advidia

A-300 Speed Dome

User Manual

User Manual

About this Manual

This Manual is applicable to Advidia A-300 IR 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.

Please use this user manual under the guidance of professionals.

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IN THE EVENT OF ANY CONFLICTS BETWEEN THIS MANUAL AND THE APPLICABLE LAW, THE LATER PREVAILS.

Regulatory Information

FCC Information

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

FCC Conditions

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

1. This device may not cause harmful interference.

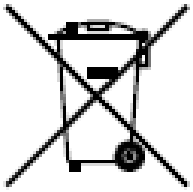
2. This device must accept any interference received, including interference that may cause undesired operation.

EU Conformity Statement

This product and - if applicable - the supplied accessories too are

marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2004/108/EC, the RoHS Directive 2011/65/EU.

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



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

Industry Canada ICES-003 Compliance

This device meets the CAN ICES-3 (A)/NMB-3(A) standards requirements.

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:

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

Cautions:

- Make sure the power supply voltage is correct before using the camera.
- Do not drop the camera or subject it to physical shock.
- Do not touch sensor modules with fingers. If cleaning is necessary, use a clean cloth with a bit of ethanol and wipe it gently. If the camera will not be used for an extended period of time, put on the lens cap to protect the sensor from dirt.

- Do not aim the camera lens at the strong light such as sun or incandescent lamp. The strong light can cause fatal damage to the camera.
- The sensor may be burned out by a laser beam, so when any laser equipment is being used, make sure that the surface of the sensor not be exposed to the laser beam.
- Do not place the camera in extremely hot, cold temperatures (the operating temperature should be between -30°C to +60°C, or -40°C to +60°C if the camera model supports heater), dusty or damp environment, and do not expose it to high electromagnetic radiation.
- To avoid heat accumulation, ensure there is good ventilation to the device.
- Keep the camera away from water and any liquids.
- While shipping, pack the camera in its original, or equivalent, packing materials. Or packing the same texture.
- Improper use or replacement of the battery may result in hazard of explosion. Please use the manufacturer recommended battery type.

Notes:

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

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

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Chapter 1 System Requirement

Operating System: Microsoft Windows XP SP1 and above version

CPU: 2.0 GHz or higher

RAM: 1G or higher

Display: 1024×768 resolution or higher

Web Browser: Internet Explorer 8.0 and above version, Apple Safari 5.0.2 and above version, Mozilla Firefox 5.0 and above version and Google Chrome 18 and above version.

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, please strengthen your own protection. If the product does not work properly, please 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), please refer to *Section 2.1* ***Setting the Network Camera over the LAN***.

2.1 Setting the Network Camera over the LAN

Purpose:

To view and configure the camera via a LAN, you need to connect the network camera in the same subnet with your computer, and install the Advidia Camera Finder Utility to search and change the IP of the network camera.

2.1.1 Wiring over the LAN

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

Purpose:

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

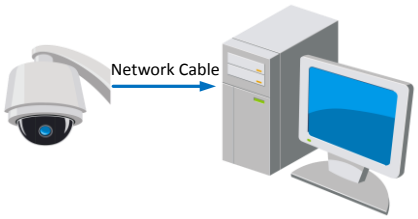

Figure 2-1 Connecting Directly

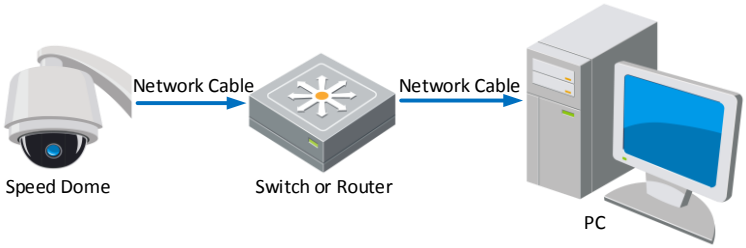

Figure 2-2 Connecting via a Switch or a Router

2.1.2 Activating the Camera

You are required to activate the camera first by setting a strong password for it before you can use the camera.

Activation via Web Browser, or Advidia Camera Finder Utility are both 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 click Enter to enter the activation interface.

Notes:

- The default IP address of the camera is 192.0.0.64.

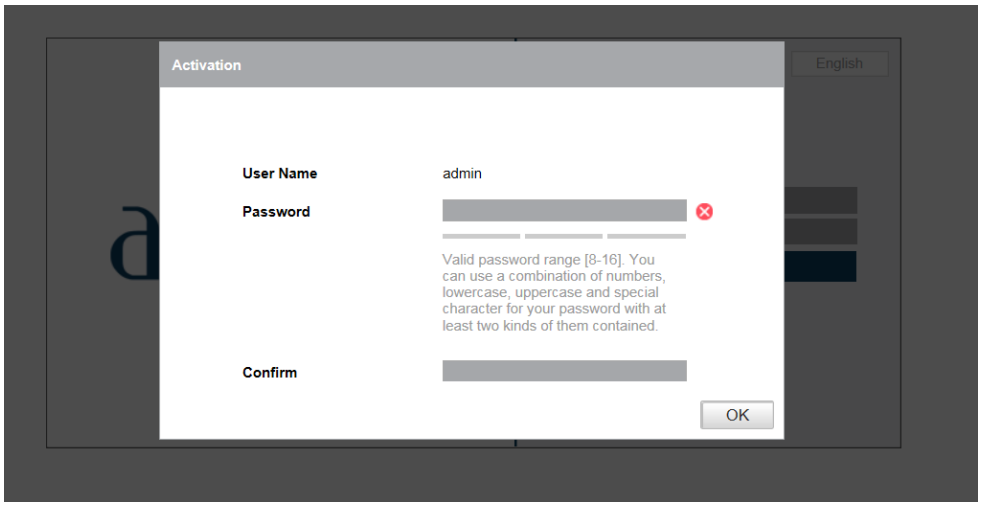

Figure 2-3 Activation via Web Browser

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

STRONG PASSWORD RECOMMENDED–We highly recommend you create a strong password 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. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

4. Confirm the password.

5. Click OK to save the password and enter the live view interface.

❖ Activation via Advidia Camera Finder Utility

Advidia Camera Finder Utility is used for detecting the online device, activating the camera, and resetting the password.

Get the Advidia Camera Finder Utility from the supplied disk or the official website, and install the Advidia Camera Finder Utility according to the prompts. Follow the steps to activate the camera.

Steps:

1. Run the Advidia Camera Finder Utility software to search the online devices.

2. Check the device status from the device list, and select the inactive device.

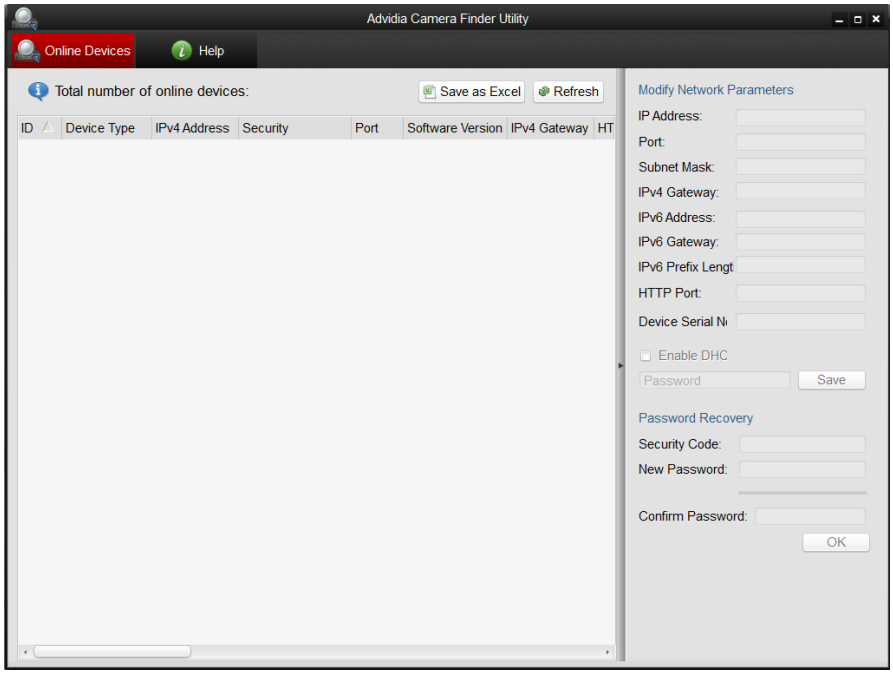

Figure 2-4 Advidia Camera Finder Utility Interface

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

> **STRONG PASSWORD RECOMMENDED**– We highly recommend you create a strong password 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. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

4. Click **OK** to save the password.

You can check whether the activation is completed on the popup window. If activation failed, please make sure that the password meets the requirement and try again.

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

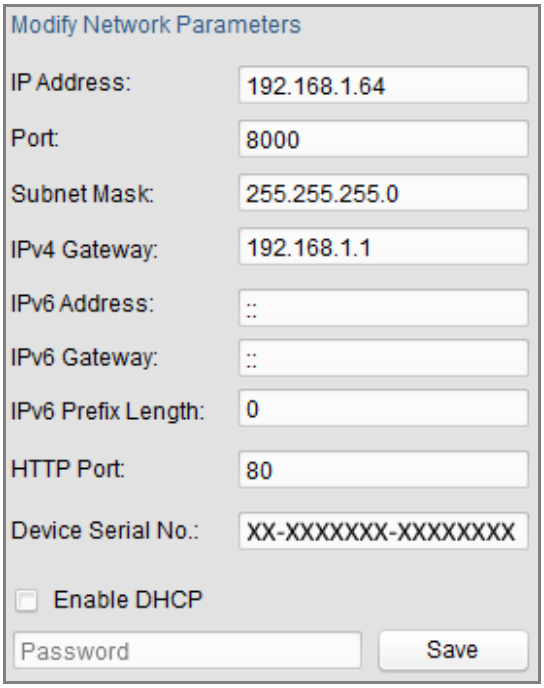

Figure 2-5 Modify the IP Address

6. Input the password and click the **Save** button to activate your IP address modification.

Chapter 3 Access to the Camera

3.1 Accessing by Web Browsers

Steps:

1. Open the web browser.
2. In the browser address bar, input the IP address of the network camera, and press the **Enter** key to enter the login interface.
3. Activate the network camera for the first time using, refer to the Section 2.1.2 for details.

   Note:

   - The default IP address is 192.0.0.64.
   - If the camera is not activated, please activate the camera first according to Chapter 2.1.2.

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 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. Please follow the installation prompts to install the plug-in.

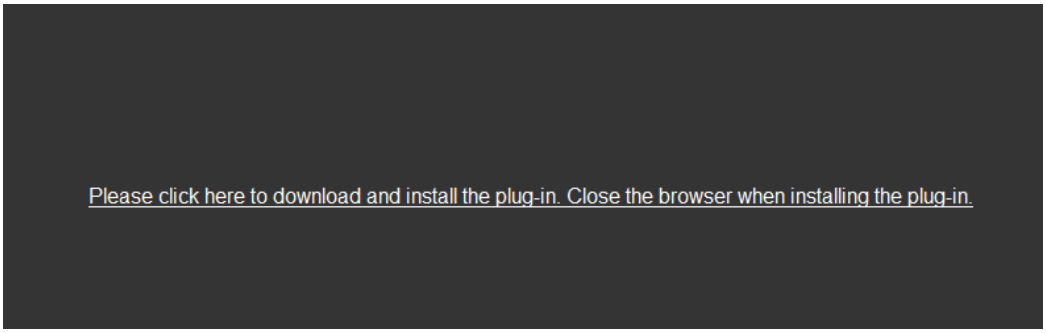

Figure 3-2 Download and Install Plug-in

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

Chapter 4 Live View

4.1 Live View Page

Purpose:

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

Log in the network camera to enter the live view page, or you can click **Live View** to enter the live view page.

Descriptions of the live view page:

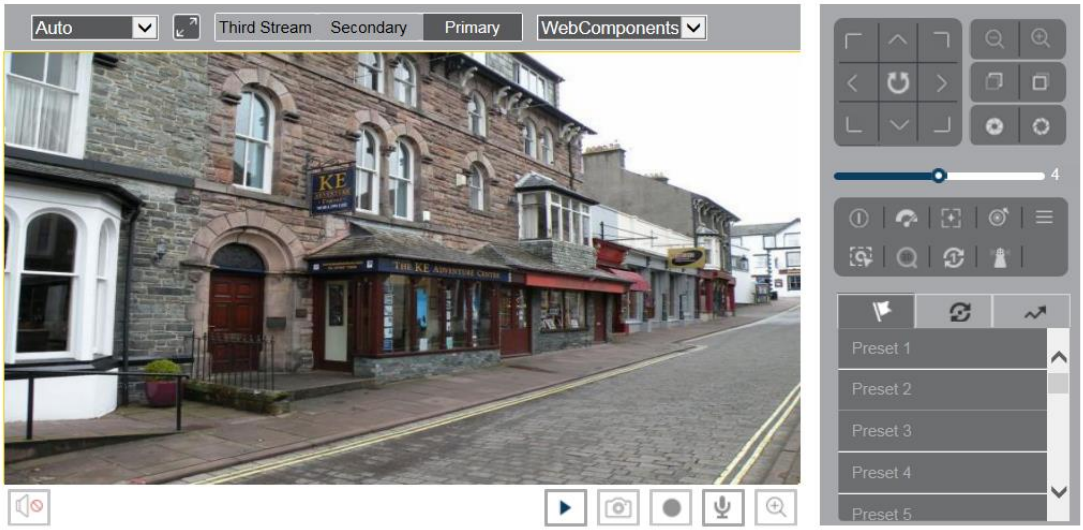

Figure 4-1 Live View Page

4.2 Starting Live View

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

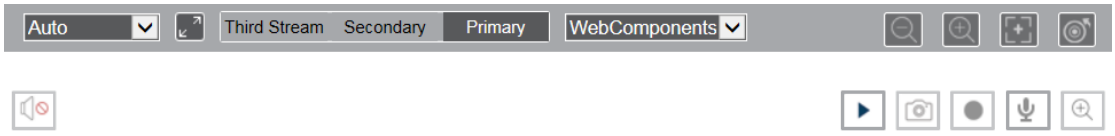

Figure 4-2 Live View Toolbar

Table 4-1 Descriptions of the Toolbar

Icon	Description

Icon	Description
/	Start/Stop live view.
Auto	The window size, 4:3, 16:9, X1 and Auto are optional.
	Full screen.
Third Stream Secondary Primary	Live view with main, sub, third stream.
WebComponents	Click to select the third-party plug-in.
	Zoom in and out
	Auto focus
	Lens initialization
	Audio on and adjust volume /Mute.
	Manually capture the picture.
	Manually start/stop recording.
	Turn on/off microphone.
	Start/stop digital zoom function.

Note: The icons vary according to the different camera models.

4.3 Operating PTZ Control

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

4.3.1 PTZ Control Panel

Click the direction buttons to control the pan/tilt movements.
Click the zoom/iris/focus buttons to realize lens control.

Figure 4-3 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 speed dome. Click and the speed dome keeps panning, the icon turns into . Click the icon again to stop the speed dome.
	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, 3D positioning, one-touch patrol, and one-touch park.
4	Speed Adjustment	Adjust speed of pan/tilt movements.
	Preset	Refer to ***Section 4.3.3 Setting/Calling a Preset*** for detailed information of setting preset.
	Patrol	Refer to ***Section 4.3.4 Setting/Calling a Patrol*** for detailed information of setting patrol.
	Pattern	Refer to ***Section 4.3.6 Setting/Calling a Pattern*** for detailed information of setting pattern.

- **Buttons on the Preset/Patrol/Patterns interface:**

Table 4-3 Descriptions of Buttons

Buttons	Description
▶	Start the selected patrol/pattern.
■	Stop current patrol/pattern.
⚙	Set the selected preset/patrol.
✕	Delete the selected preset/patrol/pattern.
◉	Start recording a pattern.
●	Stop recording the pattern.

4.3.2 Auxiliary Functions

The Auxiliary functions panel is shown in the figure below:

Figure 4-4 Auxiliary Functions

- Light

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

- Wiper

  Click to move the wiper once.

- Auxiliary Focus

  The auxiliary focus function is reserved.

- Manual Tracking

Before you start:

Enter the Smart Tracking settings interface and enable smart tracking first.

PTZ > Smart Tracking

- 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.

- One-touch Patrol

Click to call one-touch patrol. For detailed information of setting one-touch patrol.

- One-touch Park

  Click to save the current view as the preset No. 32 and start park at the the current position.

4.3.3 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 4-5 Setting a Preset

2. Use the PTZ control buttons to move the lens to the desired position.
   - Pan the speed dome to the right or left.
   - Tilt the speed dome 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 256 presets.

- **Calling a Preset:**

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

Notes:

- The following presets are predefined with special commands. You can only call them but not configure them. For instance, preset 99 is the "Start auto scan". If you call the preset 99, the speed dome starts auto scan function.
- Preset function varies depending on the speed dome models.

Table 4-4 Special Presets

Preset	Function	Preset	Function
33	Auto flip	92	Start to set limit stops
34	Back to initial position	93	Set limit stops manually
35	Call patrol 1	94	Remote reboot
36	Call patrol 2	95	Call OSD menu
37	Call patrol 3	96	Stop a scan
38	Call patrol 4	97	Start random scan
39	Day mode (IR cut filter in)	98	Start frame scan
40	Night mode (IR cut filter out)	99	Start auto scan
41	Call pattern 1	100	Start tilt scan
42	Call pattern 2	101	Start panorama scan
43	Call pattern 3	102	Call patrol 5
44	Call pattern 4	103	Call patrol 6
45	One-touch Patrol	104	Call patrol 7

90	Wiper	105	Call patrol 8

Note:

You may need to use the OSD (On Screen Display) menu when controlling the speed dome remotely. To display the OSD menu on the live view screen, you can call the preset number 95.

4.3.4 Setting/Calling a Patrol

A patrol is a memorized series of preset function. It can be configured and called on the patrol settings interface. There are up to 8 patrols for customizing. A patrol can be configured with 32 presets.

Before you start:

Make sure that the presets you want to add into a patrol have been defined.

- **Setting a Patrol:**

Steps:

1. In the PTZ control panel, click to enter the patrol settings interface.
2. Select a patrol number from the list and click .
3. Click + to enter the adding interface of preset.
4. Configure the preset number, patrol time and patrol speed.

Name	Description
Patrol Time	It is the duration staying on one patrol point. The speed dome moves to another patrol point after the patrol time.
Patrol Speed	It is the speed of moving from one preset to another.

5. Click **OK** to save a preset into the patrol.
6. Repeat the steps from 3 to 5 to add more presets.
7. Click **OK** to save all the patrol settings.

- **Calling a Patrol:**

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

4.3.5 One-touch Patrol

One-touch patrol is an automatically created patrol. The system automatically add preset No.1 to No.32 to the patrol path 8. You can call the one-touch patrol and the speed dome moves as the patrol path 8 automatically.

Steps:

1. Set preset No.1 to No.32. Refer to ***Section 4.3.3 Setting/Calling a Preset*** for detailed information of setting preset.
2. Call preset No. 45, and the speed dome moves as patrol path 8.
3. Click to enter the patrol settings interface and start/stop one-touch patrol, edit the patrol time and the speed.
4. You can click of the PTZ control panel to start one-touch patrol.

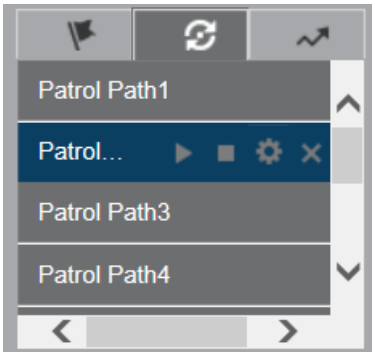

Figure 4-6 Patrol Path 8

4.3.6 Setting/Calling a Pattern

A pattern is a memorized series of pan, tilt, zoom, and preset functions. It can be called on the pattern settings interface. There are up to 4 patterns for customizing.

Note:

Pattern function varies depending on the speed dome models.

- **Setting a Pattern:**

Steps:

1. In the PTZ control panel, click to enter the pattern settings interface.

2. Select a pattern number from the list as shown in Figure 4-7.

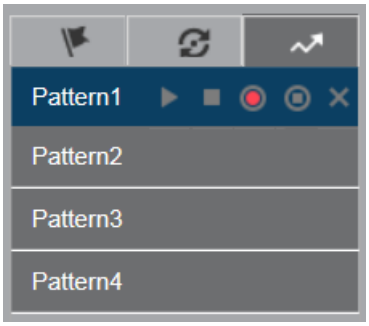

Figure 4-7 Patterns Settings Interface

3. Click to enable recording the panning, tilting and zooming actions.
4. Use the PTZ control buttons to move the lens to the desired position after the information of **PROGRAM PATTERN REMAINNING MEMORY %)** is displayed on the screen.

- Pan the speed dome to the right or left.
- Tilt the speed dome up or down.
- Zoom in or out.
- Refocus the lens.

5. Click to save all the pattern settings.

- **Buttons on the Patterns interface:**

Table 4-5 Descriptions of the Buttons

Buttons	Description
▶	Start the selected patrol/pattern.
■	Stop current patrol/pattern.
⚙	Set the selected preset/patrol.
✕	Delete the selected preset/patrol/pattern.
◉	Start recording a pattern.
◉	Stop recording the pattern.

Notes:

These 4 patterns can be operated separately and with no priority level.

When configuring and calling the pattern, proportional pan is valid; the limit stops and auto flip will be invalid; and the 3D positioning operation is not supported.

4.4 Recording and Capturing Pictures Manually

In the live view interface, click on the toolbar to capture the live pictures or click to record the live view. The saving paths of the captured pictures and clips can be set on the **System > Local** page.

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

Chapter 5 Basic Configuration

5.1 Configuring Local Parameters

Purpose:

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

Steps:

1. Enter the Local Configuration interface: **System** > **Local**.

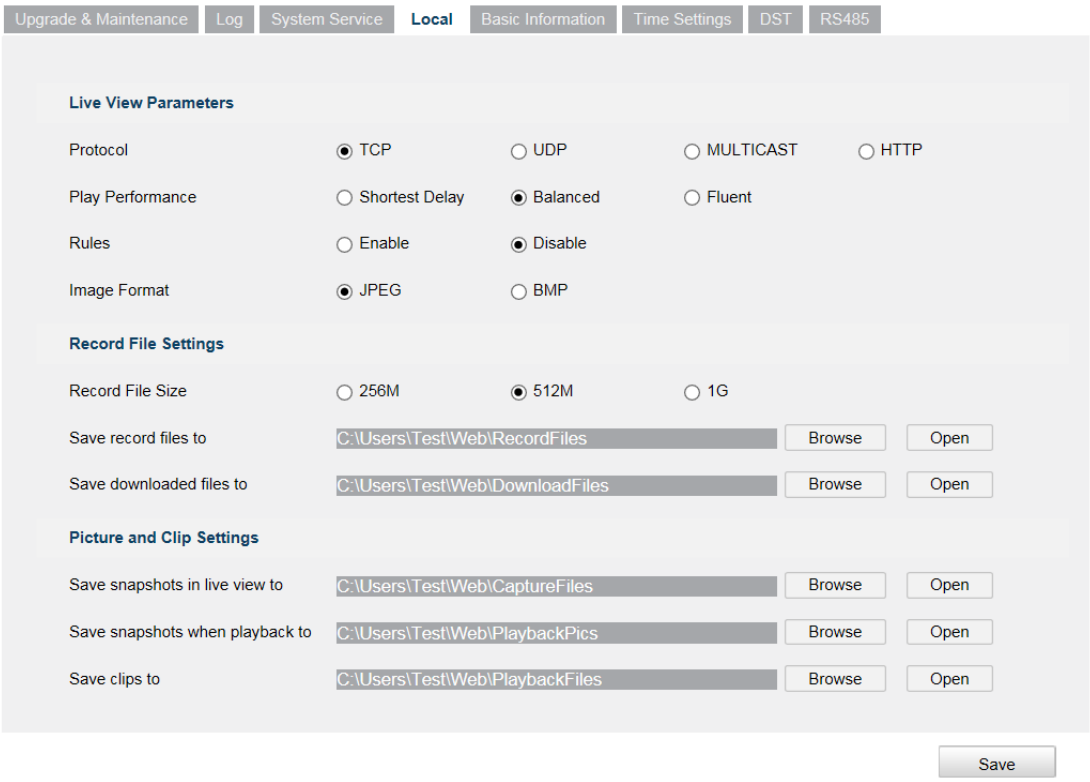

Figure 5-1 Local Configuration Interface

2. Configure the following settings:

- **Live View Parameters:** Set the protocol type and live view performance.
  - ♦ **Protocol Type:** TCP, UDP, MULTICAST and HTTP are selectable.

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

UDP: Provides real-time audio and video streams.

HTTP: Allows the same quality as of TCP without setting specific ports for streaming under some network environments.

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

- **Play Performance:** Set the play performance to Shortest Delay or Auto.
- **Rules:** It refers to the rules on your local browser, select enable or disable to display or not display the colored marks when the motion detection, face detection, or intrusion detection is triggered. E.g., enabled as the rules are, and the face detection is enabled as well, when a face is detected, it will be marked with a green rectangle on the live view.
- **Image Format:** Choose the image format for picture capture.

- **Record File Settings:** Set the saving path of the recorded video files. Valid for the record files you recorded with the web browser.
  - **Record File Size:** Select the packed size of the manually recorded and downloaded video files to 256M, 512M or 1G. After the selection, the maximum record file size is the value you selected.
  - **Save record files to:** Set the saving path for the manually recorded video files.
  - **Save downloaded files to:** Set the saving path for the downloaded video files in playback mode.
- **Picture and Clip Settings:** Set the saving paths of the captured pictures and clipped video files. Valid for the pictures you capture with the web browser.
  - **Save snapshots in live view to:** Set the saving path of the manually captured pictures in live view mode.
  - **Save snapshots when playback to:** Set the saving path of the captured pictures in playback mode.
  - **Save clips to:** Set the saving path of the clipped video files in playback mode.
  - ***Note*:** You can click **Browse** to change the directory for saving the clips and pictures, and click Open to open the set folder of clips and picture saving.

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

5.2 Configure System Settings

Purpose:

Follow the instructions below to configure the system settings, include System Settings, Maintenance, Security, and User Management, etc.

5.2.1 Configuring Basic Information

Enter the Device Information interface: **System** > **Basic Information**.

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

Figure 5-2 Basic Information

5.2.2 Configuring Time Settings

Purpose:

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

Steps:

1. Enter the Time Settings interface, **System> Time Settings**.

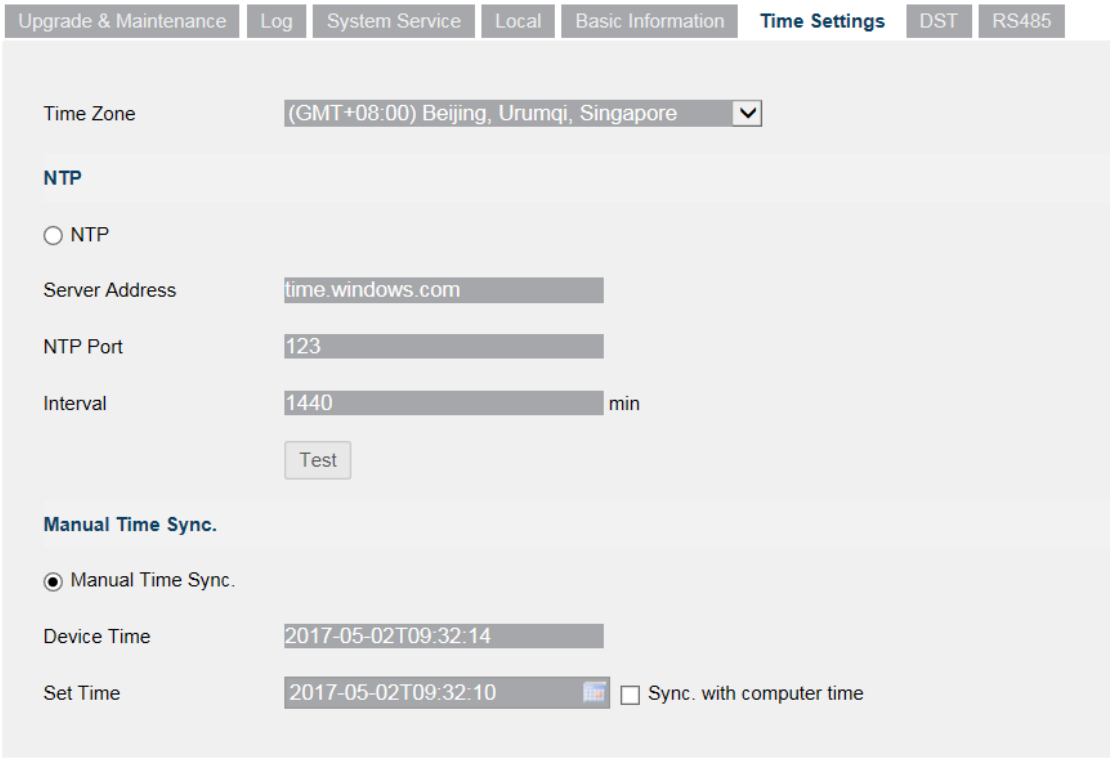

Figure 5-3 Time Settings

2. Select the Time Zone of your location from the drop-down menu.
3. Configure the NTP settings.
   (1) Click to enable the **NTP** function.
   (2) Configure the following settings:
   Server Address: IP address of NTP server.
   NTP Port: Port of NTP server.
   Interval: The time interval between the two synchronizing actions with NTP server.
   (3) (Optional) You can click the **Test** button to test the time synchronization function via NTP server.

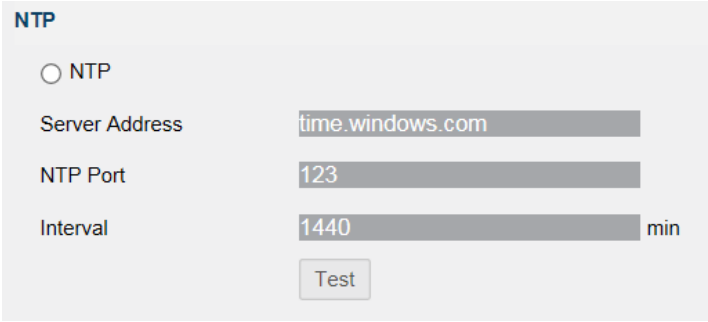

Figure 5-4 Time Sync by NTP Server

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

- Configure the manual time synchronization.
  (1) Check the **Manual Time Sync.** item to enable the manual time synchronization function.
  (2) Click the icon to select the date, time from the pop-up calendar.
  (3) (Optional) You can check **Sync. with computer time** item to synchronize the time of the device with that of the local PC.

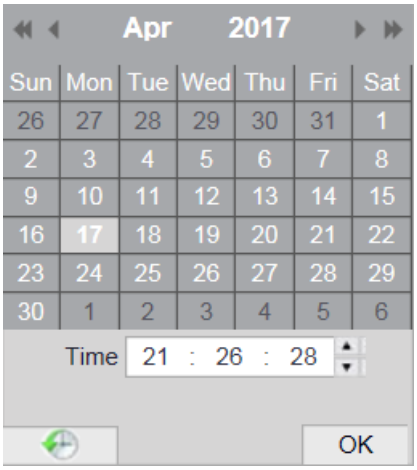

Figure 5-5 Time Sync Manually

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

5.2.3 Configuring RS485 Settings

Purpose:

The RS485 serial port is used to control the PTZ of the camera. The configuring of the PTZ parameters should be done before you control the PTZ unit.

Steps:

1. Enter RS-485 Port Setting interface: **System** > **RS485**.

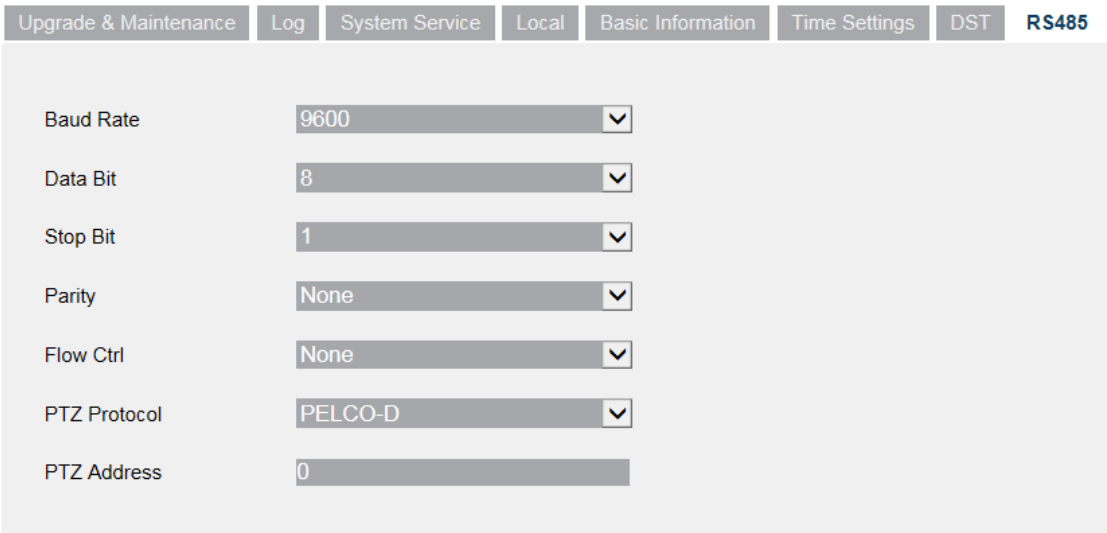

Figure 5-6 RS-485 Settings

2. Set the RS485 parameters and click **Save** to save the settings.

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

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

5.2.4 Configuring DST Settings

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.

Configure the DST according to your actual demand.

Steps:

1. Enter the DST configuration interface.

   System > **DST**

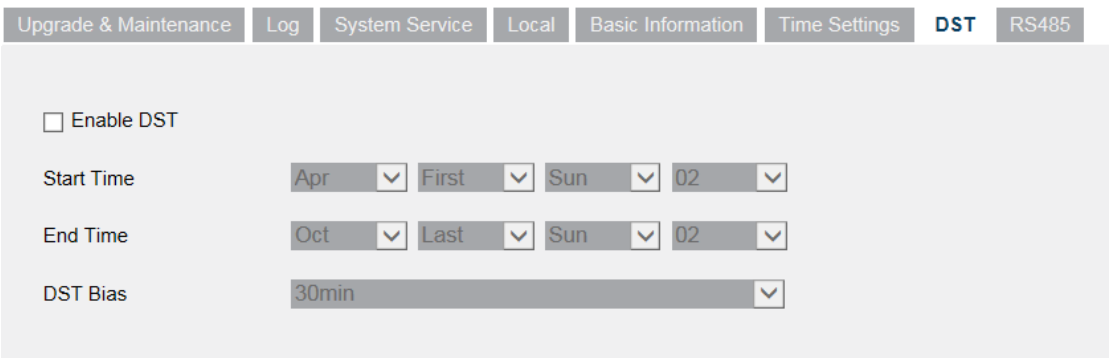

Figure 5-7 DST Settings

2. Select the start time and the end time.
3. Select the DST Bias.
4. Click **Save** to activate the settings.

5.3 Maintenance

5.3.1 Upgrade & Maintenance

The upgrade & maintenance interface allows you to process the operations, including reboot, partly restore, restore to default, export/import the configuration files, and upgrade the device.

Enter the Maintenance interface:

System > **Upgrade & Maintenance**

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

  Note: After restoring the default settings, the IP address is also restored to the default IP address, please be careful for this action.
- **Export/Import Config. File:** Configuration file is used for the batch configuration of the camera, which can simplify the configuration steps when there are a lot of cameras needing configuring.

  Steps:

  1. Click **Device Parameters** to export the current configuration file, and save it

to certain place.

2. Click **Browse** to select the saved configuration file and then click **Import** to start importing configuration file.

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

- **Upgrade**: Upgrade the device to a certain version.

Steps:

1. Select firmware or firmware directory to locate the upgrade file.

   Firmware: Locate the exact path of the upgrade file.

   Firmware Directory: Only the directory the upgrade file belongs to is required.

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

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

5.3.2 Log

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

Before you start:

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

Steps:

1. Enter log searching interface: **System** > **Log**.

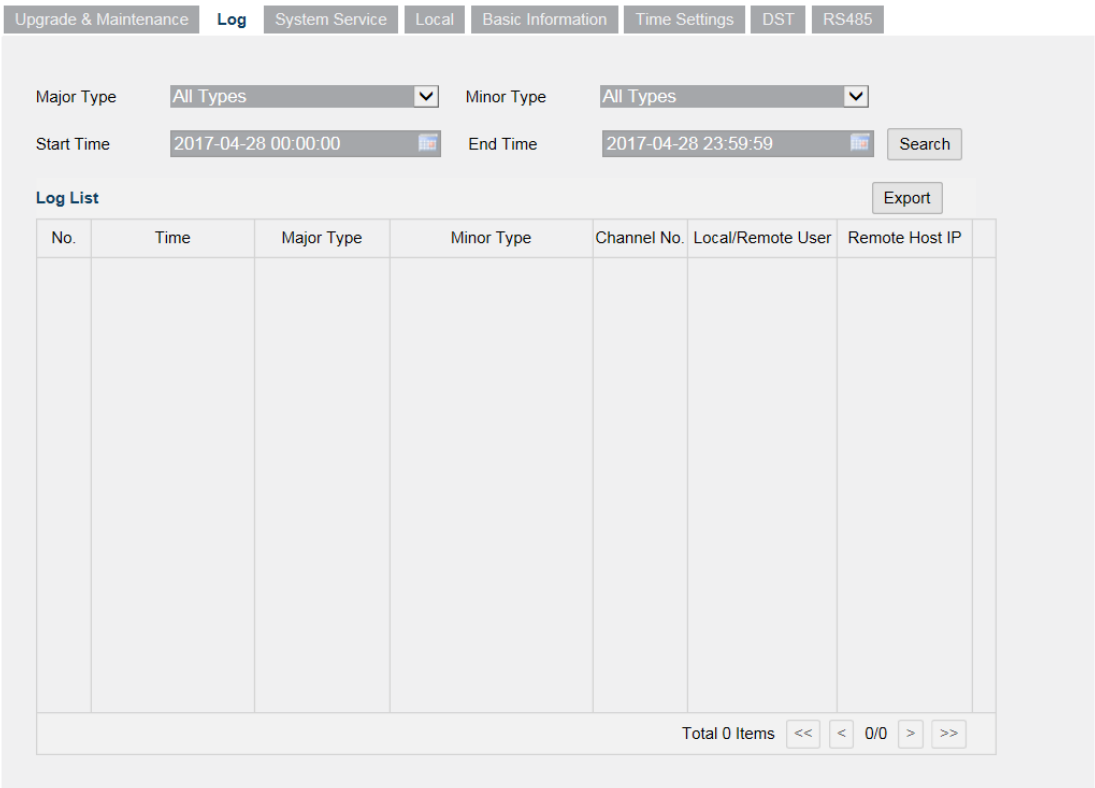

Figure 5-8 Log Searching Interface

2. Set the log search conditions to specify the search, including the Major Type, Minor Type, Start Time and End Time.
3. Click **Search** to search log files. The matched log files will be displayed on the log list interface.
4. To export the log files, click **Export** to save the log files.

5.3.3 System Service

System service settings refer to the software and hardware service the camera supports. Supported functions vary according to the different cameras. For the cameras support IR LED, ABF (Auto Back Focus), Auto Defog, or Status LED, you can select to enable or disable the corresponding service according to the actual demands.

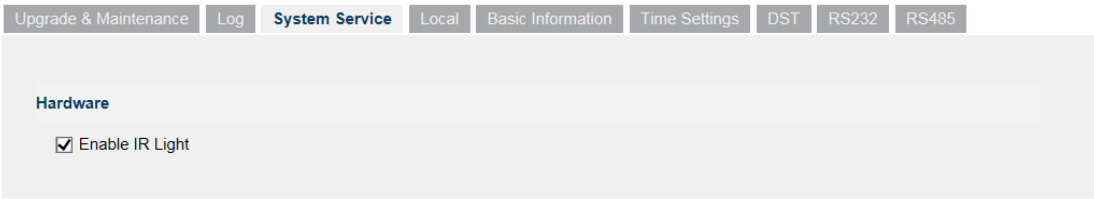

Figure 5-9 Enable IR Light

5.4 Security Settings

Configure the parameters, including Authentication, Anonymous Visit, IP Address Filter, and Security Service from security interface.

5.4.1 Authentication

Purpose:

You can specifically secure the stream data of live view.

Steps:

1. Enter the Authentication interface: **Security** > **Authentication.**

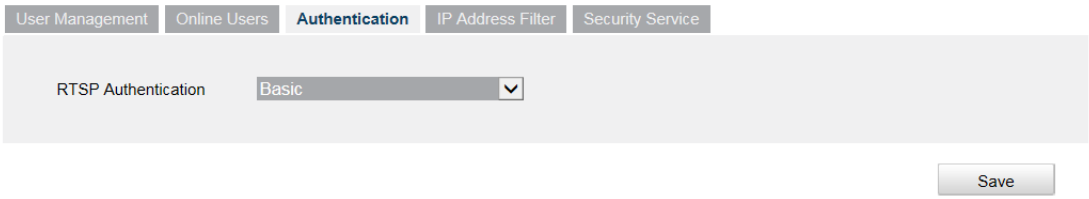

Figure 5-10 RTSP Authentication

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

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

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

5.4.2 IP Address Filter

This function makes it possible for access control.

Steps:

1. Enter the IP Address Filter interface: **Security** > **IP Address Filter**

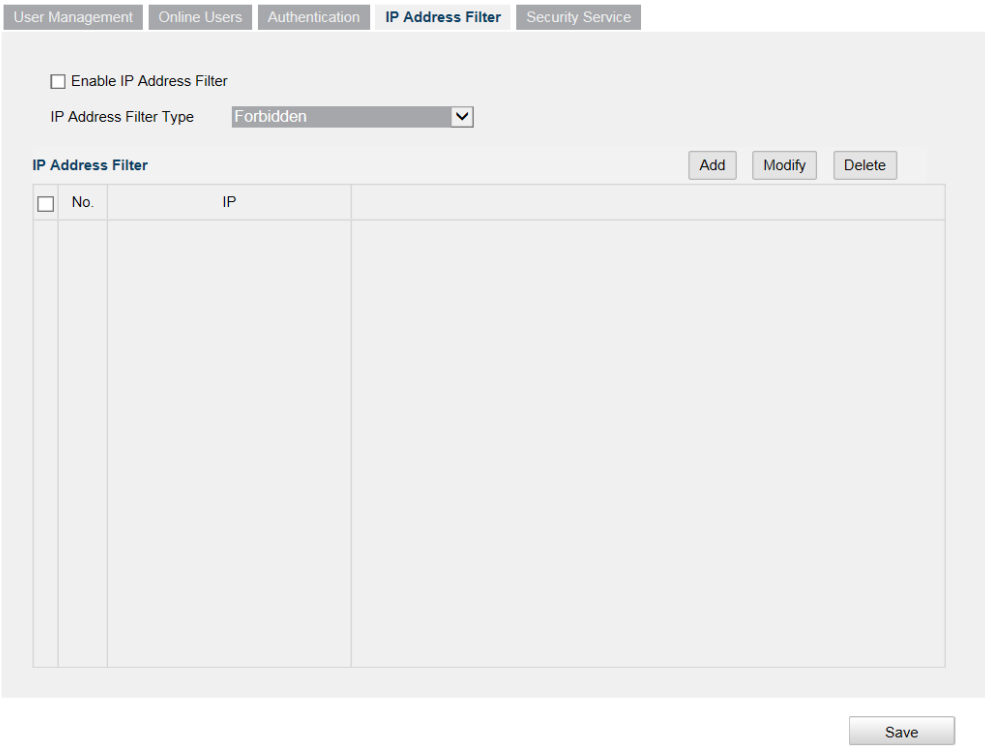

Figure 5-11 IP Address Filter Interface

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

     Steps:

     (1) Click the **Add** to add an IP.

     (2) Input the IP Adreess.

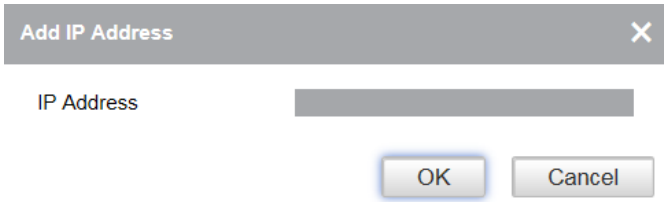

Figure 5-12 Add an IP

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

- Modify an IP Address

  Steps:

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

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

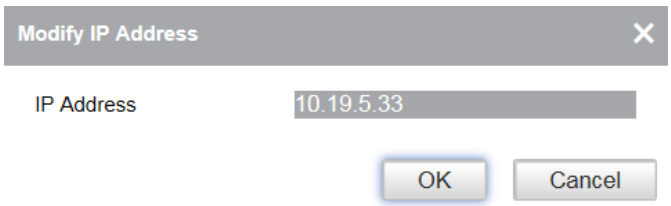

Figure 5-13 Modify an IP

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

- Delete an IP Address or IP Addresses.

  Select the IP address(es) and click **Delete**.

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

5.4.3 Security Service

To enable the remote login, and improve the data communication security, the camera provides the security service for better user experience.

Steps:

1. Enter the security service configuration interface: **Security** > **Security Service**.

Figure 5-14 Security Service

2. Check the checkbox of **Enable SSH** to enable the data communication security, and uncheck the checkbox to disable the SSH.
3. Check the checkbox of **Enable Illegal Login Lock**, and then the IP address will be locked if the admin user performs 7 failed user name/password attempts (5 times for the operator/user).

Note: If the IP address is locked, you can try to login the device after 30 minutes.

5.5 User Management

5.5.1 User Management

The admin user can add, delete or modify user accounts, and grant them different permissions. We highly recommend you manage the user accounts and permissions properly.

Steps:

1. Enter the User Management interface: **Security >User Management**

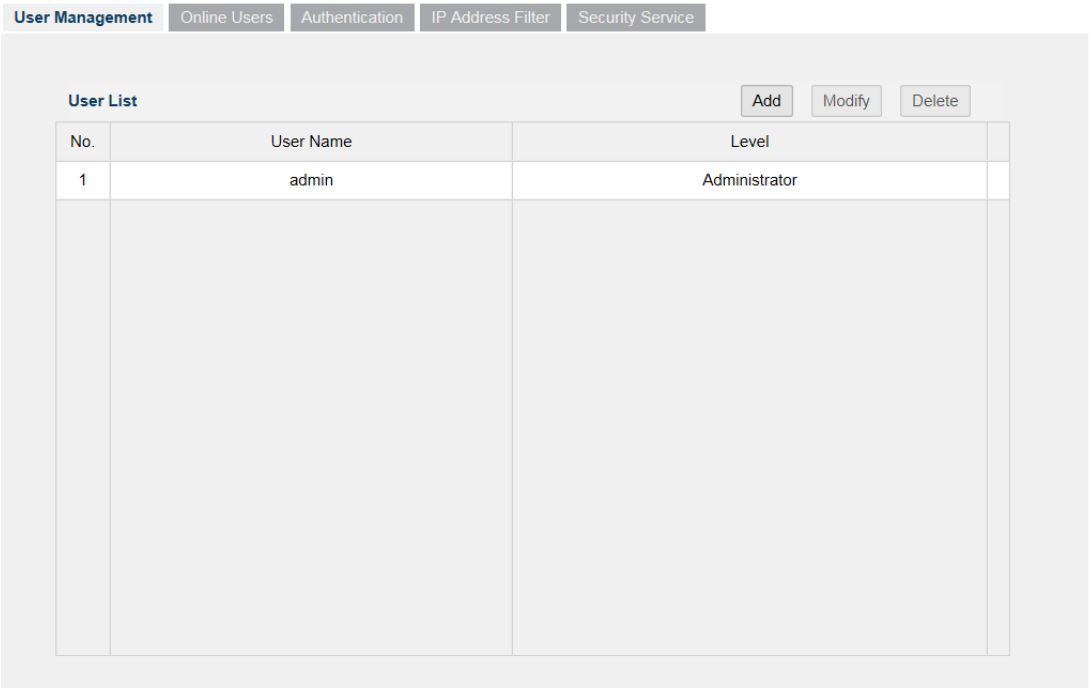

Figure 5-15 User Management Interface

- **Adding a User**

The *admin* user has all permissions by default and can create/modify/delete other accounts.

The *admin* user cannot be deleted and you can only change the *admin* password.

Steps:

1. Click **Add** to add a user.

2. Input the **User Name**, select **Level** and input **Password.**

Notes:

- Up to 31 user accounts can be created.
- Users of different levels own different default permissions. Operator and user are selectable.

STRONG PASSWORD RECOMMENDED–We highly recommend you create a strong password 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. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

3. You can check or uncheck the permissions for the new user.
4. Click **OK** to finish the user addition.

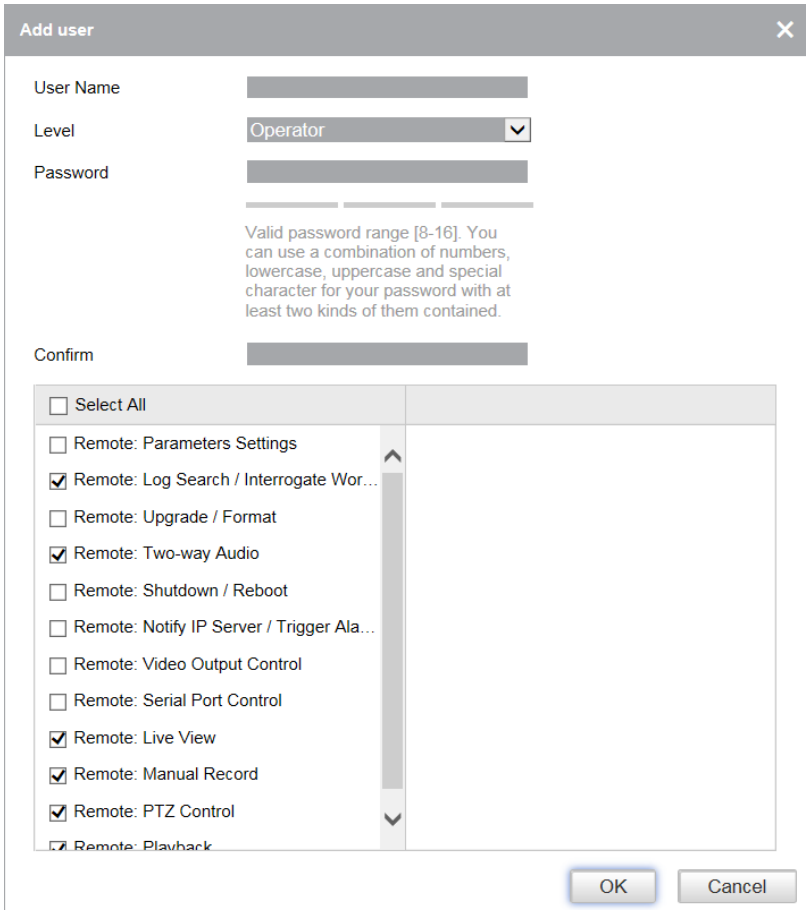

Figure 5-16 Add a User

- **Modifying a User**

Steps:

1. Left-click to select the user from the list and click **Modify**.
2. Modify the **User Name**, **Level** and **Password**.

STRONG PASSWORD RECOMMENDED–We highly recommend you create a strong password 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. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

3. You can check or uncheck the permissions.
4. Click **OK** to finish the user modification.

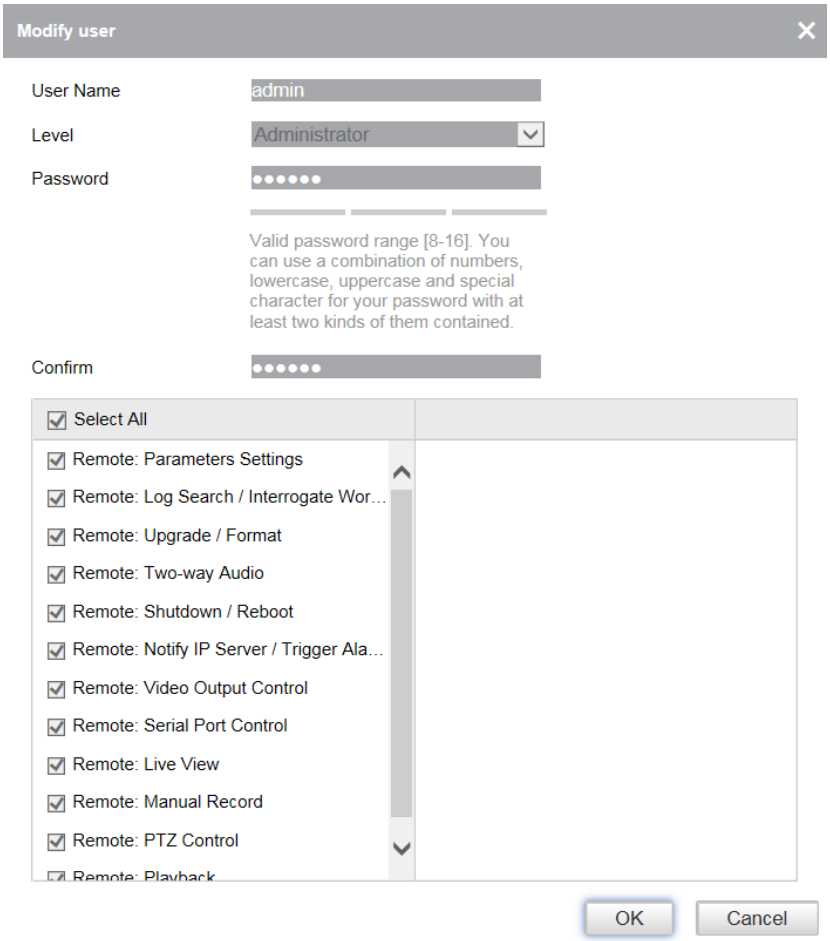

Figure 5-17 Modify a User

- **Deleting a User**

Steps:

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

5.5.2 Online Users

Purpose:

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.

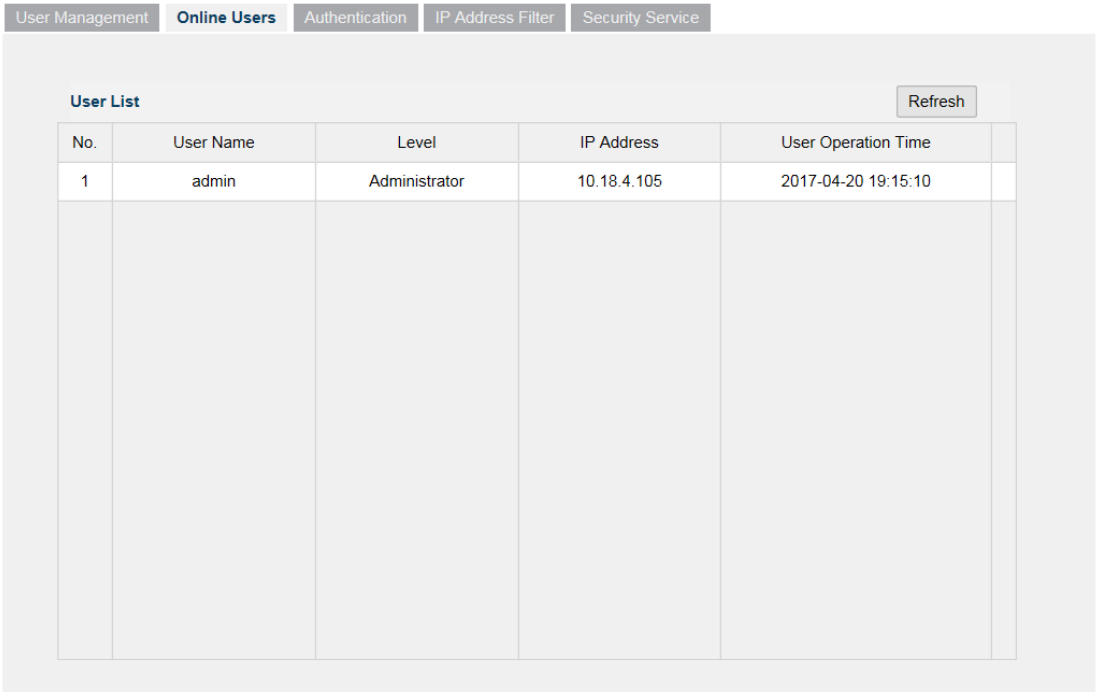

Figure 5-18 View the Online Users

Chapter 6 Network Settings

Follow the instructions in this chapter to configure the basic settings and advanced settings.

6.1 Configuring Basic Settings

Purpose:

You can configure the parameters, including TCP/IP, DDNS, PPPoE, Port, and NAT, etc., by following the instructions in this section.

6.1.1 Configuring TCP/IP Settings

Purpose:

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

Steps:

1. Enter TCP/IP Settings interface: **Network > TCP/IP**

Figure 6-1 TCP/IP Settings

2. Configure the basic network settings, including the NIC Type, IPv4 or IPv6 Address, IPv4 or IPv6 Subnet Mask, IPv4 or IPv6 Default Gateway, MTU settings and Multicast Address.
3. (Optional) Check the checkbox of **Enable Multicast Discovery**, and then the online network camera can be automatically detected by client software via private multicast protocol in the LAN.
4. Configure the DNS server. Input the preferred DNS server, and alternate DNS server.
5. Click **Save** to save the above settings.

***Notes*:**

- The valid value range of 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.
- A reboot is required for the settings to take effect.

6.1.2 Configuring DDNS Settings

Purpose:

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

***Before you start*:**

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

Steps:

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

   Steps:

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

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

   (3)Enter the **User Name** and **Password** registered on the DynDNS website.

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

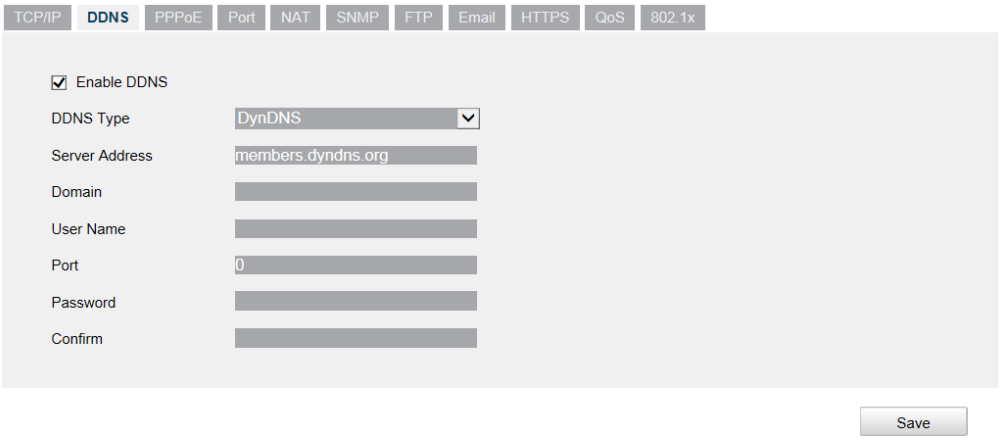

Figure 6-2 DynDNS Settings

   - NO-IP:

   Steps:

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

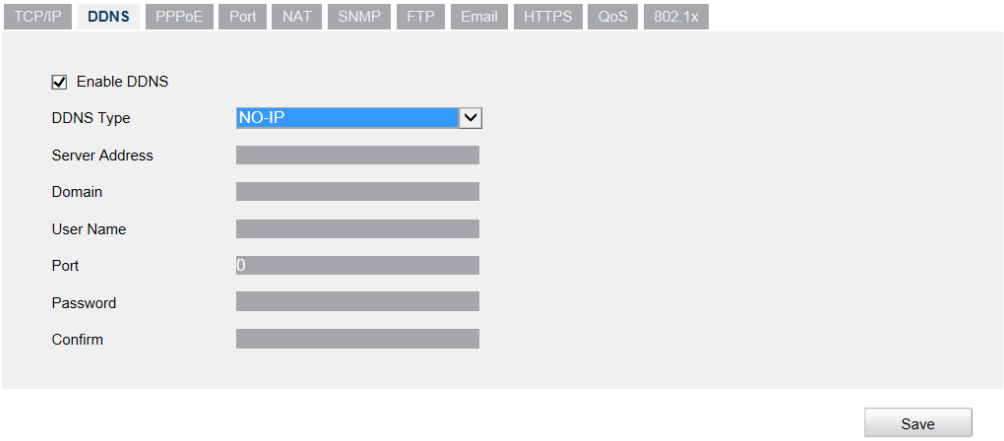

Figure 6-3 NO-IP DNS Settings

(2) Enter the Server Address as www.noip.com

(3) Enter the Domain name you registered.

(4) Enter the User Name and Password.

(5) Click **Save** and then you can view the camera with the domain name.

6.1.3 Configuring Port Settings

Purpose:

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

Steps:

1. Enter the Port Settings interface, **Network >Port**

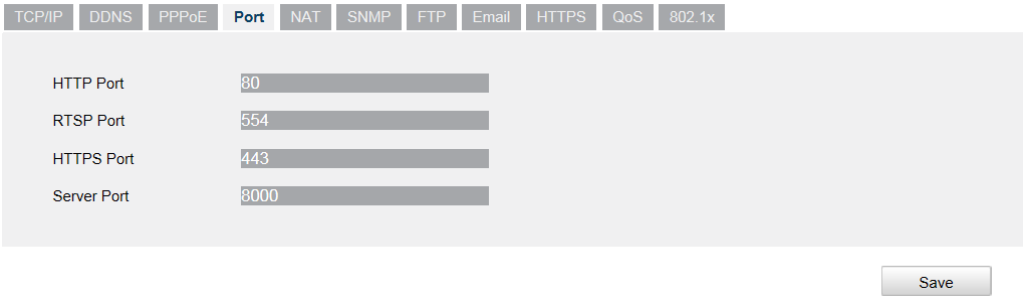

Figure 6-4 Port Settings

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

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

RTSP Port: The default port number is 554 and it can be changed to any port No. ranges from 1 to 65535.

HTTPS Port: The default port number is 443, and it can be changed to any port No. which is not occupied.

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

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

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

6.1.4 Configure NAT (Network Address Translation) Settings

Purpose:

NAT interface allows you to configure the UPnP™ parameters.

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

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

Steps:

1. Enter the NAT settings interface. **Network > NAT.**
2. Check the checkbox to enable the UPnP™ function.
3. Choose a nickname for the camera, or you can use the default name.
4. Select the port mapping mode. Manual and Auto are selectable. And for manual port mapping, you can customize the value of the external port.
5. Click **Save** to save the settings.

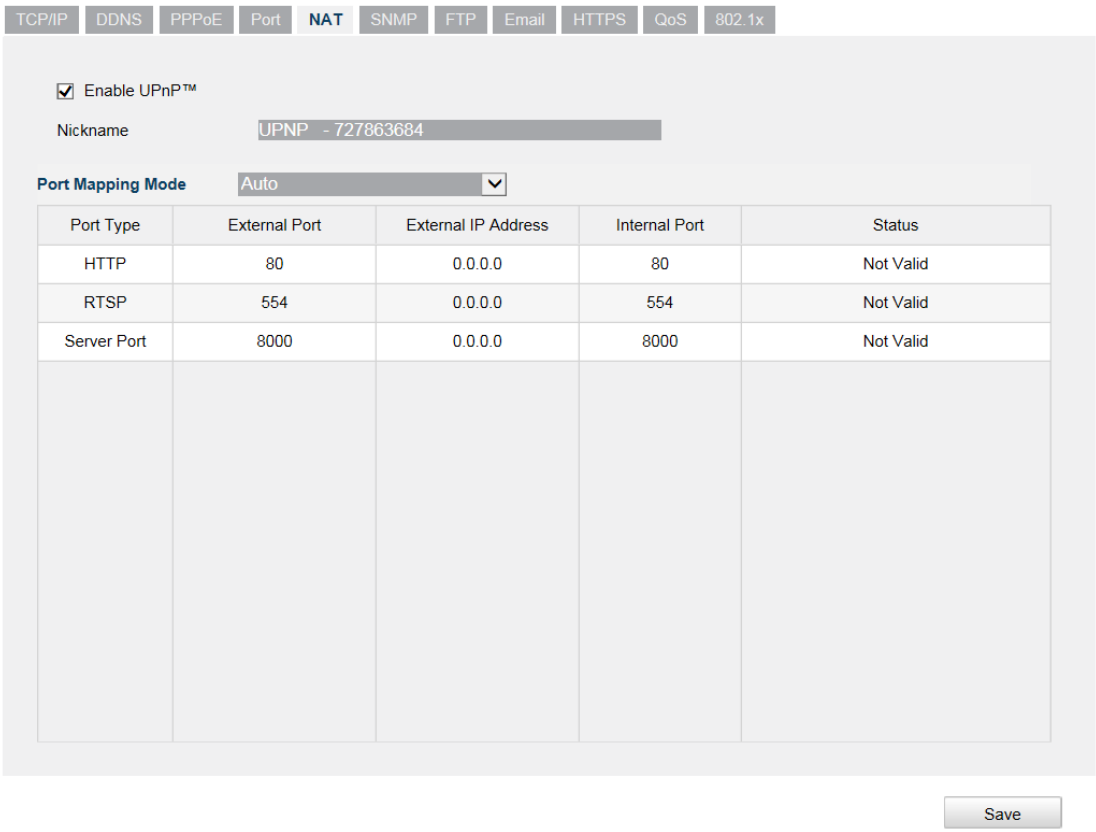

Figure 6-5 NAT Settings

6.2 Configure Advanced Settings

Purpose:

You can configure the parameters, including SNMP, FTP, Email, HTTPS, QoS, 802.1x, etc., by following the instructions in this section.

6.2.1 Configuring SNMP Settings

Purpose:

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

Before you start:

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

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

- *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.*

Steps:

1. Enter the SNMP Settings interface: **Network > SNMP**.

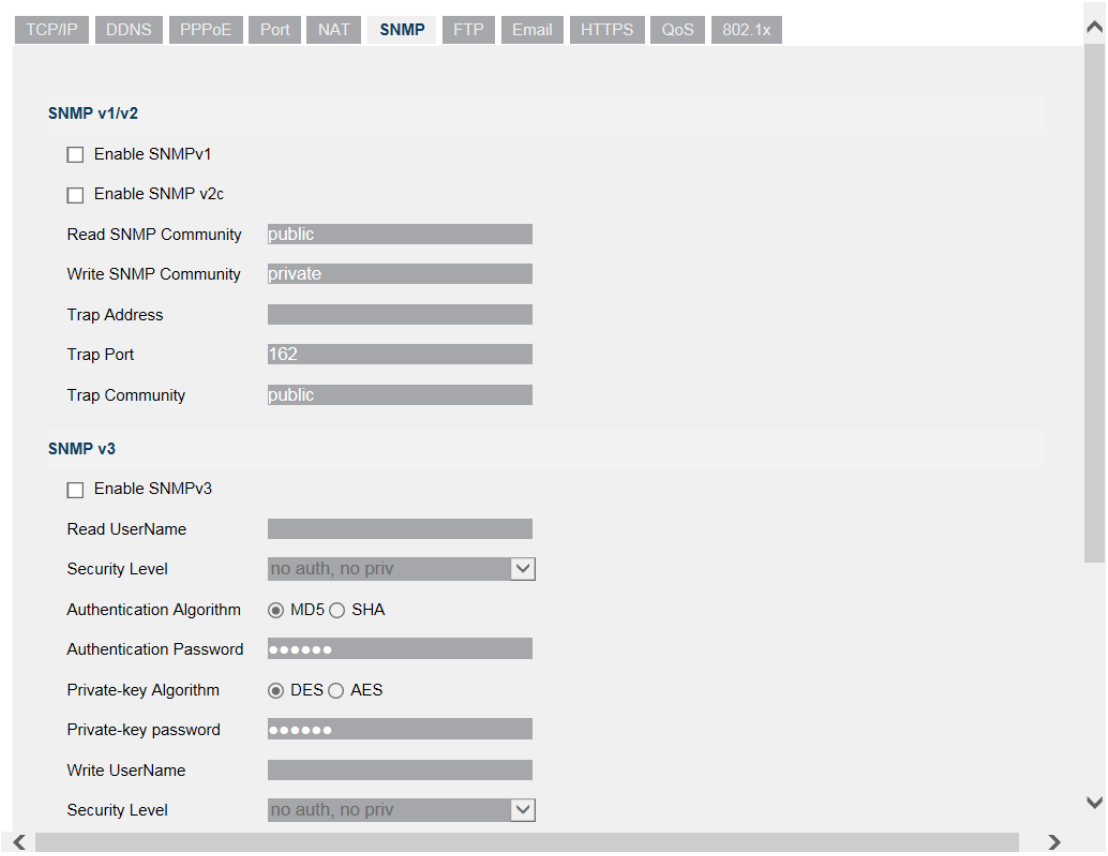

Figure 6-6 SNMP Settings

2. Check the checkbox of Enable SNMPv1, Enable SNMP v2c, Enable SNMPv3 to enable the feature correspondingly.
3. Configure the SNMP settings.

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

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

Notes:

- A reboot is required for the settings to take effect.
- To lower the risk of information leakage, you are suggested to enable SNMP v3 instead of SNMP v1 or v2.

6.2.2 Configuring FTP Settings

Purpose:

You can configure the FTP server related information to enable the uploading of the

captured pictures to the FTP server. The captured pictures can be triggered by events or a timing snapshot task.

Steps:

1. Enter the FTP Settings interface: **Network** > **FTP**.

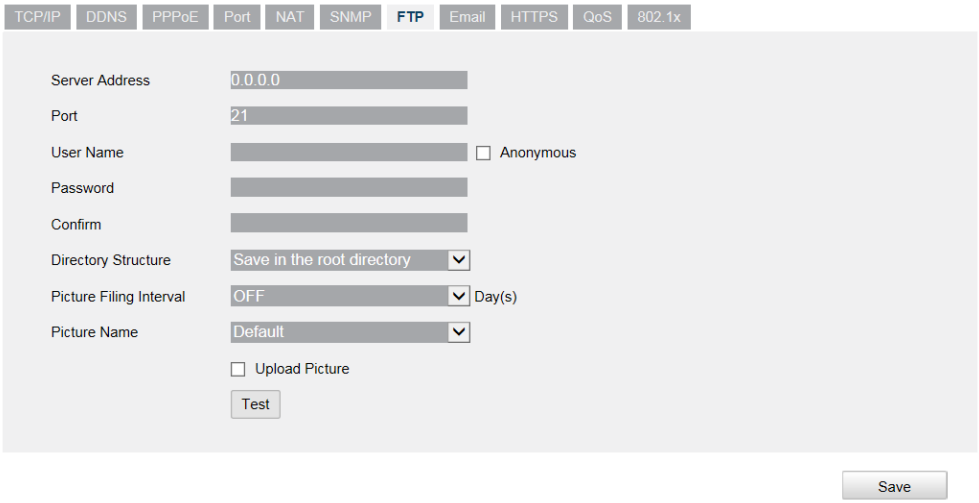

Figure 6-7 FTP Settings

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

   - *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.*

4. Set the directory structure and picture filing interval.

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

have the option to use the Device Name, Device Number or Device IP for the name of the directory; and when the Child Directory is selected, you can use the Camera Name or Camera No. as the name of the directory.

Picture Filing Interval: For better picture management, you can set the picture filing interval from 1 day to 30 days. Pictures captured in the same time interval will be saved in one folder named after the beginning date and ending date of the time interval.

Picture Name: Set the naming rule for captured picture files. You can choose **Default** in the drop-down list to use the default rule, that is,

IP address_channel number_capture time_event type.jpg

(e.g., *10.11.37.189_01_20150917094425492_FACE_DETECTION.jpg*).

Or you can customize it by adding a **Custom Prefix** to the default naming rule.

5. Check the Upload Picture checkbox to enable the function.

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

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

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

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

6.2.3 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:

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

Steps:

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

   Note: Please refer to *Section 6.1.1* ***Configuring TCP/IP Settings*** for detailed information.

2. Enter the Email Settings interface: **Network** > **Email**.

3. Configure the following settings:

   Sender: The name of the email sender.

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

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

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

   Email 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: If you want to use STARTTLS, make sure that the protocol is supported by your e-mail server. If you check the Enable STARTTLS checkbox when the protocol is not supported by your e-mail sever, your e-mail will not be encrypted.

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

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

   Authentication (optional): If your email server requires authentication, check this checkbox to use authentication to log in to this server and 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 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 **Receiver** table**:** Select the receiver to which the email is sent. Up to 3 receivers can be configured.

Receiver: The name of the user to be notified.

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

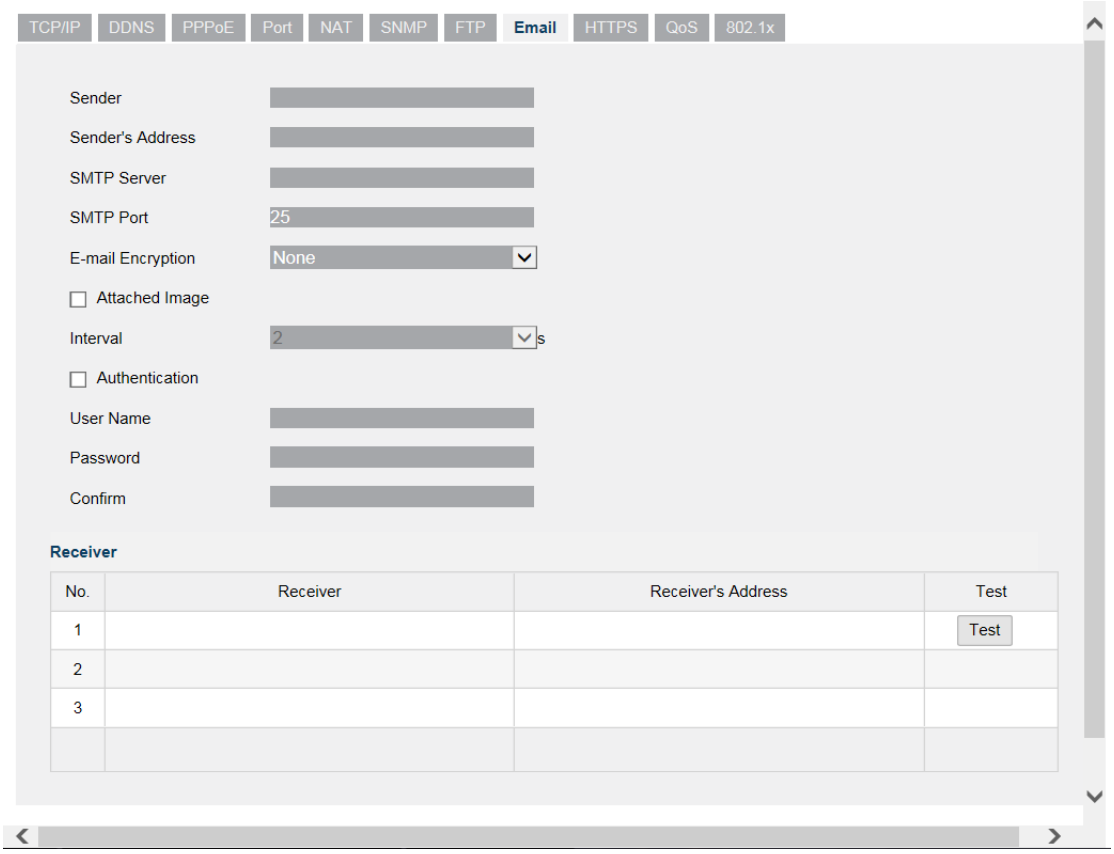

Figure 6-8 Email Settings

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

6.2.4 Configure HTTPS Settings

Purpose:

HTTPS provides authentication of the web site and its associated web server, which protects against Man-in-the-middle attacks. Perform the following steps to set the port number of https.

E.g., If you set the port number as 443 and the IP address is 192.168.1.64, you may access the device by inputting https://192.168.1.64:443 via the web browser.

Steps:

1. Enter the HTTPS settings interface. **Network > HTTPS**.
2. Check the checkbox of Enable to enable the function.

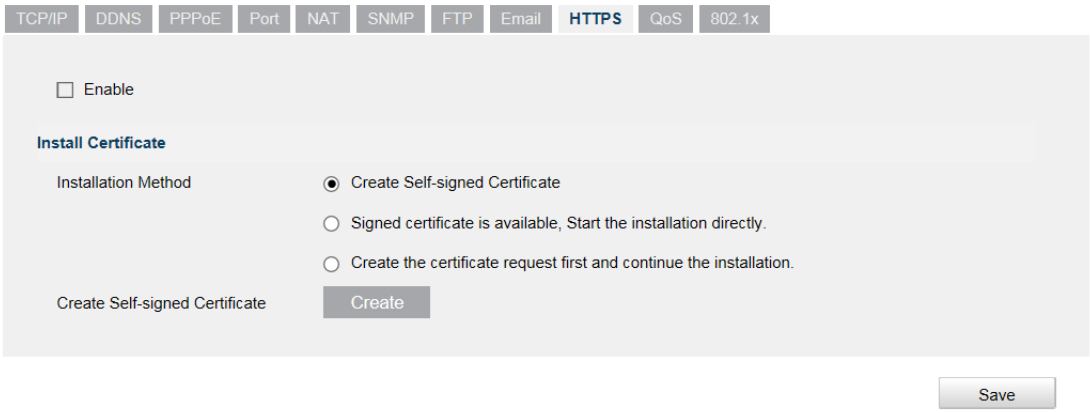

Figure 6-9 HTTPS Configuration Interface

3. Create the self-signed certificate or authorized certificate.
   - Create the self-signed certificate

   (1) Select **Create Self-signed Certificate** as the Installation Method.

   (2) Click **Create** button to enter the creation interface.

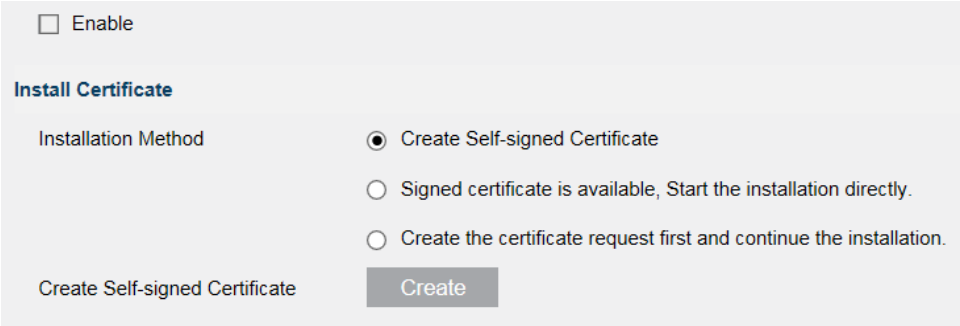

Figure 6-10 Create Self-signed Certificate

(3) Enter the country, host name/IP, validity and other information.

(4) Click **OK** to save the settings.

Note: If you already had a certificate installed, the Create Self-signed Certificate is grayed out.

- Create the authorized certificate

(1) Select **Create the certificate request first and continue the installation** as the Installation Method.

(2) Click **Create** button to create the certificate request. Fill in the required information in the popup window.

(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.

4. There will be the certificate information after your successfully creating and installing the certificate.

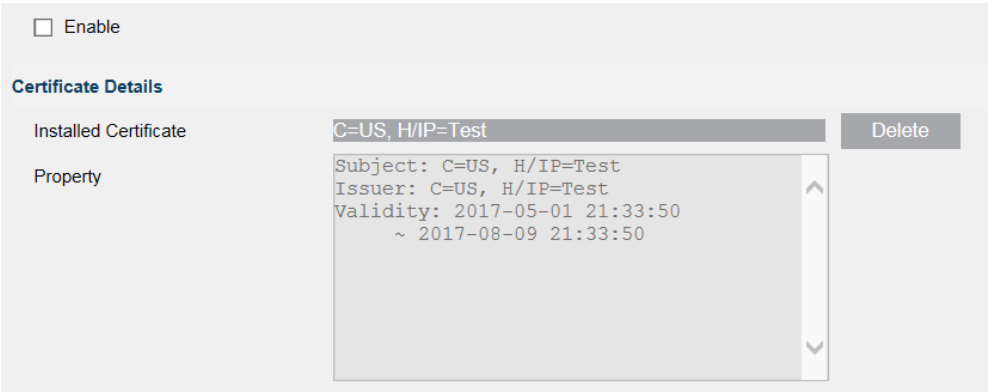

Figure 6-11 Installed Certificate

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

6.2.5 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: **Network** > **QoS**

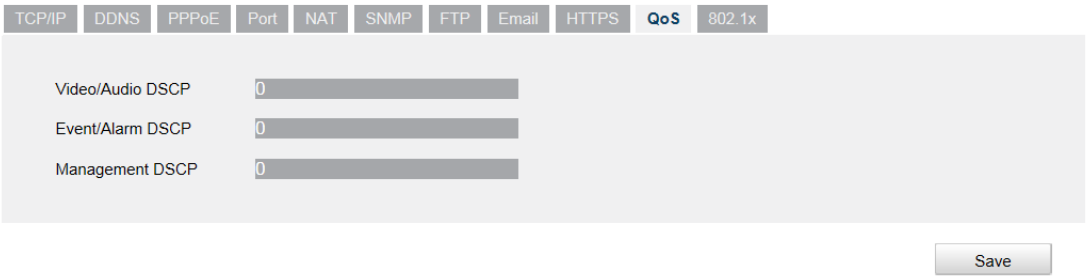

Figure 6-12 QoS Settings

2. Configure the QoS settings, including Video/Audio DSCP, Event/Alarm DSCP and Management DSCP.

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

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

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

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

6.2.6 Configuring 802.1X Settings

Purpose:

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

Before you start:

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

- *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.*

Steps:

1. Enter the 802.1X Settings interface, **Network > 802.1X**

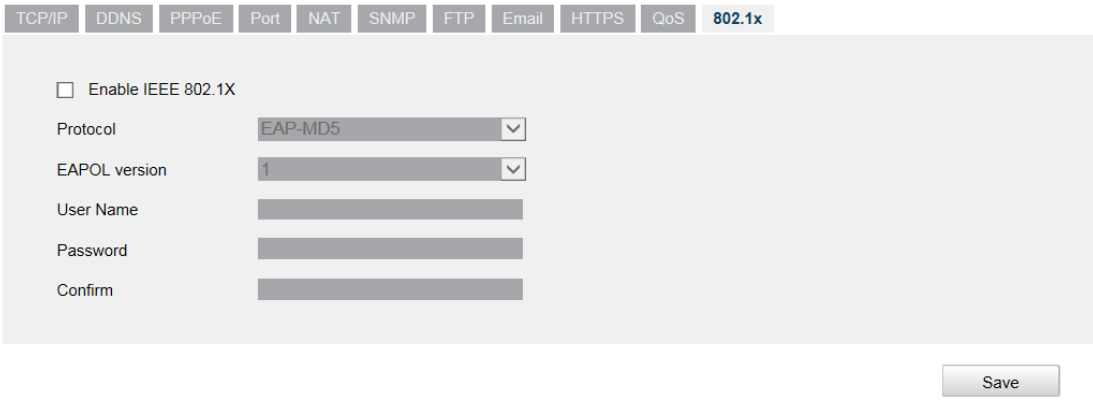

Figure 6-13 802.1X Settings

2. Check the **Enable IEEE 802.1X** checkbox to enable the feature.
3. Configure the 802.1X settings, including Protocol, EAPOL version, User Name, Password and Confirm.

   Note: The **EAPOL version** must be identical with that of the router or the switch.
4. Enter the user name and password to access the server.
5. Click **Save** to finish the settings.

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

Chapter 7 Image Settings

Purpose:

Follow the instructions below to configure the display settings, OSD settings, video setting, audio settings, ROI, and Display info. on Stream.

7.1 Configuring Display Settings

Purpose:

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

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

Steps:

1. Enter the Display Settings interface, **Image > Display Settings**.

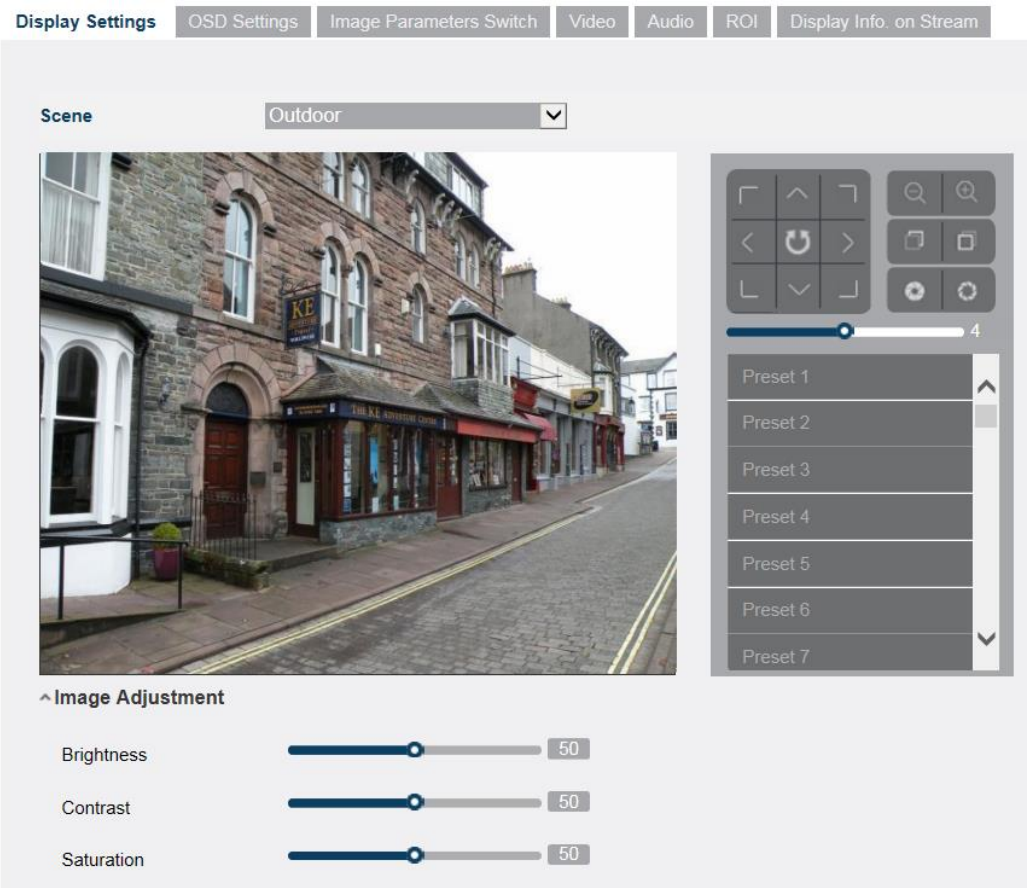

Figure 7-1 Display Settings of Day/Night Auto-Switch

2. Set the image parameters of the camera.

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

- **Scene Mode**

  Choose the scene as indoor or outdoor according to the real environment.

- **Image Adjustment**

  Brightness describes bright of the image, which ranges from 1 to 100.

  Contrast describes the contrast of the image, which ranges from 1 to 100.

  Saturation describes the colorfulness of the image color, which ranges from 1 to 100.

  Sharpness describes the edge contrast of the image, which ranges from 1 to 100.

- **Exposure Settings**

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

  ◆ **Auto:**
  The iris, shutter and gain values will be adjusted automatically according to the brightness of the environment. You can set the iris range and shutter ranges by setting the Max. Iris Limit, Min. Iris Limit, Max. Shutter Limit, and Min. Shutter Limit respectively.

  ◆ **Iris Priority:**
  The value of iris needs to be adjusted manually. The shutter and gain values will be adjusted automatically according to the brightness of the environment.

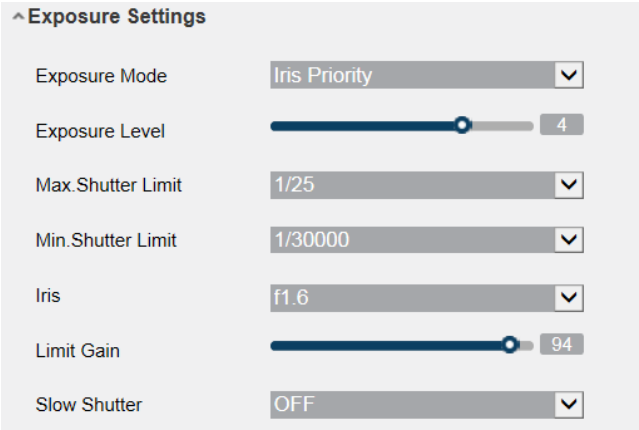

Figure 7-2 Iris Priority Mode

◆ **Shutter Priority:**

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

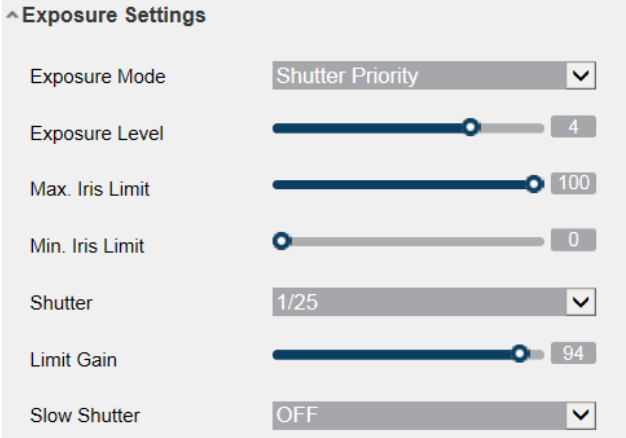

Figure 7-3 Shutter Priority Mode

◆ **Manual:**

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

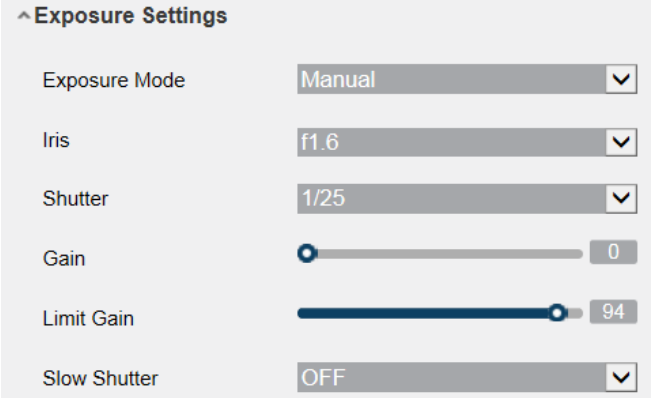

Figure 7-4 Manual Mode

- **Focus Settings**

◆ **Focus Mode:**

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

Auto: The speed dome focuses automatically at any time according to objects in the scene.

Semi-auto: The speed dome focuses automatically only once after panning, tilting and zooming.

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

◆ **Min. Focus Distance:**

This function is used to limit the minimum focus distance.

- **Day/Night Switch**

Select the Day/Night Switch mode according to different surveillance demand. Day, Night, Auto, Scheduled-Switch, and Triggered by alarm input are selectable for day/night switch.

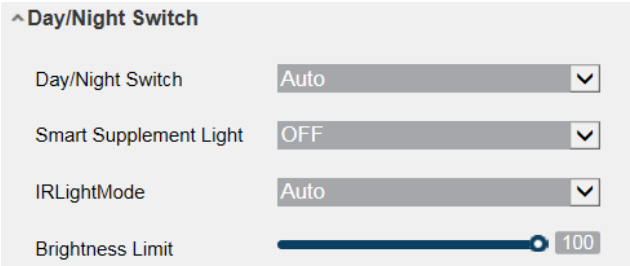

Figure 7-5 Day/Night Switch

Day: the camera stays at day mode.

Night: the camera stays at night mode.

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

Scheduled-Switch: Set the start time and the end time to define the duration for day/night mode.

Smart Supplement Light: Set the supplement light as ON, and OFF are selectable for light mode. If the light supplement is on and the image center is overexposure, you can enable this function.

IR Light Mode: The brightness of the infrared light will be adjusted automatically.

Brightness Limit value ranges from 0 to 100.

- **Backlight Settings**

BLC: If you focus on an object against strong backlight, the object will be too dark to be seen clearly. BLC compensates light to the object in the front to make it clear. OFF, Up, Down, Left, Right, 180 and Auto are selectable.

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

HLC: High Light Compression function can be used when there are strong lights

in the scene affecting the image quality.

- **White Balance**

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

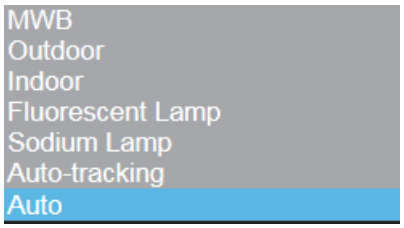

Figure 7-6 White Balance

- **Image Enhancement**

Digital Noise Reduction: DNR reduces the noise in the video stream. OFF, Normal and Expert are selectable. Set the DNR level from 0 to 100 in Normal Mode. Set the DNR level from both space DNR level [0-100] and time DNR level [0-100] in Expert Mode.

Defog Mode: You can enable the defog function when the environment is foggy and the image is misty. It enhances the subtle details so that the image appears clearer.

EIS (Electrical Image Stabilizer): EIS reduces the effects of vibration in a video.

- **Video Adjustment**

Camera Rotation: It mirrors the image so you can see it inversed. OFF and 180 are selectable.

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

Capture Mode: It's the selectable video input mode to meet the different demands of field of view and resolution.

- **Others**

Lens Initialization: The lens operates the movements for initialization when you

check the checkbox of Lens Initialization.

Zoom Limit: You can set **Zoom Limit** value to limit the maximum value of zooming. The value can be selected from the list.

Local Output: You can enable or disable the video output through the CVBS interface on your demand.

7.2 Configuring OSD Settings

Purpose:

You can customize the camera name, time/date format, display mode, and OSD size displayed on the live view.

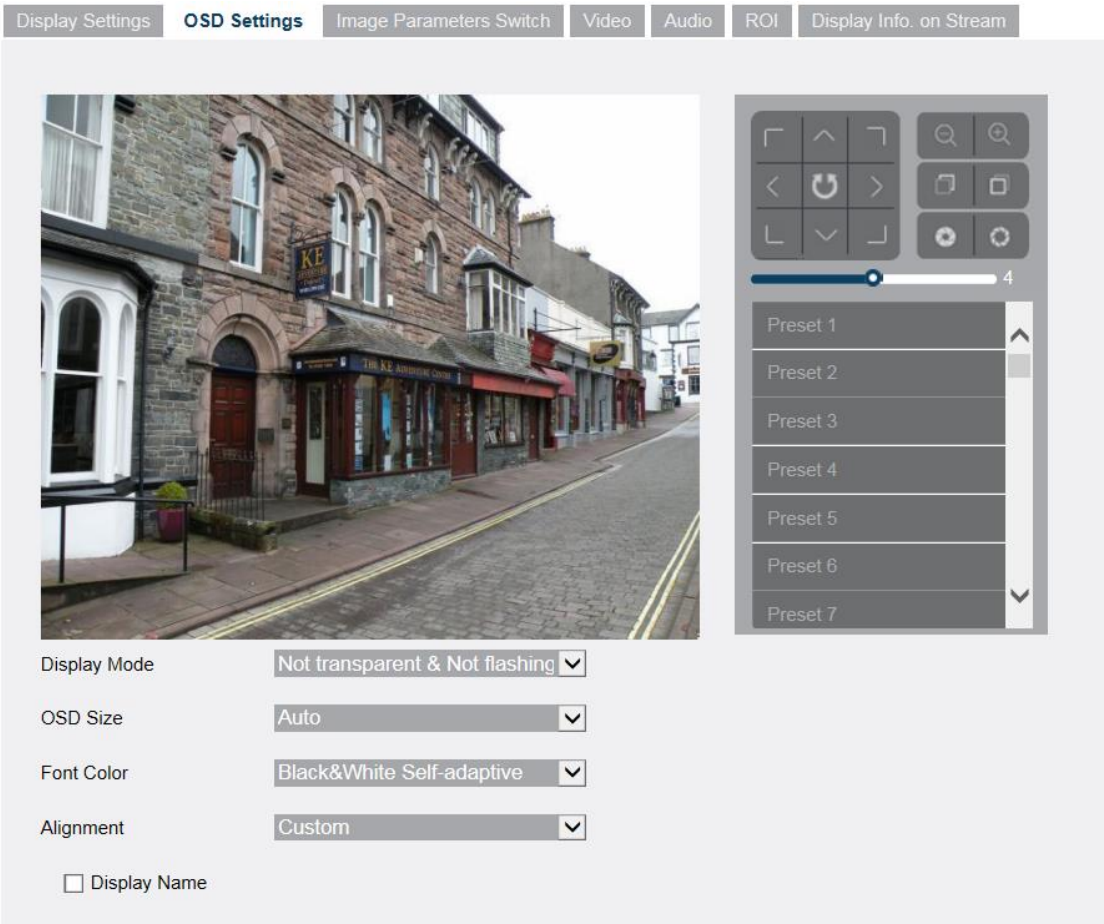

Figure 7-7 OSD Settings

Steps:

1. Enter the OSD Settings interface: **Image > 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 and date format.
5. Select from the drop-down list to set the time format, date format, display mode, OSD size and OSD color.
6. Configure the text overlay settings.
   (1) Check the checkbox in front of the textbox to enable the on-screen display.
   (2) Input the characters in the textbox.
   Note: Up to 8 text overlays are configurable.
7. Adjust the position and alignment of text frames.
   Left align, right align and custom are selectable. If you select custom, you can use the mouse to click and drag text frames in the live view window to adjust their positions.
   Note: The alignment adjustment is only applicable to Text Overlay items.
8. Click **Save** to save the settings.

7.3 Configuring Image Parameters Switch

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: **Image** > **Image Parameters Switch**
2. Check the **Link to Preset** checkbox 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 dropdown 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.)

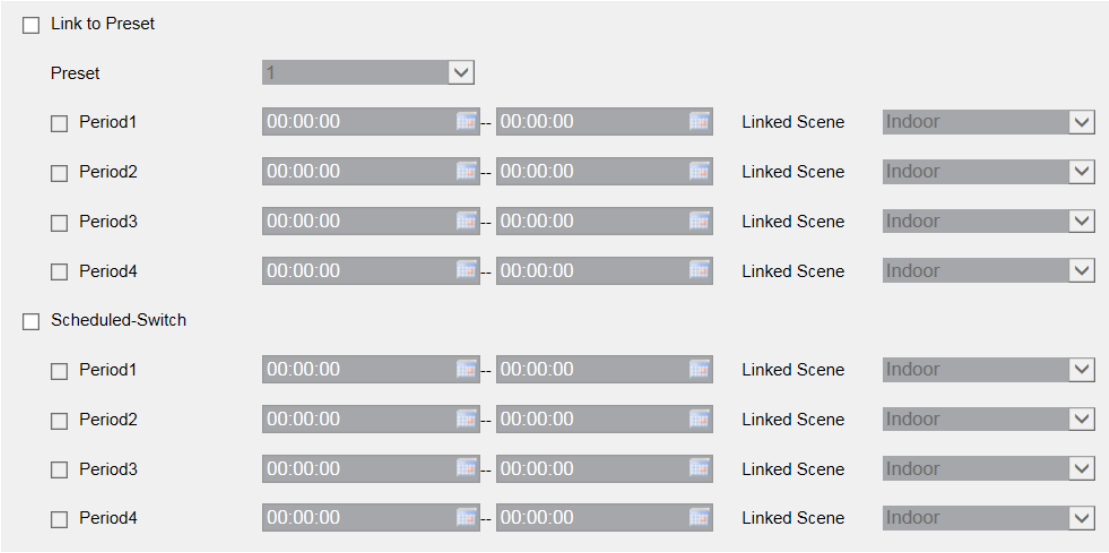

Figure 7-8 Link to Preset

Figure 7-9 Linked Scene

4. When you enable the function of **Scheduled-Switch**, check the corresponding checkbox, set the time period and the linked scene.
5. Click **Save** button to save the settings.

7.4 Configuring Video Settings

Steps:

1. Enter the Video Settings interface, **Image > Video**

Figure 7-10 Video Settings

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

Notes:

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

3. You can customize the following parameters for the selected stream type.

Video Type:

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

Resolution:

Select the resolution of the video output.

Bitrate Type:

Select the bitrate type to constant or variable.

Video Quality:

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

Frame Rate:

Set the frame rate. 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 from 32 to 16384 Kbps. The higher value corresponds to the higher video quality, but the better bandwidth is required.

Note: The maximum limit of the max. bitrate value varies according to different camera platforms. For certain cameras, the maximum limit is 8192 Kbps or 12288 Kbps.

Video Encoding:

If the Stream Type is set to main stream, H.264 and H.265 are selectable, and if the stream type is set to sub stream or third stream, H.264, MJPEG, and H.265 are selectable. H.265 is a new encoding technology. Compared with H.264, it reduces the transmission bitrate under the same resolution, frame rate and image quality.

Note: Selectable video encoding types may vary according to different camera modes.

H.264+ and H.265+:

- **H.264+:** If you set the main stream as the stream type, and H.264 as the video encoding, you can see H.264+ available. H.264+ is an improved compression coding technology based on H.264. By enabling H.264+, users can estimate the HDD consumption by its maximum average bitrate. Compared to H.264, H.264+ reduces storage by up to 50% with the same maximum bitrate in most scenes.
- **H.265+:** If you set the main stream as the stream type, and H.265 as the video encoding, you can see H.265+ available. H.265+ is an improved compression coding technology based on H.265. By enabling H.265+, users can estimate the HDD consumption by its maximum average bitrate. Compared to H.265, H.265+ reduces storage by up to 50% with the same maximum bitrate in most scenes.

You need to reboot the camera if you want to turn on or turn off the H.264+/H.265+. If you switch from H.264+ to H.265+ directly, and vice versa, a reboot is not required by the system.

Notes:

- Upgrade your video player to the latest version if live view or playback does not work properly due to compatibility.
- The bitrate type must be variable if you want to use H.264+ or H.265+.
- With H.264+/H.265+ enabled, the parameters such as profile, I frame interval, video quality, and SVC are greyed out if the bitrate type is variable.
- With H.264+/H.265+ enabled, some functions are not supported. For those functions, corresponding interfaces will be hidden.
- H.264+/H.265+ can spontaneously adjust the bitrate distribution according the requirements of the actual scene in order to realize the set maximum average bitrate in the long term. The camera needs at least 3 days to adapt to a fixed monitoring scene.

Max. Average Bitrate:

When you set a maximum bitrate, its corresponding recommended maximum average bitrate will be shown in the Max. Average Bitrate box. You can also set the maximum average bitrate manually from 32 Kbps to the value of the set maximum bitrate.

Profile:

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

I Frame Interval:

Set I Frame Interval from 1 to 400.

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 is, the better fluency of the stream will be, though, the video quality may not be so satisfactory. The lower value of the smoothing is, the higher quality of the stream will be, though it may appear not fluent.

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

Note:

The video parameters vary according to different camera models. Refer to the actual display page for camera functions.

7.5 Configuring Audio Settings

Steps:

1. Enter the Audio Settings interface: **Image** > **Audio**.

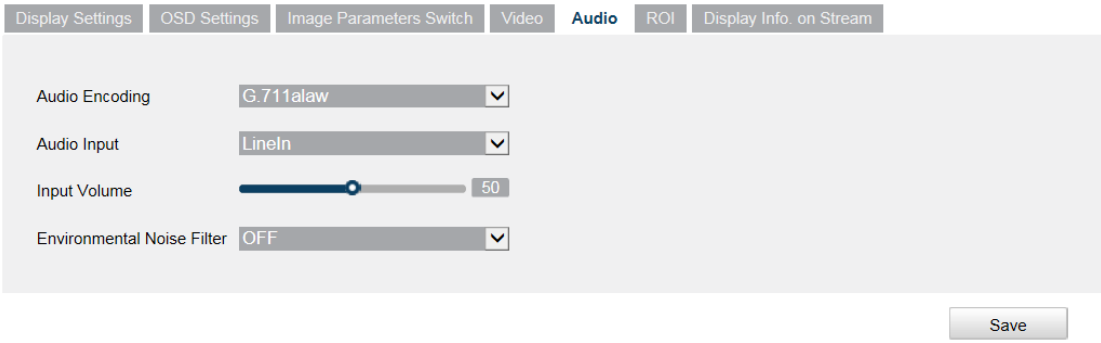

Figure 7-11 Audio Settings

2. Configure the following settings.

   Note: Audio settings vary according to different camera models.

   Audio Encoding: G.722.1, G.711 ulaw, G.711alaw, G.726, MP2L2 and PCM are selectable. For MP2L2, the Sampling Rate and Audio Stream Bitrate are configurable. For PCM, the Sampling Rate can be set.

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

   Input Volume: 0-100 adjustable.

   Environmental Noise Filter: Set it as OFF or ON. When the function is enabled, the noise in the environment can be filtered to some extent.

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

7.6 Configuring ROI Encoding

Purpose:

ROI (Region of Interest) encoding helps to discriminate the ROI and background information in video compression, which means, the technology assigns more encoding resource to the region of interest, thus to increase the quality of the ROI whereas the background information is less focused.

Note: ROI function varies according to different camera models.

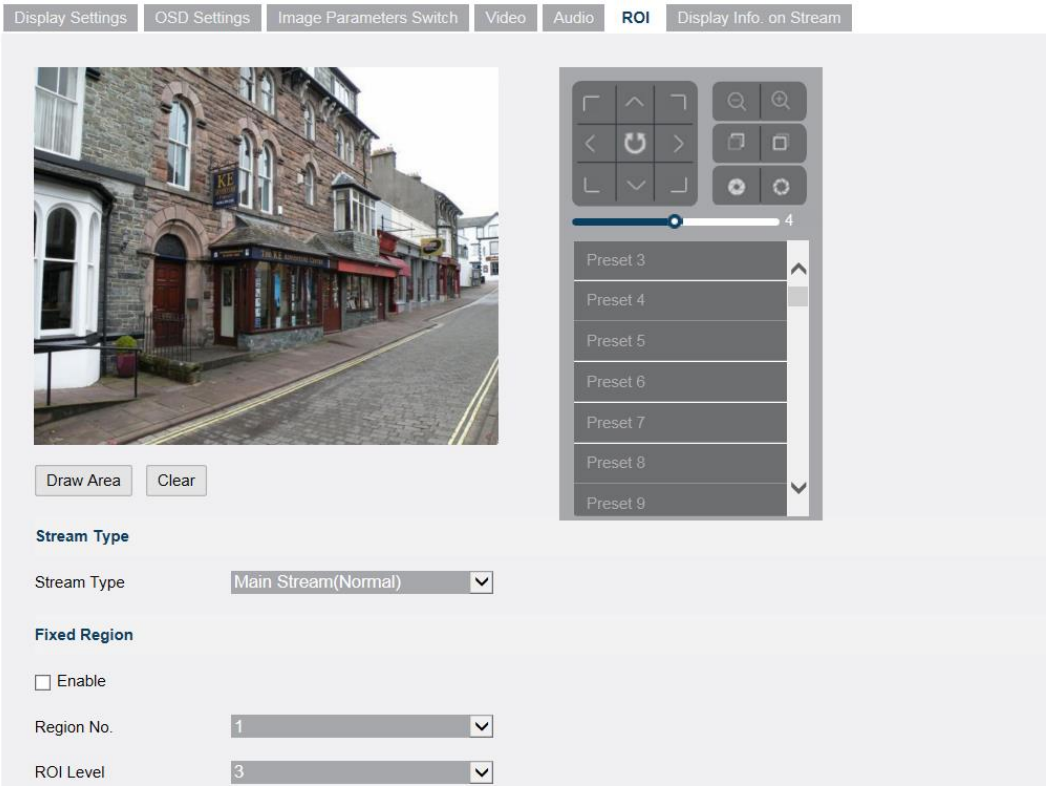

Figure 7-12 Region of Interest Settings

Steps:

1. Enter the ROI settings interface: **Image** > **ROI**.
2. Select the Stream Type for ROI encoding.
3. Check the checkbox of **Enable** under Fixed Region item.
4. Set **Fixed Region** for ROI.
   (1) Select the Region No. from the drop-down list.

(2) Check the **Enable** checkbox to enable ROI function for the chosen region.

(3) Click **Drawing**. Click and drag the mouse on the view screen to draw a red rectangle as the ROI region. You can click **Clear** to cancel former drawing. Click **Stop Drawing** when you finish.

(4) Select the ROI level.

(5) Enter a region name for the chosen region.

(6) Click **Save** the save the settings of ROI settings for chosen fixed region.

(7) Repeat steps (1) to (6) to setup other fixed regions.

5. Set **Dynamic Region** for ROI.

- **Target Tracking:** When a smart event is detected, e.g. line crossing detection, the object which trigger the pre-defined rule will be automatically tracked, and the image quality of the tracking target will be increased.
- **Face Tracking:** When the face detection is triggered, the image quality of the face will be increased.

Note:

- To enable target tracking function, you should enable the smart tracking function, refer to section 10.8 Configuring Smart Tracking.
- To enable face tracking function, the face detection function should be supported and enabled.

6. Respectively set the ROI level. The higher the value, the better image quality in the red frame.

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

7.7 Display Info. on Stream

Check the checkbox of **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.

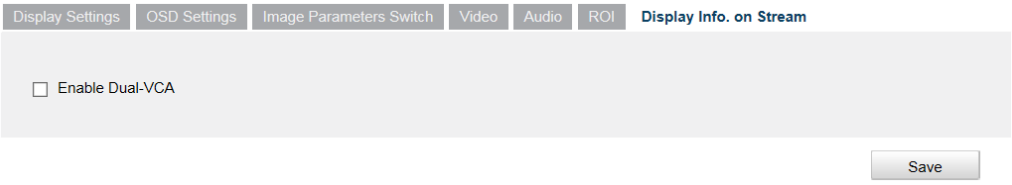

Figure 7-13 Display Info. on Stream

Chapter 8 Event Settings

This section explains how to configure the network camera to respond to alarm events, including basic event and smart event.

8.1 Basic Events

You can configure the basic events by following the instructions in this section, including motion detection, video tampering, alarm input, alarm output, and exception, etc. These events can trigger the linkage methods, such as Notify IP Server, Send Email, Trigger Alarm Output, etc.

Note: Check the checkbox of Notify IP Server if you want the alarm information to be pushed to PC or mobile client software as soon as the alarm is triggered.

8.1.1 Configuring Motion Detection

Purpose:

Motion detection detects the moving objects in the configured surveillance area, and a series of actions can be taken when the alarm is triggered.

In order to detect the moving objects accurately and reduce the false alarm rate, normal configuration and expert configuration are selectable for different motion detection environment.

- **Normal Configuration**

Normal configuration adopts the same set of motion detection parameters in the daytime and at night.

Tasks 1: Set the Motion Detection Area

Steps:

1. Enter the motion detection settings interface: **Event > Motion Detection**.
2. Check the checkbox of **Enable Motion Detection**.
3. Check the checkbox of **Enable Dynamic Analysis for Motion** if you want to mark the detected objects with green rectangles.

   Note: Select Disable for rules if you don't want the detected objected displayed with the green rectangles. Select disable rules from **Configuration > Local Configuration > Live View Parameters-rules**.

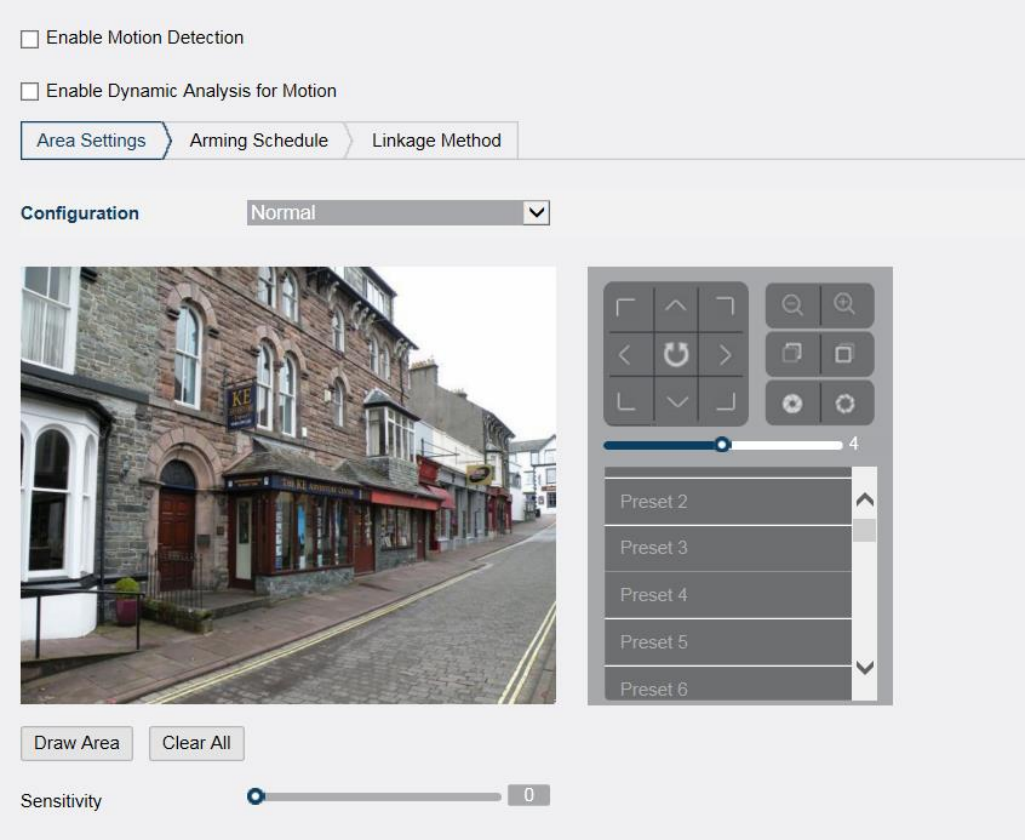

Figure 8-1 Enable Motion Detection

4. Click **Draw Area**. Click and drag the mouse on the live video to draw a motion detection area. Click **Stop Drawing** to finish drawing one area.
5. (Optional) Click **Clear All** to clear all of the areas.
6. (Optional) Move the slider to set the sensitivity of the detection.

Task 2: Set the Arming Schedule for Motion Detection

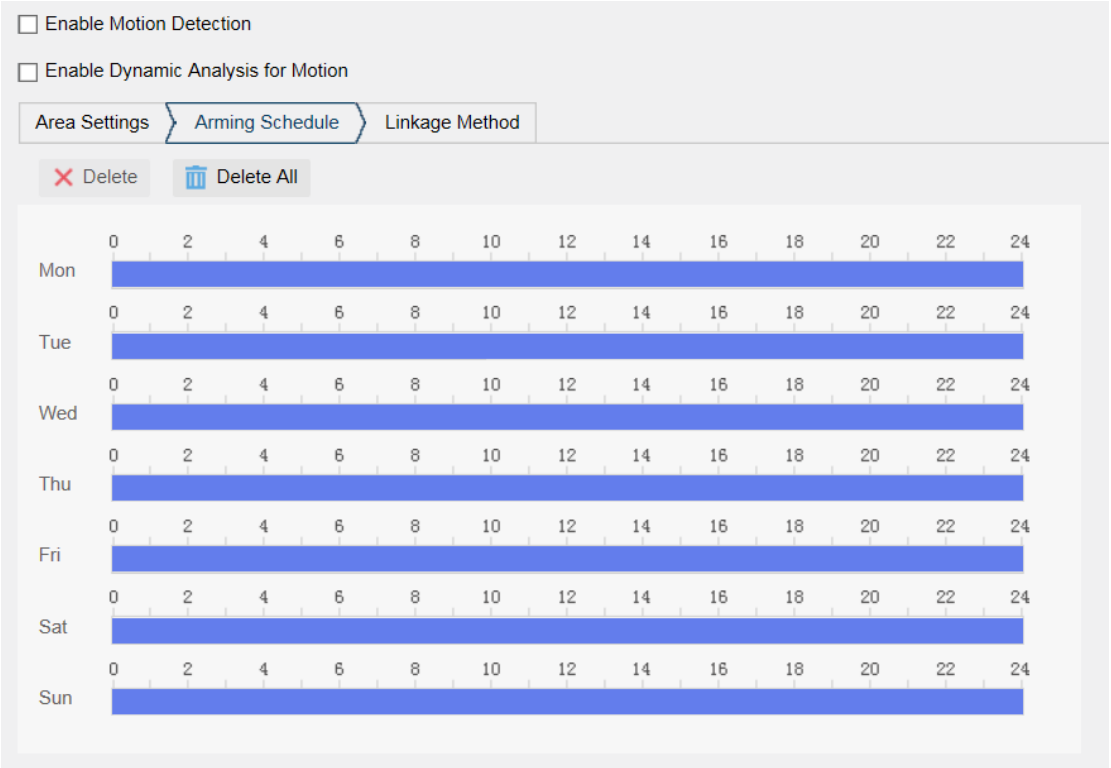

Figure 8-2 Arming Schedule

Steps:

1. Click **Arming Schedule** to edit the arming schedule.
2. Click on the time bar and drag the mouse to select the time period.

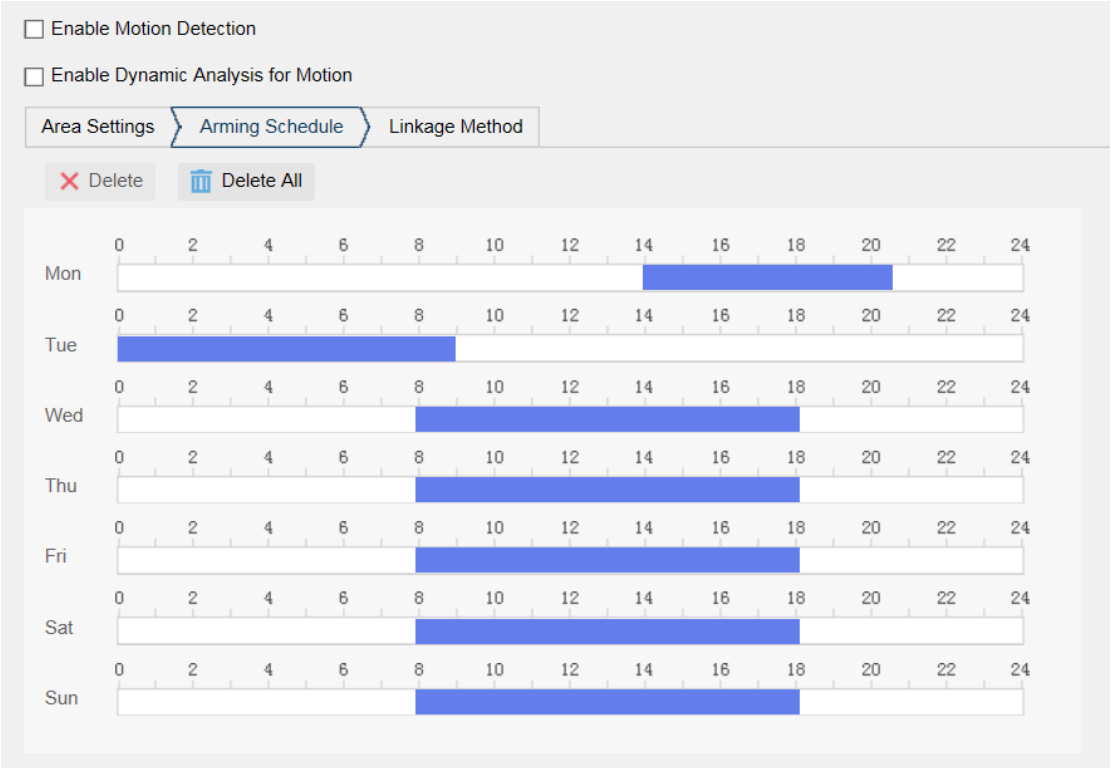

Figure 8-3 Arming Schedule

Note: Click on the selected time period, you can adjust the time period to the desired time by either moving the time bar or input the exact time period.

3. (Optional) Click Delete to delete the current arming schedule, or click Save to save the settings.
4. Move the mouse to the end of each day, a copy dialogue box pops up, and you can copy the current settings to other days.
5. Click **Save** to save the settings.

Note: The time of each period can't be overlapped. Up to 8 periods can be configured for each day.

Task 3: Set the Linkage Method for Motion Detection

Check the checkbox to select the linkage method. Audible Warning, Send Email, Notify IP Server, Upload to FTP/Memory Card/NAS, Trigger Channel and Trigger Alarm Output are selectable. You can specify the linkage method when an event occurs.

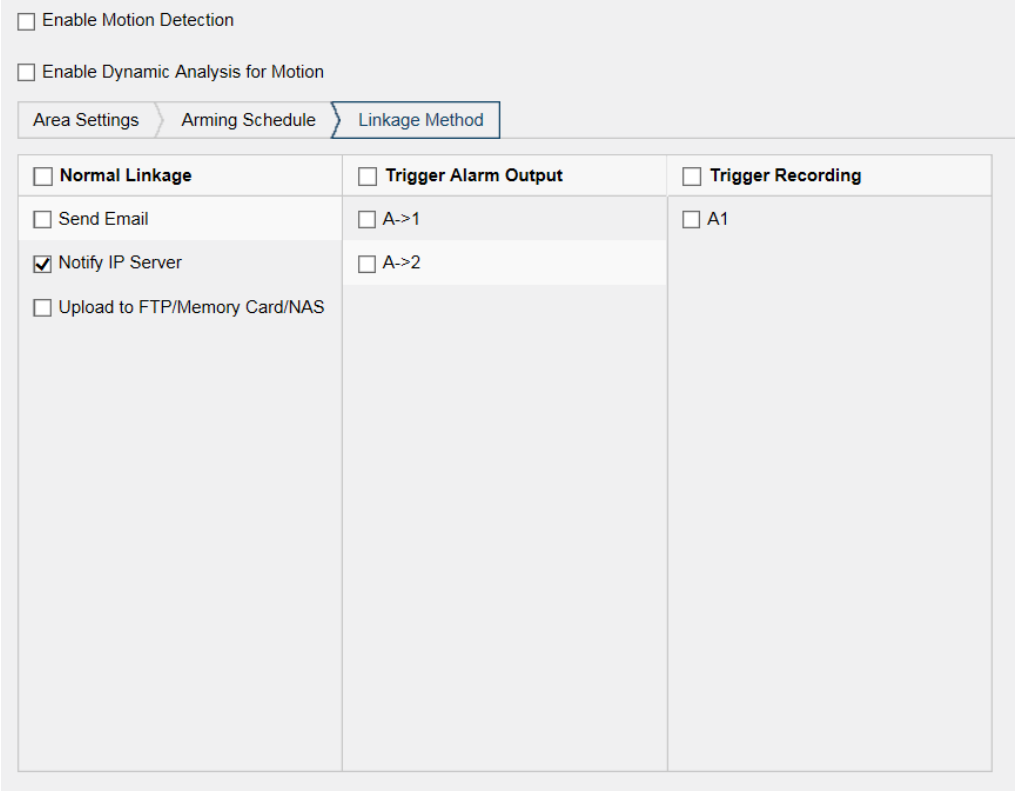

Figure 8-4 Linkage Method

Note: The linkage methods vary according to the different camera models.

- **Notify IP Server**

  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, please refer to *Section 7.2.3* to complete Email setup in advance.

- **Upload to FTP/Memory Card/NAS**

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

  Notes:

  - Set the FTP address and the remote FTP server first. Refer to *Section 6.2.2* ***Configuring FTP Settings*** for detailed information.
  - Go to **Event** > **Capture** > **Capture Parameters** page, enable the event-triggered snapshot, and set the capture interval and capture number.
  - The captured image can also be uploaded to the available SD card or network disk.

- **Trigger Recording**

  The video will be recorded when the motion is detected. You have to set the recording schedule to realize this function. Please refer to *Section 9.1* for detailed information.

- **Trigger Alarm Output**

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

  Note: To trigger an alarm output when an event occurs, please refer to *Section 8.1.4* ***Configuring Alarm Output*** to set the related parameters.

- **Expert Configuration**

Expert mode is mainly used to configure the sensitivity and proportion of object on each area for different day/night switch.

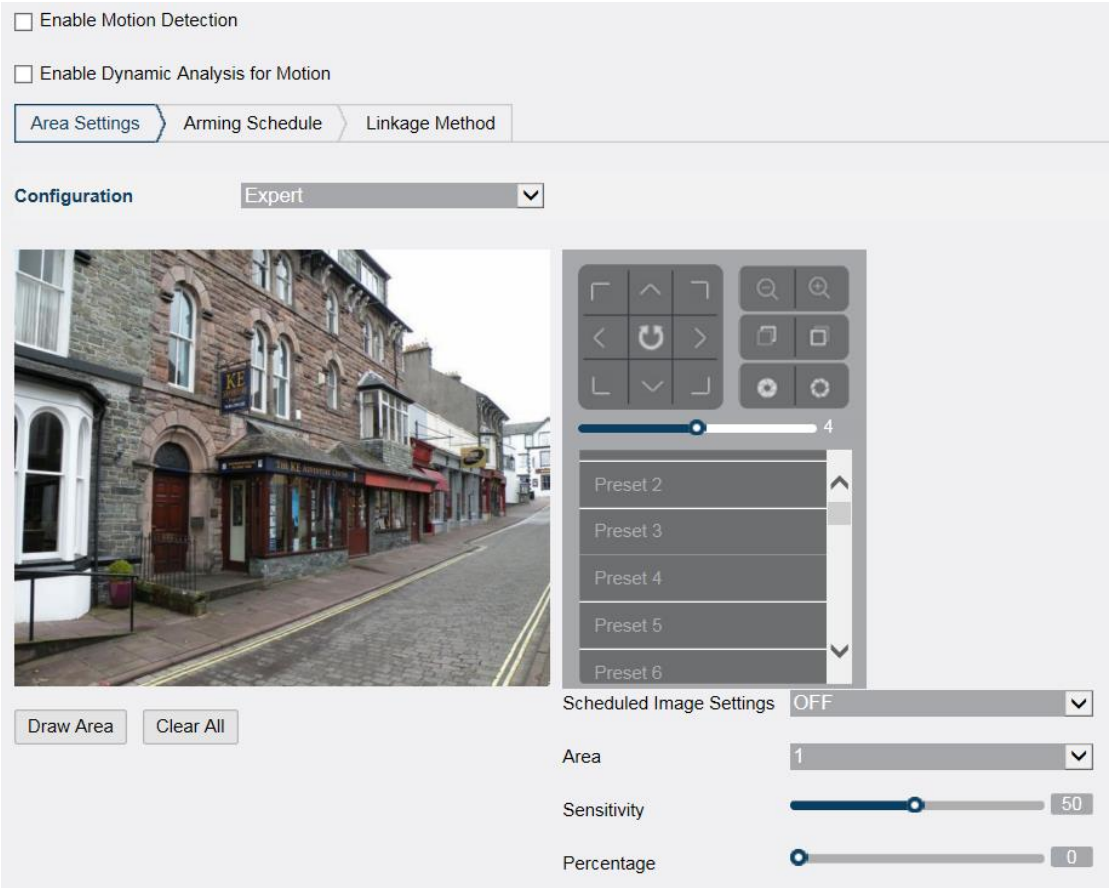

Figure 8-5 Expert Mode of Motion Detection

- Day/Night Switch OFF

Steps:

1. Draw the detection area as in the normal configuration mode. Up to 8 areas are supported.
2. Select **OFF** for **Switch Day and Night Settings**.
3. Select the area by clicking the area No.
4. Slide the cursor to adjust the sensitivity and proportion of object on the area for the selected area.
5. Set the arming schedule and linkage method as in the normal configuration mode.
6. Click **Save** to save the settings.

- Day/Night Auto-Switch

Steps:

1. Draw the detection area as in the normal configuration mode. Up to 8 areas are supported.
2. Select **Auto-Switch** for **Switch Day and Night Settings**.

3. Select the area by clicking the area No..
4. Slide the cursor to adjust the sensitivity and proportion of object on the area for the selected area in the daytime.
5. Slide the cursor to adjust the sensitivity and proportion of object on the area for the selected area at night.
6. Set the arming schedule and linkage method as in the normal configuration mode.
7. Click **Save** to save the settings.

- Day/Night Scheduled-Switch

Steps:

1. Draw the detection area as in the normal configuration mode. Up to 8 areas are supported.
2. Select **Scheduled-Switch** for **Switch Day and Night Settings**.

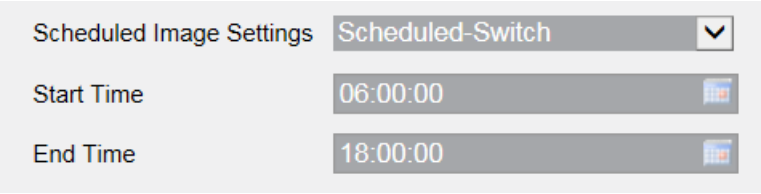

Figure 8-6 Day/Night Scheduled-Switch

3. Select the start time and the end time for the switch timing.
4. Select the area by clicking the area No..
5. Slide the cursor to adjust the sensitivity and proportion of object on the area for the selected area in the daytime.
6. Slide the cursor to adjust the sensitivity and proportion of object on the area for the selected area at night.
7. Set the arming schedule and linkage method as in the normal configuration mode.
8. Click **Save** to save the settings.

8.1.2 Configuring Video Tampering Alarm

Purpose:

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

certain alarm response actions.

Steps:

1. Enter the video tampering Settings interface, **Event > Video Tampering**.

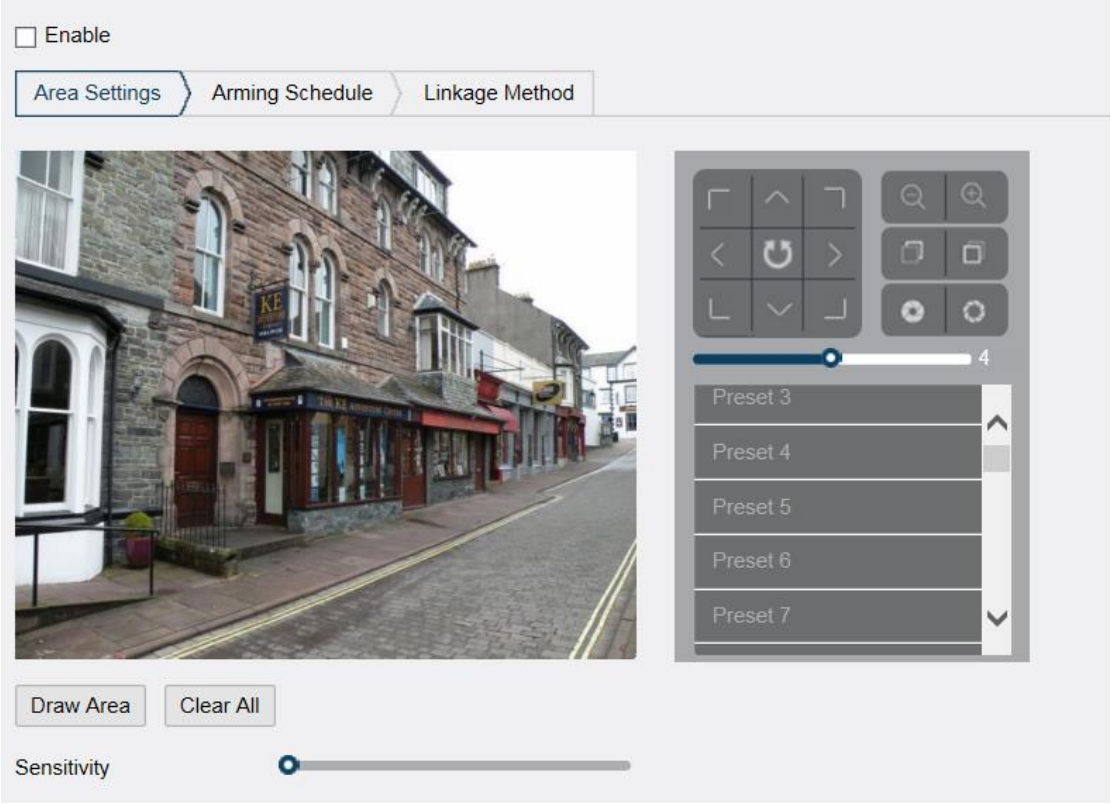

Figure 8-7 Video Tampering Alarm

2. Check **Enable Video Tampering** checkbox to enable the video tampering detection.
3. Set the video tampering area. Refer to ***Task 1: Set the Motion Detection Area*** in *Section 8.1.1*.
4. Click **Edit** to edit the arming schedule for video tampering. The arming schedule configuration is the same as the setting of the arming schedule for motion detection. Refer to ***Task 2: Set the Arming Schedule for Motion Detection*** in *Section 8.1.1*.
5. Check the checkbox to select the linkage method taken for the video tampering. Audible warning, Notify IP Server, send email and trigger alarm output are selectable. Please refer to ***Task 3: Set the Linkage Method for Motion Detection*** in *Section 8.1.1*.

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

8.1.3 Configuring Alarm Input

Steps:

1. Enter the Alarm Input Settings interface: **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). Edit the name to set a name for the alarm input (optional).

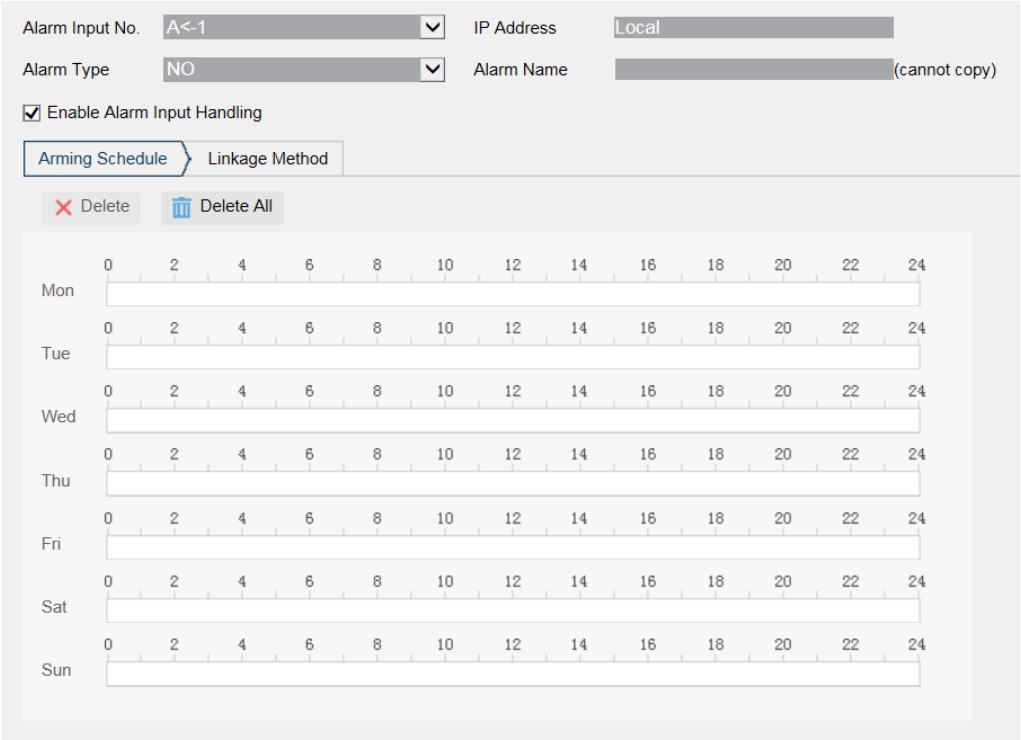

Figure 8-8 Alarm Input Settings

3. Click **Arming Schedule** to set the arming schedule for the alarm input. Refer to ***Task 2: Set the Arming Schedule for Motion Detection*** in *Section 8.1.1*.
4. Click **Linkage Method** and check the checkbox to select the linkage method taken for the alarm input. Refer to ***Task 3: Set the Linkage Method for Motion Detection*** in *Section 8.1.1*.
5. You can copy your settings to other alarm inputs.
6. Click **Save** to save the settings.

8.1.4 Configuring Alarm Output

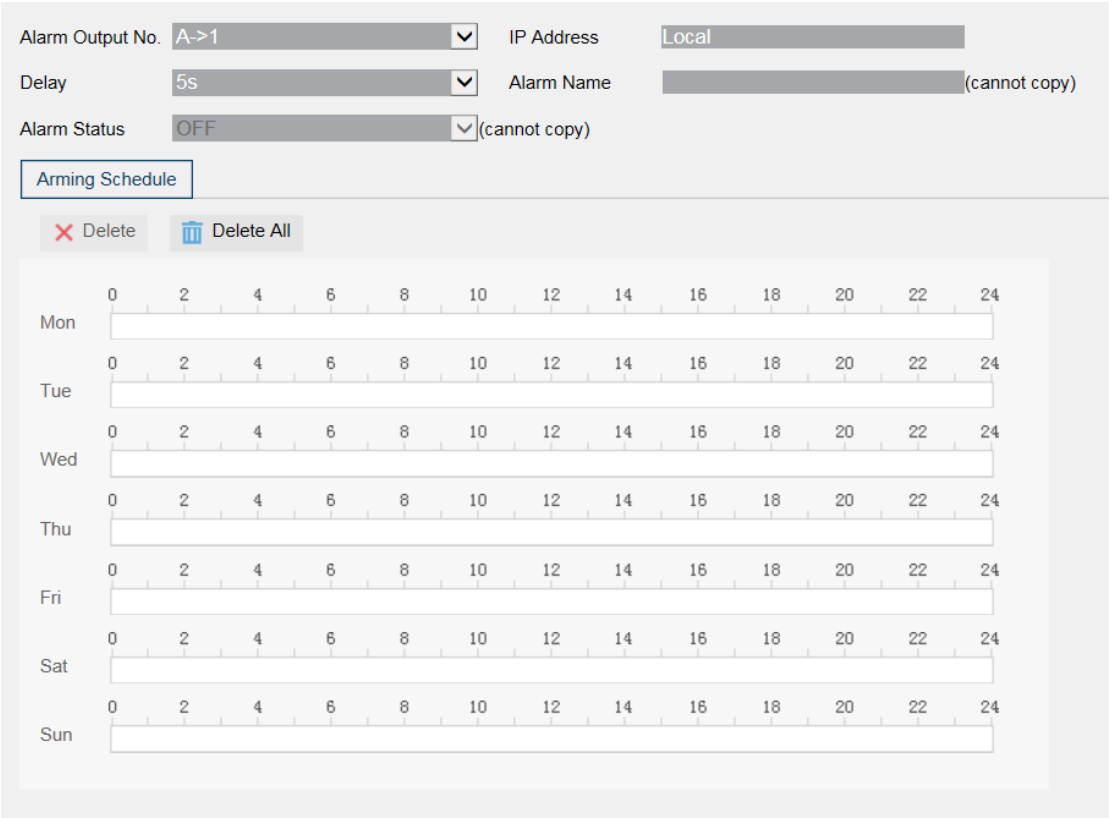

Figure 8-9 Alarm Output Settings

Steps:

1. Enter the Alarm Output Settings interface: **Event > Alarm Output**.
2. Select one alarm output channel in the **Alarm Output** drop-down list. You can also set a name for the alarm output (optional).
3. The Delay time can be set to 5sec, 10sec, 30sec, 1min, 2min, 5min, 10min or Manual. The delay time refers to the time duration that the alarm output remains in effect after alarm occurs.
4. Click **Arming Schedule** to enter the Edit Schedule Time interface. The time schedule configuration is the same as the settings of the arming schedule for motion detection Refer to ***Task 2: Set the Arming Schedule for Motion Detection*** in *Section 8.1.1*.
5. You can copy the settings to other alarm outputs.
6. Click **Save** to save the settings.

8.1.5 Handling Exception

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

Steps:

1. Enter the Exception Settings interface: **Event > Exception**.
2. Check the checkbox to set the actions taken for the Exception alarm. Refer to ***Task 3: Set the Linkage Method for Motion Detection*** in *Section 10.1.1*.

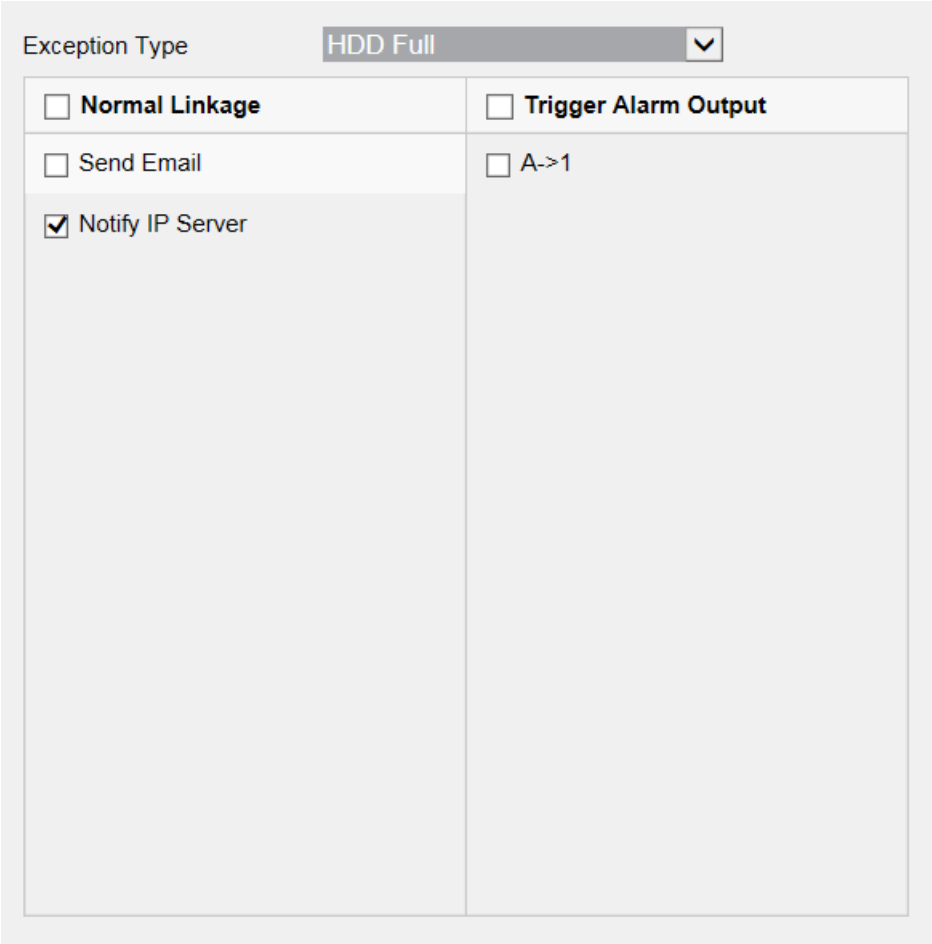

Figure 8-10 Exception Settings

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

8.2 Smart Events

You can configure the smart events by following the instructions in this section,

including audio exception detection, defocus detection, scene change detection, intrusion detection, and line crossing detection, etc. These events can trigger the linkage methods, such as Notify IP Server, Send Email, Trigger Alarm Output, etc.

8.2.1 Configuring Audio Exception Detection

Purpose:

Audio exception detection function detects the abnormal sounds in the surveillance scene, such as the sudden increase/decrease of the sound intensity, and some certain actions can be taken when the alarm is triggered.

Note: Audio exception detection function varies according to different camera models.

Steps:

1. Enter the Audio Exception Detection settings interface, **Event > Audio Exception Detection**.

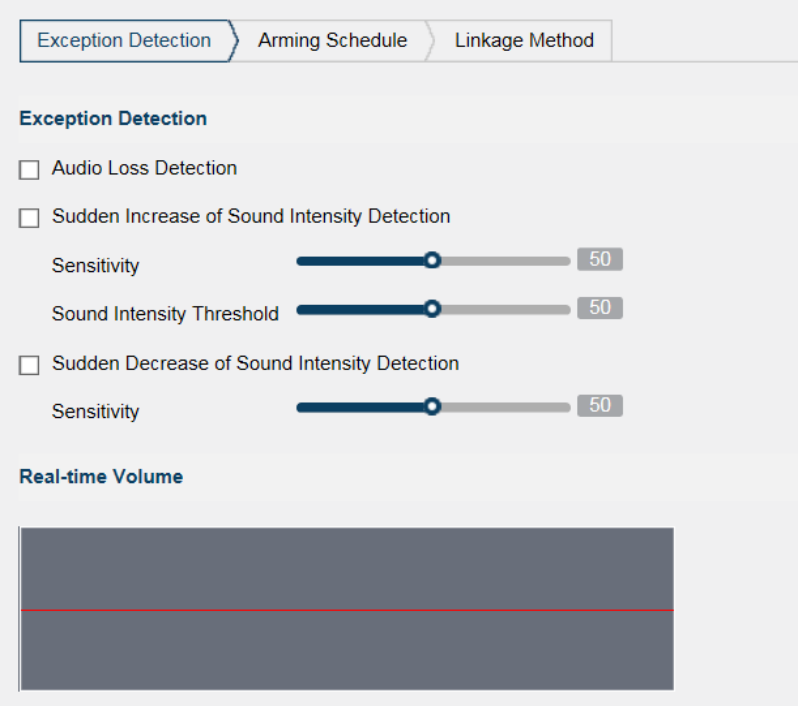

Figure 8-11 Audio Exception Detection

2. Check the checkbox of **Audio Loss Exception** to enable the audio loss detection function.
3. Check the checkbox of **Sudden Increase of Sound Intensity Detection** to detect

the sound steep rise in the surveillance scene. You can set the detection sensitivity and threshold for sound steep rise.

4. Check the checkbox of **Sudden Decrease of Sound Intensity Detection** to detect the sound steep drop in the surveillance scene. You can set the detection sensitivity and threshold for sound steep drop.

   Notes:

   - Sensitivity: Range [1-100], the smaller the value is, the more severe the change should be to 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 real environment.
   - You can view the real-time volume of the sound on the interface.

5. Click **Arming Schedule** to set the arming schedule. Refer to ***Task 2 Set the Arming Schedule for Motion Detection*** in *Section 8.1.1* for detailed steps.
6. Click **Linkage Method** and select the linkage methods for audio exception, including Notify IP Server, Send Email, Upload to FTP/Memory Card/NAS, Trigger Channel for recording and Trigger Alarm Output.
7. Click **Save** to save the settings.

8.2.2 Configuring Face Detection

Purpose:

Face detection function detects the face appears in the surveillance scene, and some certain actions can be taken when the alarm is triggered.

Steps:

1. Enter the Face Detection settings interface, **Event > Face Detection**.
2. Check the **Enable Face Detection** checkbox to enable the function.
3. Check the checkbox of **Enable Dynamic Analysis** for Face Detection, and then the detected face is marked with green rectangle on the live video.

Note: To mark the detected face on the live video, go to **System > Local** to enable the **Rules**.

4. Click-and-drag the slider to set the detection sensitivity. The Sensitivity ranges from 1 to 5. The higher the value is, the more easily the face can be detected.
5. Click **Arming Schedule** to set the arming schedule. Refer to ***Task 2 Set the Arming Schedule for Motion Detection*** in *Section 8.1.1* for detailed steps.
6. Click **Linkage Method** to select the linkage methods for face detection. Refer to ***Task 3: Set the Linkage Method Taken for Motion Detection*** in *Section 8.1.1*.

Figure 8-12 Face Detection

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

8.2.3 Configuring Intrusion Detection

Purpose:

Intrusion detection function detects people, vehicle or other objects which enter and loiter in a pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

Note: Intrusion detection function varies according to different camera models.

Steps:

1. Enter the Intrusion Detection settings interface, **Event > Intrusion Detection**.

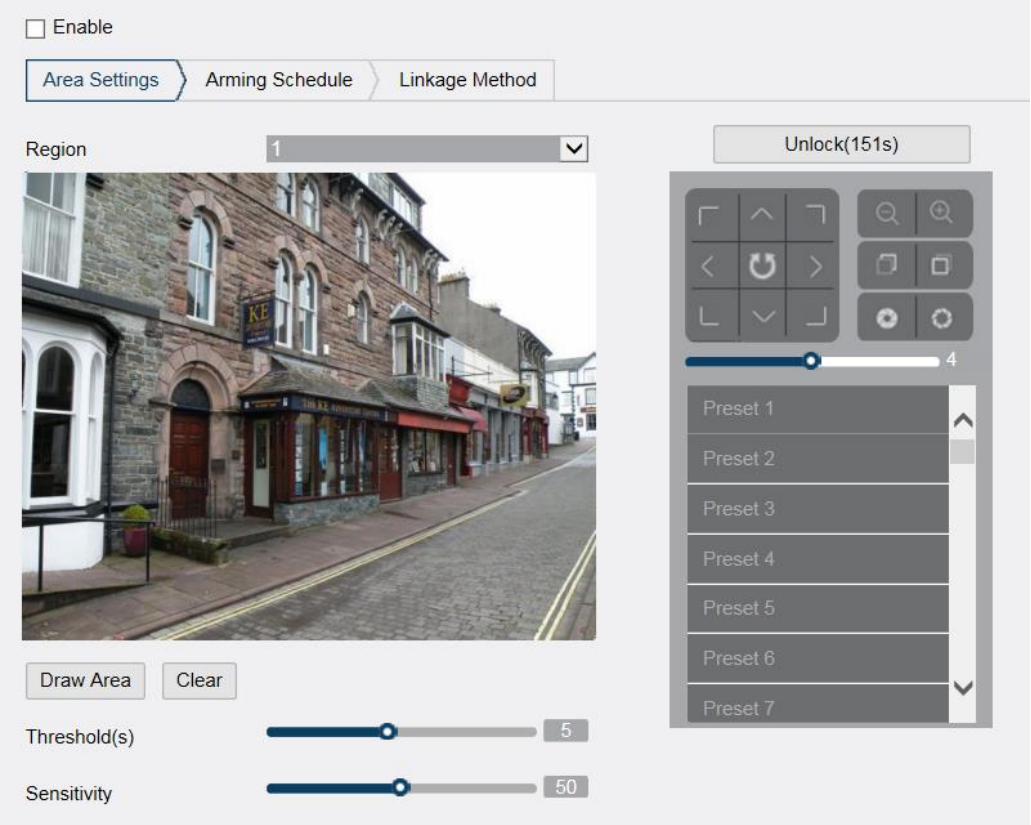

Figure 8-13 Intrusion Detection

2. Check the checkbox of **Enable Intrusion Detection** to enable the function.
3. Select the region from the drop-down list for detection settings.
4. Click **Area Settings** tab and click **Draw Area** button to start the region drawing.
5. Click on the live video to specify the four vertexes of the detection region, and right click to complete drawing.
6. Set the time threshold, detection sensitivity and object percentage for intrusion detection.

   Threshold: Range [0s-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.

Percentage: Range [1-100]. Percentage defines the ratio of the in-region part of the object which can trigger the alarm. For example, if the percentage is set as 50%, when the object enters the region and occupies half of the whole region, the alarm is triggered.

7. Repeat the above steps to configure other regions. Up to 4 regions can be set. You can click the **Clear** button to clear all pre-defined regions.
8. Click **Arming Schedule** to set the arming schedule.
9. Click **Linkage Method** to select the linkage methods for intrusion detection, including Notify IP Server, Send Email, Upload to FTP/Memory Card/NAS, Trigger Channel and Trigger Alarm Output.
10. Click **Save** to save the settings.

8.2.4 Configuring Line Crossing Detection

Purpose:

Line crossing detection function detects people, vehicle or other objects which cross a pre-defined virtual line, and some certain actions can be taken when the alarm is triggered.

Note: Line crossing detection function varies according to different camera models.

Steps:

1. Enter the Line Crossing Detection settings interface, **Event > Line Crossing Detection**.

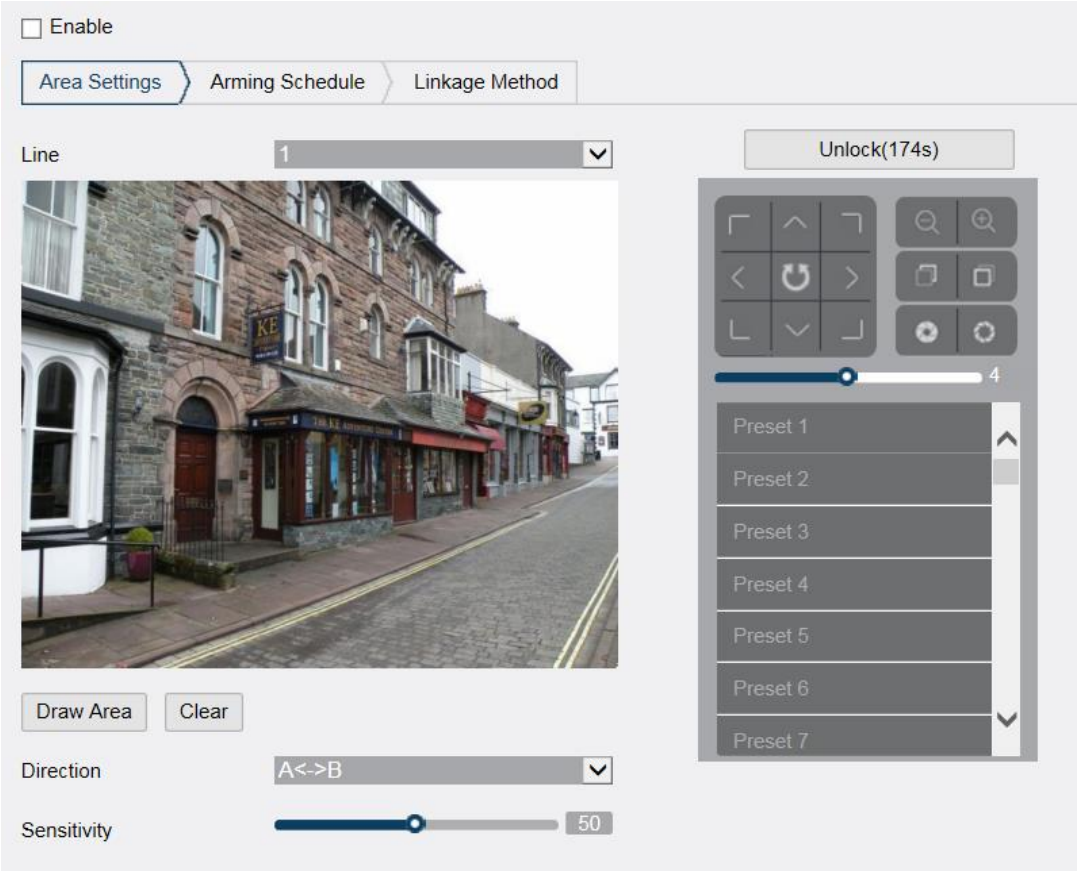

Figure 8-14 Line Crossing Detection

2. Check the checkbox of **Enable Line Crossing Detection** to enable the function.
3. Select the line from the drop-down list for detection settings.
4. Click **Area Settings** tab and click **Draw Area** button, and a virtual line is displayed on the live video.
5. Click-and-drag the line, and you can locate it on the live video as desired. Click on the line, two red squares are displayed on each end, and you can click-and-drag one of the red squares to define the shape and length of the line.
6. Select the direction for line crossing detection. And you can select the directions as A<->B, A ->B, and B->A.

   A<->B: Only the arrow on the B side shows; when an object going across the plane with both direction can be detected and alarms are triggered.

   A->B: Only the object crossing the configured line from the A side to the B side can be detected.

   B->A: Only the object crossing the configured line from the B side to the A side can be detected.

7. Click-and-drag the slider to set the detection sensitivity.

   Sensitivity: Range [1-100]. The higher the value is, the more easily the line crossing action can be detected.
8. Repeat the above steps to configure other lines. Up to 4 lines can be set. You can click the **Clear** button to clear all pre-defined lines.
9. Click the **Arming Schedule** to set the arming schedule.
10. Select the linkage methods for line crossing detection, including Notify IP Server, Send Email, Upload to FTP/Memory Card/NAS, Trigger Channel and Trigger Alarm Output.
11. Click **Save** to save the settings.

8.2.5 Configuring Region Entrance Detection

Purpose:

Region entrance detection function detects people, vehicle or other objects which enter a pre-defined virtual region from the outside place, and some certain actions can be taken when the alarm is triggered.

Steps:

1. Enter the Region Entrance Detection settings interface, **Event** > **Region Entrance Detection**.

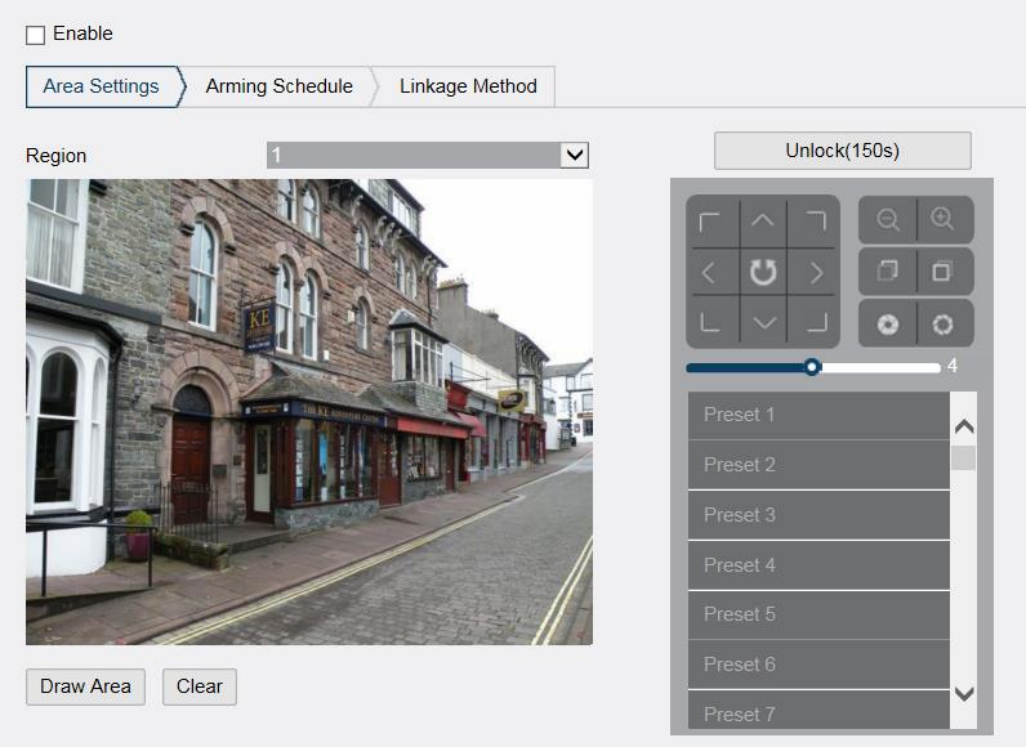

Figure 8-15 Region Entrance Detection

2. Check the **Enable** checkbox to enable the function.
3. Select the **Region** from the drop-down list for detection settings.
4. Click **Area Settings** and click **Draw Area** button to start the area drawing.
5. Click on the live video to specify the four vertexes of the detection region, and right click to complete drawing.
6. Click-and-drag the slider to set the detection sensitivity.

   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 entering the region can trigger the alarm.
7. Repeat the above steps to configure other regions. Up to 4 regions can be set. You can click the **Clear** button to clear all pre-defined regions.
8. Click **Arming Schedule** to set the arming schedule.
9. Click **Linkage Method** to select the linkage methods.
10. Click **Save** to save the settings.

8.2.6 Configuring Region Exiting Detection

Purpose:

Region exiting detection function detects people, vehicle or other objects which exit from a pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

Steps:

1. Enter the Region Exiting Detection settings interface, **Event > Region Exiting Detection**.

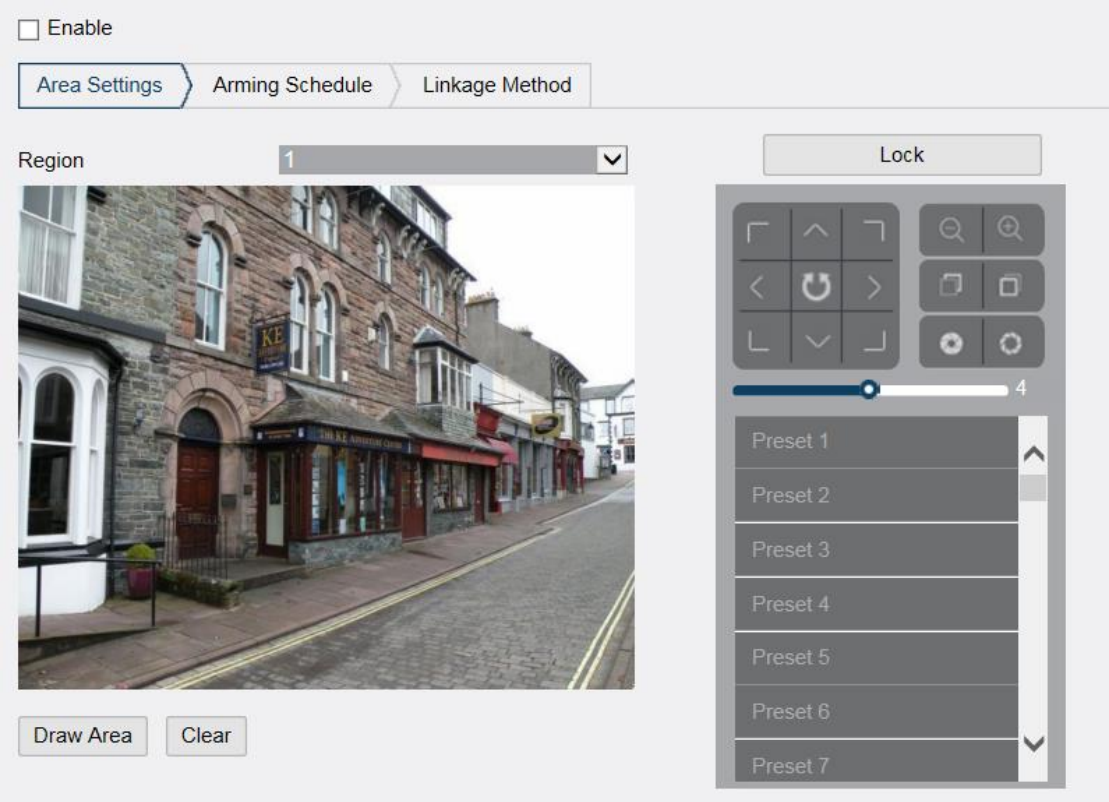

Figure 8-16 Region Exiting Detection

2. Check **Enable** checkbox to enable the function.
3. Select the **Region** from the drop-down list for detection settings.
4. Click **Area Settings** and click **Draw Area** button to start the area drawing.
5. Click on the live video to specify the four vertexes of the detection region, and right click to complete drawing.
6. Click-and-drag the slider to set the detection sensitivity.

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 exiting from the region can trigger the alarm.

7. Repeat the above steps to configure other regions. Up to 4 regions can be set. You can click the **Clear** button to clear all pre-defined regions.
8. Click **Arming Schedule** to set the arming schedule.
9. Click **Linkage Method** to select the linkage methods.
10. Click **Save** to save the settings.

Chapter 9 Storage Settings

Before you start:

To configure record settings, please make sure that you have the network storage device or local storage device configured.

9.1 Configuring Record Schedule

Purpose:

There are two kinds of recording for the cameras: 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 local storage or in the network disk.

Steps:

1. Enter the Record Schedule Settings interface: **Event** > **Record Schedule**.

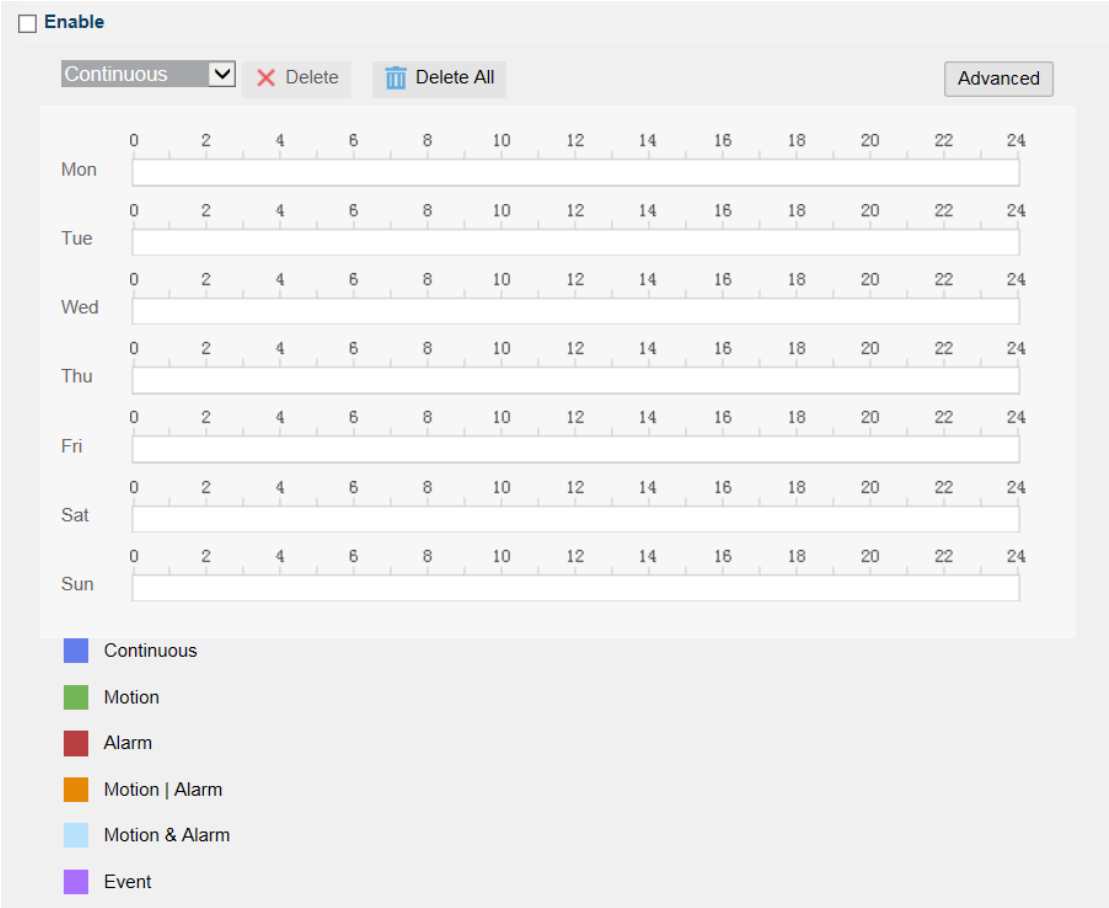

Figure 9-1 Recording Schedule Interface

2. Check the checkbox of **Enable** to enable scheduled recording.
3. Click **Advanced** to set the camera record parameters.

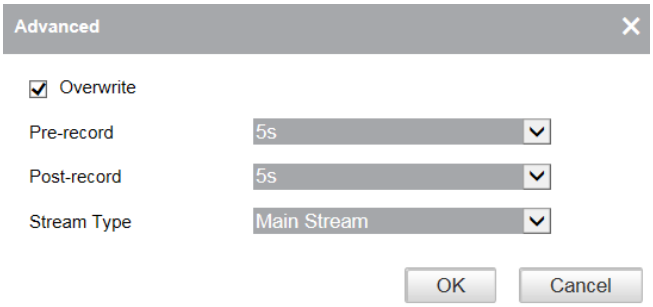

Figure 9-2 Record Parameters

- 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, 5s, 10s, 15s, 20s, 25s, 30s or not limited.

- Post-record: The time you set to stop recording after the scheduled time or the event. For example, if an alarm triggered recording ends at 11:00, and the post-record time is set as 5 seconds, the camera records until 11:00:05.

  The Post-record time can be configured as 5s, 10s, 30s, 1 min, 2 min, 5 min or 10 min.
- Stream Type: Select the stream type for recording.

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

4. Select a **Record Type**. The record type can be Continuous, Motion Detection, Alarm, Motion | Alarm, Motion & Alarm, and Event.

- **Continuous**

  If you select **Continuous**, the video will be recorded automatically according to the time of the schedule.
- **Record Triggered by Motion Detection**

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

  Besides configuring the recording schedule, you have to set the motion detection area and check the checkbox of Trigger Channel in the Linkage Method of Motion Detection Settings interface. For detailed information, please refer to the ***Task 1: Set the Motion Detection Area*** in the *Section 8.1.1*.
- **Record Triggered by Alarm**

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

  Besides configuring the recording schedule, you have to set the **Alarm Type** and check the checkbox of **Trigger Channel** in the **Linkage Method** of **Alarm Input Settings** interface. For detailed information, please refer to *Section 8.1.3*.
- **Record Triggered by Motion & Alarm**

  If you select **Motion & Alarm**, the video will be recorded when the motion and alarm are triggered at the same time.

  Besides configuring the recording schedule, you have to configure the settings

on the **Motion Detection** and **Alarm Input Settings** interfaces. Please refer to *Section 8.1.1* and *Section 8.1.3* for detailed information.

- **Record Triggered by Motion | Alarm**

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

  Besides configuring the recording schedule, you have to configure the settings on the **Motion Detection** and **Alarm Input Settings** interfaces. Please refer to *Section 8.1.1* and *Section 8.1.3* for detailed information.

- **Record Triggered by Events**

  If you select **Event**, the video will be recorded if any of the events is triggered. Besides configuring the recording schedule, you have to configure the event settings.

5. Select the record type, and click-and-drag the mouse on the time bar to set the record schedule.

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

9.2 Configure 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.

Steps:

1. Enter the Capture Settings interface: **Event** > **Capture**.

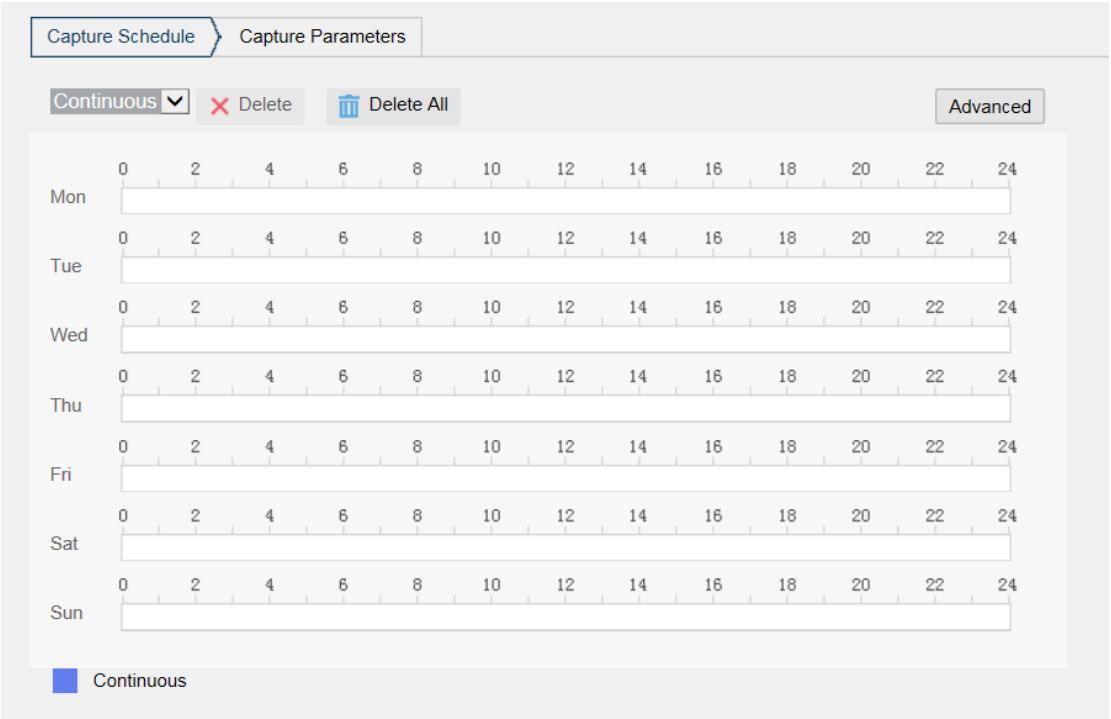

Figure 9-3 Capture Configuration

2. Go to **Capture Schedule** tab to configure the capture schedule by click-and-drag the mouse on the time bar. You can copy the record schedule to other days by clicking the green copy icon on the right of each time bar.
3. Click **Advanced** to select stream type.

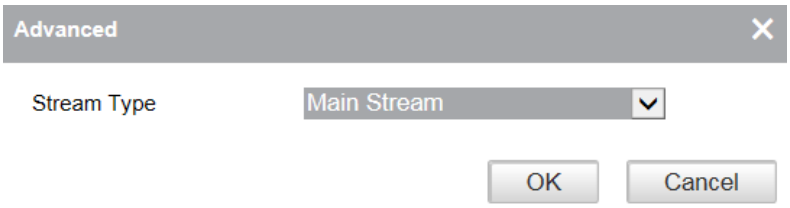

Figure 9-4 Advanced Setting of Capture Schedule

4. Click **Save** to save the settings.
5. Go to **Capture Parameters** tab to configure the capture parameters.
   (1) Check the **Enable Timing Snapshot** checkbox to enable continuous snapshot.
   (2) Select the picture format, resolution, quality and capture interval.
   (3) Check the **Enable Event-triggered Snapshot** checkbox to enable event-triggered snapshot.
   (4) Select the picture format, resolution, quality, capture interval, and capture

number.

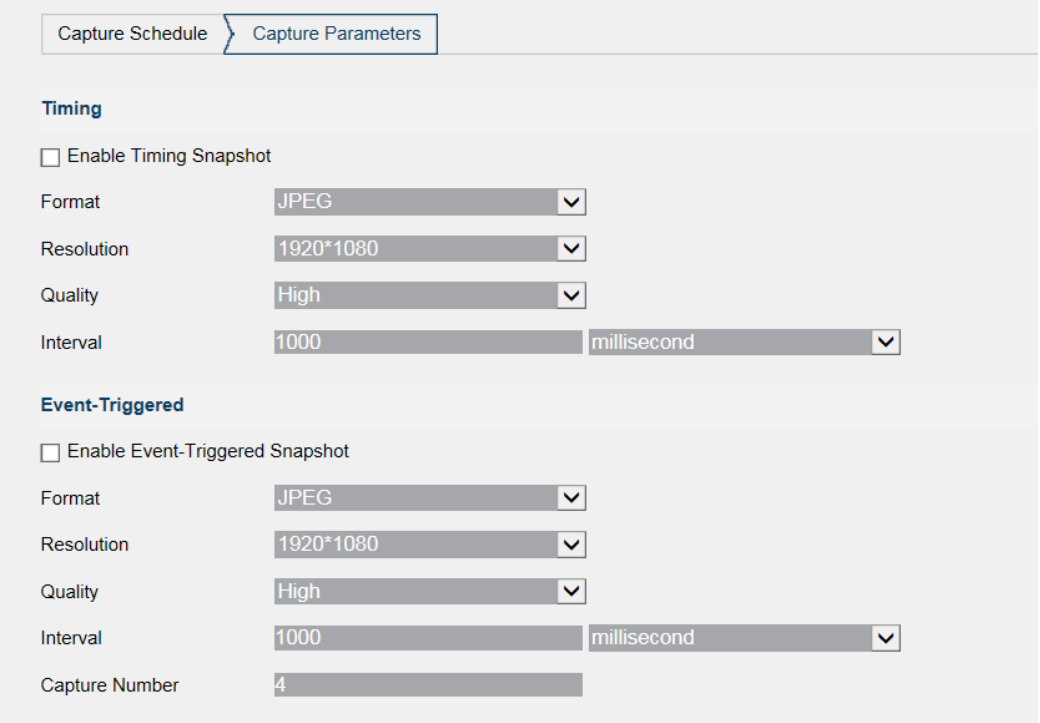

Figure 9-5 Set Capture Parameters

6. Set the time interval between two snapshots.
7. Click **Save** to save the settings.

9.3 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, pictures, etc.

Steps:

1. Add Net HDD.
   (1) Enter the Net HDD settings interface, **Event** > **Net HDD**.

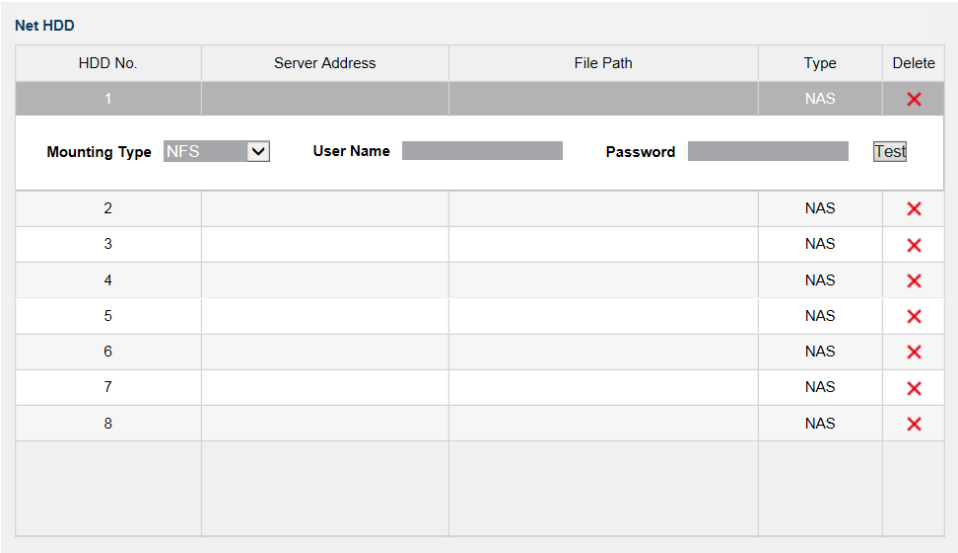

Figure 9-6 Add Network Disk

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

(3) Select the mounting type. NFS and SMB/CIFS are selectable. And you can set the user name and password to guarantee the security if SMB/CIFS is selected.

Note: Please 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 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.*

(4) Click **Save** to add the network disk.

2. Initialize the added network disk.

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

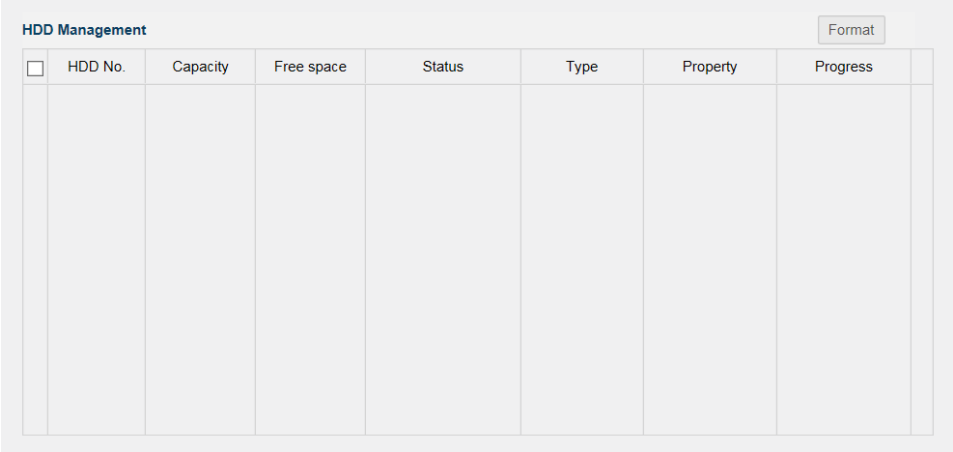

Figure 9-7 Storage Management Interface

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

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

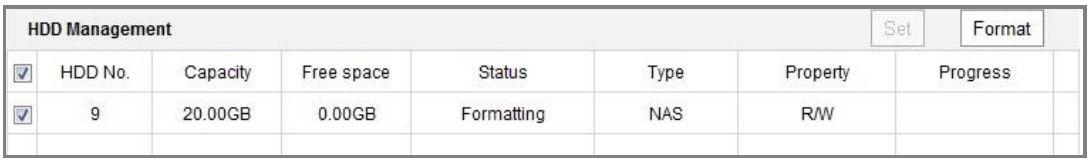

Figure 9-8 View Disk Status

3. Define the quota for record and pictures.

(1) Input the quota percentage for picture and for record.

(2) Click **Save** and refresh the browser page to activate the settings.

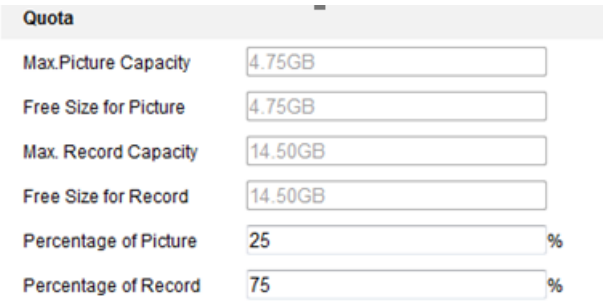

Figure 9-9 Quota Settings

Note:

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

Chapter 10 PTZ Configuration

10.1 Configuring Basic PTZ Parameters

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

1. Enter the Basic PTZ Parameter Configuration interface:

   PTZ > **Basic Settings**

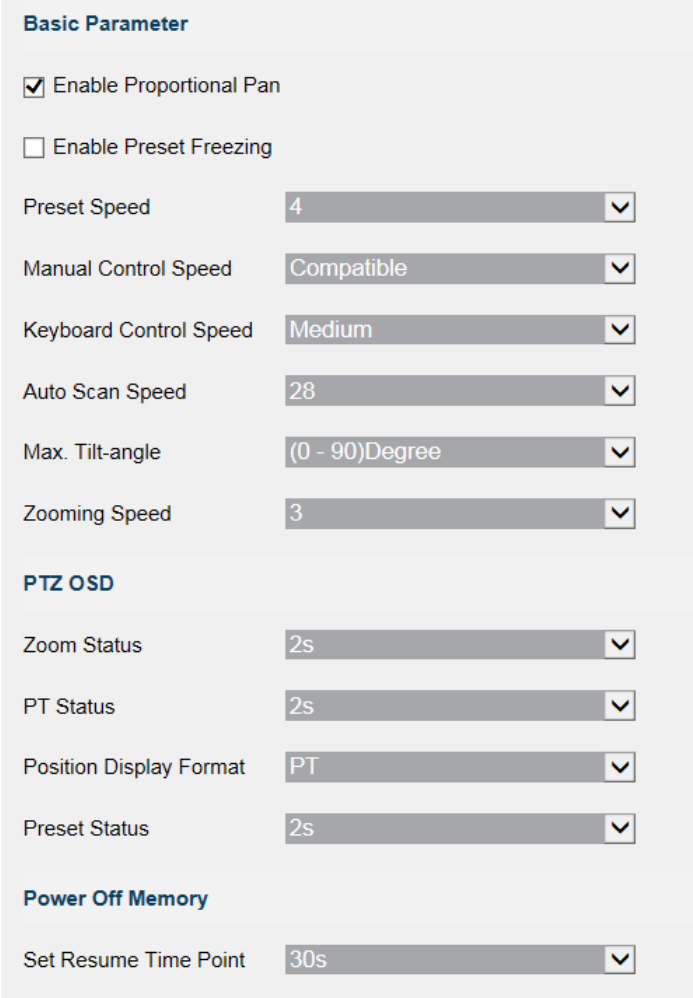

Figure 10-1 Basic PTZ Configuration Interface

2. Configure the following settings:

- **Basic Parameters:** Enable/disable proportional pan and preset freezing, set the preset speed, keyboard control speed, and auto scan speed.
  - ♦ **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.

  Note: Preset freezing function is invalid when you calling a pattern.

- **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 Self-adaptive.
  - 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.

  Self-adaptive: You are recommended to set the Self-adaptive when the application scene of the speed dome is complicated.

- **Keyboard Control Speed:** Define the speed of PTZ control by a keyboard as Low, Normal or High.
- **Auto Scan Speed:** The dome provides 5 scan modes: auto scan, tilt scan, frame scan, random scan and panorama scan. The scan speed can be set from level 1 to 40.
- **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, Always Close or Always Open.
  - **PT Status:** Set the azimuth angle display duration while panning and tilting as 2 seconds, 5 seconds, 10 seconds, Always Close or Always Open.

- ♦ **Preset Status:** Set the preset name display duration while calling the preset as 2 seconds, 5 seconds, 10 seconds, Always Close or Always Open.

- **Power-off Memory:** The 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.

10.2 Configuring PTZ Limits

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

Steps:

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

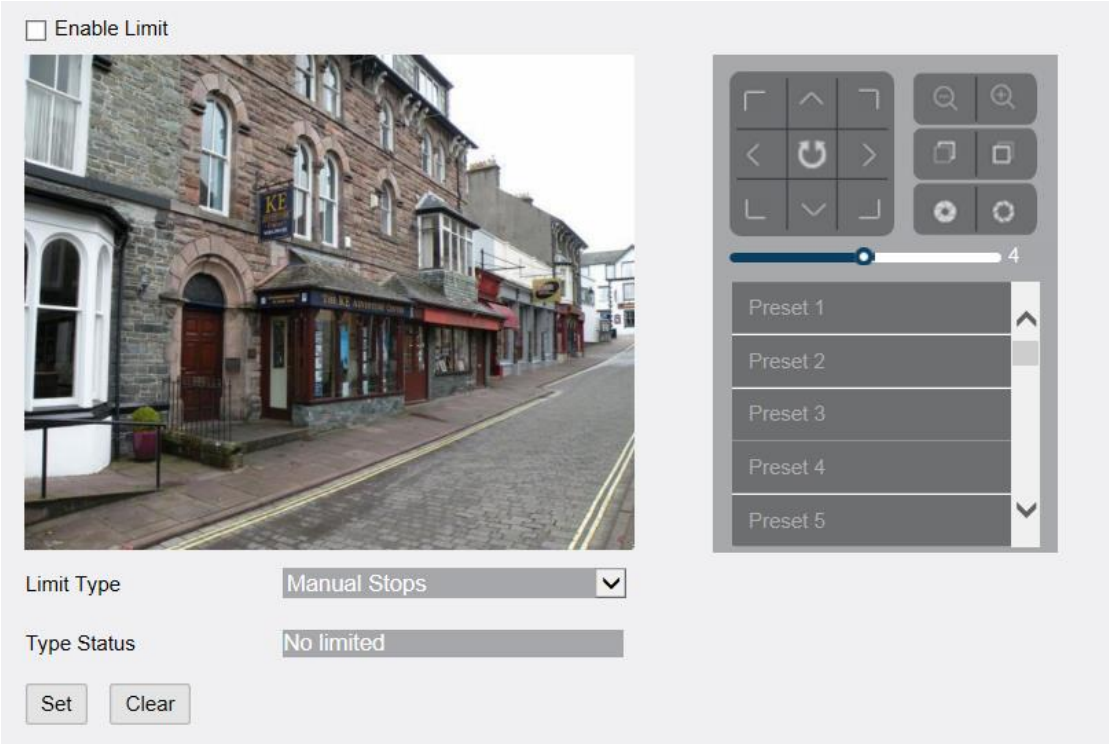

Figure 10-2 Configure the PTZ Limit

2. Click the checkbox of **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.

- **Scan Stops:**

When scan limit stops are set, the random scan, frame scan, auto scan, tilt scan, panorama scan is performed only in the limited surveillance area.

Note:

Manual Stops of **Limit Type** is prior to **Scan Stops.** When you set these two limit types at the same time, **Manual Stops** is valid and **Scan Stops** is invalid.

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 dome.
4. Click **Set** to save the limits or click **Clear** to clear the limits.

10.3 Configuring Initial Position

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:

4. Enter the Initial Position Configuration interface: **PTZ** > **Initial Position**

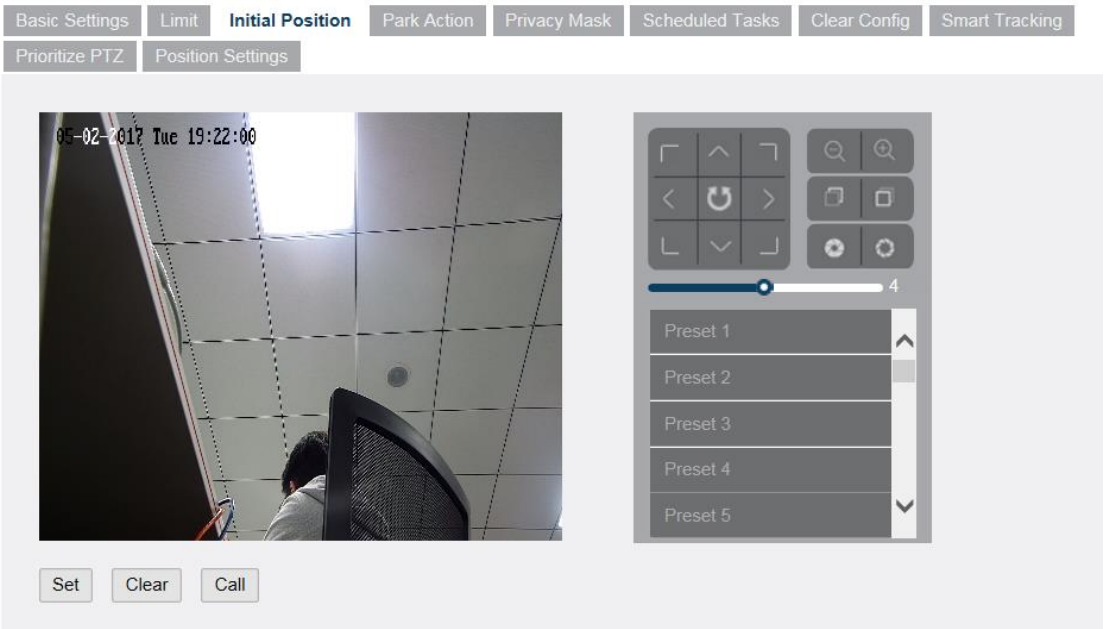

Figure 10-3 PTZ Configuration

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

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

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

10.4 Configuring Park Actions

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

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.

Steps:

1. Enter the Park Action Settings interface: **PTZ > Park Action**

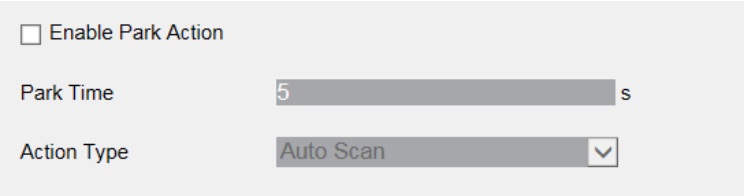

Figure 10-4 Set the Park Action

2. Check the checkbox of **Enable Park Action**.
3. Set the **Park Time** as the inactivity time of the dome before it starts the park actions.
4. Choose **Action Type** the from the drop-down list.

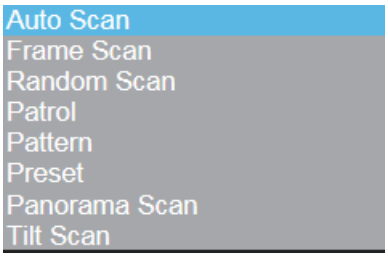

Figure 10-5 Action Types

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

10.5 Configuring Privacy Mask

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: **PTZ** > **Privacy Mask**

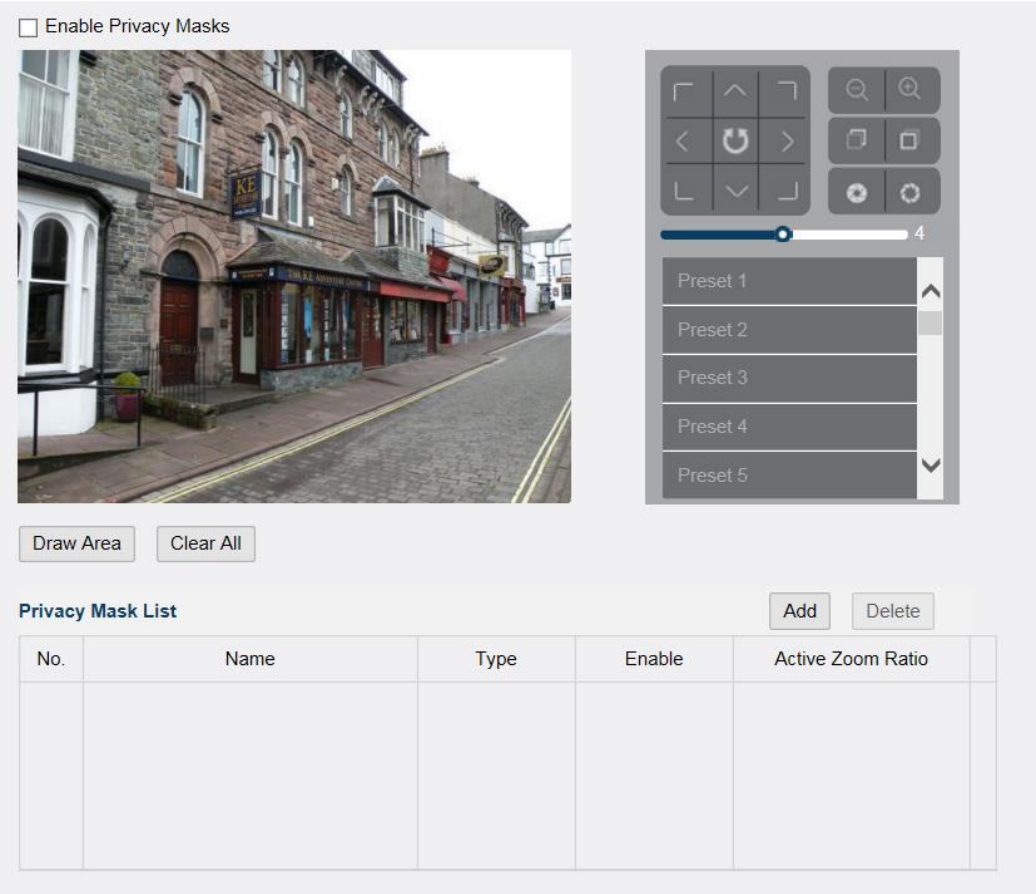

Figure 10-6 Draw the Privacy Mask

2. Click the PTZ control buttons to find the area you want to set the privacy mask.
3. Click Draw Area; click and drag the mouse in the live video window to draw the area.

   You can drag the corners of the red rectangle area to draw a polygon mask.
4. Click Stop Drawing to finish drawing or click Clear All to clear all of the areas you set without saving them.
5. 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.
6. You can also define the color of the masks.
7. You can select a mask and click Delete to delete it from the list.
8. Check the checkbox of **Enable Privacy Mask** to enable this function.

10.6 Configuring Scheduled Tasks

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

Steps:

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

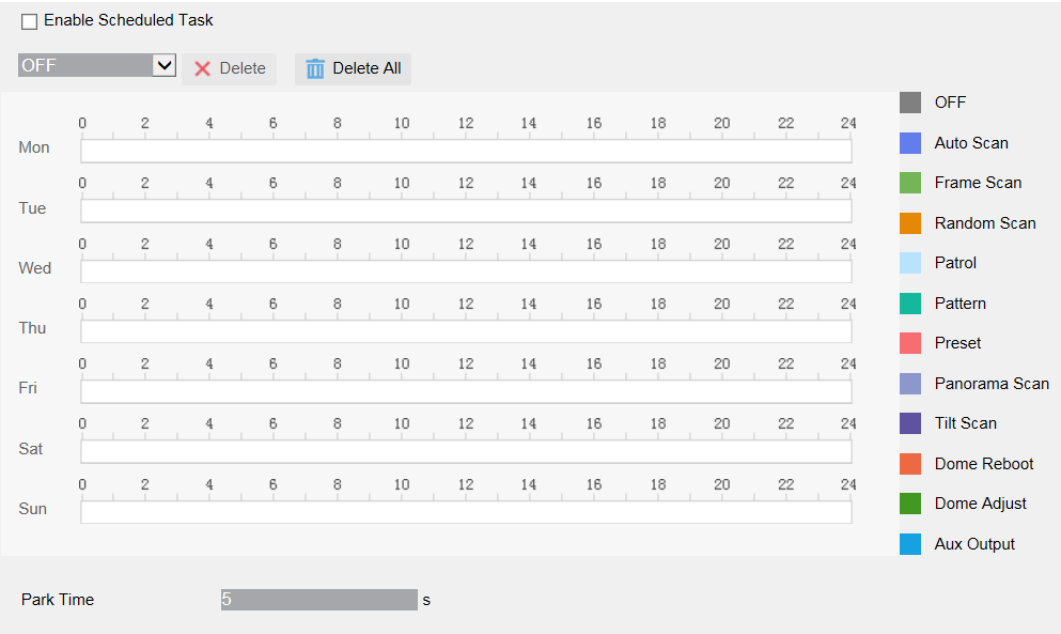

Figure 10-7 Configure Scheduled Tasks

2. Check the checkbox of **Enable Scheduled Task**.
3. Set the **Park Time**. You can set the park time (a period of inactivity) before the dome starts the scheduled tasks.
4. Select the task type from the drop-down list. You can choose scan, preset, pattern and etc.

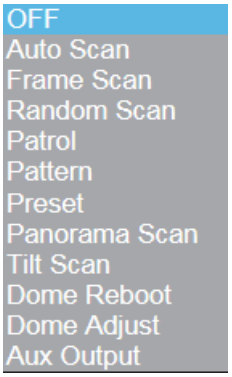

Figure 10-8 Task Types

5. Select the timeline of a certain day, click and drag the left button of 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).
7. After setting the record schedule, you can click a record segment to display the segment record settings interface to edit the segment record parameters. (Optional)

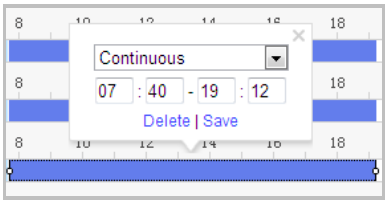

Figure 10-9 Segment Record Settings

8. Click **Save** button to save the settings.

10.7 Clearing PTZ Configurations

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

Steps:

1. Enter the Clearing Configuration interface: **PTZ > Clear Config**
2. Check the checkbox of the items you want to clear.
3. Click **Save** button to clear the settings.

10.8 Configuring Smart Tracking

The speed dome tracks the moving objects automatically after you configure this function.

Steps:

1. Enter the Smart Tracking Settings interface: **PTZ > Smart Tracking**

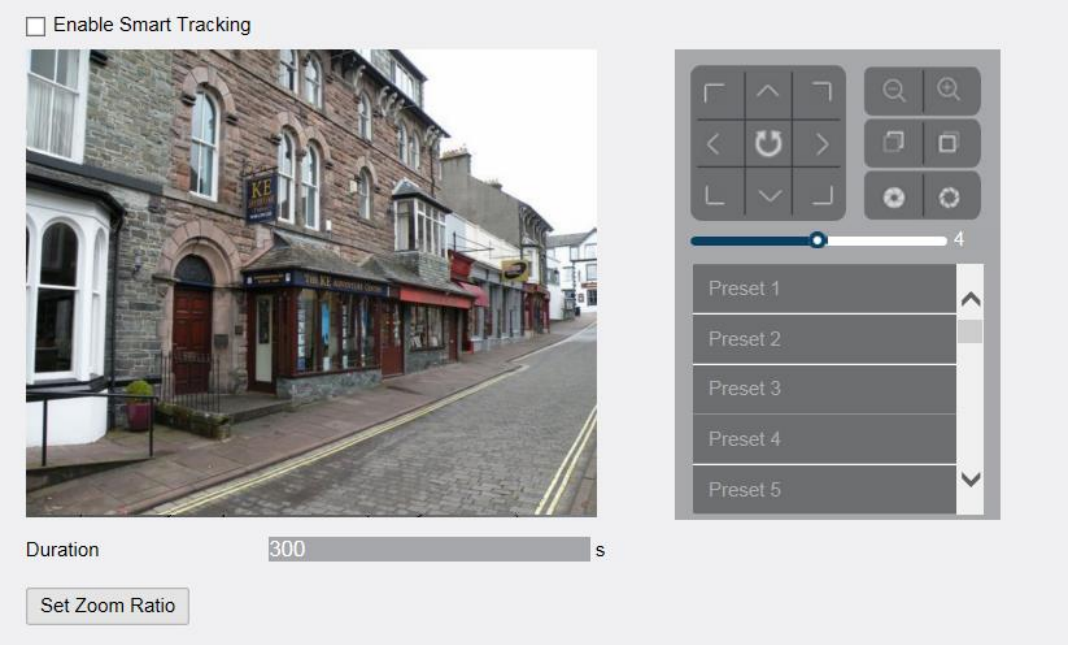

Figure 10-10 Configure Smart Tracking

2. Check the Enable Smart Tracking check box to enable smart tracking function.
3. Click the PTZ buttons to select an object.
4. Click Set Zoom Ratio to set the current zoom ratio as the tracking zoom ratio.
5. Set the tracking duration. The speed dome stops tracking when the duration time is up. The duration ranges from 0 to 300 seconds.

Note:

- Setting the duration to 0 means that there' no duration when speed dome tracks.
- Not all the speed dome models support this function. Please take the browser interface of the actual product as standard.

10.9 Configuring PTZ Control Priority

Steps:

1. Get to the configuration interface: **PTZ > Prioritize PTZ**.
   - The speed dome can be controlled by network and RS-485 signals. You can set the control priority of these two signals.
   - The operation of **Operator** is prior to that of **User**. When the **Operator** is

controlling the speed dome, the **User** cannot control it. When the **Operator** finishes, the **User** can control the speed dome after the **Delay** time. The **Delay** time can be set in Priority PTZ interface as shown follows.

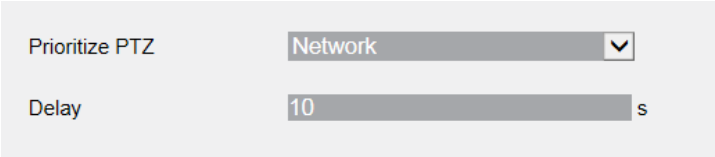

Figure 10-11 PTZ Priority

2. Click **Save** button to activate the settings.

10.10 Configuring Position Settings

Position Settings can be configured to show the position of the PTZ camera.

Steps:

1. Get to the configuration interface: **PTZ > Position Settings**

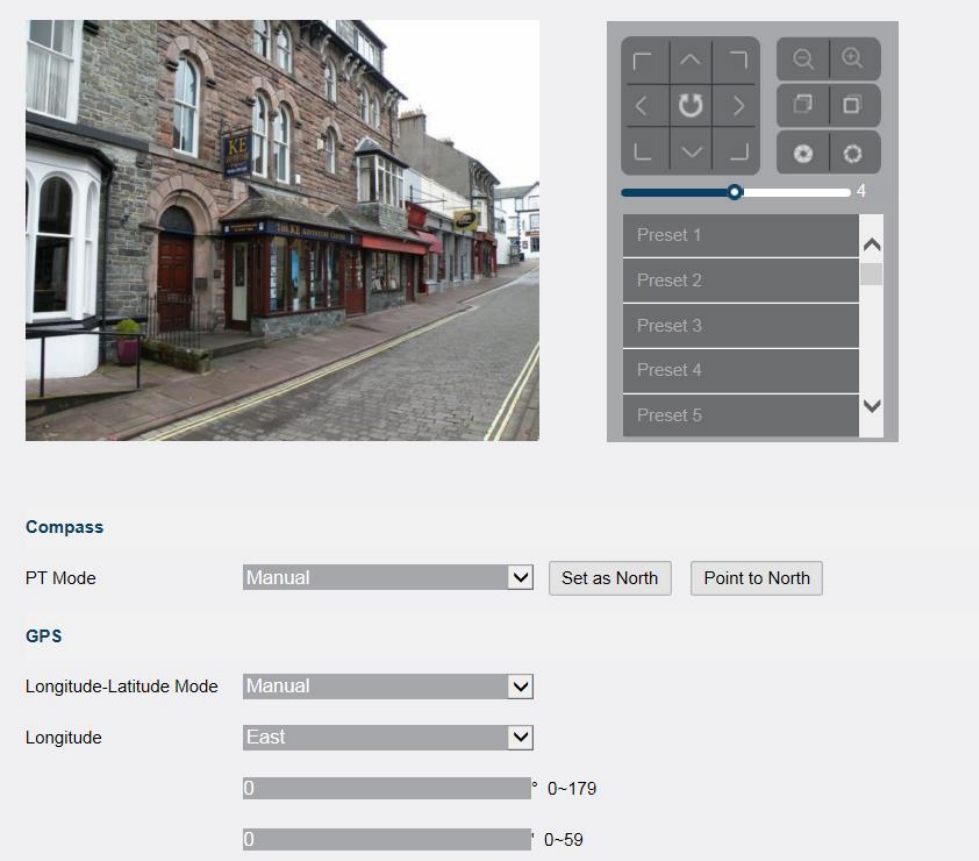

Figure 10-12 Position Settings

2. Move PTZ button to the North and click **Set as North** button. When PTZ camera move to other direction, you can click **Point to North** button to make the camera back to the north direction.
3. You can also set the longitude and latitude of the position you selected.

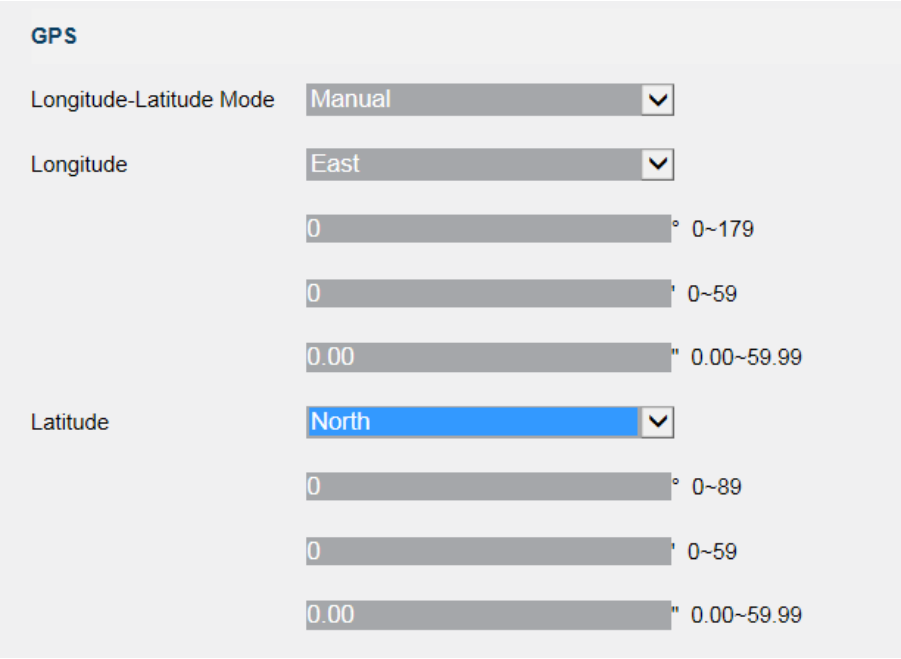

Figure 10-13 GPS Settings

Chapter 11 Playback

Purpose:

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

Steps:

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

Figure 11-1 Playback Interface

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

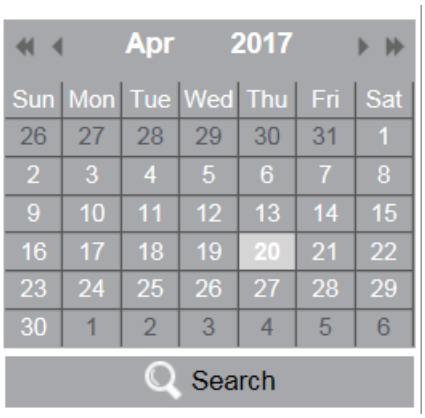

Figure 11-2 Search Video

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

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

Figure 11-3 Playback Toolbar

Table 11-1 Description of the buttons

Button	Operation	Button	Operation
▶	Play	📷	Capture a picture

	Pause		Start/Stop clipping video files
	Stop		Audio on and adjust volume/Mute
	Speed down		Download Recording
	Speed up		Download images
	Enable/Disable digital zoom		Playback by frame

Note: You can choose the file paths locally for downloaded playback video files and pictures in Local Configuration interface.

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 11-4 Set Playback Time

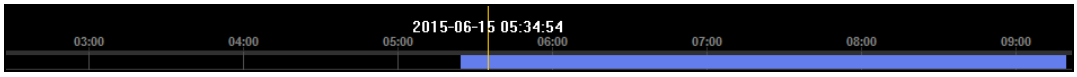

Figure 11-5 Progress Bar

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

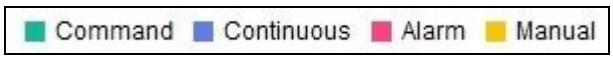

Figure 11-6 Video Type