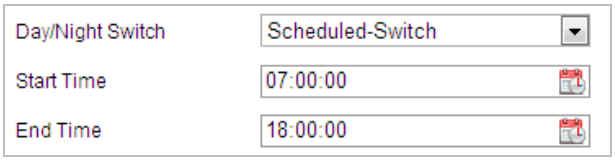

Figure 6-25 Day Night Schedule

Backlight Settings

- **BLC (Back Light Compensation)**

If there's a bright backlight, the subject in front of the backlight appears silhouetted or dark. Enabling **BLC** (back light compensation) function can correct the exposure of the subject. But the backlight environment is washed out to white.

- **WDR (Wide Dynamic Range)**

The wide dynamic range (WDR) function helps the camera provide clear images even under back light circumstances. When there are both very bright and very dark areas simultaneously in the field of view, WDR balances the brightness level of the whole image and provide clear images with details.

You can enable or disable the WDR function as shown in Figure 6-26. The wide dynamic level ranges from 0 to 100.

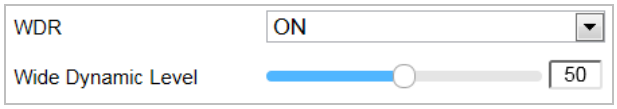

Figure 6-26 WDR

- **HLC**

HLC (High Light Compensation) makes the camera identify and suppress the strong light sources that usually flare across a scene. This makes it possible to see the detail of the image that would normally be hidden.

White Balance

The **White Balance** mode can be set to **Auto**, **MWB**, **Outdoor**, **Indoor**, **Fluorescent Lamp**, **Sodium Lamp** and **Auto-Tracking**.

◆ **Auto**:

In **Auto** mode, the camera retains color balance automatically according to the current color temperature.

◆ **Manual White Balance:**

In **MWB** mode, you can adjust the color temperature manually to meet your own demand as shown in Figure 6-27.

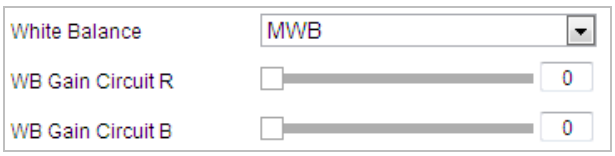

Figure 6-27 Manual White Balance

◆ **Outdoor**

You can select this mode when the speed dome is installed in outdoor environment.

◆ **Indoor**

You can select this mode when the speed dome is installed in indoor environment.

◆ **Fluorescent Lamp**

You can select this mode when there are fluorescent lamps installed near the speed dome.

◆ **Sodium Lamp**

You can select this mode when there are sodium lamps installed near the speed dome.

◆ **Auto-Tracking**

In **Auto-Tracking** mode, white balance is continuously being adjusted in real-time according to the color temperature of the scene illumination.

Image Enhancement

- **3D Digital Noise Reduction**

You can set **Digital Noise Reduction** function to **Normal** and adjust the **Noise Reduction Level**. The level ranges from 0 to 100.

If you are a professional technician, you can set it to **Expert** Mode then adjust **Space DNR Level** and **Time DNR Level**. The level ranges from 0 to 100.

- **Defog Mode**

You can set the **Defog Mode** to ON or OFF as you need.

6.3.2 Configuring OSD Settings

Purpose:

The speed dome supports following on screen displays:

Time: Supports for time display.

Camera Name: Identifies the name of camera.

You can customize the on screen display of time.

Steps:

1. Enter the OSD settings interface:

   Configuration > Image > OSD Settings

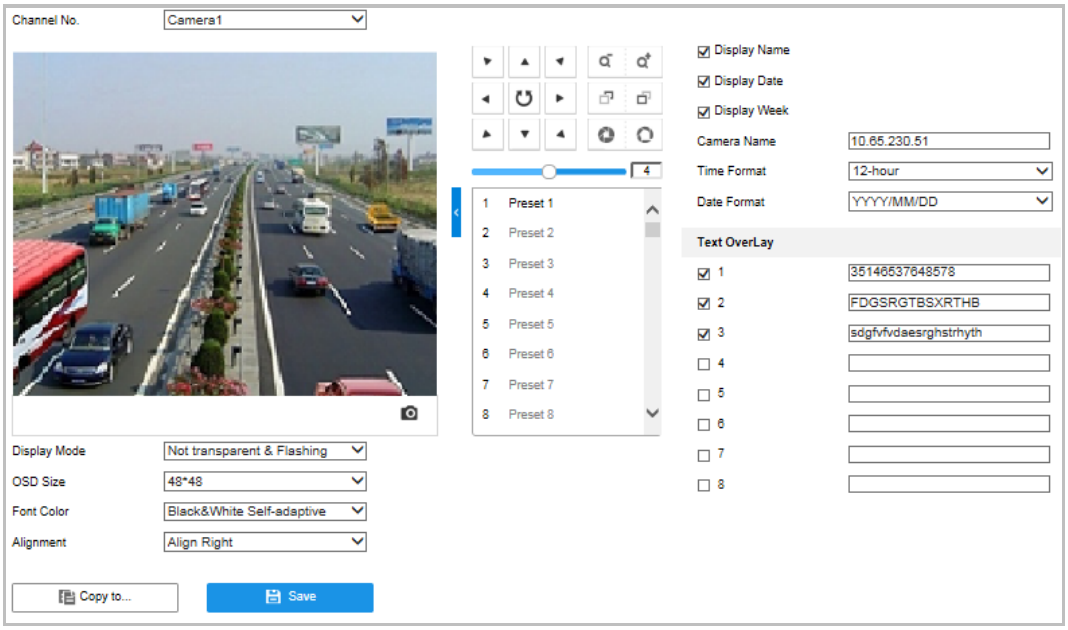

Figure 6-28 OSD Settings

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, OSD size, font color, and alignment.
5. You can use the mouse to drag the text frame IPdome in the live view window to adjust the OSD position.

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

6.3.3 Configuring Text Overlay Settings

Purpose:

You can customize the text overlay.

Steps:

1. Enter the Text Overlay settings interface:
   Configuration > **Image** > **OSD Settings**
2. Check the checkbox in front of textbox to enable the on-screen display.
3. Input the characters in the textbox.
4. Use the mouse to drag the red text frame Text in the live view window to adjust the text overlay position.
5. Click **Save** to save the settings.

6.3.4 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 Privacy Mask setting interface
   Configuration > Image > Privacy Mask
2. Select the camera channel to configure.

   NOTE

   You can only configure privacy mask function for panoramic camera in this interface.
3. Check **Enable Privacy Mask** to enable the function.
4. Click **Draw Area**.
5. Drag the mouse in the live view window to draw the mask area.
6. Click **Stop Drawing** to finish drawing or click **Clear All** to clear all of the areas you set without saving them.
7. Click **Save** to save the settings.

6.3.5 Configuring Image Parameters Switch

NOTE

This function varies depending on different speed dome models.

Purpose:

You can configure **Link to Preset** or **Scheduled-Switch** in this interface. **Link to Preset:** Set the time period and linked scene for the preset and check the corresponding checkbox to go to the

linked scene in the configured time period. **Scheduled-Switch:** Set the time period and linked scene and it will go to the linked scene in the configured time period when you check the corresponding checkbox.

Steps:

1. Enter the Image Parameters Switch interface:
   Configuration > Image > Image Parameters Switch
2. Check **Link to Preset** or **Scheduled-Switch** to enable the function. (Only one function can be enabled in the same time.)
3. When you enable the function of **Link to Preset**, select one preset from the drop-down list, check the corresponding checkbox, set the time period and the linked scene for the selected preset. (Up to 4 periods can be configured for one preset.)

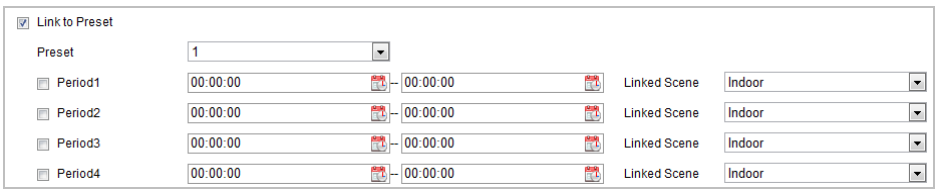

Figure 6-29 Link to Preset

Figure 6-30 Linked Scene

4. When you enable the function of **Scheduled-Switch**, check the corresponding checkbox, set the time period and the linked scene.

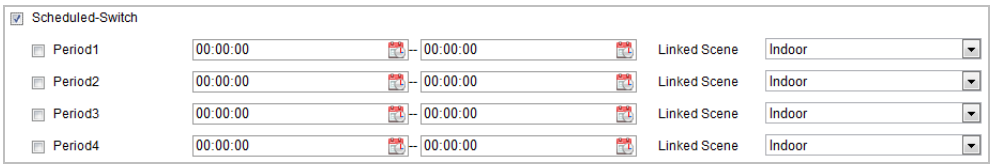

Figure 6-31 Schedule-Switch

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

NOTE

The two functions are not enabled by default.

6.4 Configuring System Settings

6.4.1 System Settings

Viewing Basic Information

Enter the Device Information interface:

Configuration > System > System Settings > Basic Information

In the **Basic Information** interface, you can edit the Device Name and Device No.
Other information of the camera, such as Model, Serial No., Firmware Version, Encoding Version, Web Version, Plugin Version, Number of Channels, Number of HDDs, Number of Alarm Input, Number of Alarm Output, and Firmware Version Property are displayed. The information cannot be changed in this menu. It is the reference for maintenance or modification in future.

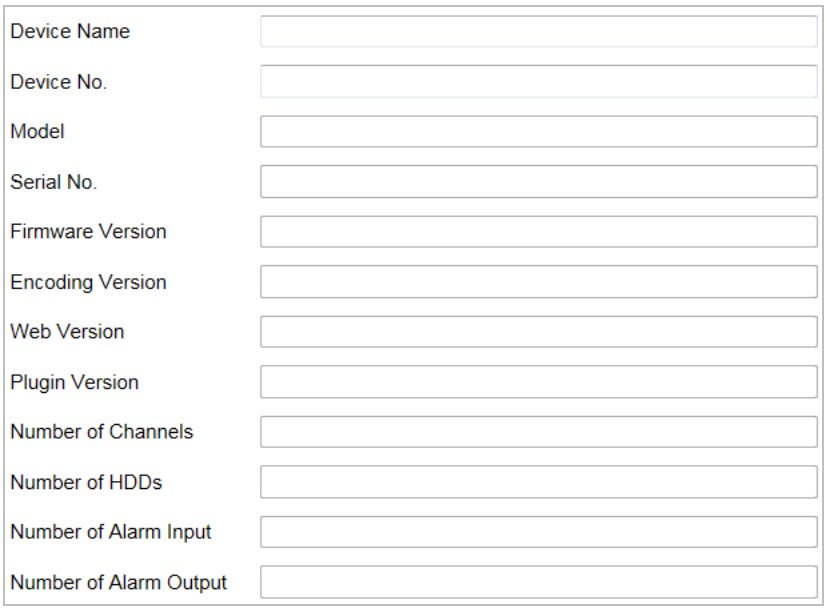

Figure 6-32 Device Information

Time Settings

Purpose:

You can follow the instructions in this section to configure the time which can be displayed on the video. There are Time Zone, Time Synchronization, and Daylight Saving Time (DST) functions for setting the time. Time Synchronization consists of auto mode by Network Time Protocol (NTP) server and manual mode.

Enter the Time Settings interface:

Configuration > System > System Settings > Time Settings

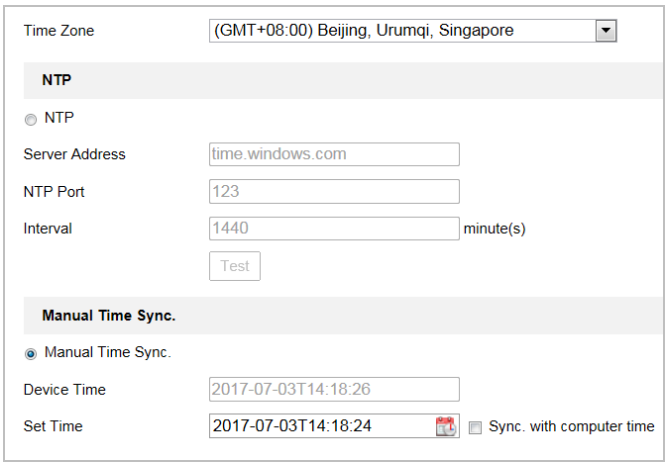

Figure 6-33 Time Settings

- **Configuring Time Synchronization by NTP Server**

Steps:

(1) Check the radio button 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 by NTP server. It can be set from 1 to 10080 minutes.

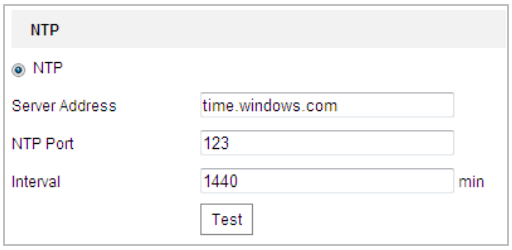

Figure 6-34 Time Sync by NTP Server

You can click **Test** to make sure that the NTP server is connected.

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.

- **Configuring Time Synchronization Manually**

Steps:

(1) Check **Manual Time Sync**.

(2) Click to set the system time from the pop-up calendar.

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

NOTE

You can also check **Sync with local time** to synchronize the time of the camera with the time of your computer.

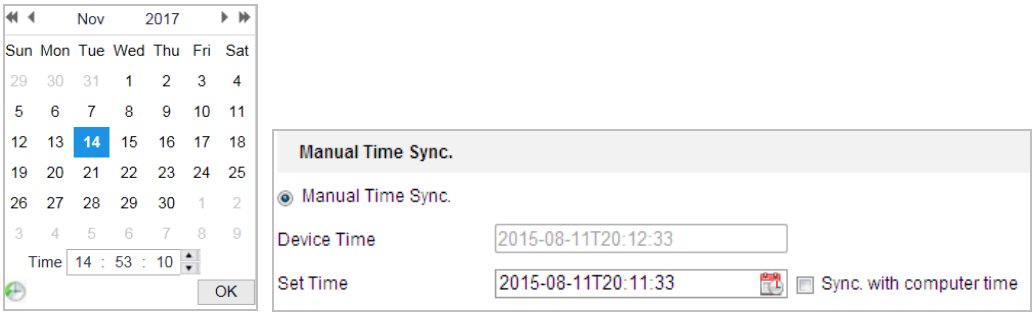

Figure 6-35 Time Sync Manually

- **Select the Time Zone**

Purpose:

When the camera is taken to another time zone, you can use the **Time Zone** function to adjust the time. The time will be adjusted according to the original time and the time difference between the two time zones.

From the **Time Zone** drop-down menu as shown in Figure 6-36, select the Time Zone in which the camera locates.

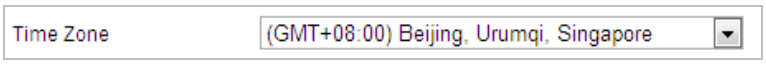

Figure 6-36 Time Zone Settings

Configuring DST (Daylight Saving Time)

Purpose:

Daylight Saving Time (DST) is a way of making better use of the natural daylight by setting your clock forward one hour during the summer months, and back again in the fall.

If there is the habit of adjusting clocks forward in your country in certain time period of a year, you can turn this function on. The time will be adjusted automatically when the Daylight Saving Time (DST) comes.

Steps:

1. Enter the **DST** interface by **Configuration > Advanced Configuration > System > DST**

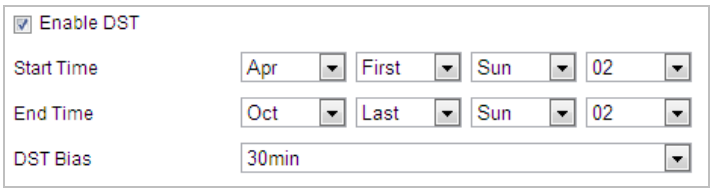

Figure 6-37 DST Settings

2. Check **Enable DST** to enable the DST function.
3. Set the date of the DST period.
4. Click **Save** to save the settings.

6.4.2 Maintenance

Upgrade & Maintenance

- **Rebooting the Camera**

Steps:

1. Enter the Maintenance interface:
2. **Configuration** > **System** > **Maintenance > Upgrade & Maintenance:**
3. Click **Reboot** to reboot the network camera.

- **Restoring Default Settings**

Steps:

1. Enter the Maintenance interface:
   Configuration > **System** > **Maintenance > Upgrade & Maintenance:**

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

NOTE

Clicking **Default** restores all the parameters to default settings including the IP address and user information. Use this button with caution.

Default	
Restore	Reset all the parameters, except the IP parameters and user information, to the default settings.
Default	Restore all parameters to default settings.

Figure 6-38 Restore Default Settings

- **Exporting Configuration File**

Steps:

1. Enter the Maintenance interface:
   Configuration > **System** > **Maintenance > Upgrade & Maintenance**
2. Click **Device Parameters** and set the encryption password to export the current configuration file.
3. Set the saving path to save the configuration file in local storage.
4. Click **Diagnose Information** to download the log and system information.

- **Importing Configuration File**

1. Enter the Maintenance interface:
   Configuration > **System** > **Maintenance > Upgrade & Maintenance**
2. Click **Browse** to select the saved configuration file.
3. Input the encryption password you have set when exporting the configuration file.
4. Click **Import** to import configuration file.

NOTE

You need to reboot the camera after importing configuration file.

- **Upgrading the System**

Steps:

1. Enter the Maintenance interface:
   Configuration >**System** > **Maintenance** > **Upgrade & Maintenance**
2. Select Firmware or Firmware Directory.
   - **Firmware**: when you select **Firmware**, you need to find the firmware in your computer to upgrade the device.
   - **Firmware Directory**: You need to find the directory where the firmware locates. The device can find the firmware in the directory automatically.
3. 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. Don't disconnect power of the camera during the process. The camera reboots automatically after upgrading.

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:

Configure network storage for the camera or insert a memory card in the camera.

Steps:

1. Enter the Log interface:

   Configuration >System > Maintenance > Log

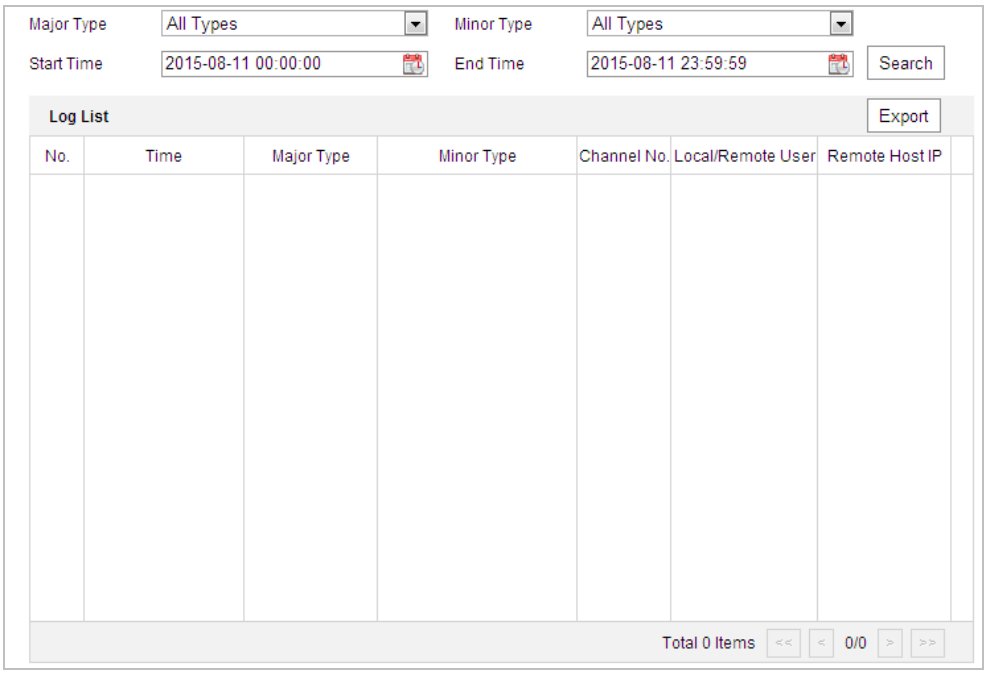

Figure 6-39 Log Searching Interface

2. Set the log search conditions to specify the search, including the Major Type, Minor Type, Start Time and End Time as shown in Figure 6-39.
3. Click **Search** to search log files. The matched log files will be displayed on the **Log** interface.
4. To export the log files, click **Save Log** to save the log files in your computer.

System Service

Steps:

1. Enter the interface of configuring the remote connection:

   Configuration > System > Maintenance > System Service
2. Check the checkbox to enable supplement light function if the device supports the function.
3. Input a number in text field as the upper limit of the remote connection number. E.g. when you specify the remote connection number as 10, then the 11th remote connection cannot be established.

Figure 6-40 Live View Connection Settings

4. You can check **Eable Third Stream** to enbale the third stream. And face detection function is invalid when the third stream is enabled.
5. Click **Save** to activate the settings.

6.4.3 Security

Configuring Authentication Security

Purpose:

You can specifically secure the stream data of live view.

Steps:

1. Enter the Authentication interface:
   Configuration> **System**> **Security** > **Authentication**
2. Select the authentication type. Digest is the recommended safer authentication way.
3. Click **Save** to save the settings.

Configuring IP Address Filter

Purpose:

With this function on, the camera allows certain IP addresses whether to log in or not.

Steps:

1. Enter IP Address Filter interface:
   Configuration > **System** > **Security** > **IP Address Filter**

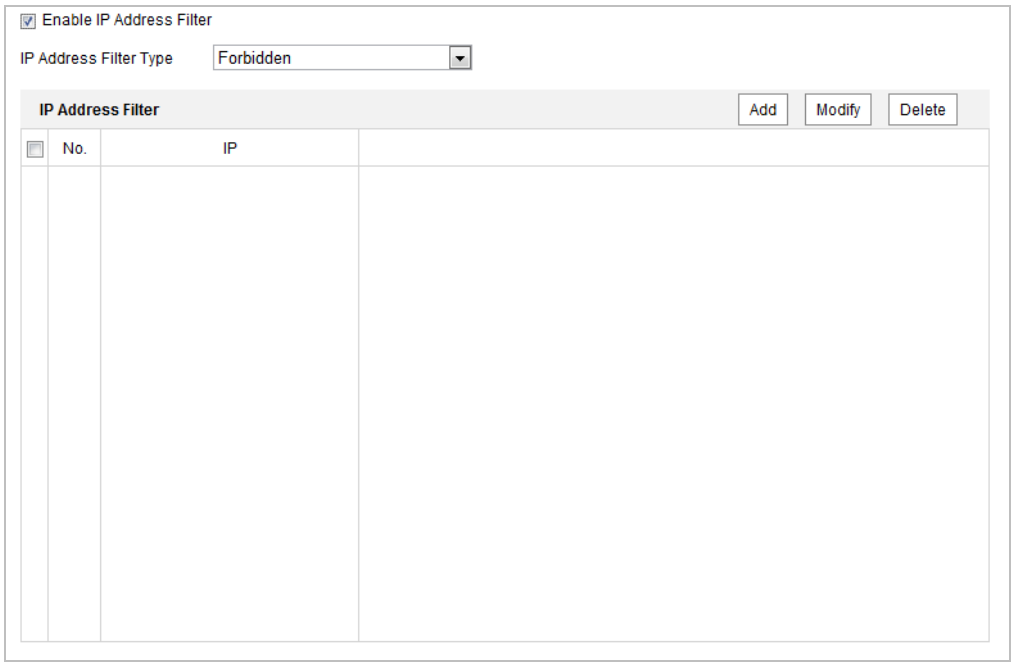

Figure 6-41 IP Address Filter

2. Check **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 **Add** to add an IP.
  (2) Input the IP Adreess.
  (3) Click **OK** to finish adding.

- **Modify an IP Address**

  Steps:

  (1) Select an IP address from filter list and click **Modify**.
  (2) Modify the IP address in the text filed.
  (3) Click **OK** to finish modifying.

- **Delete an IP Address**

  Left-click an IP address from filter list and click **Delete**.

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

Configure Security Service Settings

Steps:

1. Enter the Security Service interface:
   Configuration> **System** > **Security** > **Security Service**
2. Check **SSH** to enable the function.
3. Check the checkbox to enable the Illegal Login Lock function.
   Illegal Login Lock: Enabling illegal login lock function is to automatically lock the device IP after the admin user performing 7 failed password attempts (5 attempts for the user/operator).
4. Click **Save** to save the settings.

6.4.4 User Management

Enter the User Management interface**:**

Configuration > **System** > **User Management**

The **admin** user has access to create, modify or delete other accounts. Up to 32 user accounts can be created.

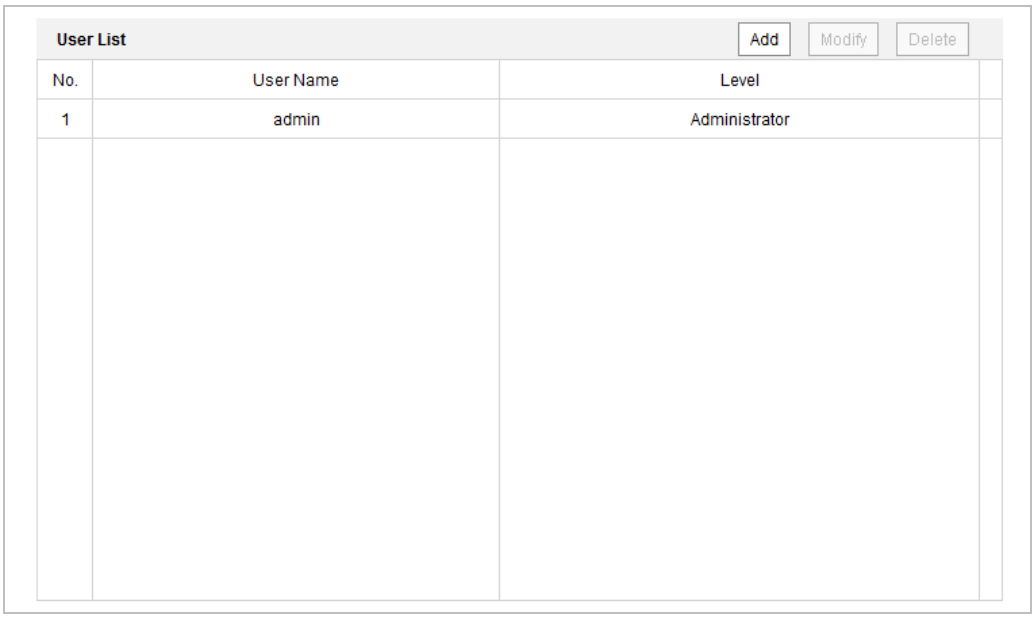

Figure 6-42 User Information

- **Add a User**

Steps:

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

- *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (Using a minimum of 8 characters, including at least three of the following categories: upper case letters, lower case letters, numbers, and special characters.) in order to increase the security of your product.*
- *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*

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.

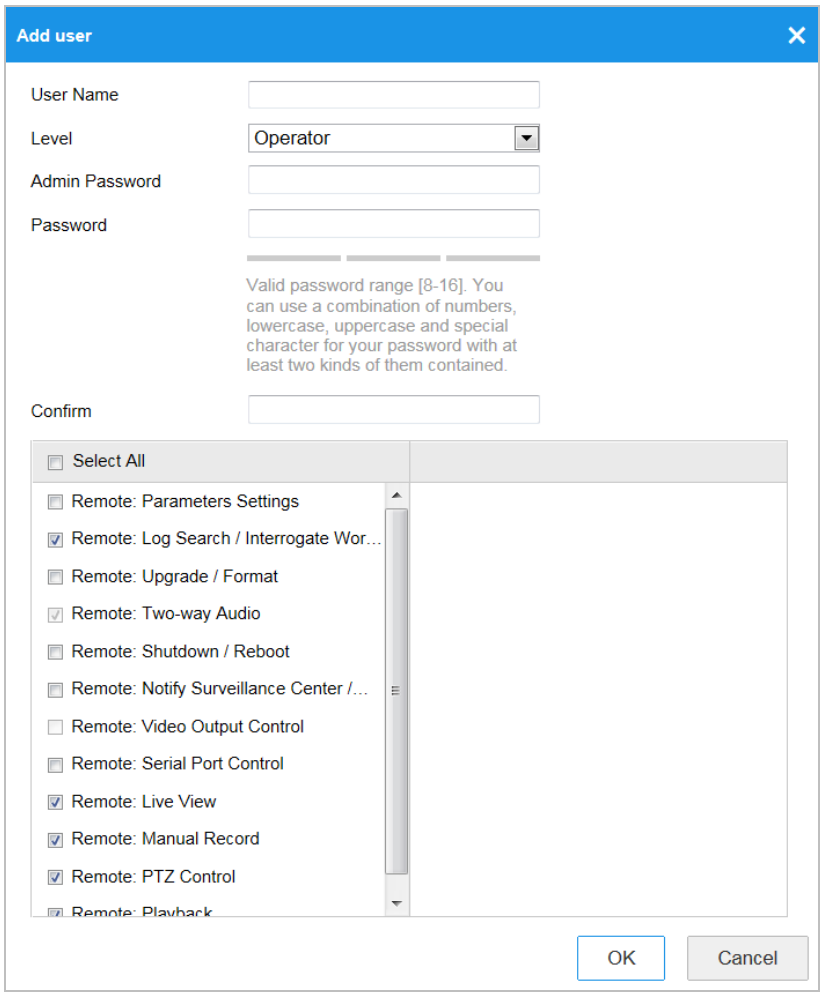

Figure 6-43 Add a User

- **Modify a User**

Steps:

1. Select an added 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.

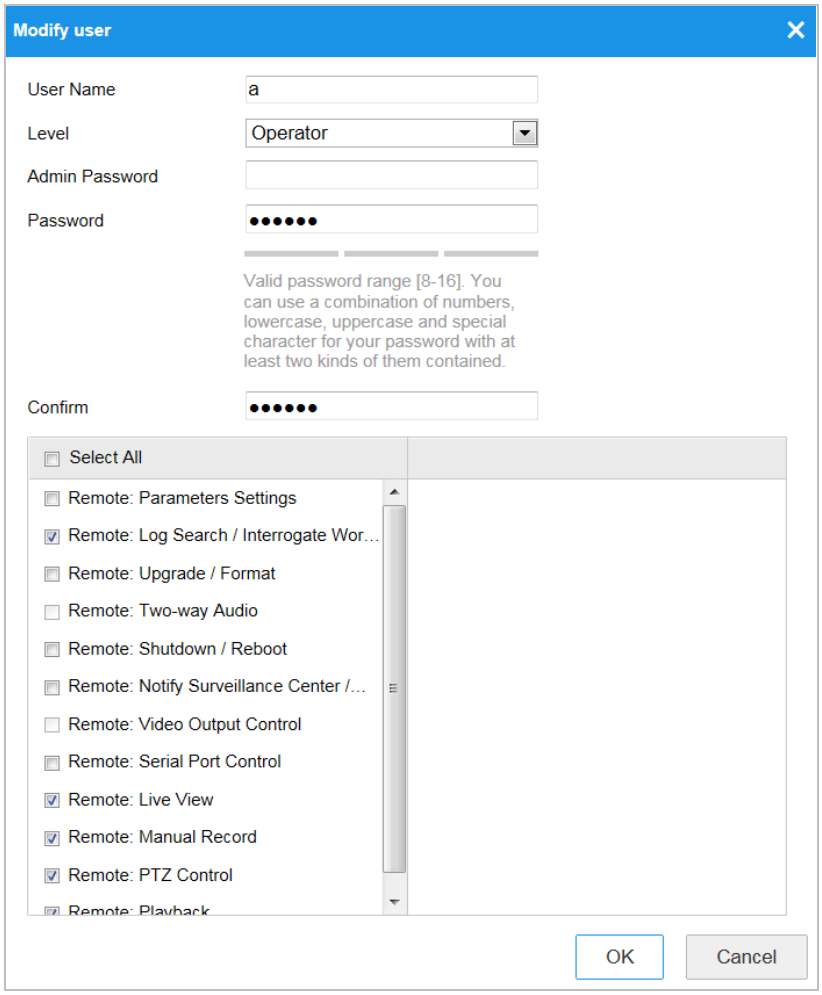

Figure 6-44 Modify a User

- **Delete a User**

Steps:

1. Select an added user and click **Delect**.
2. Click **OK** on the pop-up dialogue box to delete the user.

Online Users

Enter the Online Users configuration interface:

Configuration > **System** > **User Management** > **Online Users**

User List Refresh

No.	User Name	Level	IP Address	User Operation Time
1	admin	Administrator	10.15.2.15	2017-11-14 14:59:15

Figure 6-45 Online Users

You can see the current users who are visiting the device through this interface.

User information, such as user name, level, IP address, and operation time, is displayed in the User List. Click **Refresh** to refresh the list.

Appendix

SADP Software Introduction

Description of SADP

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 and port number, etc. will be displayed.

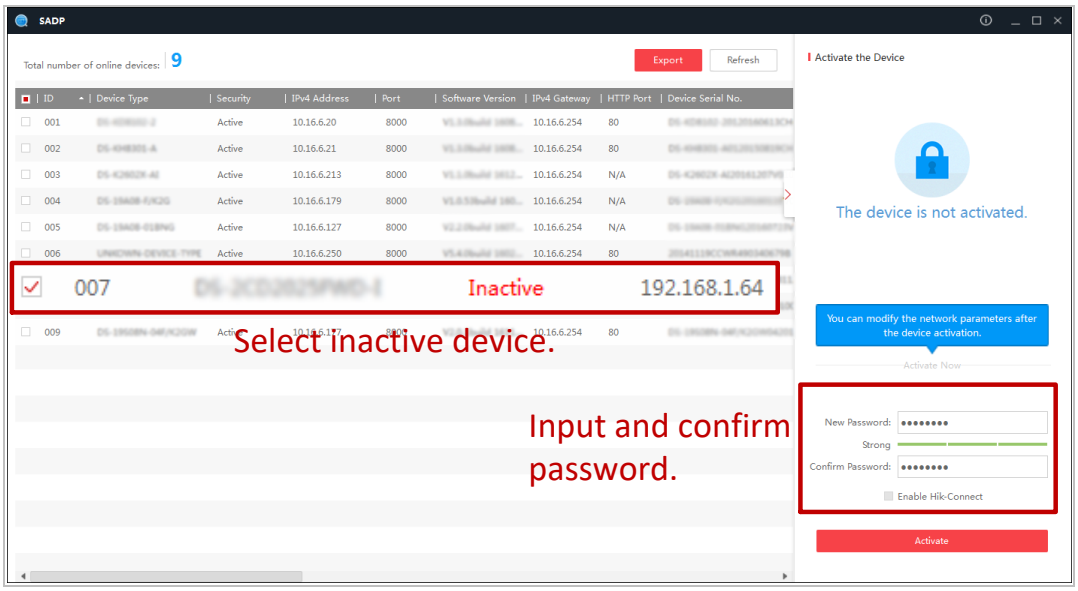

Figure A.1.1 Searching Online Devices

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. Input the password of the admin account of the device in the **Password** field and click **Modify** to save the changes.

- *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*
- *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*

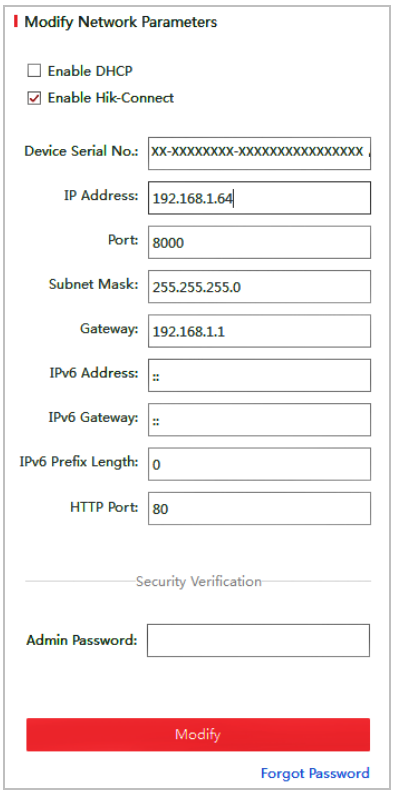

Figure A.1.2 Modify Network Parameters