HIKVISION

Network Mini PTZ Camera

User Manual

<u>**User Manual**</u>

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About this Manual

This Manual is applicable to Network Mini PTZ Camera.

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

Please use this user manual under the guidance of professionals.

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Regulatory Information

FCC Information

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

FCC Conditions

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

1. This device may not cause harmful interference.

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

EU Conformity Statement

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

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

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.

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

Cautions:

- Make sure the power supply voltage is correct before using the product.

- Do not drop the product or subject it to physical shock. Do not install the product on vibratory surface or places.

- Do not expose it to high electromagnetic radiating environment.

- Do not aim the lens at the strong light such as sun or incandescent lamp. The strong light can cause fatal damage to the product.

- The sensor may be burned out by a laser beam, so when any laser equipment is being used, make sure that the surface of the sensor not be exposed to the laser beam.

- For working temperature, please refer to the specification manual for details.

- To avoid heat accumulation, good ventilation is required for a proper operating environment.

- While shipping, the product should be packed in its original packing.

- Please use the provided glove when open up the product cover. Do not touch the product cover with fingers directly, because the acidic sweat of the fingers may erode the surface coating of the product cover.

- Please use a soft and dry cloth when clean inside and outside surfaces of the product cover. Do not use alkaline detergents.

- Improper use or replacement of the battery may result in hazard of explosion. Please use the manufacturer recommended battery type.

Table of Contents

Chapter 1 Overview

1.1 System Requirement

System requirement of web browser accessing is as follows:

Operating System: Microsoft Windows XP SP1 and above version / Vista / Win7 / Server 2003 / Server 2008 32bits

CPU: Intel Pentium IV 3.0 GHz or higher

RAM: 1G or higher

Display: 1024×768 resolution or higher

Web Browser: Internet Explorer 8.0 and above version, Apple Safari 5.02 and above version, Mozilla Firefox 5 and above version and Google Chrome 18 and above versions.

1.2 Functions

NOTE The functions vary depending on the models of mini PTZ camera.

- **PTZ Limits**

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

- **Scan Modes**

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

- **Presets**

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

- **Label Display**

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

- **Auto Flips**

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

- **Privacy Mask**

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

- **3D Positioning**

In the client software, use the left key of mouse to click on the desired position in the video

image and drag a rectangle area in the lower right direction, then the mini PTZ camera system will move the position to the center and allow the rectangle area to zoom in. Use the left key of mouse to drag a rectangle area in the upper left direction to move the position to the center and allow the rectangle area to zoom out.

● **Proportional Pan/Tilt**

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

● **Auto Focus**

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

● **Day/Night Auto Switch**

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

● **Slow Shutter**

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

● **Backlight Compensation (BLC)**

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

● **Wide Dynamic Range (WDR)**

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

NOTE This feature varies depending on mini PTZ camera models.

● **White Balance (WB)**

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

● **Patrol**

A patrol is a memorized series of pre-defined preset function. The scanning speed between two presets and the dwell time at the preset are programmable.

● **Pattern**

A pattern is a memorized series of pan, tilt, zoom, and preset functions. By default the focus and iris are in auto status during the pattern is being memorized.

NOTE Pattern function varies depending on mini PTZ camera models.

● **Power Off Memory**

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

● **Scheduled Task**

A time task is a preconfigured action that can be performed automatically at a specific date and time. The programmable actions include: auto scan, random scan, patrol 1-8 ,pattern 1-4, preset 1-8,frame scan, panorama scan, tilt scan, day, night, reboot, PT adjust, Aux Output, etc.

● **Park Action**

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

● **User Management**

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

● **3D Digital Noise Reduction**

Comparing with the general 2D digital noise reduction, the 3D digital noise reduction function processes the noise between two frames besides processing the noise in one frame. The noise will be much less and the video will be clearer.

Chapter 2 Network Connection

Before you start:

● If you want to set the network mini PTZ camera via a LAN (Local Area Network), please refer to *Section 2.1.*

● If you want to set the network mini PTZ camera via a WAN (Wide Area Network), please refer to *Section 2.2.*

2.1 Setting the Network Mini PTZ camera over the LAN

Purpose:

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

NOTE For the detailed introduction of SADP, please refer to Appendix 1.

2.1.1 Wiring over the LAN

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

Purpose:

● To test the network mini PTZ camera, you can directly connect the network mini PTZ camera to the computer with a network cable as shown in Figure 2-1.

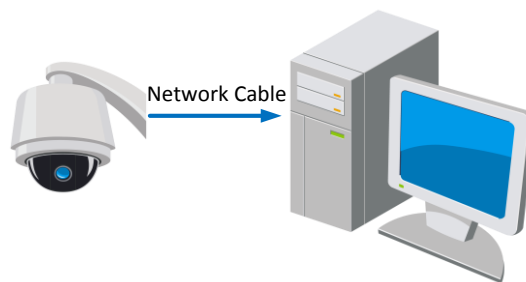● Refer to the Figure 2-2 to set the network mini PTZ camera over the LAN via a switch or a router.
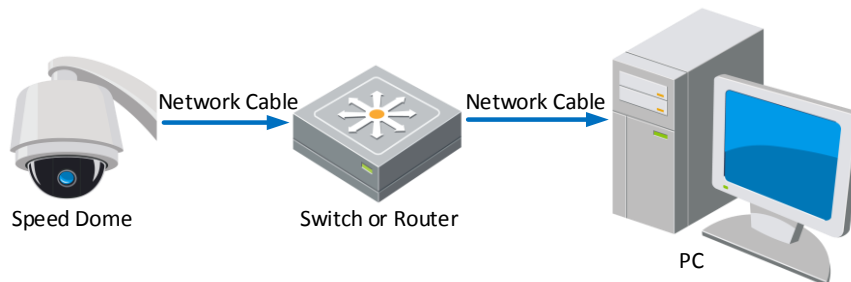
Figure 2-1 Connecting Directly

Figure 2-2 Connecting via a Switch or a Router

2.1.2 Activating the Mini PTZ camera

Purpose:

You are required to activate the mini PTZ camera first before you can use the mini PTZ camera. Activation via Web Browser, Activation via SADP, and Activation via client software are supported. In the following sections, activation via web browser and SADP will be taken as examples. You may refer to the user manual of the mini PTZ camera for the details of activation via client software.

◆ Activation via Web Browser

Steps:

1. Power on the mini PTZ camera, and connect the mini PTZ 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.

NOTE The default IP address of the mini PTZ camera is 192.168.1.64.

Figure 2-3 Activation Interface(Web)

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 activate the mini PTZ camera and enter the live view interface.

◆ Activation via SADP Software

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

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

Steps:

1.   Run the SADP software to search the online devices.

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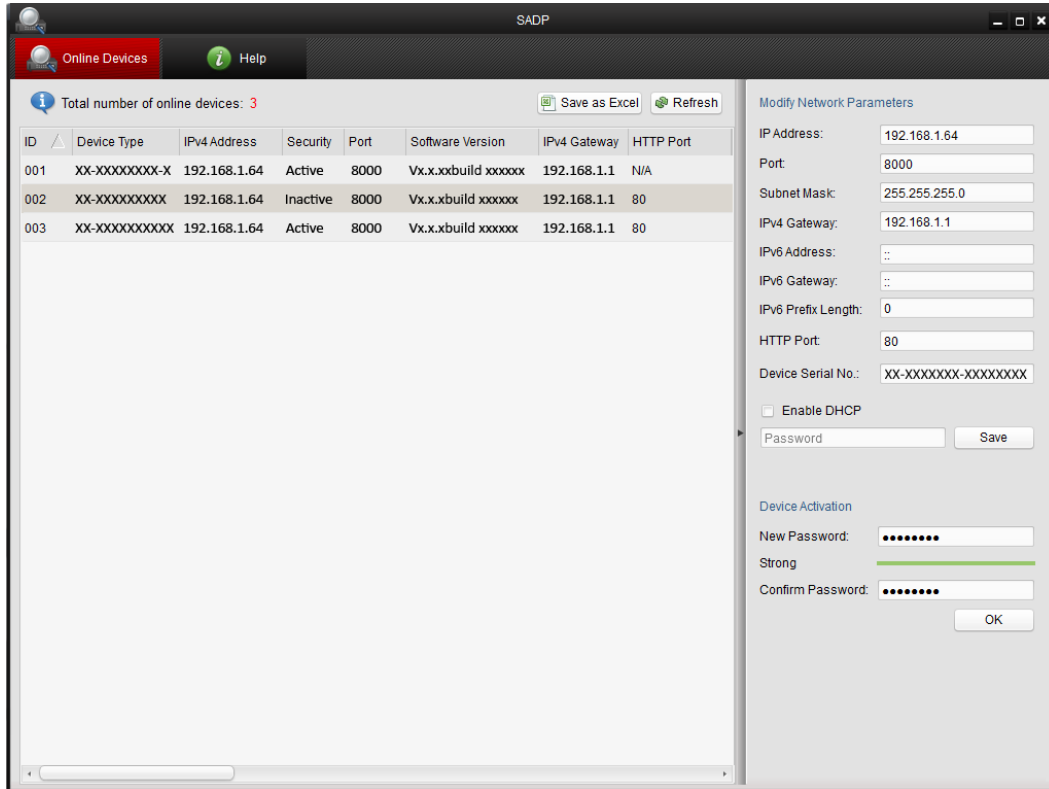

Figure 2-4 SADP Interface

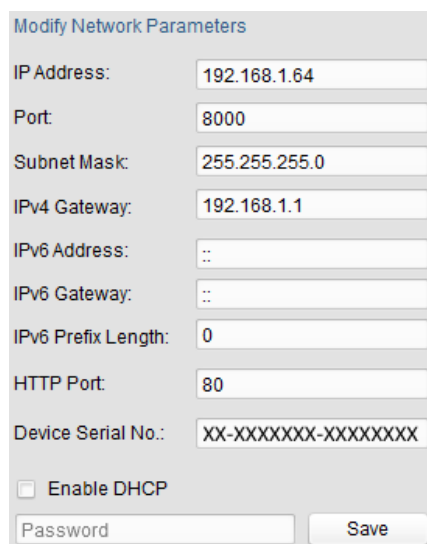3. Create a password and input the password in the password field, and confirm the password.

> ⚠ **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 then try again.

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

◆ Activation via Client Software

The client software is versatile video management software for multiple kinds of devices.
Get the client software from the supplied disk or the official website, and install the software according to the prompts. Follow the steps to activate the camera.

Steps:

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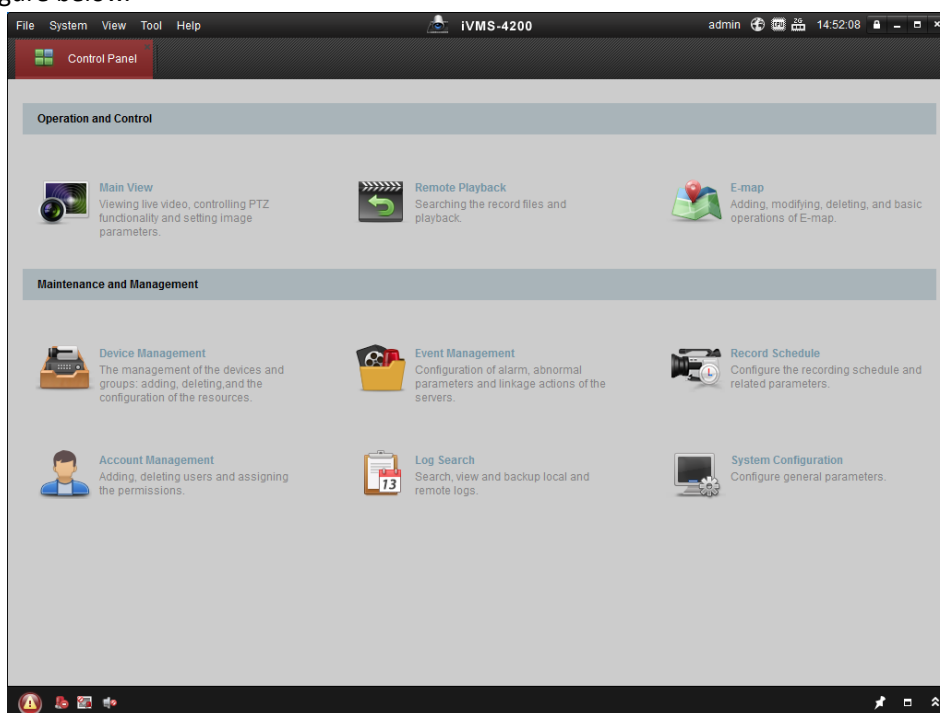
Figure 2-6 Control Panel

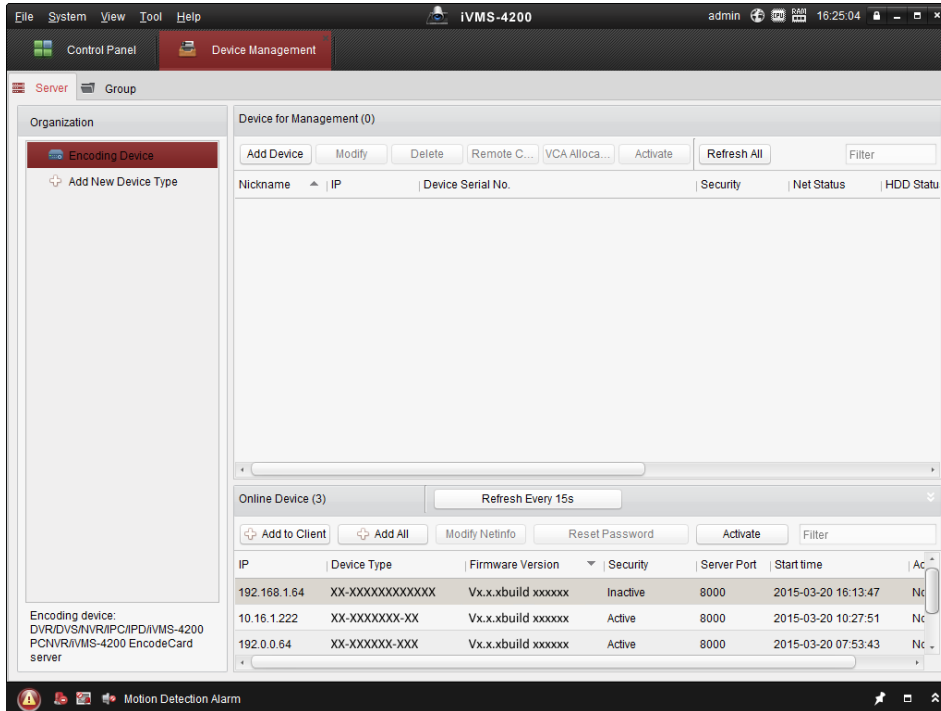2. Click the **Device Management** icon to enter the Device Management interface, as shown in the figure below.

Figure 2-7 Device Management Interface

3. Check the device status from the device list, and select an inactive device.
4. Click the **Activate** button to pop up the Activation interface.
5. 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.*
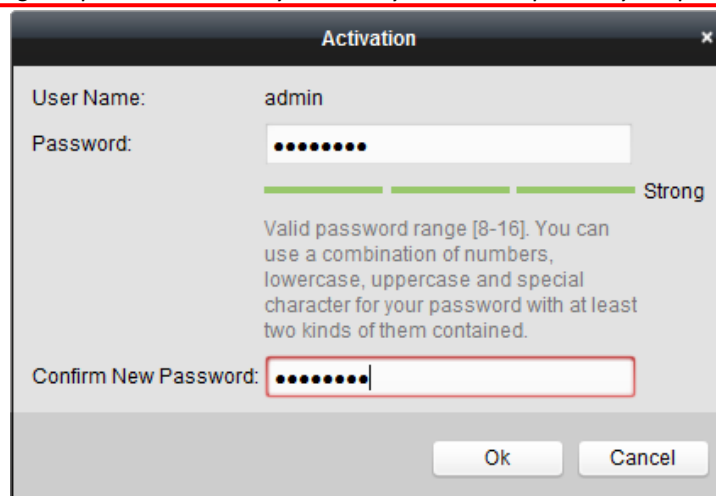

Figure 2-8 Activation Interface

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6. Click **OK** button to start activation.
7. Click the **Modify Netinfo** button to pop up the Network Parameter Modification interface, as shown in the figure below.

Figure 2-9 Modifying the Network Parameters

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

2.2 Setting the Network Mini PTZ camera over the WAN

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

2.2.1 Static IP Connection

Before you start:
Please apply a static IP from an ISP (Internet Service Provider). With the static IP address, you can connect the network mini PTZ camera via a router or connect it to the WAN directly.
● **Connecting the network mini PTZ camera via a router**
Steps:
1. Connect the network mini PTZ camera to the router.
2. Assign a LAN IP address, the subnet mask and the gateway. Refer to *Section 2.1.2* for detailed IP address configuration of the mini PTZ camera.
3. Save the static IP in the router.

4. Set port mapping, E.g., 80, 8000 and 554 ports. The steps for port mapping vary depending on different routers. Please call the router manufacturer for assistance with port mapping.

    NOTE Refer to Appendix 2 for detailed information about port mapping.

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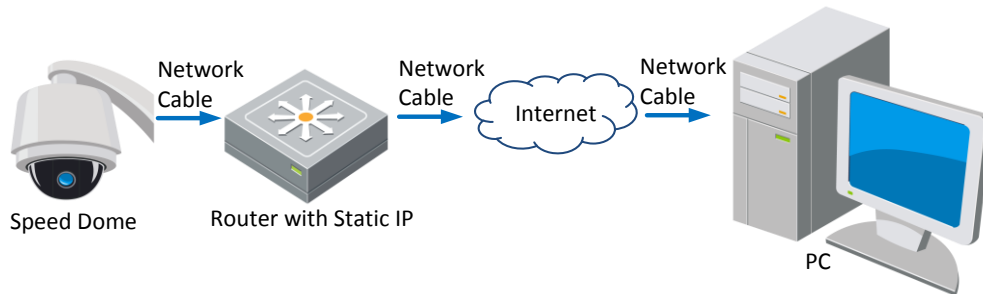

Figure 2-10 Accessing the Mini PTZ camera through Router with Static IP

END

● **Connecting the network mini PTZ camera with static IP directly**

You can also save the static IP in the mini PTZ camera and directly connect it to the internet without using a router. Refer to *Section 2.1.2* for detailed IP address configuration of the mini PTZ camera.
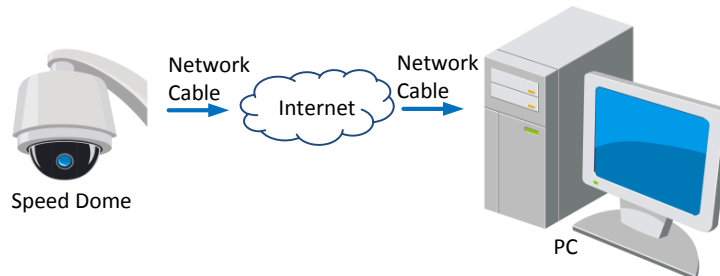
Figure 2-11 Accessing the Mini PTZ camera with Static IP Directly

2.2.2 Dynamic IP Connection

Before you start:

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

● **Connecting the network mini PTZ camera via a router**

Steps:

1. Connect the network mini PTZ camera to the router.
2. In the mini PTZ camera, assign a LAN IP address, the subnet mask and the gateway. Refer to *Section 2.1.2* for detailed LAN configuration.

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3. In the router, set the PPPoE user name, password and confirm the password.

⚠️

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

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

4. Set port mapping. E.g. 80, 8000 and 554 ports. The steps for port mapping vary depending on different routers. Please call the router manufacturer for assistance with port mapping.

NOTE

Refer to Appendix 2 for detailed information about port mapping.

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

END

● **Connecting the network mini PTZ camera via a modem**

Purpose:

This mini PTZ camera supports the PPPoE auto dial-up function. The mini PTZ camera gets a public IP address by ADSL dial-up after the mini PTZ camera is connected to a modem. You need to configure the PPPoE parameters of the network mini PTZ camera. Refer to **Section 6.3.3 Configuring PPPoE Settings** for detailed configuration.
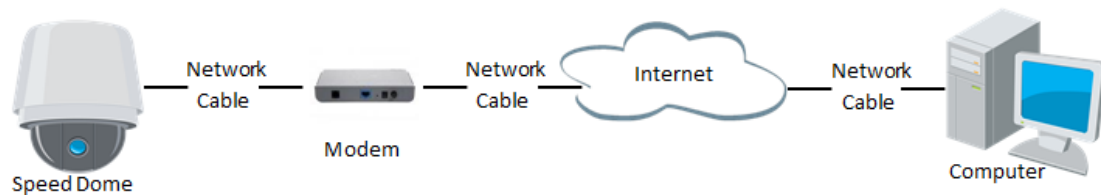

Figure 2-12 Accessing the Mini PTZ camera with Dynamic IP

NOTE

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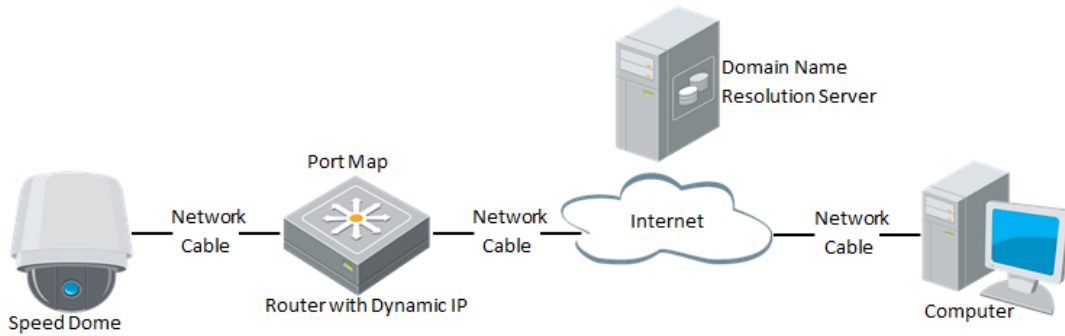
♦ Normal Domain Name Resolution

Figure 2-13 Normal Domain Name Resolution

Steps:

1. Apply a domain name from a domain name provider.
2. Configure the DDNS settings in the **DDNS Settings** interface of the network mini PTZ camera. Refer to *Section 6.3.2 Configuring DDNS Settings* for detailed configuration.
3. Visit the mini PTZ camera via the applied domain name.
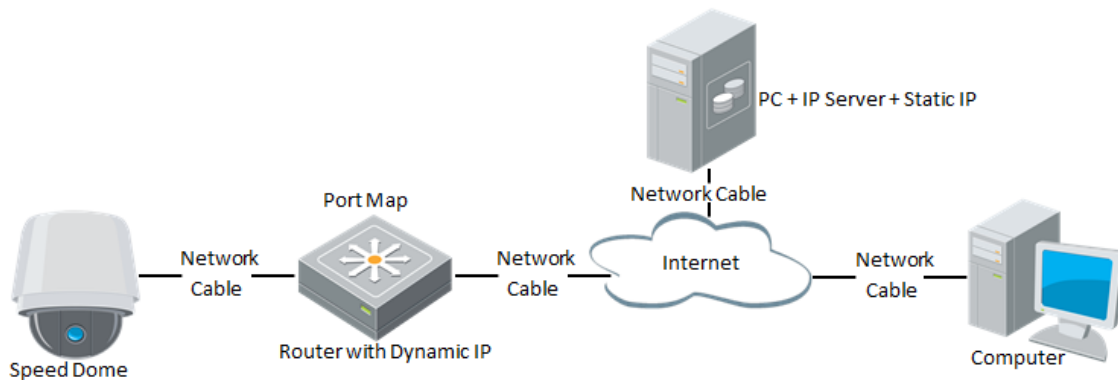

♦ Private Domain Name Resolution

Figure 2-14 Private Domain Name Resolution

Steps:

1. Install and run the IP Server software in a computer with a static IP.
2. Access the network mini PTZ camera through the LAN with a web browser or the client software.
3. Enable DDNS and select IP Server as the protocol type. Refer to *Section 6.3.2 Configuring DDNS Settings* for detailed configuration.

Chapter 3 Access to the Network Mini PTZ camera

3.1 Accessing by Web Browsers

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

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

    ![NOTE]

    The device IP address gets locked if the admin user performs 7 failed password attempts (5 attempts for the user/operator).
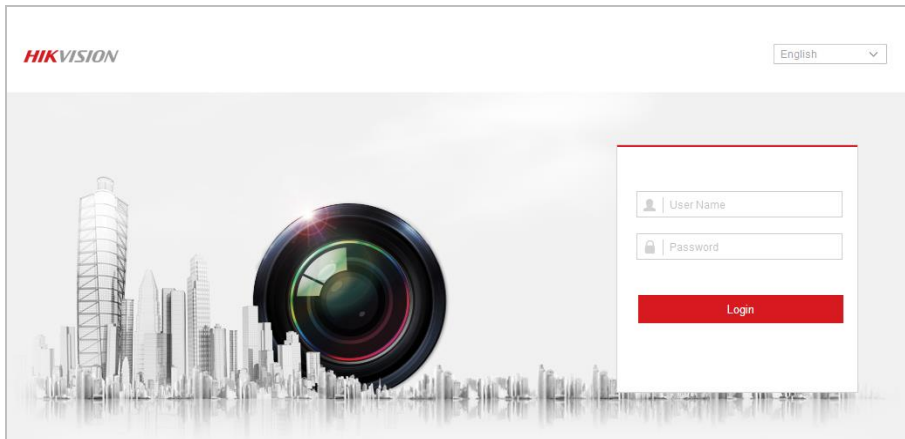
Figure 3-1 Login Interface

6. Install the plug-in before viewing the live video and operating the mini PTZ camera. Please follow the installation prompts to install the plug-in.
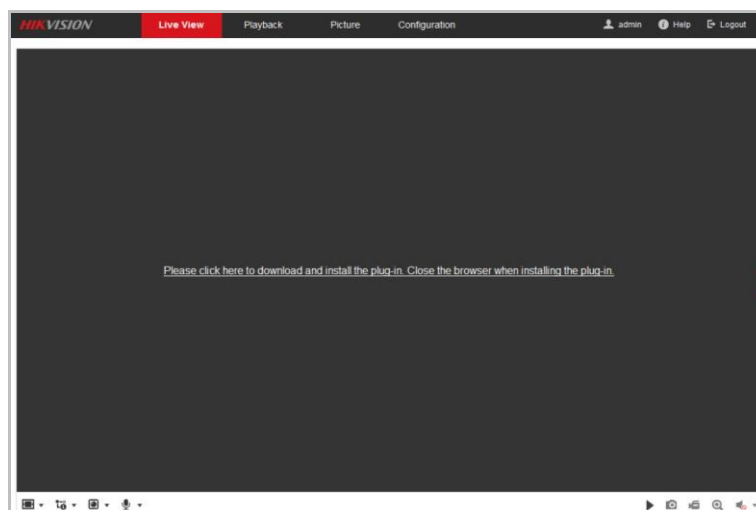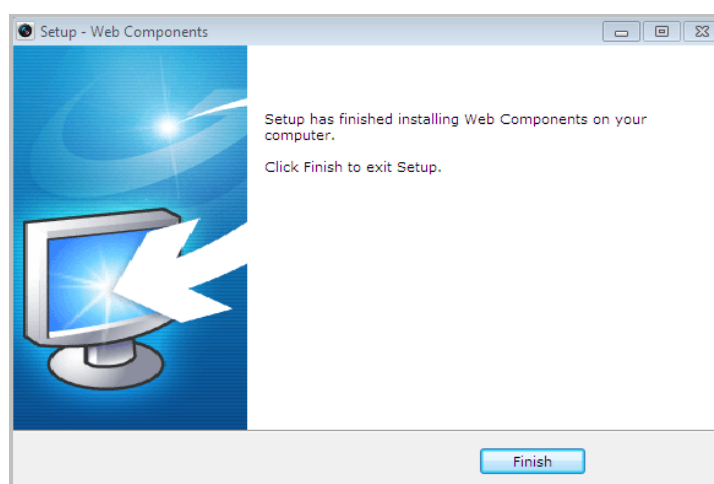
Figure 3-2 Download and Install Plug-in

Figure 3-3 Install Plug-in

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

3.2 Accessing by Client Software

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

Follow the installation prompts to install the client software and WinPcap. The configuration interface and live view interface of client software are shown below.
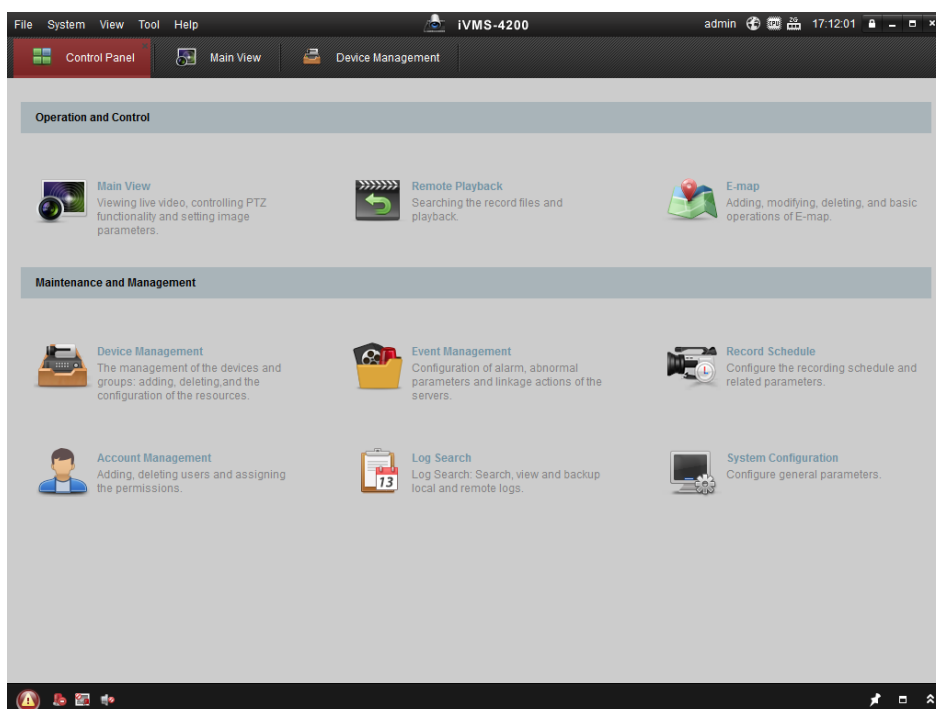
Figure 3-4 iVMS-4200 Control Panel
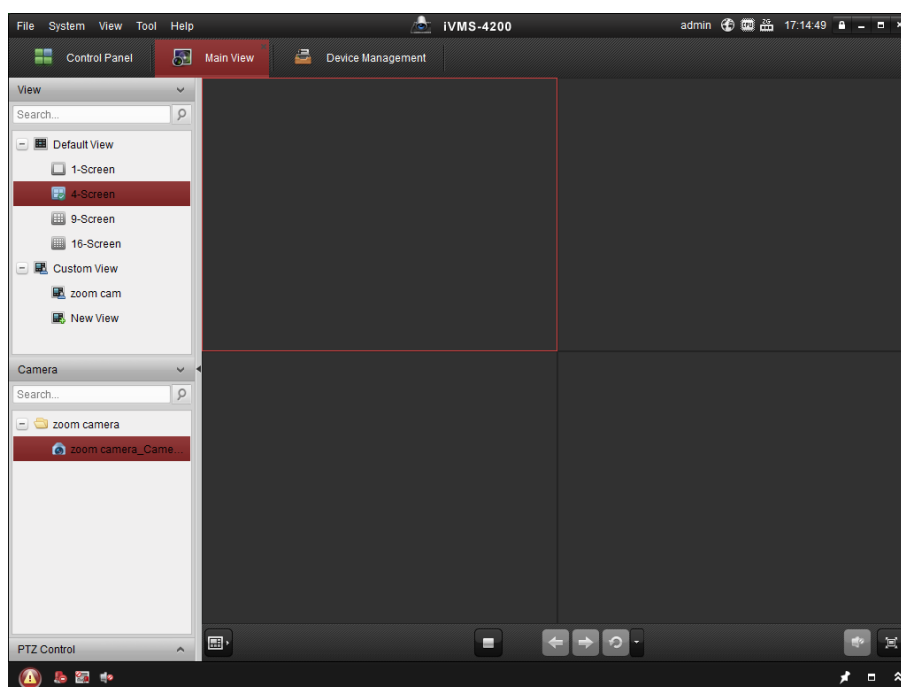
Figure 3-5 iVMS-4200 Live View Interface

NOTE

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

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Chapter 4 Live View

4.1 Live View Page

Purpose:

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

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

Descriptions of the live view page:
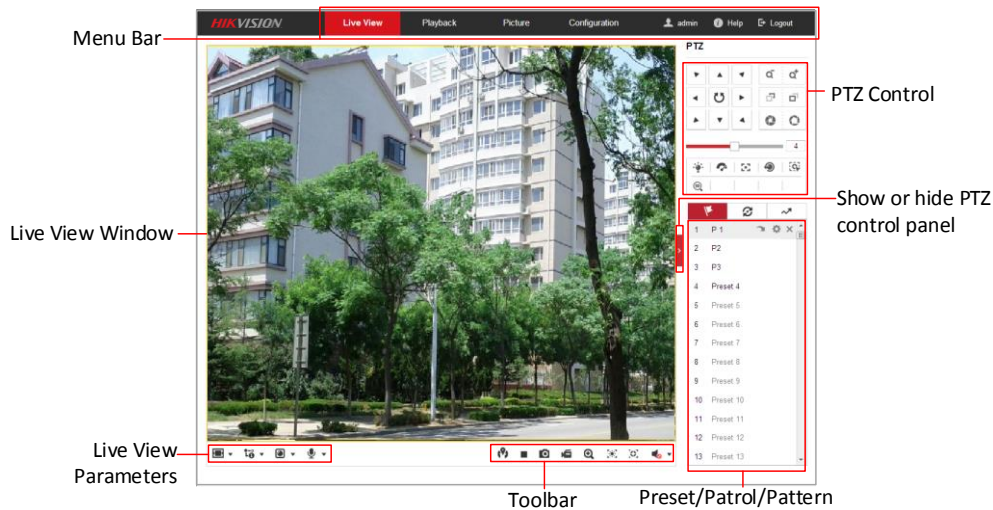
Figure 4-1 Live View Page

Menu Bar:

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

Live View Window:

Display the live video.

Toolbar:

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

PTZ Control:

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

Preset/patrol/pattern:

Set and call the preset/patrol/pattern for the mini PTZ camera.

NOTE Pattern function varies depending on mini PTZ camera models.

Live View Parameters:

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

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
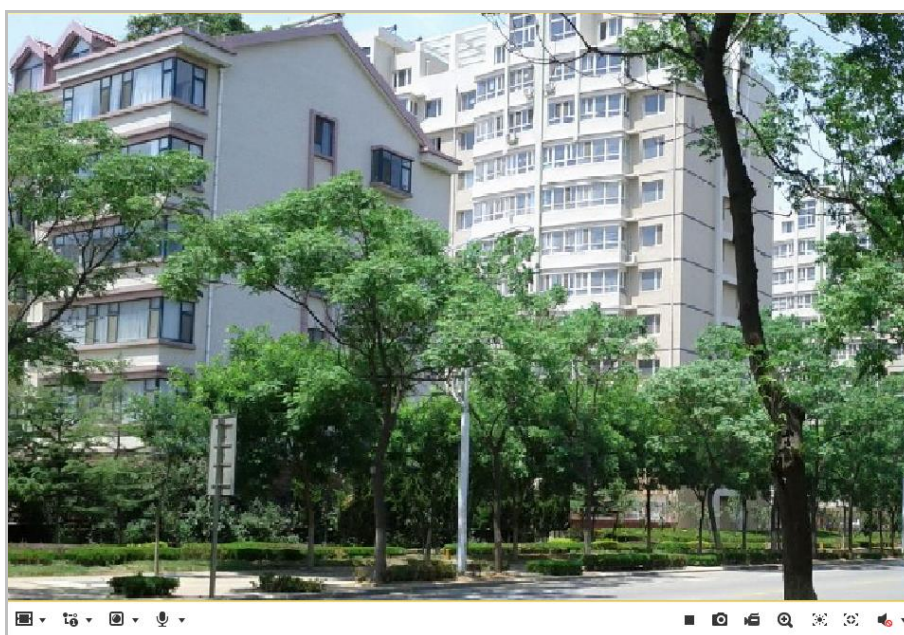the mini PTZ camera.
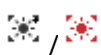
Figure 4-2 Start Live View

Table 4-1 Descriptions of the Toolbar

Icon	Description	Icon	Description
▶ / ■	Start/Stop Live view.	📷	Manually capture the pictures.
4:3 / 16:9 / 1× / ▣	Display in 4:3/16:9/original/ Self-adaptive window size.	🔳₁ / 🔳₂	Live view with the main/sub.
◉ / ◔	Play via webcomponents/ quick time.	🎤 / 🎤	Start/Stop Two-way Audio.
🎥 / 🎥	Manual start/stop recording.	🔇 / 🔊 ▬▬▭	Mute/Audio on and adjust volume
🔍 / 🔍	Start/stop digital zoom.	③ᴰ	Start 3D positioning.
✳ / ✳	Enable/Disable Regional Exposure	⦿ / ⦿	Enable / Disable Regional Focus
⟳ / ⟳	Start/Stop manual tracking.		

NOTE Before using the two-way audio or recording with audio functions, please set the

Stream Type to **Video & Audio** referring to Section *6.4.1 Configuring Video Settings*.

Full-screen Mode:

You can double-click on the live video to switch the current live view into full-screen or return to normal mode from the full-screen.

Regional Focus:

Steps:

1. Click the on the toolbar to enter the regional focus operation mode.

2. Click-and-drag the mouse to draw a rectangle on the image as the desired focus region.

3. Click the to exit the regional focus operation mode.

Regional Exposure:

Steps:

1. Click the on the toolbar to enter the regional exposure operation mode.

2. Click-and-drag the mouse to draw a rectangle on the image as the desired exposure region.

3. Click the to exit the regional exposure operation mode.

3D Positioning:

Steps:

1. Click on the tool bar of live view interface.

2. Operate the 3D positioning function:
   - Left 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.

END

Please refer to the following sections for more information:
- Configuring remote recording in Section *7.2 Configuring Recording Schedule*.
- Setting the image quality of the live video in Section *6.1 Configuring Local Parameters* and Section *6.4.1 Configuring Video Settings*.
- Setting the OSD text on live video in Section *6.5.2 Configuring OSD Settings*.

4.3 Recording and Capturing Pictures Manually

In the live view interface, click [icon] on the toolbar to capture the live pictures or click [icon] to record the live video. The local saving paths of the captured pictures and clips can be set in the **Configuration > Local Configuration** interface.

To configure remote automatic recording, please refer to Section *7.2 Configuring Recording Schedule*.

[NOTE] You can configure the format of the picture to save in your computer as JPEG or BMP, refer to the *section 7.1 Configuring Recording Schedule.*

.

4.4 Operating PTZ Control

Purpose:

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

4.4.1 PTZ Control Panel

On the live view page, click [icon] to show the PTZ control panel or click [icon] to hide it.
Click the direction buttons to control the pan/tilt movements.
Click the zoom/iris/focus buttons to realize lens control.

Figure 4-3 PTZ Control Panel

Table 4-2 Descriptions of PTZ Control Panel

Button	Description
Zoom out/in
Focus near/far

Button	Description
	Iris Open/Close
4	Adjust speed of pan/tilt movements

4.4.2 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.
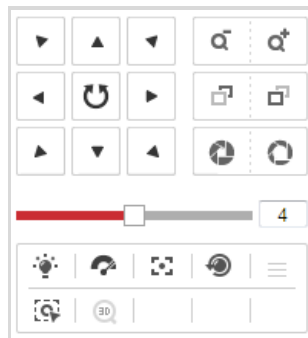
● **Setting a Preset:**

Steps:

1. In the PTZ control panel, select a preset number from the preset list.
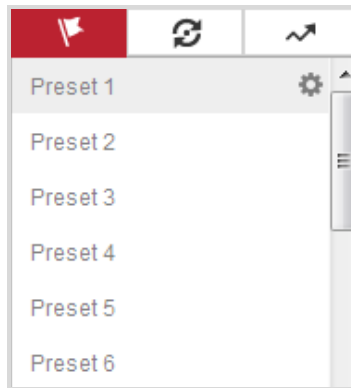
Figure 4-4 Setting a Preset

2. Use the PTZ control buttons to move the lens to the desired position.
   - Pan the mini PTZ camera to the right or left.
   - Tilt the mini PTZ camera up or down.
   - Zoom in or out.
   - Refocus the lens.
3. Click ⚙ to finish the setting of the current preset.
4. Edit a preset name by double clicking on the default name such as preset 1. (The pre-defined presets are named already and not configurable. Please 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.

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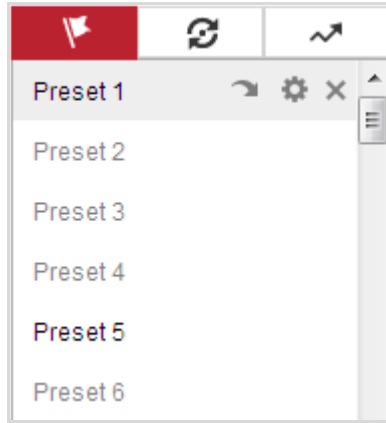
Figure 4-5 Calling a Preset

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

Steps:

1. Select any preset from the list.

2. Click the preset number you need on the keyboard.

*   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 mini PTZ camera starts auto scan function.

*   Pattern function varies depending on mini PTZ camera models.

Table 4-3 Special Presets

Preset No.	Function	Preset No.	Function
33	Auto flip	93	Set limit stops manually
34	Back to initial position	94	Remote reboot
35	Call patrol 1	96	Stop a scan
36	Call patrol 2	97	Start random scan
37	Call patrol 3	98	Start frame scan
38	Call patrol 4	99	Start auto scan
39	IR cut filter in	100	Start tilt scan
40	IR cut filter out	101	Start panorama scan
41	Call pattern 1	102	Call patrol 5
42	Call pattern 2	103	Call patrol 6
43	Call pattern 3	104	Call patrol 7
44	Call pattern 4	105	Call patrol 8
45	One-touch patrol	106	Fan On
92	Start to set limit stops	107	Fan Off
		108	Fan On By Temperature Control
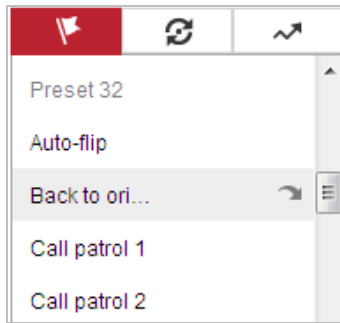
Figure 4-6 Special Preset

![NOTE] When you call preset 45 (one-touch patrol), the mini PTZ camera patrols from the preset 1 to 32. Before you enable this function, please set the preset 1 to 32 first.

4.4.3 Setting / Calling a Patrol

Purpose:

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:

Please 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 [Path 01 ▼].
3. Click [➕] to enter the adding interface of preset as shown in Figure 4-7.
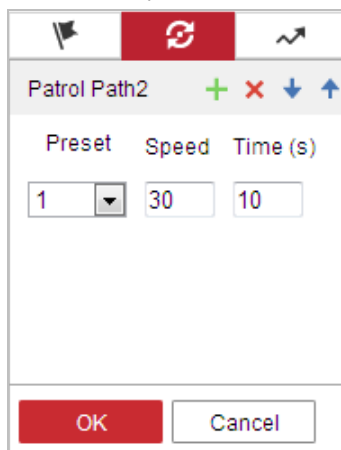
Figure 4-7 Adding Presets

4. Configure the preset number, patrol time and patrol speed.

Name	Description
Patrol Time	It is the duration staying on one patrol point. The mini PTZ camera 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, as shown in Figure 4-8.
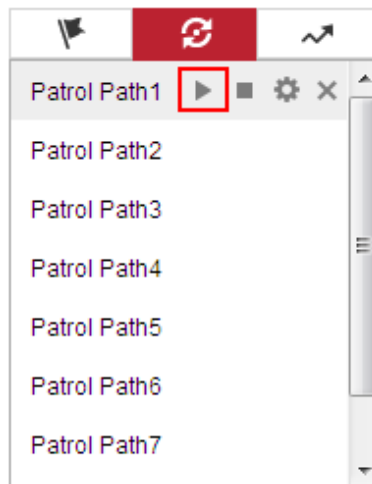
Figure 4-8 Calling a Preset

4.4.4 Setting / Calling a Pattern

Purpose:

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.

  Pattern function varies depending on mini PTZ camera 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 4-9.
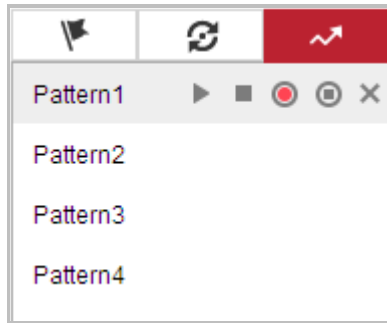
Figure 4-9 Patterns Settings Interface

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 mini PTZ camera to the right or left.
   • Tilt the mini PTZ camera up or down.
   • Zoom in or out.
   • Refocus the lens.

5. Click ⦿ to save all the pattern settings.

[END]

● **Buttons on the Patterns interface:**

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.

[NOTE]

   ● 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.

4.5 Configuring Live View Parameters

● **Main stream/Sub-stream:**

You can select ![icon] or ![icon] as the stream type of live viewing. The main stream is with a relatively high resolution and needs much bandwidth. The sub-stream is with a low resolution and needs less bandwidth. The default setting of stream type is ![icon].

![NOTE] Please refer to Section **6.4.1 Configuring Video Settings** for more detailed parameter settings of the main stream and sub-stream respectively.

● **Image Size:**

You can scale up/down the live view image by clicking ![4:3] ![16:9] ![1X] ![icon]. the image size can be 4:3, 16:9, original or auto.

Chapter 5 PTZ Configuration

5.1 Configuring Basic PTZ Parameters

Purpose:

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

1. Enter the Basic PTZ Parameter Configuration interface:

   Configuration > **PTZ** > **Basic Settings**

Figure 5-1 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.

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.

◆ **Keyboard Control Speed:** Define the speed of PTZ control by a keyboard as Low, Normal or High.

◆ **Auto Scan Speed:** The mini PTZ camera 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 speed of zooming is adjustable.

● **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 mini PTZ camera can resume its previous PTZ status or actions after it restarted from a power-off. You can set the time point of which the mini PTZ camera resumes its PTZ status. You can set it to resume the status of 30 seconds, 60 seconds, 300 seconds or 600 seconds before power-off.

3. Click [🖫 Save] to save the settings.

5.2 Configuring PTZ Limits

Purpose:

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

Steps:

1. Enter the Limit Configuration interface:
   Configuration > **Advanced Configuration** > **PTZ** > **Limit**
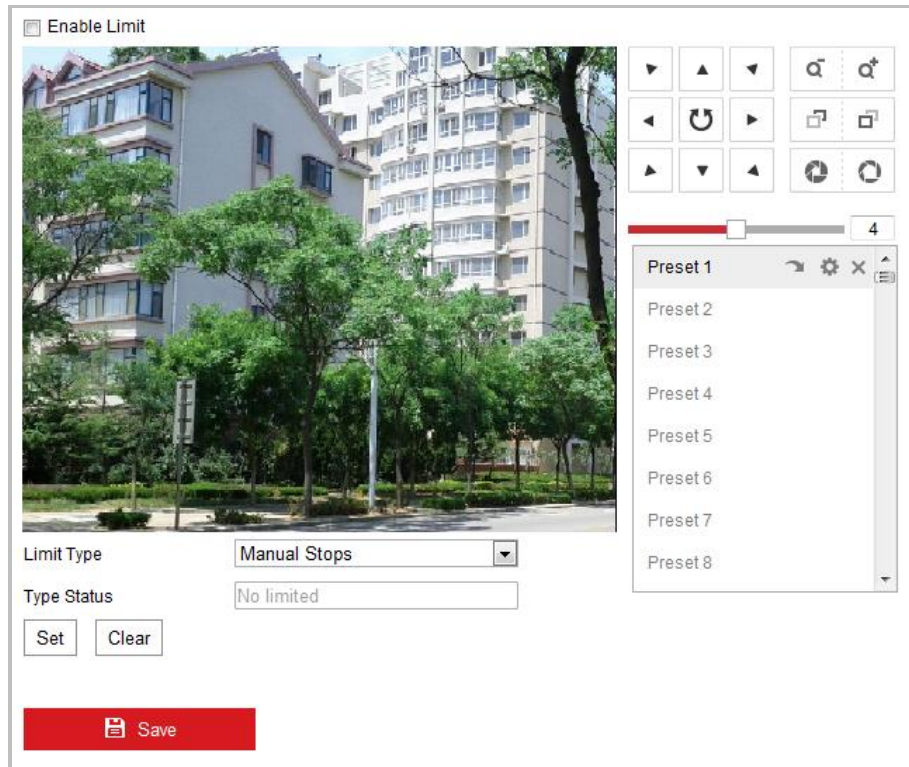
Figure 5-2 Configure the PTZ Limit

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 mini PTZ camera.
4. Click **Set** to save the limits or click **Clear** to clear the limits.

END

5.3 Configuring Initial Position

Purpose:

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

● **Customize an Initial Position:**

Steps:

1. Enter the Initial Position Configuration interface:
    Configuration > **PTZ** > **Initial Position**
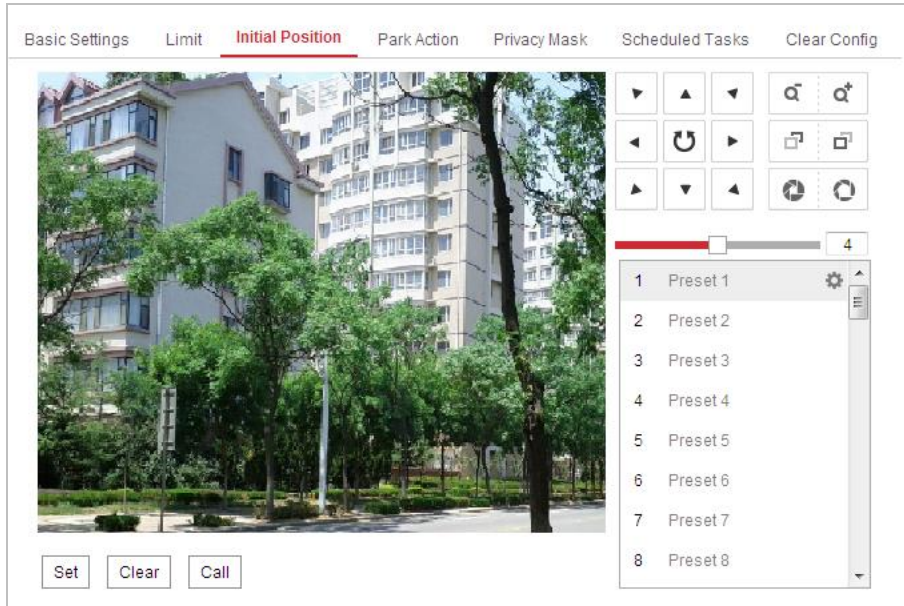
Figure 5-3 PTZ Configuration

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

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

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

[END icon]

5.4 Configuring Park Actions

Purpose:

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

[NOTE icon]

- **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.
- Pattern function varies depending on mini PTZ camera models.

Steps:

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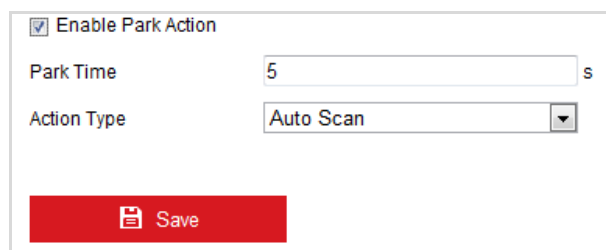
Configuration > **PTZ** > **Park Action**

Figure 5-4 Set the Park Action

2. Check the checkbox of **Enable Park Action**.

3. Set the **Park Time** as the inactivity time of the mini PTZ camera before it starts the park actions.

4. Choose **Action Type** the from the drop-down list.
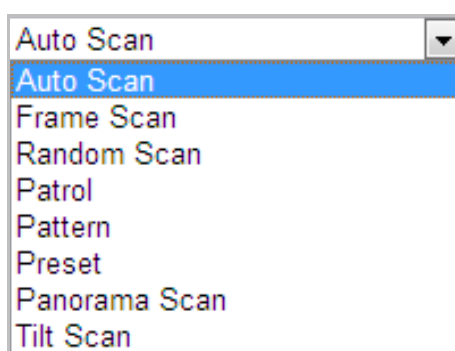
Figure 5-5 Action Types

5. Click [🖫 Save] to save the settings.

5.5 Configuring Privacy Mask

Purpose:

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

Steps:

1. Enter the Privacy Mask Settings interface:

    Configuration > **PTZ** > **Privacy Mask**
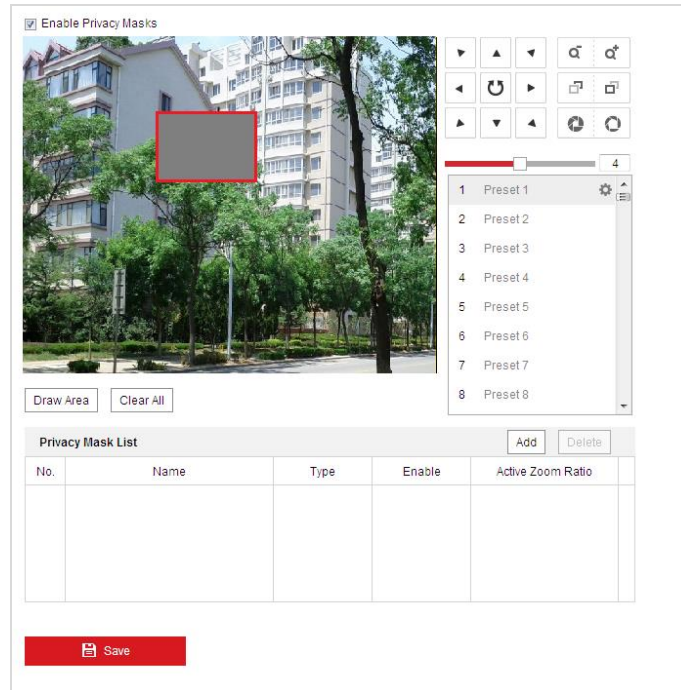
Figure 5-6 Draw the Privacy Mask

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.

4. You can drag the corners of the red rectangle area to draw a polygon mask.

5. Click [Stop Drawing] to finish drawing or click [Clear All] to clear all of the areas you set without saving them.

6. Click [Add] to save the privacy mask, and it will be listed in the **Privacy Mask List** area; set the value of **Active Zoom Ratio** on your demand, and then the mask will only appear when the zoom ratio is greater than the predefined value.

Figure 5-7 Privacy Mask List

7. Check the checkbox of **Enable Privacy Mask** to enable this function.

NOTE You are allowed to draw up to 8 areas for the mini PTZ camera.

END

5.6 Configuring Scheduled Tasks

Purpose:

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

Steps:

1. Enter the Scheduled Task Settings interface:

    Configuration> **PTZ** > **Scheduled Tasks**
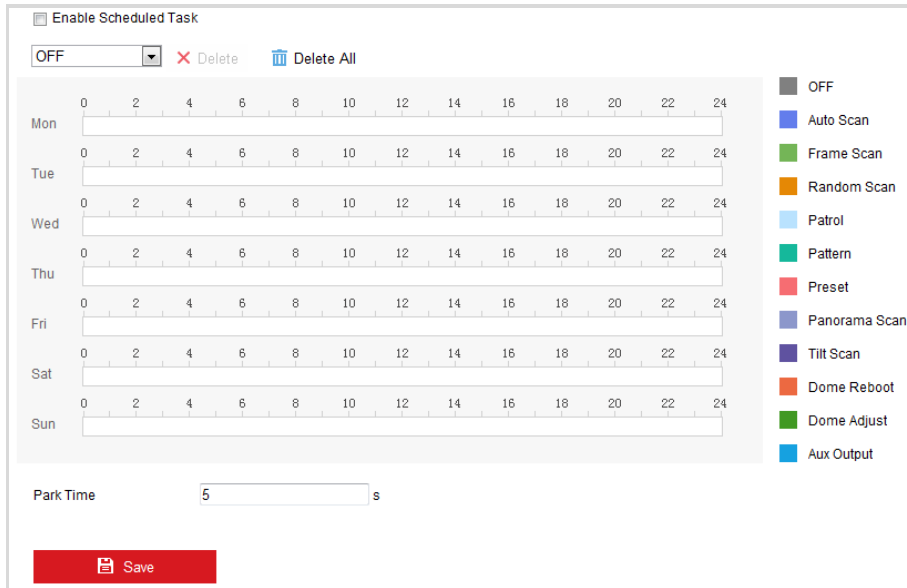
Figure 5-8 Configure Scheduled Tasks

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 mini PTZ camera starts the scheduled tasks.

4. Select the task type from the drop-down list. You can choose scan, preset, pattern and etc.
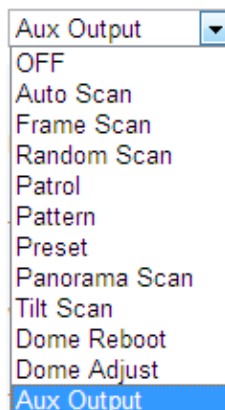
Figure 5-9 Task Types

5. Select the timeline of a certain day, click and drag the the mouse to set the recording schedule (the start time and end time of the recording task).

6. After you set the scheduled task, you can click and copy the task to other days

(optional).

Figure 5-10 Edit the Schedule and Task Type

NOTE

The time of each task cannot be overlapped. Up to 10 tasks can be configured for each day.

7. Click [Save] to save the settings.

END

5.7 Clearing PTZ Configurations

Purpose:

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

NOTE Pattern function varies depending on mini PTZ camera models.

Steps:

1. Enter the Clearing Configuration interface:

   Configuration > PTZ > Clear Config

2. Check the checkbox of the items you want to clear.

3. Click [Save] to clear the settings.

END

Chapter 6 Mini PTZ camera

Configuration

6.1 Configuring Local Parameters

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

Steps:

1. Enter the Local Configuration interface:

   Configuration > Local

Figure 6-1 Local Configuration Interface

2. Configure the following settings:

● **Live View Parameters:** Set the protocol type, stream type, image size 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.
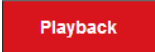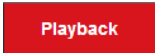
   UDP: Provides real-time audio and video streams.

   HTTP: Allows the same quality as of TCP without setting specific ports for streaming under some network environments.
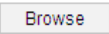
   MULTICAST: It's recommended to select the protocol type to [MULTICAST] when using the Multicast function. For other information about Multicast, refer to Section ***6.3.1 Configuring TCP/IP Settings***.

♦ **Live View Performance:** Set the live view performance to Shortest Delay, or Auto.

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◆   **Rules:** You can enable or disable the rules of dynamic analysis for motion here.

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

● **Record File Settings:** Set the saving path of the video files.

◆   **Record File Size:** Select the packed size of manually recorded and downloaded video files. The size can be set to 256M, 512M or 1G.

◆   **Save record files to:** Set the saving path for the manually recorded video files.

◆   **Save downloaded files to:** Set the saving path for the downloaded video files in

[Playback]   interface.

● **Picture and Clip Settings:** Set the saving paths of the captured pictures and clipped video files.

◆   **Save snapshots in live view to:** Set the saving path of the manually captured pictures in

[Live View]   interface.

◆   **Save snapshots when playback to:** Set the saving path of the captured pictures in

[Playback]   interface.

◆   **Save clips to:** Set the saving path of the clipped video files in [Playback]   interface.

[NOTE]   You can click [Browse]   to change the directory for saving video files, clips and pictures.

3.   Click [Save]   to save the settings.

[END]

6.2 Configuring System Settings

6.2.1 Viewing Device Information

Enter the Device Information interface:

Configuration > System > System Settings > Basic Information

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

Other information of the network mini PTZ 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.

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Figure 6-2 Device Information

6.2.2 Time Settings

Purpose:

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

To enter the Time Settings interface:

Configuration > System > System Settings > Time Settings

Figure 6-3 Time Settings

● **Configuring Time Synchronization by NTP Server**

Steps:

(1) Check the radio button to enable the **NTP** function.

(2) Configure the following settings:

Server Address: IP address of NTP server.

NTP Port: Port of NTP server.

Interval: The time interval between the two synchronizing actions by NTP server. It can be set from 1 to 10080 minutes.

Figure 6-4 Time Sync by NTP Server

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

NOTE If the mini PTZ 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 mini PTZ camera is set in a customized network, NTP software can be used to establish a NTP server for time synchronization.

● **Configuring Time Synchronization Manually**

Steps:

(1) Check the **Manual Time Sync** radio button.

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

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

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

Figure 6-5 Time Sync Manually

● **Select the Time Zone**

Purpose:

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

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

Time Zone	(GMT+08:00) Beijing, Urumqi, Singapore

Figure 6-6 Time Zone Settings

6.2.3 Configuring RS-485

Purpose:

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

Steps:

1. Enter RS-485 Port Setting interface:

    Configuration> Advanced Configuration> System > RS485

RS485	
Baud Rate	9600
Data Bit	8
Stop Bit	1
Parity	None
Flow Ctrl	None
PTZ Protocol	PELCO-D
PTZ Address	0
Save	

Figure 6-7 RS-485 Settings

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

The Baudrate, PTZ Protocol and PTZ Address parameters of the mini PTZ camera should be

exactly the same as those of the control device.
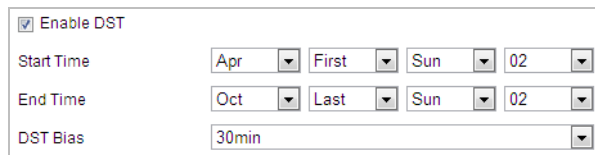
6.2.4 Configuring DST (Daylight Saving Time)

Purpose:

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

Steps:

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

2. Check ☐ Enable DST to enable the DST function.

3. Set the date of the DST period.

4. Click [🖫 Save] to save the settings.

Enable DST							
Start Time	Apr	▼	First	▼	Sun	▼	02	▼
End Time	Oct	▼	Last	▼	Sun	▼	02	▼
DST Bias	30min						▼
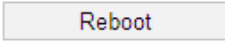
Figure 6-8 DST Settings

6.2.5 Upgrade & Maintenance

Rebooting the Mini PTZ camera
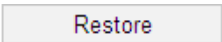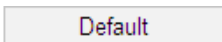
Steps:

1. Enter the Maintenance interface:

2. **Configuration** > **System** > **Maintenance > Upgrade & Maintenance:**

3. Click [Reboot] to reboot the network mini PTZ camera.

Restoring Default Settings

Steps:

1. Enter the Maintenance interface:

    Configuration > **System** > **Maintenance > Upgrade & Maintenance:**

2. Click [Restore] or [Default] to restore the default settings.

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

Default	
Restore	Reset all the parameters, except the IP parameters and user information, to the default settings.
Default	Restore all parameters to default settings.
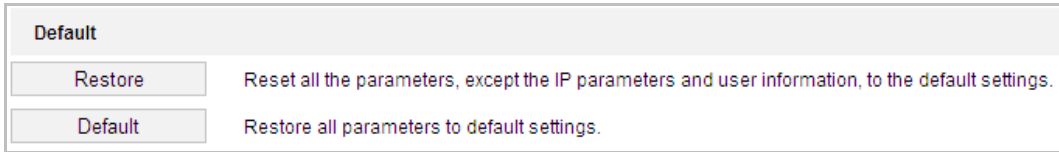
Figure 6-9 Restore Default Settings

END

Importing/Exporting Configuration File

Steps:

1. Enter the Maintenance interface:

   Configuration > **System** > **Maintenance** > **Upgrade & Maintenance:**

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

   NOTE You need to reboot the mini PTZ camera after importing configuration file.

Import Config. File			
Device Parameters		Browse	Import
Status			
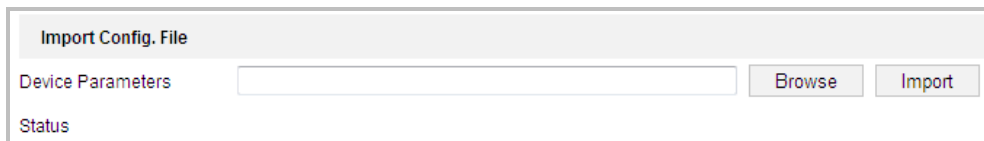
Figure 6-10 Import Configuration File

END

Upgrading the System

Steps:

1. Enter the Maintenance interface:

   Configuration >**System** > **Maintenance** > **Upgrade & Maintenance**

2. Select Firmware or Firmware Directory.

   ● **Firmware**: when you select **Firmware**, you need to find the firmware in your computer to upgrade the device.

   ● **Firmware Directory**: You need to find the directory where the firmware locates. The device can find the firmware in the directory automatically.

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

   NOTE The upgrading process will take 1 to 10 minutes. Please don't disconnect power of the mini PTZ camera during the process. The mini PTZ camera reboots automatically after

upgrading.

Figure 6-11 Remote Upgrade

6.2.6 Log Searching

Purpose:

The operation, alarm, exception and information of the mini PTZ camera can be stored in log files. You can also export the log files on your demand.
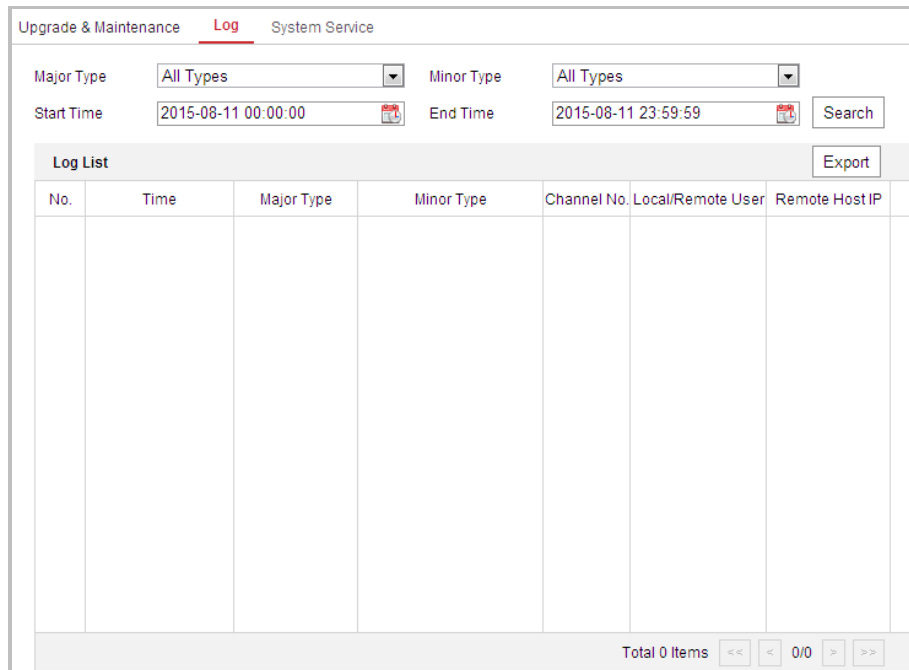
Before you start:

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

Steps:

1. Enter the Log interface:

   Configuration >System > Maintenance > Log

Figure 6-12 Log Searching Interface

2. Set the log search conditions to specify the search, including the Major Type, Minor Type, Start Time and End Time as shown in Figure 6-12.

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3. Click Search to search log files. The matched log files will be displayed on the **Log** interface.

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

END

6.3 Configuring Network Settings

6.3.1 Configuring TCP/IP Settings

Purpose:

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

Steps:

1. Enter TCP/IP Settings interface:
   Configuration > Network > Basic Settings > TCP/IP

Figure 6-13 TCP/IP Settings

2. Configure the NIC settings, including the **IPv4(IPv6) Address**, **IPv4(IPv6) Subnet Mask** and **IPv4(IPv6) Default Gateway**.

3. Click [🖫 Save] to save the above settings.

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

- If the DHCP server is available, you can check ☐ DHCP to automatically obtain an IP

address and other network settings from that server.
● The valid value range of Maximum Transmission Unit (MTU) is 500 ~ 1500. The default value is 1500.
● The Multicast sends a stream to the multicast group address and allows multiple clients to acquire the stream at the same time by requesting a copy from the multicast group address. Before utilizing this function, you have to enable the Multicast function of your router and configure the gateway of the network mini PTZ camera.
● If the DNS server settings are required for some applications (e.g., sending email), you should properly configure the **Preferred DNS Server** and **Alternate DNS server**.

Figure 6-14 DNS Server Settings

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

6.3.2 Configuring DDNS Settings

Purpose:
If your mini PTZ 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 mini PTZ camera.

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

Steps:
1. Enter the DDNS Settings interface:
   Configuration > Network > Basic Settings > DDNS

Figure 6-15 DDNS Settings

2. Check the **Enable DDNS** checkbox to enable this feature.
3. Select **DDNS Type**. Three DDNS types are selectable: IPServer, HiDDNS, NO-IP and DynDNS.
   ● **DynDNS:**
   Steps:
   (1) Enter **Server Address** of DynDNS (e.g. members.dyndns.org).
   (2) In the **Domain** text field, enter the domain name obtained from the DynDNS website.
   (3) Enter the **Port** of DynDNS server.
   (4) Enter the **User Name** and **Password** registered on the DynDNS website.
   (5) Click [💾 Save] to save the settings.

Figure 6-16 DynDNS Settings

   ● **IP Server:**
   Steps:
   (1) Enter the Server Address of the IP Server.
   (2) Click [💾 Save] to save the settings.

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

Figure 6-17 IPServer Settings

● **HiDDNS:**
 Steps:
(1) Enter the Server Address: www.hik-online.com.
(2) Enter the Domain name of the camera. The domain is the same with the device alias in the HiDDNS server.

(3) Click [🖫 Save] to save the settings.

Figure 6-18 HiDDNS Settings

● **NO-IP:**
 Steps:
(1) Enter **Server Address** of NO-IP.
(2) In the **Domain** text field, enter the domain name obtained from the NO-IP website.
(3) Enter the **Port** of NO-IP server.
(4) Enter the **User Name** and **Password** registered on the NO-IP website.

(5) Click [🖫 Save] to save the settings.

6.3.3 Configuring PPPoE Settings

Purpose:
If you have no router but only a modem, you can use Point-to-Point Protocol over Ethernet (PPPoE) function.
Steps:
1. Enter the PPPoE Settings interface:
      Configuration > Network > Basic Settings > PPPoE

Figure 6-19 PPPoE Settings

2.   Check the **Enable PPPoE** checkbox to enable this feature.

3.   Enter **User Name**, **Password**, and **Confirm** password for PPPoE access.

NOTE The User Name and Password should be assigned by your ISP.

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

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

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

6.3.4 Configuring Port Settings

Purpose:

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

Steps:

1.   Enter the Port Settings interface:

    Configuration > Network > Basic Settings > Port

Figure 6-20 Port Settings

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

    HTTP Port: The default port number is 80.

    RTSP Port: The default port number is 554.

HTTPS Port: The default port number is 443.

Server Port: The default port number is 8000.

3.   Click   [🖫 Save]   to save the settings.

[END]

6.3.5   Configuring NAT (Network Address Translation) Settings

Steps:

1. Set the port mapping mode:

    To port mapping with the default port numbers:

    Choose | Port Mapping Mode | Auto   ▼ |

    To port mapping with the customized port numbers:

    Choose | Port Mapping Mode | Manual   ▼ |

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

Port Mapping Mode	Manual	▼		
Port Type	External Port	External IP Address	Internal Port	Status
HTTP	80	0.0.0.0	80	Valid
RTSP	554	0.0.0.0	554	Valid
Server Port	8002	0.0.0.0	8000	Valid

Figure 6-21 Port Mapping Mode

2.   Click   [🖫 Save]   to save the settings.

[END]

6.3.6   Configuring SNMP Settings

Purpose:

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

Before you start:

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

[NOTE]   The SNMP version you select should be the same as that of the SNMP software.

Steps:

1.   Enter the SNMP Settings interface:

Configuration > Network > Advanced Settings > SNMP

Figure 6-22 SNMP Settings

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

   NOTE The configuration of the SNMP software should be the same as the settings you configure here.

4. Click [💾 Save] to save and finish the settings.

END

6.3.7 Configuring FTP Settings

Purpose:

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

Steps:

1. Enter the FTP Settings interface:

   Configuration > Network > Advanced Settings > FTP

Figure 6-23 FTP Settings

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

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

   ![warning icon]

   ● *For your privacy and to better protect your system against security risks, we strongly recommend the use of strong passwords for all functions and network devices. The password should be something of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers and special characters) in order to increase the security of your product.*
   ● *Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.*
   ● **Setting the directory in FTP server for saving files**:
      In the **Directory Structure** field, you can select the root directory, parent directory and child directory.
      ◆ **Root directory**: The files will be saved in the root of FTP server.
      ◆ **Parent directory**: The files will be saved in a folder in FTP server. The name of folder can be defined as shown in following Figure 6-24.

Figure 6-24 Parent Directory

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◆ **Child directory**: It is a sub-folder which can be created in the parent directory. The files will be saved in a sub-folder in FTP server. The name of folder can be defined as shown in following Figure 6-25.
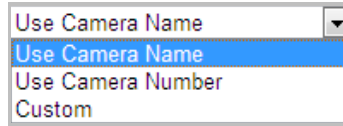
Figure 6-25 Child Directory

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

3. Click ![Save] to save the settings.

4. You can click **Test** to confirm the configuration.

![NOTE] If you want to upload the captured pictures to FTP server, you also have to enable the continuous snapshot or event-triggered snapshot in **Snapshot** interface. For detailed information, please refer to the Section *7.3 Configuring Snapshot Settings*.

![END]

6.3.8 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 **Configuration> Network > Basic Settings > TCP/IP** before using the Email function.

Steps:

1. Enter the Email Settings interface:

   Configuration> Network > Advanced Settings > Email

Figure 6-26 Email Settings

2. Configure the following settings:

Sender: The name of the email sender.

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

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

SMTP Port: The SMTP port. The default TCP/IP port for SMTP is 25.

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

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

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

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

⚠️

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

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

Receiver: The name of the user to be notified.

Receiver's Address: The email address of user to be notified. (Optional: click Test to make sure that the email server can send email out.)

3. Click [💾 Save] to save the settings.

[END]

6.3.9 Configuring HTTPS Settings

Purpose:

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

⚠️

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

Steps:

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1. Enter the HTTPS settings interface.

   Configuration > Network > Advanced Settings > HTTPS

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

Figure 6-27 Create Certificate

OPTION 1: Create the self-signed certificate

1) Select Create Self-signed Certificate.

2) Click the **Create** button to create the following dialog box.

Figure 6-28 Create Self-signed Certificate

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

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

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

1) Select Signed certificate is available, Start the installation directly.

2) Click the **Browse** button to upload the available certificate.

3) Click **Install** button to install the certificate.

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

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

1) Select Create certificate request first and continue the installation.

2) Click the **Create** button to create the certificate request, and fulfill the required information.

3) Download the certificate request and submit it to the trusted certificate authority for signature.

4) After receiving the signed valid certificate, import the certificate to the device.

5) Click **OK** to save the settings.

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3. There will be the certificate information after you successfully create and install the certificate.
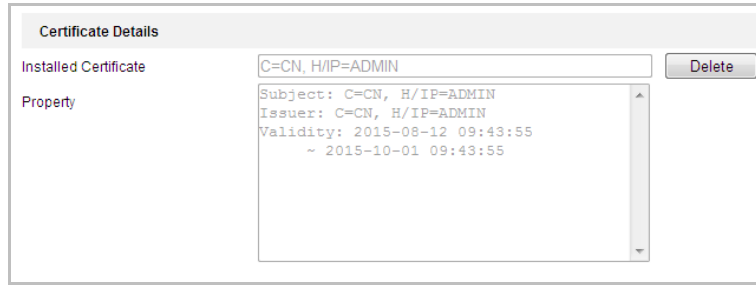
Figure 6-29 Installed Certificate Property

NOTE

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

6.3.10 Configuring QoS Settings

Purpose:
QoS (Quality of Service) can help solve the network delay and network congestion by configuring the priority of data sending.
Steps:
1. Enter the QoS Settings interface:
   Configuration >Advanced Configuration > Network > QoS
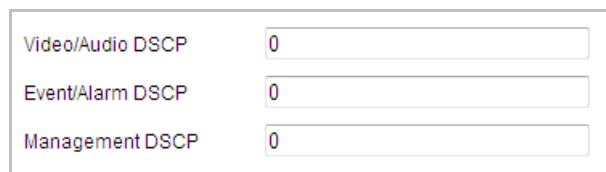
Figure 6-30 QoS Settings

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

3. Click [Save] to save the settings.

NOTE

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

END

6.3.11 Configuring 802.1X Settings

Purpose:

The mini PTZ camera supports IEEE 802.1X standard.

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

The protected LAN with 802.1X standard is shown as follows:
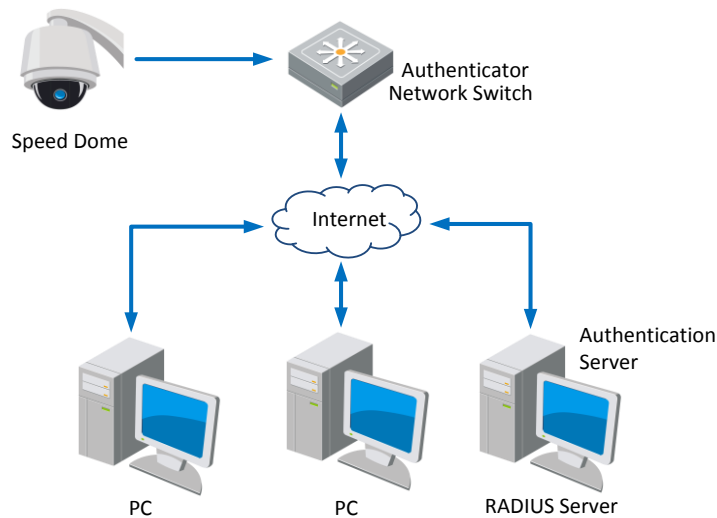
Figure 6-31 Protected LAN

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

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

Steps:

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

Configuration > Network > Advanced Settings > 802.1X

Figure 6-32 802.1X Settings

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

NOTE The EAP-MD5 version must be identical with that of the router or the switch.

5. Click [🖫 Save] to finish the settings.

NOTE The camera reboots when you save the settings.

6. After the configuration, connect the camera to the protected network.

END

6.3.12 Configuring UPnP™ Settings

Purpose:

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

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

Steps:

1. Enter the UPnP™ settings interface.

   Configuration >Network > Advanced Settings > UPnP™

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

   NOTE

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

END

6.4   Configuring Video and Audio Settings

6.4.1   Configuring Video Settings

Steps:
1. Enter the Video Settings interface:
   Configuration > Video/Audio > Video

Figure 6-33 Configure Video Settings

2. Select the **Stream Type** of the mini PTZ camera to main stream (normal) or sub-stream.
   The main stream is usually for recording and live viewing with good bandwidth, and the sub-stream can be used for live viewing when the bandwidth is limited. Refer to the Section *6.1 Configuring Local Parameters* for switching the main stream and sub-stream for live viewing.
3. You can customize the following parameters for the selected main stream or sub-stream:
   Video Type:
   Select the stream type to video stream, or video & audio composite stream. The audio signal will be recorded only when the **Video Type** is **Video & Audio**.
   Resolution:
   Select the resolution of the video output.
   Bitrate Type:
   Select the bitrate type to constant or variable.

Video Quality:

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

Frame Rate:

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

Max. Bitrate:

Set the max. bitrate to 32~12288Kbps. The higher value corresponds to the higher video quality, but the higher bandwidth is required.

Video Encoding:

The **Video Encoding** standard can be set to H.264 & H.265.

I Frame Interval:

Set the I-Frame interval from 2 to 250.

SVC:

SVC (Scalable video coding technology) is for storing videos when the bandwidth is limited. To use this function, a specified H.264 encoding storage device is necessary.

4. Click [Save] to save the settings.

END
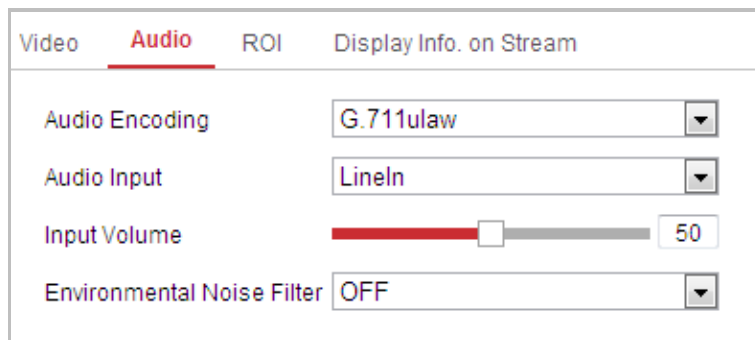
6.4.2 Configuring Audio Settings

Steps:

1. Enter the Audio Settings interface

   Configuration > Video/Audio > Audio

   Figure 6-34 Audio Settings

2. Configure the following settings.

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

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

   Audio Stream Bitrate: When the Audio Encoding is selected as MP2L2, you can configure the Audio Stream Bitrate in the dropdown list. The greater the value is, the better the audio

quality will be.

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

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

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

3. Click [🖫 Save] to save the settings.

[END]

6.4.3 Configuring ROI Settings

Before you start:

ROI (Region of Interest) encoding is used to enhance the quality of images which are specified in advance.

Enter the ROI Settings interface:

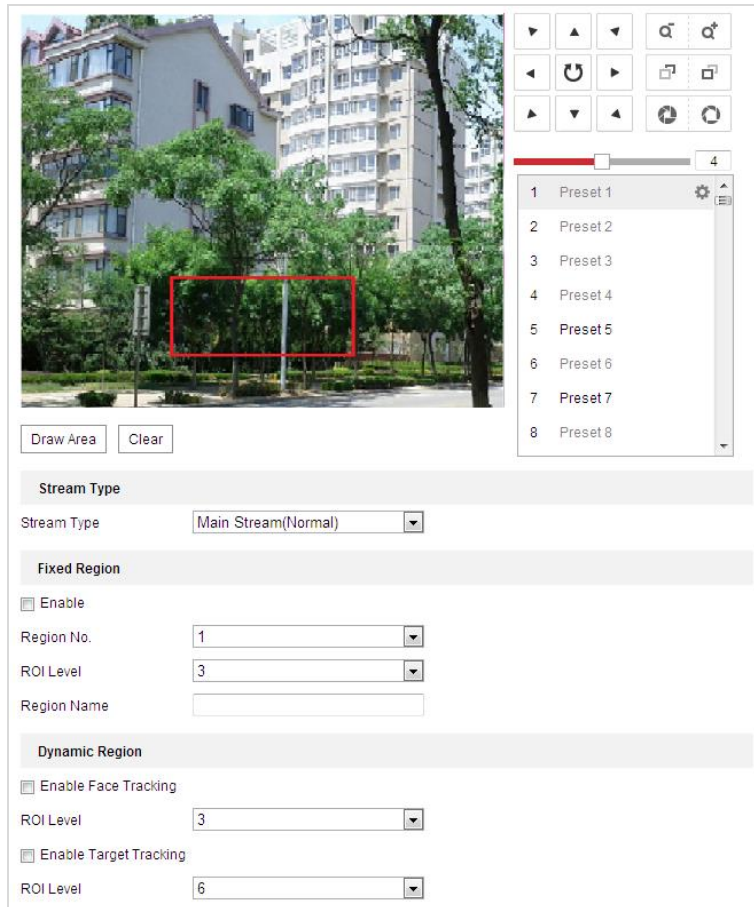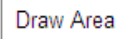**Configuration >Video/Audio > ROI**

Figure 6-35 Region of Interest

Stream Type:

You can set the ROI function for main stream or sub stream. Select a stream type and then configure the ROI settings.

● **Fixed Region:** The fixed region encoding is the ROI encoding for the manually configured area. And you can choose the Image Quality Enhancing level for ROI encoding, and you can also name the ROI area.

Steps:

1. Select a **Region No.**.
2. Check the checkbox of **Enable** under **Fixed Region**.

3. Click [Draw Area] and draw a red frame in the live view image.

4. Adjust the **ROI level** from 1 to 6. The higher the value, the better image quality in the red frame.

5. Enter a **Region Name** and click **Save** to save the settings.

6.4.4 Dual-VCA Settings

Steps:

1. Check the checkbox to enable the function of Dual-VCA which can be used cooperatively with NVR to implement dual-VCA retrieval during playback.
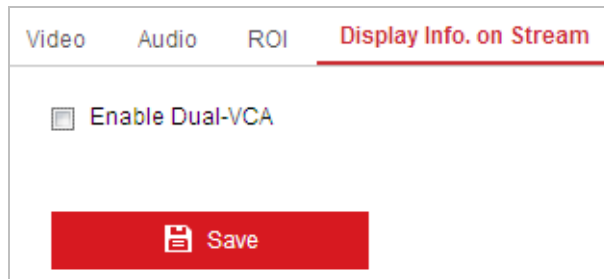

Figure 6-36 Enable Dual-VCA

2. Click [Save] to save the settings.

6.5 Configuring Image Settings

6.5.1 Configuring Display Settings

Purpose:

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

NOTE

● The parameters in **Display Settings** interface vary depending on the models of mini PTZ camera.

● You can double click the live view to enter full screen mode and double click it again to exit.

Steps:

1. Enter the Display Settings interface:

   Configuration > Image> Display Settings

2. You can select the **Mounting Scenario** in the dropdown list with different predefined image parameters.

3. Set the image parameters of the mini PTZ camera.

END
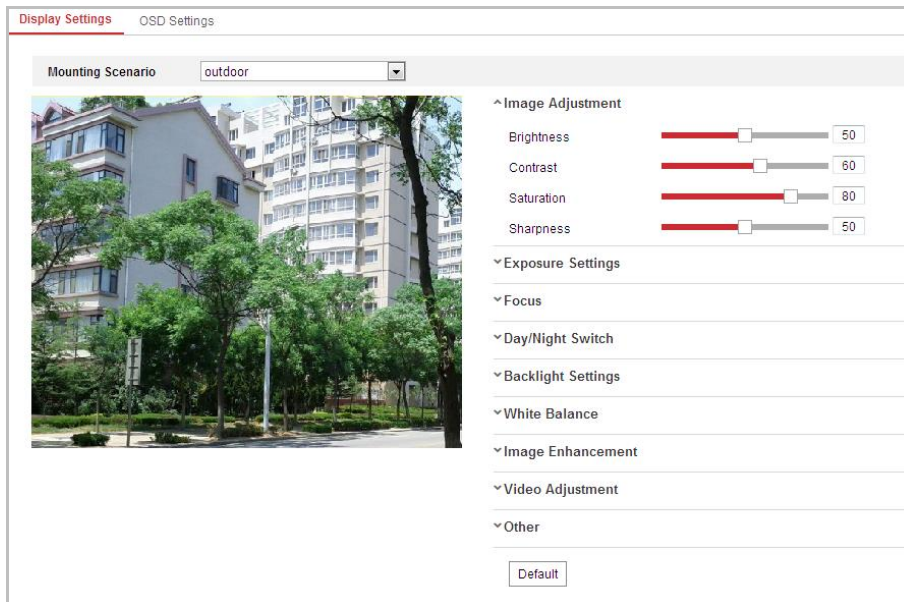
Figure 6-37 Display Settings

Image Adjustment

● **Brightness**

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

● **Contrast**

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

● **Saturation**

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

● **Sharpness**

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

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 This function varies depending on the models of mini PTZ camera.

Exposure Settings

● **Exposure Mode**

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 6-38 Manual Iris

◆ 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 6-39 Manual Shutter

◆ Gain Priority:

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

Figure 6-40 Manual Gain

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NOTE

This function is only supported under manual mode.

◆ Manual:

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

NOTE This function varies depending on the models of mini PTZ camera.

● **Limit Gain**

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

● **Slow Shutter**

This function can be used in underexposure condition. The slow shutter value can be set to **Slow Shutter*2, *4, *6, *12, *16, *24** and ***32**.

Slow Shutter	ON
Slow Shutter Level	Slow Shutter*2

Figure 6-41 Slow Shutter

Focus Settings

● **Focus Mode**

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

◆ Auto**:**

The mini PTZ camera focuses automatically at any time according to objects in the scene.

◆ Semi-auto:

The mini PTZ camera focuses automatically only once after panning, tilting and zooming.

◆ Manual**:**

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

● **Min. Focus Distance**

This function is used to limit the minimum focus distance. The value can be set to 1.5m, 3m, 6m, 10cm and 50cm.

NOTE The minimum focus value varies depending on the models of mini PTZ camera.

Day/Night Switch

● **Day/Night Switch**

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

◆ **Auto**:

In **Auto** mode, the day mode and night mode can switch automatically according to the light condition of environment. The switching sensitivity can be set to **Auto**, **Day**, **Night**, and **Scheduled-Switch**.

Figure 6-42 Auto Mode Sensitivity

◆ **Day**:

In **Day** mode, the mini PTZ camera displays color image. It is used for normal lighting conditions.

◆ **Night**:

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

◆ **Schedule:**

In **Schedule** mode, you can set the time schedule for day mode as shown in Figure 6-43. The rest time out of the schedule is for night mode.

NOTE This function varies depending on the models of mini PTZ camera.

Figure 6-43 Day Night Schedule

● **IR Light Mode**

IR light mode can be set to **Auto** and **Manual**.

◆ Auto: The brightness of the infrared light will be adjusted automatically. **IR Light Sensitivity** value ranges from 0 to 100. **Trigger Mode** can be set to **Camera** or **Photosensitive**.

◆ Manual: you need to adjust the brightness value of infrared light manually. **IR Light Bright** value ranges from 0 to 100.

NOTE Only the IR mini PTZ cameras support IR Light Mode.

NOTE

● When the **IR Light Mode** is auto, the day/night mode is adjusted automatically according to the IR Light Mode. Manually setting the day/night mode is invalid.

● When the **IR Light Mode** is manual and the **IR Light Bright** is 0, you can set the day/night mode manually.

● When the **IR Light Mode** is manual and the **IR Light Bright** is not 0, the night mode is set as the default mode. Manually setting the day/night mode is invalid.

Backlight Settings

● **BLC (Back Light Compensation)**

If there's a bright backlight, the subject in front of the backlight appears silhouetted or dark.

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Enabling **BLC**(back light compensation) function can correct the exposure of the subject. But the backlight environment is washed out to white.

● **WDR (Wide Dynamic Range)**

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

You can enable or disable the WDR function as shown in Figure 6-44. The wide dynamic level ranges from 0 to 100.

Figure 6-44 WDR

 This function varies depending on the models of mini PTZ camera.

● **HLC**

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

White Balance

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

◆ **Auto**:

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

◆ **Manual White Balance:**

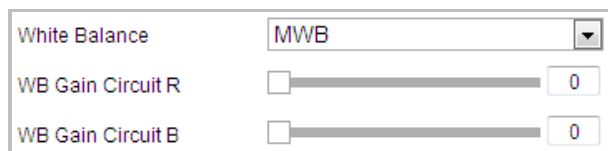In **MWB** mode, you can adjust the color temperature manually to meet your own demand as shown in Figure 6-45.

Figure 6-45 Manual White Balance

◆ **Outdoor**

You can select this mode when the mini PTZ camera is installed in outdoor environment.

◆ **Indoor**

You can select this mode when the mini PTZ camera is installed in indoor environment.

◆ **Fluorescent Lamp**

You can select this mode when there are fluorescent lamps installed near the mini PTZ camera.

◆ **Sodium Lamp**

You can select this mode when there are sodium lamps installed near the mini PTZ camera.

◆ **Auto-Track**

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

NOTE This function varies depending on the models of mini PTZ camera.

Image Enhancement

● **3D Digital Noise Reduction**

You can set **Digital Noise Reduction** function to **Normal** and adjust the **Noise Reduction Level** as shown in Figure 6-46. The level ranges from 0 to 100.

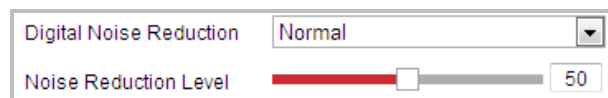| Digital Noise Reduction | Normal |
| Noise Reduction Level | 50 |

Figure 6-46 3D Digital Noise Reduction

If you are a professional technician, you can set it to Expert Mode then adjust Space DNR Level and Time DNR Level.
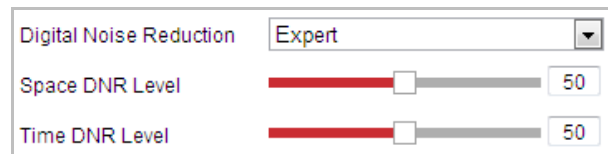

Digital Noise Reduction	Expert
Space DNR Level	50
Time DNR Level	50

Figure 6-47 Expert Mode

NOTE This function varies depending on the models of mini PTZ camera.

Video Adjustment

● **Mirror**

If you turn the **MIRROR** function on, the image will be flipped. It is like the image in the mirror. The flip direction can be set to OFF or CENTER.

NOTE This function varies depending on the models of mini PTZ camera.

● **Video Standard**

You can set the **Video Standard** to 50hz(PAL) or 60hz(NTSC) according to the video system in your country.

NOTE This function varies depending on the models of mini PTZ camera.

● **Capture Mode**

You can disable this function or select the capture mode from the list..

NOTE This function varies depending on the models of mini PTZ camera.

Other

● **Lens Initialization**

The lens operates the movements for initialization when you check the check box 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.

NOTE This function varies depending on the models of mini PTZ camera.

6.5.2 Configuring OSD Settings

Purpose:

The mini PTZ camera supports following on screen displays:

Time: Supports for time display.

Camera Name: Identifies the name of mini PTZ camera.

You can customize the on screen display of time.

Steps:

1. Enter the OSD Settings interface:

    Configuration > Image > OSD Settings

Figure 6-48 OSD Settings

2. Check the corresponding checkbox to select the display of mini PTZ camera name, date or week if required.

3. Edit the mini PTZ camera name in the text field of **Camera Name**.

4. Select from the drop-down list to set the time format, date format, display mode, OSD size

and Font color.

5. You can use the mouse to click and drag the text frame IPMini PTZ camera2 in the live view window to adjust the OSD position.

Figure 6-49 Adjust OSD Location

6. Click ![Save] to activate above settings.

![END]

6.5.3 Configuring Text Overlay Settings

Purpose:
You can customize the text overlay.
Steps:
1. Enter the Text Overlay Settings interface:
   Configuration > **Image** > **OSD Settings**
2. Check the checkbox in front of textbox to enable the on-screen display.
3. Input the characters in the textbox.
4. Use the mouse to click and drag the red text frame Text in the live view window to adjust the text overlay position.

5. Click ![Save] .

![NOTE] There are up to 4 text overlays configurable. When the video resolution is 1080p, only one text overlay is supported. When PTZ direction, preset OSDs are displayed, the text overlay is disabled.

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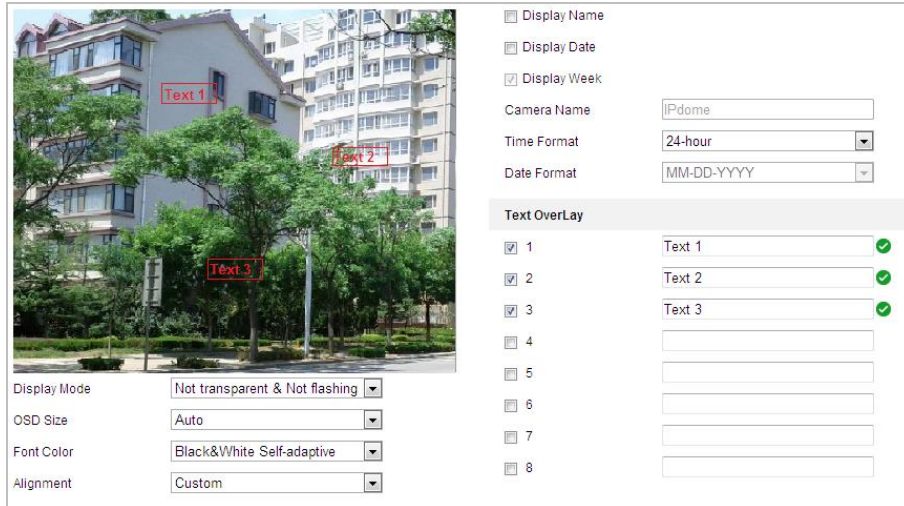
Figure 6-50 Text Overlay Settings

6.6   Configuring and Handling Alarms

Purpose:

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

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

6.6.1   Configuring Motion Detection

Purpose:

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

Steps:

1.   Enter the motion detection setting interface:

  Configuration > Advanced Configuration> Basic Event > Motion Detection

2.   Check the checkbox of the **Enable Motion Detection** to enable this function.

  You can check the **Enable Dynamic Analysis for Motion** checkbox if you want the detected object get marked with rectangle in the live view.

3.   Select the configuration mode as Normal or Expert and set the corresponding motion detection parameters.

  ● **Normal**

Figure 6-51 Motion Detection Settings-Normal

Steps:

(1) [Draw Area]. Click and drag the mouse on the live video image to draw a motion

detection area.

(2) Click [Stop Drawing] to finish drawing.

[NOTE]

- You can draw up to 8 motion detection areas on the same image.

- You can click [Clear All] to clear all of the areas.

(3) Move the slider [Sensitivity _____ 0] to set the
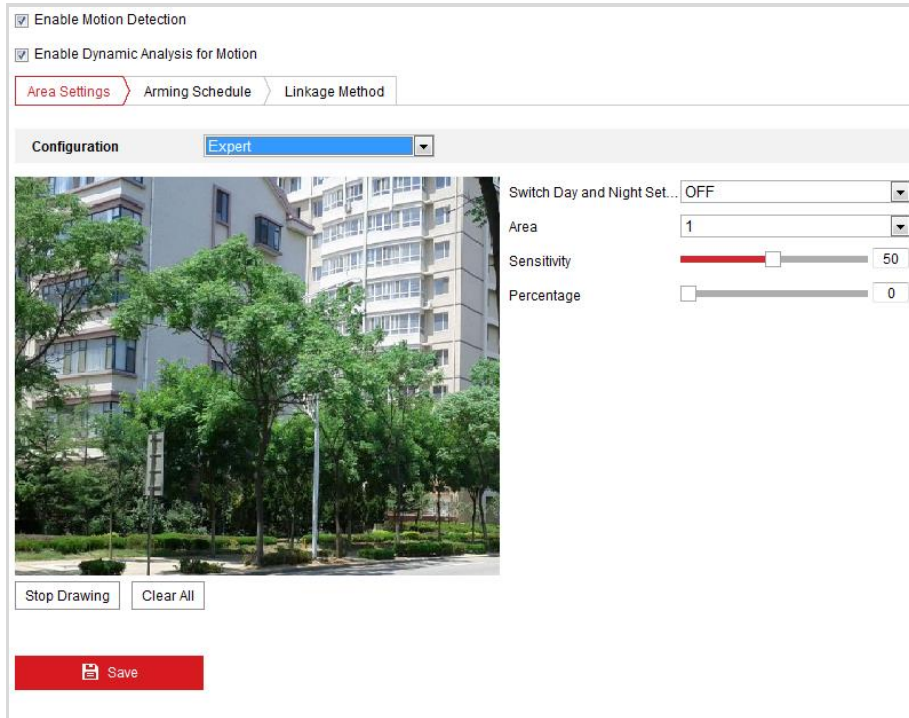
sensitivity of the detection.

● **Expert**

Figure 6-52 Motion Detection Settings-Expert

Steps:

(1) Set the Day&Night switch mode, there are OFF, Auto-Switch and Scheduled-Switch selectable. If the Day&Night switch mode is enabled, you can configure the detection rule for the day and night separately.

OFF: Disable the day and night switch.

Auto-Switch: Switch the day and night mode according to the illumination automatically.

Scheduled-Switch: Switch to the day mode at 6:00 a.m., and switch to the night mode at 18:00 p.m..

(2) Select Area No. to configure in the dropdown list.

(3) Set the values of sensitivity and proportion of object on area.

Sensitivity: The greater the value is, the easier the alarm will be triggered.

Proportion of Object on Area: When the size proportion of the moving object exceeds the predefined value, the alarm will be triggered. The less the value is, the easier the alarm will be triggered.

4. Set the Arming Schedule for Motion Detection.

 (1) Click ⟩ Arming Schedule ⟩ tab to enter the arming schedule setting interface.

Figure 6-53 Arming Schedule

(2) Select the timeline of a certain day, click and drag the mouse to set the arming schedule (the start time and end time of the arming task).

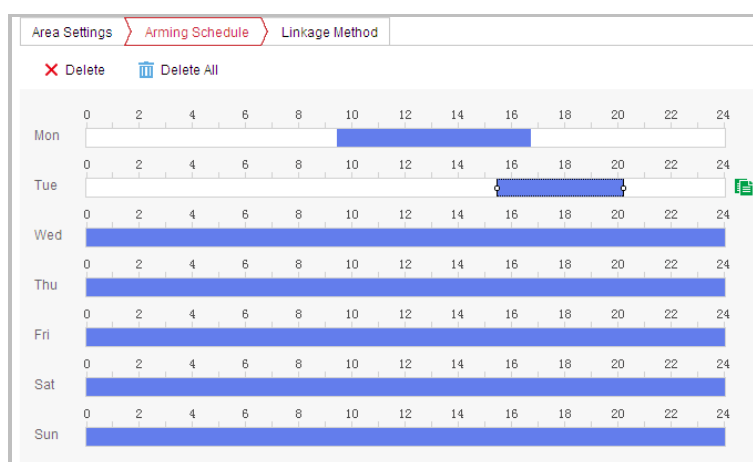(3) After you set the scheduled task, you can click [icon] and copy the task to other days (optional).

Figure 6-54 Arming Time Schedule

(4) After setting the arming schedule, you can click a segment to display the segment arming settings interface to edit the segment record parameters (optional).
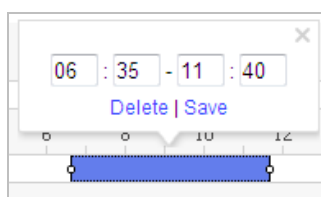

Figure 6-55 Segment Arming Settings

(5) Click [Save] to save the settings.

NOTE The time of each period cannot be overlapped. Up to 8 periods can be configured for each day.

5. Set the Alarm Actions for Motion Detection.

Click ⟩ Linkage Method tab to enter the **Linkage Method** interface.

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

Figure 6-56 Linkage Method

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

- **Notify Surveillance Center**

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

- **Send Email**

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

NOTE

To send the Email when an event occurs, you need to refer to **Section 6.3.8 Configuring Email Settings** to set the Email parameters.

- **Upload to FTP**

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

NOTE

You need a FTP server and set FTP parameters first. Refer to **Section 6.3.7 Configuring FTP Settings** for setting FTP parameters.

- **Trigger Channel**

Record a video when an event occurs.

NOTE

You have to set the recording schedule to realize this function. Please refer to *Section 7.1 Configuring Recording Schedule* for settings the recording schedule.

● **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 6.6.4 Configuring Alarm Output* to set the alarm output parameters.

END

6.6.2 Configuring Video Tampering Alarm

Purpose:

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

Steps:

1. Enter the Video Tampering Settings interface：

    Configuration > Event > Basic Event > Video Tampering

Figure 6-57 Tampering Alarm

2. Check **Enable** checkbox to enable the tampering detection.

3. Click ⟩ **Arming Schedule** ⟩ tab to enter the arming schedule setting interface. The arming schedule configuration is the same as the setting of the arming schedule for motion detection.

Refer to *Step 2 Set the Motion Detection Area* in Section *6.6.1 Configuring Motion Detection*.

4. Click [Linkage Method] tab to select the linkage method taken for the video loss alarm, notify surveillance center, send email and trigger alarm output are selectable. Refer to *Step 2 Set the Arming Schedule for Motion Detection* in Section *6.6.1 Configuring Motion Detection.*

5. Check the checkbox to select the linkage method taken for the tampering. Notify surveillance center, send email and trigger alarm output are selectable. Please refer to *Step 3 Set the Alarm Actions for Motion Detection* in Section *6.6.1 Configuring Motion Detection*.

6. Click [🖫 Save] to save the settings.

[END]

6.6.3   Configuring External Alarm Input

Steps:
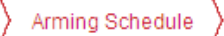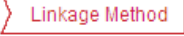
1. Enter the Alarm Input Settings interface:

   Configuration > Event > Basic Event > Alarm Input

2. Choose the alarm input No. and the Alarm Type. The alarm type can be NO (Normally Open) and NC (Normally Closed).

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

Figure 6-58 Alarm Input Settings

4. Click [Arming Schedule] tab to enter the arming schedule setting interface. The arming schedule configuration is the same as the setting of the arming schedule for motion detection. Refer to *Step 2 Set the Arming Schedule for Motion Detection* in Section *6.6.1 Configuring*

***Motion Detection**.*

5. Click tab to select the linkage method taken for the video loss alarm, including Notify surveillance center, send email, trigger channel, smart tracking and trigger alarm output are selectable. Refer to *Step **3 Set the Alarm Actions for Motion Detection*** in Section ***6.6.1 Configuring Motion Detection**.*

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

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

8. Click to save the settings.
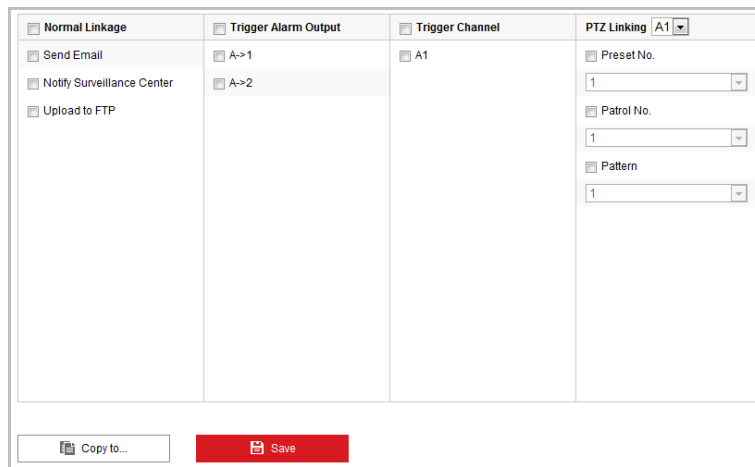
Figure 6-59 Linkage Method

6.6.4 Configuring Alarm Output

Steps:

1. Enter the Alarm Output Settings interface:

     Configuration> Event > Basic Event > Alarm Output

2. Select one alarm output channel in the **Alarm Output** drop-down list.

3. Set a name in for the alarm output (optional).

4. The **Delay** time can be set to **5sec**, **10sec**, **30sec**, **1min**, **2min**, **5min, 10min** or **Manual**. The delay time refers to the time duration that the alarm output remains in effect after alarm occurs.

5. Click tab to enter the arming schedule setting interface. The time schedule configuration is the same as the settings of the arming schedule for motion detection. Refer to *Step **2 Set the Arming Schedule for Motion Detection*** in Section ***6.6.1***

Configuring Motion Detection.

Figure 6-60 Alarm Output Settings

6. You can copy the settings to other alarm outputs.

7. Click [Save] to save the settings.

6.6.5 Handling Exception

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

Steps:

1. Enter the Exception Settings interface:

    Configuration > Event > Basic Event > Exception

2. Check the checkbox to set the actions taken for the Exception alarm. Refer to *Step **3 Set the Alarm Actions Taken for Motion Detection*** in Section ***6.6.1 Configuring Motion Detection***.

Figure 6-61 Exception Settings

3. Click [Save] to save the settings.

[END]

6.6.6 Detecting Audio Exception

Purpose:

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

Steps:

1. Enter the video audio exception detection interface:

   Configuration > Event > Smart Event > Audio Exception Detection
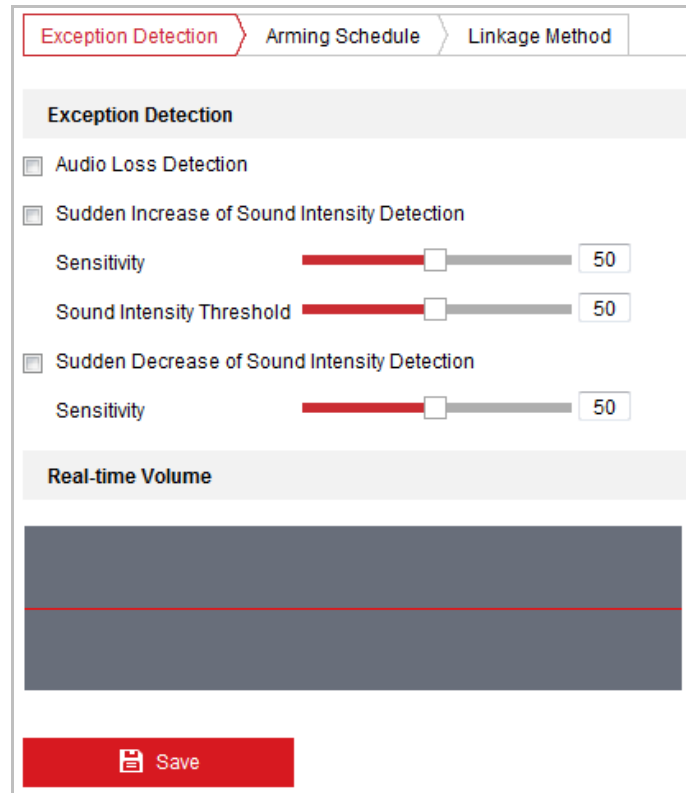
Figure 6-62 Audio Exception Detection

2. Check the checkbox of **Audio Loss Detection** to enable the audio input exception detection.
3. Check the checkbox of **Sudden Increase of Sound Intensity Detection** checkbox to enable the sudden rise detection.
   - **Sensitivity**: Range [1-100], the smaller the value the more severe the sound change will trigger the detection.
   - **Sound Intensity Threshold**: Range [1-100], it can filter the sound in the environment, the louder the environment sound, the higher the value should be. You can adjust it according to the actual environment.
4. Check the checkbox of **Sudden Decrease of Sound Intensity Detection** checkbox to enable the sudden drop detection.
   Sensitivity: Range [1-100], the smaller the value the more severe the sound change will trigger the detection.
5. Click ⟩ Arming Schedule ⟩ tab to enter the arming schedule setting interface. The time schedule configuration is the same as the settings of the arming schedule for motion detection. Refer to *Step 2* in ***Section 6.6.1.***
6. Click ⟩ Linkage Method tab to select the linkage method taken for the video loss alarm, Notify surveillance center, send email, trigger channel, smart tracking and trigger alarm output are selectable. Please refer to *Step 3* in ***Section 6.6.1.***
7. Click 💾 Save to save the settings.

📖END

6.6.7 Configuring Dual-VCA

Purpose:

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

Steps:

1. Enter the Dual-VCA function configuration interface.

   Configuration> Video/Audio> Display Info. on Stream

2. Check the **Enable Dual-VCA** checkbox.

3. Click [💾 Save] to save the settings.

6.6.8 Configuring Intrusion Detection

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

Steps:

1. Enter the intrusion detection interface:

   Configuration > Events > Smart Event >Intrusion Detection

2. Check the **Enable Intrusion Detection** checkbox.
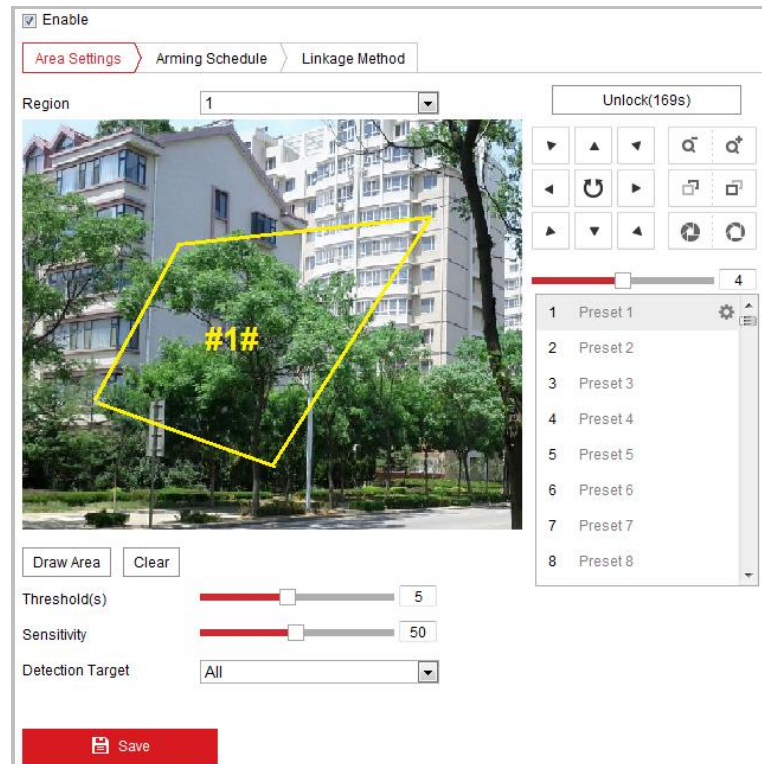
Figure 6-63 Configuring Intrusion Area

3. The event triggered and park action related PTZ movement will be locked for 180 seconds after you enter the intrusion detection interface. Optionally, you can click the

    Unlock(69s)   button to manually activate the movement, or lock the movement

    when the button turns to   Lock   by clicking it.

4. Draw area.

    1) Select the Region No.in dropdown list.

    2) Click Draw Area to draw a rectangle on the image as a defense region.

    3) Click on the image to specify a corner of the rectangle, and right-click the mouse after four corners are configured.

    NOTE

    Up to four areas are supported.

    You can click Clear to clear the areas you drawn.

5. Configure the parameters for each defense region separately.

    ● **Threshold:** Range [0-10s], the threshold for the time of the object loitering in the region. If you set the value as 0, alarm is triggered immediately after the object entering the region.

    ● **Sensitivity:** Range [1-100]. The value of the sensitivity defines the size of the object which can trigger the alarm, when the sensitivity is high, a very small object can trigger the alarm.
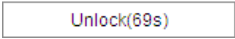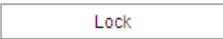
6. Click [Arming Schedule] tab to enter the arming schedule setting interface. The time
   schedule configuration is the same as the settings of the arming schedule for motion
   detection. Refer to *Step 2* in ***Section 6.6.1 Configuring Motion Detection***

7. Click [Linkage Method] tab to select the linkage method taken for the video loss alarm,
   Notify surveillance center, send email, trigger channel, smart tracking and trigger alarm
   output are selectable. Please refer to *Step 3* in ***Section 6.6.1 Configuring Motion Detection.***

8. Click [Save] to save the settings.

[END]

6.6.9 Configuring Line Crossing Detection

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

1. Enter the Line Crossing Detection interface:

   Configuration >Event > Smart Event > Line Crossing Detection

2. Check the **Enable** checkbox to enable the line crossing detection function.

3. Select the Line in dropdown list to configure.

4. The event triggered and park action related PTZ movement will be locked for 180 seconds
   after you enter the line crossing detection interface. Optionally, you can click the

   [Unlock(69s)] button to manually activate the movement, or lock the movement

   when the button turns to [Lock] by clicking it.

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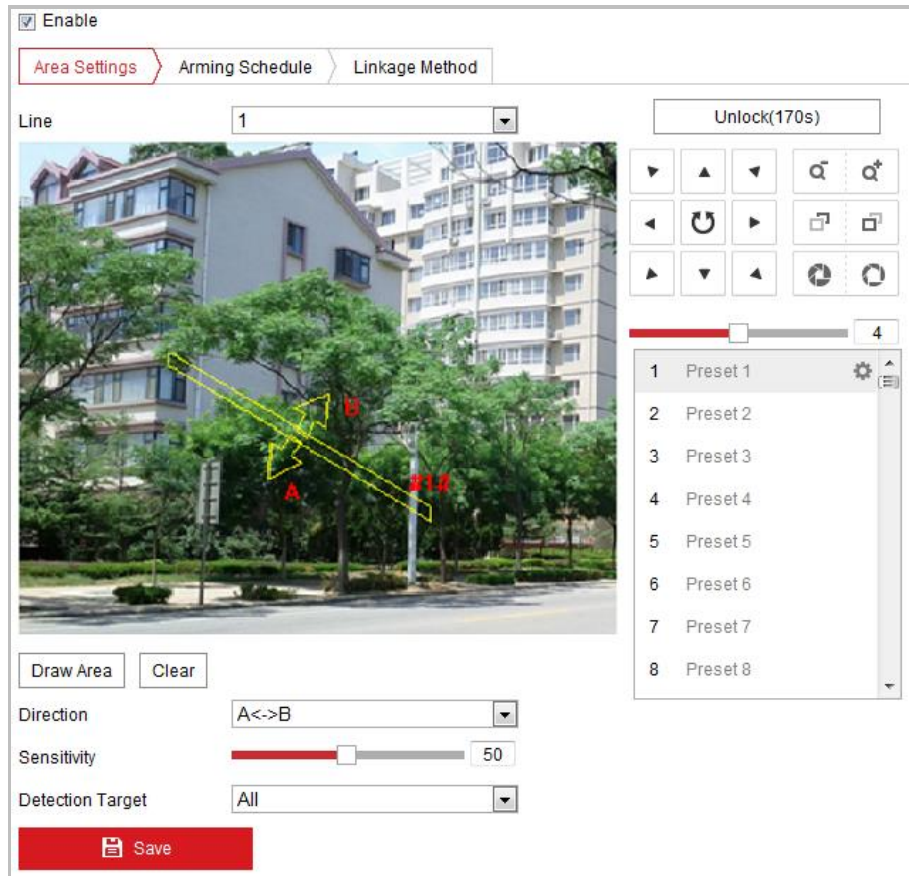
Figure 6-64 Configuring Line

5. Draw area.

    1) Click [Draw Area] to draw a line on the image.

    2) Click the line to switch to the editing mode.

        Click and drag an end to the desired place to adjust the length and angle of the line. And
        click and drag the line to adjust the location.

    NOTE

        Up to four lines are supported.

6. Configure the parameters for each defense region separately.

    ● **Direction:** Select the detection direction in the dropdown list, there are A<->B, A->B and
      B->A selectable.

    ● **Sensitivity:** Range [1-100]. The value of the sensitivity defines the size of the object which
      can trigger the alarm, when the sensitivity is high, a very small object can trigger the
      alarm.

7. Click [Arming Schedule] tab to enter the arming schedule setting interface. The time
    schedule configuration is the same as the settings of the arming schedule for motion
    detection. Refer to *Step 2* in *Section 6.6.1 Configuring Motion Detection.*

8. Click ⟩ Linkage Method tab to select the linkage method taken for the video loss alarm, including Notify surveillance center, send email, upload to FTP, trigger channel, smart tracking and trigger alarm output are selectable. Please refer to *Step 3* in ***Section 6.6.1 Configuring Motion Detection.***

9. Click 💾 Save to save the settings.

Chapter 7 Record Settings

Before you start:

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

7.1 Configuring Recording Schedule

Purpose:

There are two kinds of recording for the mini PTZ cameras: manual recording and scheduled recording. For the manual recording, refer to Section **4.4 Recording and Capturing Pictures Manually**. In this section, you can follow the instructions to configure the scheduled recording. By default, the record files of scheduled recording are stored in the SD card (if supported) or in the network disk.

Steps:

1. Enter the Record Schedule Settings interface:

    Configuration > Storage > Schedule Settings > Record Schedule
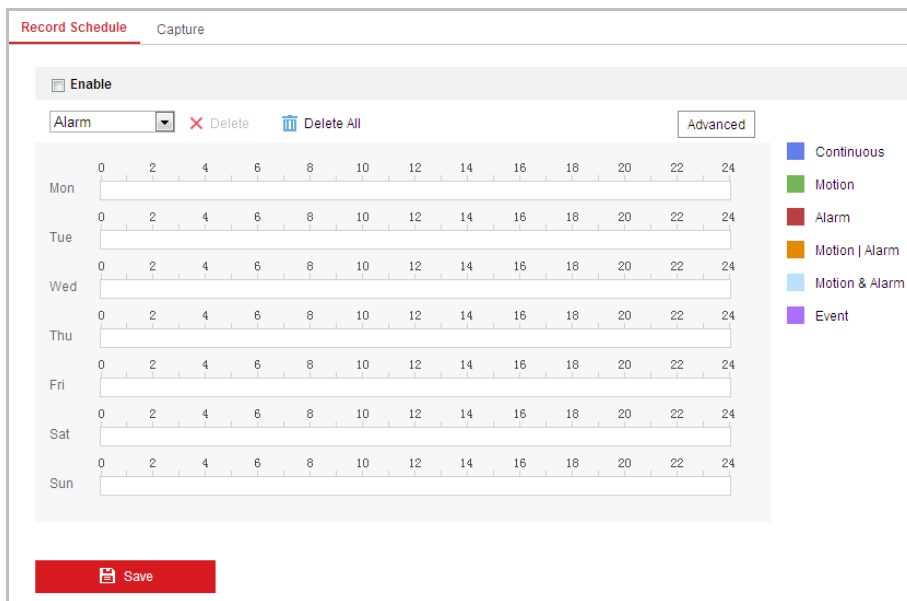
Figure 7-1 Recording Schedule Interface

2. Check the checkbox of **Enable** to enable scheduled recording.

3. To set the advanced settings of the mini PTZ camera, click Advanced to enter the advanced settings interface.
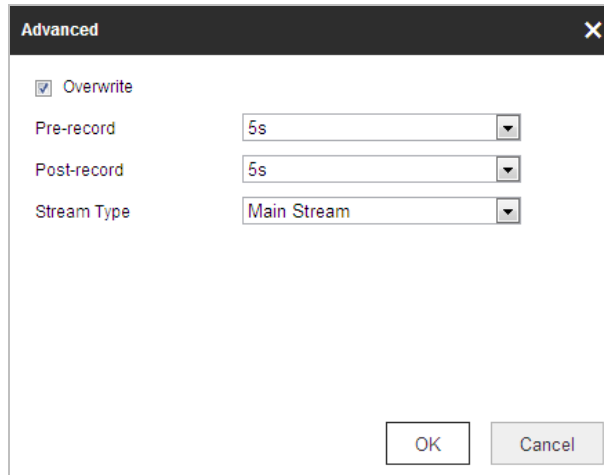
Figure 7-2 Record Parameters

● **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 mini PTZ camera starts to record at 9:59:55.

The Pre-record time can be configured as No Pre-record, 5 s, 10 s, 15 s, 20 s, 25 s, 30 s or not limited.

NOTE The pre-record time changes according to the video bitrate.

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

The Post-record time can be configured as 5 s, 10 s, 30 s, 1 min, 2 min, 5 min or 10 min.

● **Overwrite**: If you enable his function and the HDD is full, the new record files overwrite the oldest record files automatically.

● **Recording Stream**: You can select the stream type for recording; Main stream and Sub Stream are selectable. If you select the sub stream, you can record for a longer time with the same storage capacity.

NOTE The Pre-record and Post-record parameters vary depending on the mini PTZ camera model.

4. Click **OK** to save the advanced setting.

Figure 7-3 Record Schedule

5. Choose the day to set the record schedule.

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

♦ If you want to configure the all-day recording, please check the **All Day** checkbox.

♦ If you want to record in different time sections, check the **Customize** checkbox. Set the **Start Time** and **End Time.**

NOTE The time of each segment can't be overlapped. Up to 8 segments can be configured.

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

♦ **Normal**

If you select **Normal**, 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 *Step 1 Set the Motion Detection Area in the* Section **6.6.1 Configuring Motion Detection**.

♦ **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 **6.6.4 Configuring External Alarm Input**.

♦ **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 *6.6.1* and Section *6.6.4* 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 *6.6.1* and Section *6.6.4* for detailed information.

(3) 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).

(4) After you set the scheduled task, you can click 📋 and copy the task to other days (optional).

(5) 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)
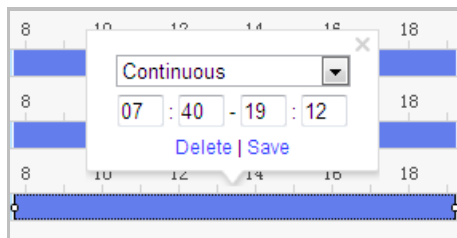
Figure 7-4 Segment Record Settings

NOTE

The time of each segment cannot be overlapped. Up to 8 segments can be configured for each day.

6. Click [💾 Save] to save the settings.

END

7.2 Configuring Capture Settings

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 Snapshot Settings interface:

Configuration > Storage > Storage Settings > Capture
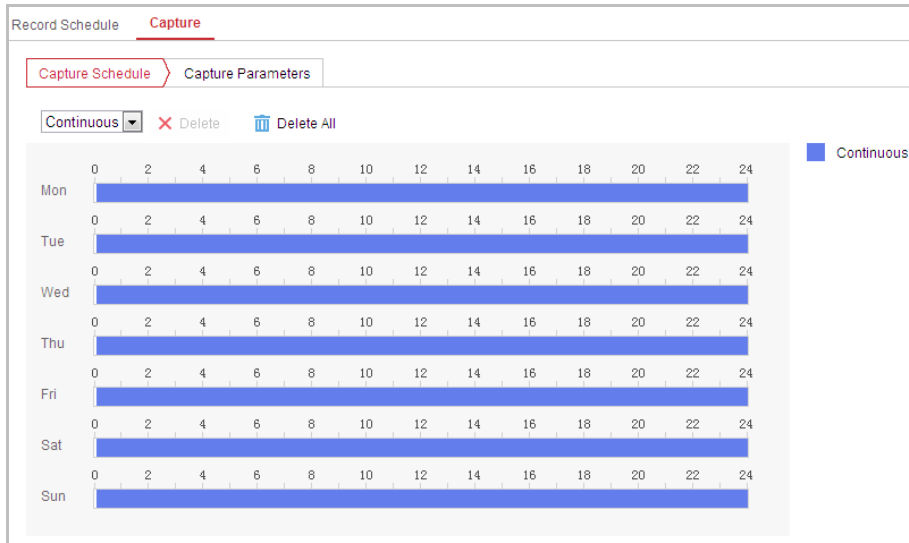
Figure 7-5 Snapshot Settings

2. Click [Capture Schedule] to enter the Capture Schedule interface.

3. Select the timeline of a certain day, click and drag the left button of the mouse to set the capture schedule (the start time and end time of the recording task).

4. After you set the scheduled task, you can click and copy the task to other days (optional).

5. After setting the capture schedule, you can click a capture segment to display the segment capture settings interface to edit the segment capture parameters. (optional)
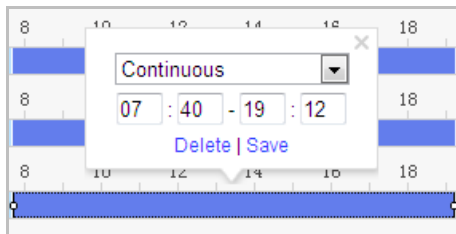
Figure 7-6 Segment Snapshot Settings

6. Click [Capture Parameters] to enter the Capture Parameters Interface.

7. Check the **Enable Timing Snapshot** checkbox to enable continuous snapshot, and configure the schedule of timing snapshot. Check the **Enable Event-triggered Snapshot** checkbox to enable event-triggered snapshot.

8. Select the format, resolution, quality of the snapshot.

9. Set the time interval between two snapshots.

10. Click [🖫 Save] to save the settings.

END

Uploading to FTP

Please make sure that the FTP server is online.

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

● Upload continuous snapshots to FTP

Steps:

1) Configure the FTP settings and check **Upload Picture** checkbox in FTP Settings interface. Please refer to Section *6.3.8 Configuring FTP Settings* for more details to configure FTP parameters.

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

3) Click **Edit** to set the snapshot schedule. Refer to *Step 2 Set the Arming Schedule for Motion Detection* in Section *6.6.1 Configuring Motion Detection*.

● Upload event-triggered snapshots to FTP

Steps:

1) Configure the FTP settings and check **Upload Picture** checkbox in FTP Settings interface. Please refer to Section *6.3.8 Configuring FTP Settings* for more details to configure FTP parameters.

2) Check **Upload to FTP** checkbox in Motion Detection Settings or Alarm Input interface. Please refer to *Step 3 Set the Alarm Actions Taken for Motion Detection* in Section *6.6.1 Configuring Motion Detection, or Step 4 Configuring External Alarm Input* in Section *6.6.1 Configuring Motion Detection*.

3) Check the **Enable Event-triggered Snapshot** checkbox.

7.3 Uploading to FTP

Please make sure that the FTP server is online.

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

♦ Upload continuous snapshots to FTP

Steps:

1) Check the **Enable Timing Snapshot** checkbox.

2) Configure the FTP settings and check **Upload Picture** checkbox in FTP Settings interface. Please refer to *Section 6.3.7 Configuring FTP Settings* for more details to configure FTP parameters.

♦ Upload event-triggered snapshots to FTP

Steps:

1) Check the **Enable Event-triggered Snapshot** checkbox.

2) Configure the FTP settings and check **Upload Picture** checkbox in FTP Settings interface. Please refer to ***Section 6.3.7 Configuring FTP Settings*** for more details to configure FTP parameters.

3) Check **Upload to FTP** checkbox in Motion Detection Settings or Alarm Input interface. Please refer to *Step 3* in ***Section 6.6.1*** Configuring Motion Detection.

7.4 Configuring Net HDD

Before you start:

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

Steps:

Add the network disk

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

   Configuration > Storage > Storage Management > Net HDD

Figure 7-7 Select Net HDD Type

2. Enter the IP address and the file path of the network disk.

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

   NOTE 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 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.*
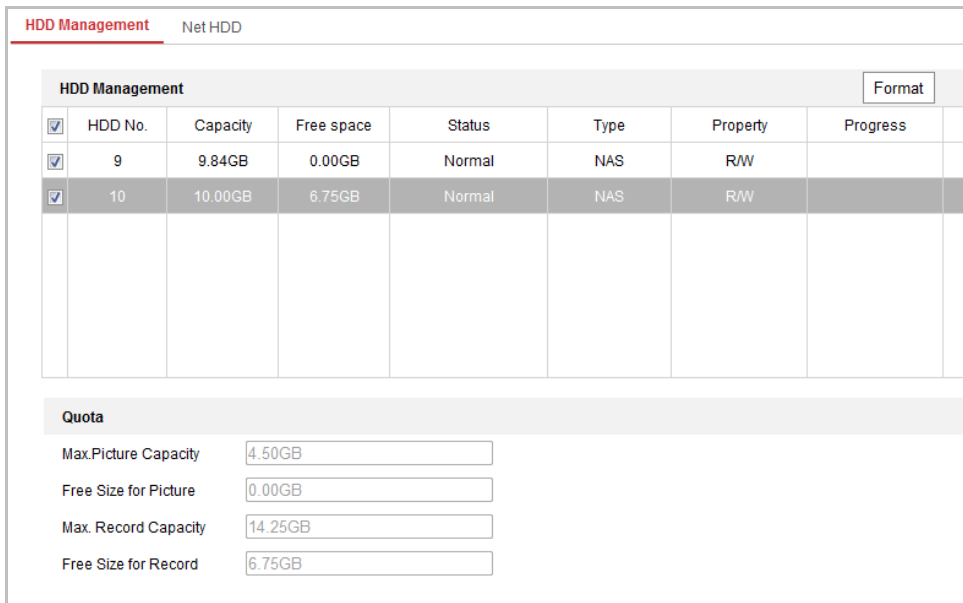
4. Click ~~[🖫 Save]~~ to add the network disk.

[NOTE] After having saved successfully, you need to reboot the mini PTZ camera to activate the settings.

Initialize the added network disk.

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

HDD No.	Capacity	Free space	Status	Type	Property	Progress
9	9.84GB	0.00GB	Normal	NAS	R/W	
10	10.00GB	6.75GB	Normal	NAS	R/W	

Quota
Max.Picture Capacity	4.50GB
Free Size for Picture	0.00GB
Max. Record Capacity	14.25GB
Free Size for Record	6.75GB
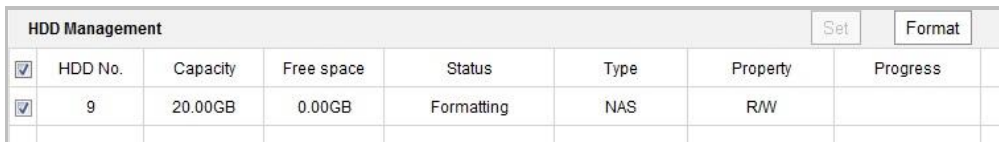
Figure 7-8 Storage Management Interface

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

3. When the initialization completed, the status of disk will become **Normal** as shown in Figure 7-9**.**

HDD Management
HDD No.	Capacity	Free space	Status	Type	Property	Progress
9	20.00GB	0.00GB	Formatting	NAS	R/W	

Figure 7-9 View Disk Status

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 7-10 Quota Settings

NOTE

● Up to 8 NAS disks can be connected to the mini PTZ camera.
● To initialize and use the SD card after insert it to the mini PTZ camera, please refer to the steps of NAS disk initialization.

END

Chapter 8 Playback

Purpose:

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

8.1 Play Back Video Files

Steps:

1. Click **Playback** on the menu bar to enter playback interface.
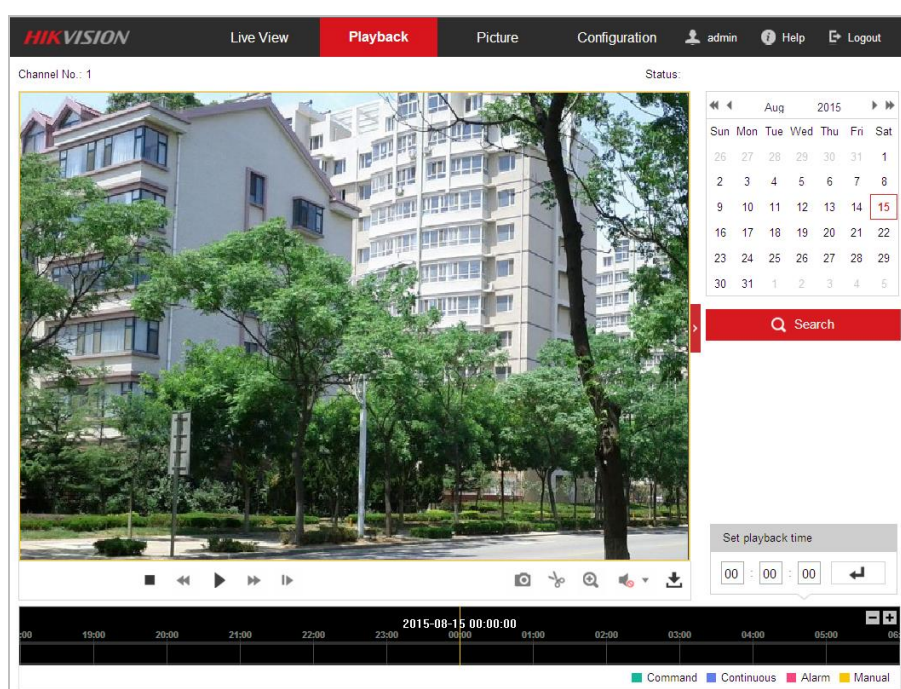
Figure 8-1 Playback Interface

2. Select the date and click **Search**.
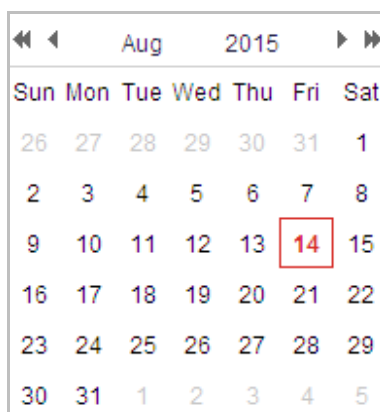
Figure 8-2 Search Video

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

📖 END

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

◼ ◀◀ ❚❚ ▶▶ ❘▶   📷 ✂ ⊕ 🔇 ▾ ⬇

Figure 8-3 Playback Toolbar

Table 8-1 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
▶▶	Speed up	❘▶	Playback by frame
⊕ / ⊖	Enable/Disable digital zoom		

📓 NOTE You can choose the file paths locally for downloaded playback video files and pictures in Local Configuration interface. Please refer to Section **6.1 Configuring Local Parameters** for details.

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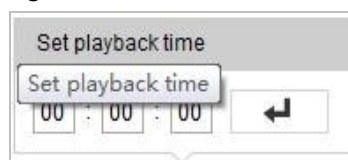
Set playback time

Set playback time

00 : 00 : 00   ↵

Figure 8-4 Set Playback Time

2015-06-15 05:34:54
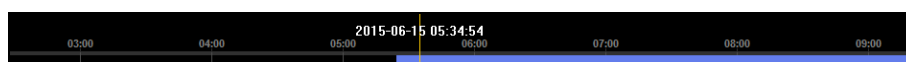03:00   04:00   05:00   06:00   07:00   08:00   09:00

Figure 8-5 Progress Bar

The different colors of the video on the progress bar stand for the different video types as shown in Figure 8-6.
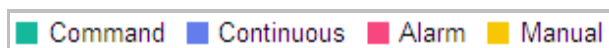
Figure 8-6 Video Types

8.2   Downloading Video Files

Steps:

1.   Click on the playback interface. The pop-up menu is shown in Figure 8-7.

2.   Set the start time and end time. Click **Search**. The corresponding video files are listed on the left.
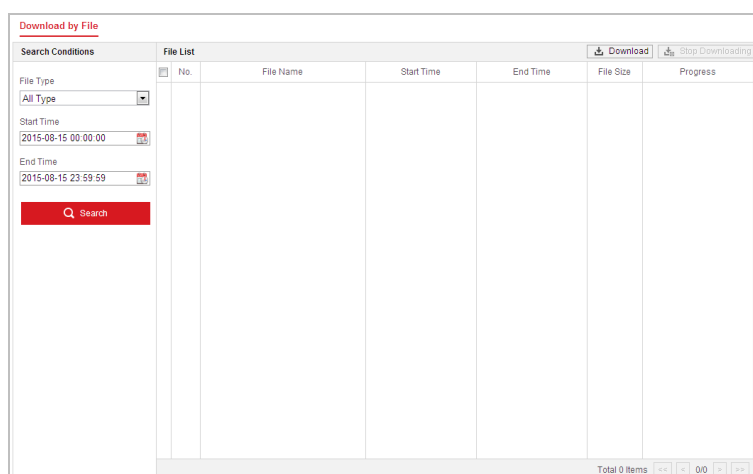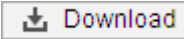

Figure 8-7 Video Downloading interface

3.   Check the checkbox in front of the video files that you need to download.

4.   Click to download the video files.

Chapter 9 Pictures

Purpose:

This section explains how to view the captured picture files stored in the network disks and download the captured pictures.

Steps:

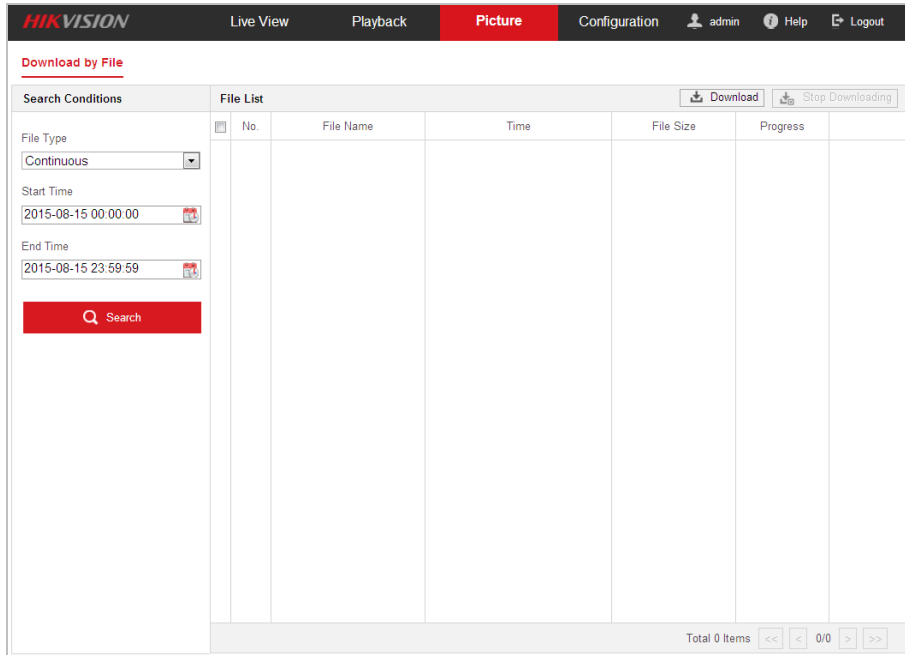1. Click **Picture** on the menu bar to enter picture interface.

Figure 9-1 Picture Interface

2. Select the file type of capturing the pictures from the list as timing, alarm, motion, etc.
3. Set the start time and end time. Click **Search**. The corresponding picture files will be listed.
4. Check the checkbox in front of the files that you need to download.
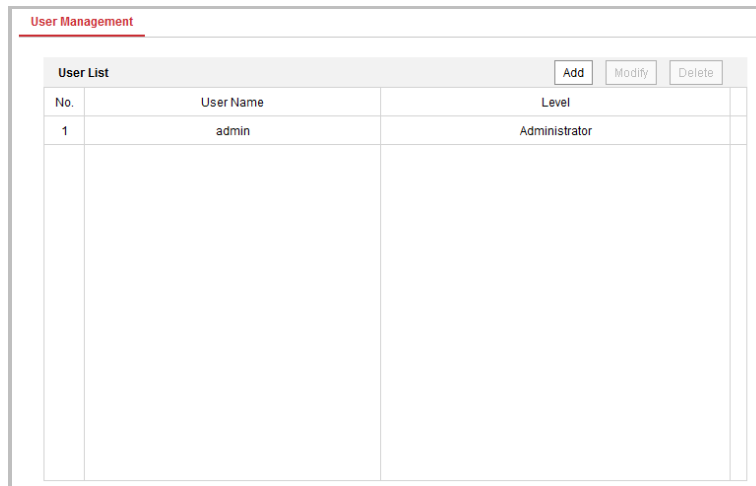
5. Click **Download** to download the files.

Chapter 10 Others

10.1 Managing User Accounts

Enter the User Management interface**:**

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

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

Figure 10-1 User Information

● Add a User

Steps:

1. Click [Add] to add a user.

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

   ⚠️

   ● *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.*

   ![NOTE]

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

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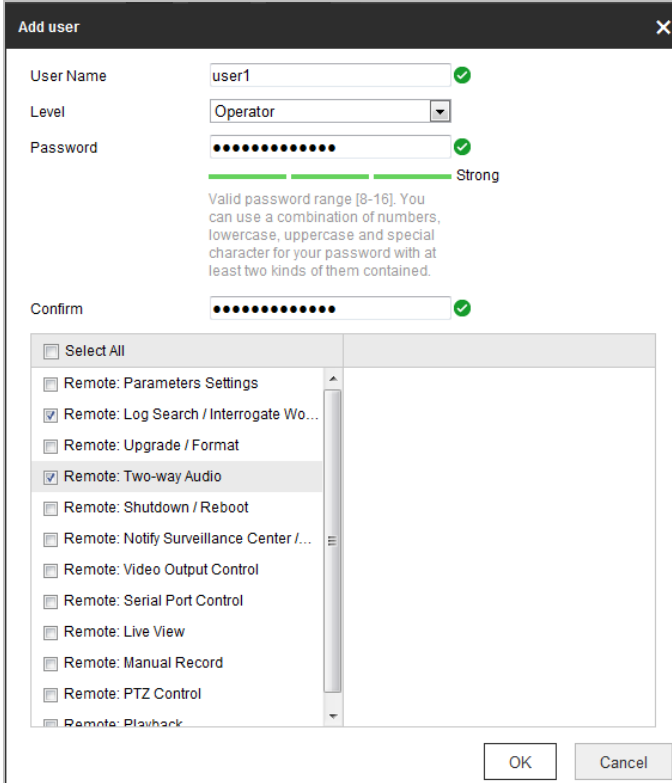
4. Click ![OK] to finish the user addition.


Figure 10-2 Add a User

![END]

● Modify a User

Steps:

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

Figure 10-3 Modify a User

END

● Delete a User

Steps:

1. Left-click the user name you want to delete and click [Delete].

2. Click [OK] on the pop-up dialogue box to delete the user.

END

10.2 Configuring Authentication Security

Purpose:

You can specifically secure the stream data of live view.

Steps:

1. Enter the Authentication interface:

   Configuration> **System**> **Security** > **Authentication**

2. Set the authentication mode for each authentication type.

   RTSP Authentication: Select the authentication mode as basic or disable in the dropdown list to enable or disable the RTSP authentication.

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3. Click ![Save] to save the settings.

10.3 Configuring Anonymous Visit

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

 Only live view is available for the anonymous user.

Steps:

1. Enter the Anonymous Visit interface:

   Configuration> System> Security > Anonymous Visit

Figure 10-4 Anonymous Visit

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

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

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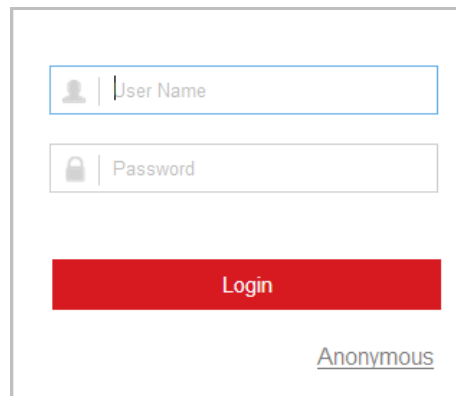

Figure 10-5 Login Interface with an Anonymous Checkbox

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

By permitting the Anonymous "Live View" function, you may enable others to access your mini PTZ camera and view live images without providing login credentials. It therefore is critical when permitting the Anonymous "Live View" function to ensure that your camera's field of view does not impact the privacy of individuals whose images might be captured without authorization.

Given its inherent intrusiveness, video surveillance is inappropriate in areas where people have a

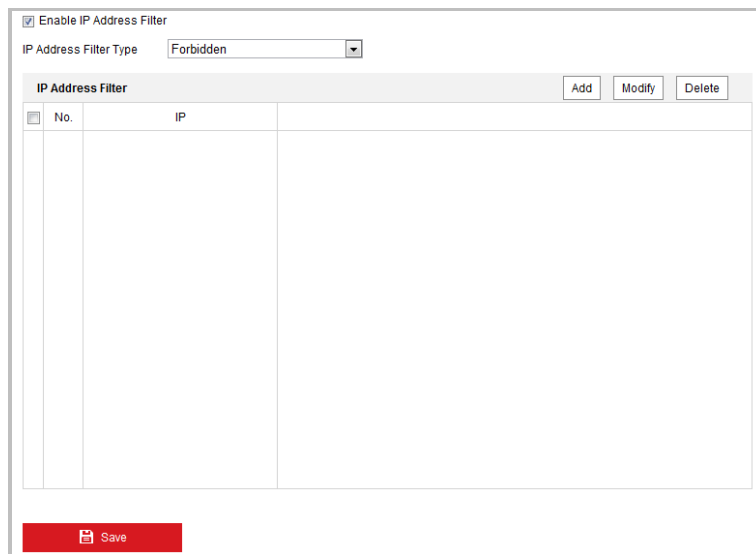higher expectation of privacy.

10.4 Configuring IP Address Filter

Purpose:

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

Steps:

1. Enter IP Address Filter interface:

   Configuration > **System** > **Security** > **IP Address Filter**

Figure 10-6 IP Address Filter

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 10-7 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 10-8 Modify an IP

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

● Delete an IP Address

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

● Delete all IP Addresses

Click **Clear** to delete all the IP addresses.

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

10.5 Security Service

Steps:
1. Enter the Security Service interface:
   Configuration> **System** > **Security** > **Security Service**
2. Check the checkbox to enable the SSH function.
   Enable SSH: Enabling SSH (Secure Shell) function is to encrypt and compress the data and to reduce the transmission time.

10.6 Configuring Supplement Light

Steps:

1. Enter the interface of configuring the remote connection:
   Configuration> System > Maintenance > Service
2. Check the checkbox to enable the IR light function, and then the light will be turned on automatically when the illumination is not enough for the video monitoring.

3. Click the [🖫 Save] button to activate the settings.

[END]

10.7 Configuring Remote Connection

Steps:

1. Enter the interface of configuring the remote connection:
   Configuration > System > Maintenance > System Service
2. Input a number in text field as the upper limit of the remote connection number. E.g. when you specify the remote connection number as 10, then the 11th remote connection cannot be established.

Figure 10-9 Live View Connection Settings

3. Click the [🖫 Save] button to activate the settings.

Appendix

Appendix 1 SADP Software Introduction

● **Description of SADP**

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

● **Search active devices online**

♦ **Search online devices automatically**

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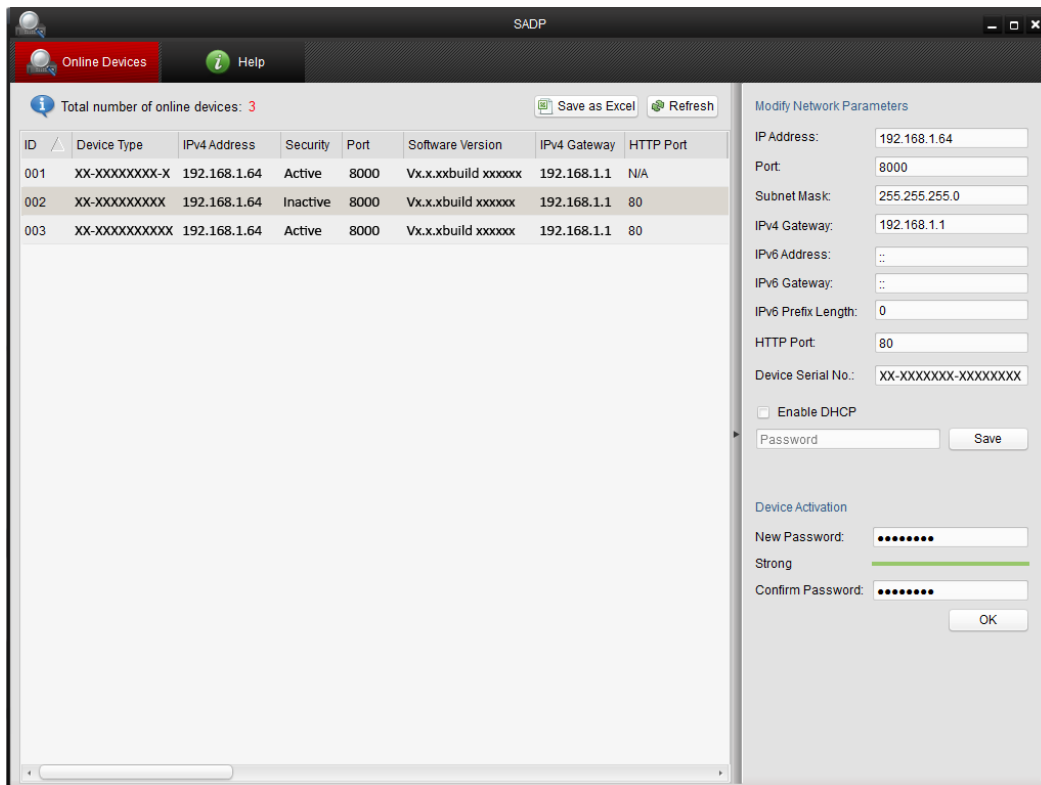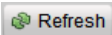

Figure A.1.1 Searching Online Devices

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

♦ **Search online devices manually**

You can also click **Refresh** to refresh the online device list manually. The newly

searched devices will be added to the list.

NOTE You can click △ or ▽ on each column heading to order the information; you can click ▶ to expand the device table and hide the network parameter panel on the right side, or click ◀ to show the network parameter panel.

● **Modify network parameters**

Steps:

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

⚠️

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

Modify Network Parameters	
IP Address:	192.168.1.64
Port:	8000
Subnet Mask:	255.255.255.0
IPv4 Gateway:	192.168.1.1
IPv6 Address:	3a3a::
IPv6 Gateway:	3a3a::
IPv6 Prefix Length:	64
Serial No.:	XX-XXXXXX-XXXXXX-XXXXXX
Password	Save

ℹ️ Note:Enter the admin password of the device before you save the network parameters.

Figure A.1.2 Modify Network Parameters

Appendix 2 Port Mapping

The following settings are for TP-LINK router (TL-R410). The settings vary depending on different

models of routers.

Steps:

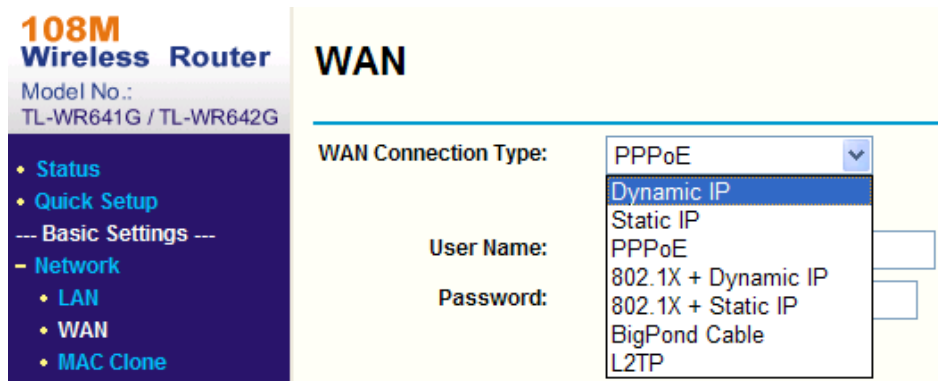1. Select the **WAN Connection Type**, as shown below:

Figure A.2.1 Select the WAN Connection Type

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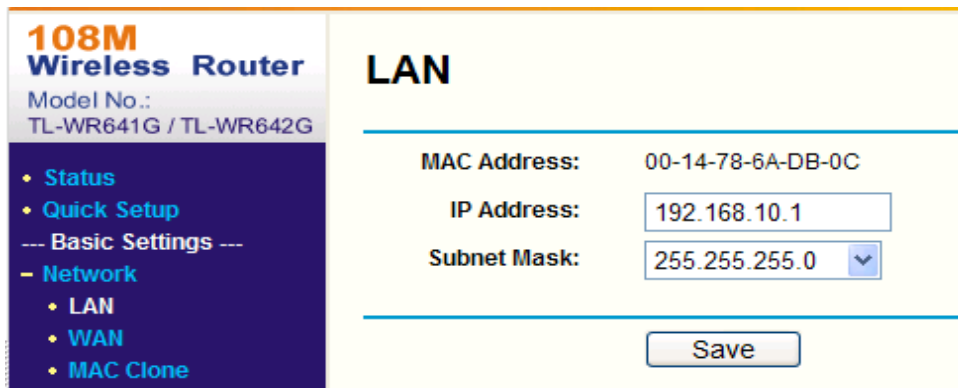
    subnet mask settings.

Figure A.2.2 Set the LAN parameters

3. Set the port mapping in the virtual severs of **Forwarding**. You need to forward ports 80, 8000,

    8200~8210 and 554 for a mini PTZ camera.

NOTE
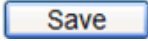
● You can change 80, 8000 and 554 ports value in the mini PTZ camera with web browser or
  client software.

● In the mini PTZ camera, the 8200~8210 ports change with the 8000 port with a constant
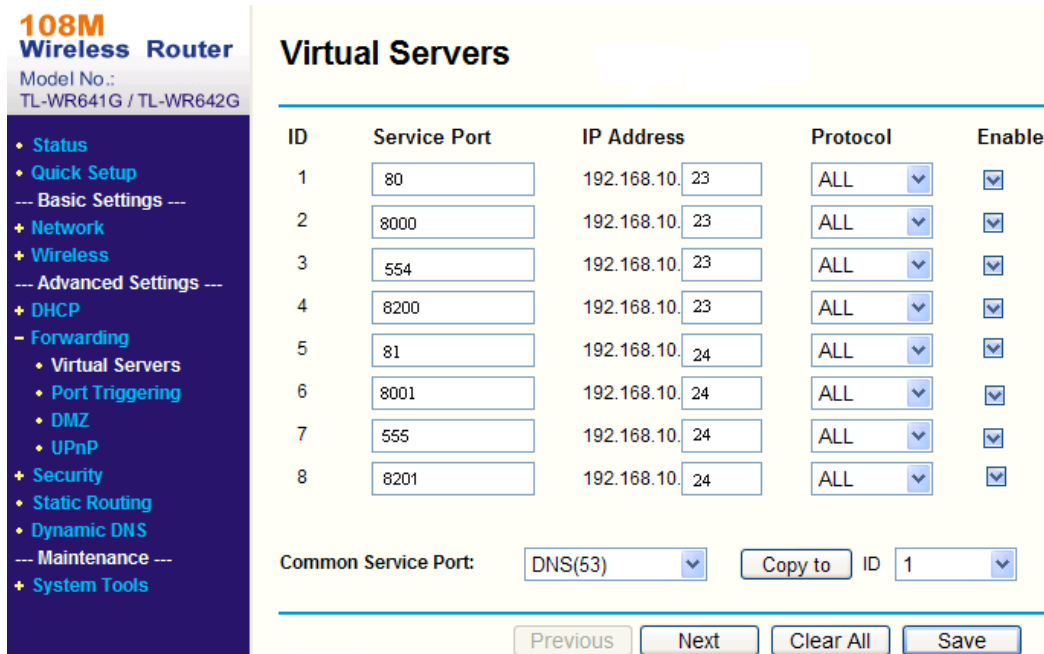
value of 200. E.g. if the 8000 port is changed to 8005, then the 8200~8210 ports should be changed to 8205~8215.

Example:

When the mini PTZ cameras are connected to the same router, you can forward the ports of a mini PTZ camera as 80, 8000, 8200~8210 and 554 with IP address 192.168.1.23, and the ports of another mini PTZ camera as 81, 8001, 8201~8211 and 555 with IP 192.168.1.24. Refer to the steps as below:

Steps:

1. As the settings mentioned above, forward the port 80, 8000, 8200~8210 and 554 for the network mini PTZ camera at 192.168.1.23

2. Forward the port 81, 8001, 8201~8211 and 555 for the network mini PTZ camera at 192.168.1.24.

3. Enable **ALL** or **TCP** protocols.

4. Check the **Enable** checkbox and click [Save].

Figure A.2.3 Port Mapping

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

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