Illustra

Illustra Standard Gen3

2MP IR PTZ Camera

Installation and Configuration Guide

Johnson Controls

Table of Contents

Tyco Ilustra Standard 2MP IR PTZ Camera

This Tyco Illustra Standard 2MP IR PTZ camera Installation and Configuration Guide is a user manual which provides installation, and configuration information of the camera.

This camera has PTZ functions, such as presets, scans, and target tracking, and smart functions, such as Road Traffic, Face Capture and Smart Event.

Main Features

Face Capture

- The device captures human faces according to set pupil distance or capture threshold and uploads the pictures to the center.

Road Traffic

- The device captures vehicles on road and upload related vehicle information, such as license plates.

- License plate recognition of multiple countries and regions are supported.

Event

- The device detects basic events and multiple smart events, such as line crossing detection, intrusion detection, region entrance detection, and region exiting detection.

PTZ

- The device supports PTZ functions, such as presets, scans, patrol, smart tracking and power-off memory.

In The Box

Check everything in the packing box matches to the order form and the packing slip. In addition to this guide, items below are included in the packing box:

- 1 x PTZ camera
- 1 x installation adaptor
- 1 x QSG manual.
- 1 x L-Key hexagonal wrench
- 1 x waterproof tape
- 1 x waterproof cable jacket
- 1 x seal tape
- 1 x head cover

Contact your dealer if any item is missing.

Quick Reference

- Default IP: 192.168.1.168
- Default Username and Password: admin / admin (Must change the default password to activate the camera at the first time login)
- Power: 24 VAC (Max. 60 W, including max. 18 W for IR and max. 6 W for heater), Hi-PoE (Max. 50 W, including max. 18 W for IR and max. 6 W for heater)

Memory Card Slot
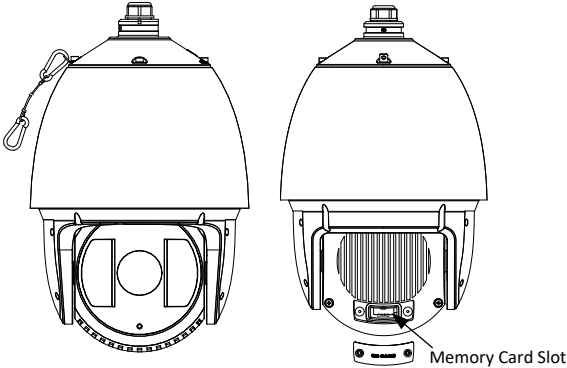
Figure 1   Overview of Tyco Illustra Standard 2MP PTZ Camera

Device Activation and Accessing

To protect the security and privacy of the user account and data, you should set a login password to activate the device when access the device via network.

Activate Device

The device needs to be activated by setting a strong password before use. This part introduces activation using different client tools.

Activate Device via Web Browser

Use web browser to activate the device. The default IP address of the device is 192.168.1.168. Please open IE11/Chrome/Firefox or the tool – AD connected to activate the device.

Before You Start

Make sure your device and your PC connect to the same LAN.

Procedure 5 Activate the device

- Change the IP address of your PC to the same subnet as the device.
- The default IP address of the device is 192.168.1.168.
- Open a web browser and input the default IP address.
- Create and confirm the admin password.

Notes:

STRONG PASSWORD RECOMMENDED-We highly recommend you create a strong password 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. 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.

- Click OK to complete activation and enter Live View page.
- Modify IP address of the camera.
- Enter IP address modification page. Configuration → Network → TCP/IP
- Change IP address.
- Save the settings.

Activate via AD connected

AD connected is a tool to detect, activate and modify the IP address of the device over the LAN.

Before You Start

- Get the AD connected software from the CD.
- The device and the PC that runs the AD connected tool should belong to the same subnet.

The following steps show how to activate one device and modify its IP address. For batch activation and IP address modification, refer to User Manual of AD connected for details.

Procedure 6 Activate the device by AD connected

- Run the AD connected software and search the online devices.

- Find and select your device in online device list.

- Input new password (admin password) and confirm the password.

Notes:

STRONG PASSWORD RECOMMENDED-We highly recommend you create a strong password 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. 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.

- Click Activate to start activation.
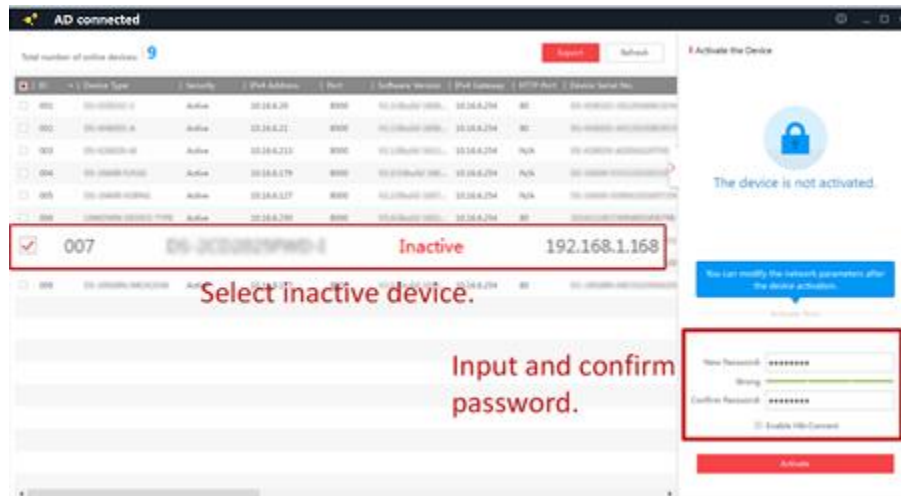
Figure 2   AD connected Interface

- Status of the device becomes Active after successful activation.

- Modify IP address of the device.

- 1) Select the device.

- 2) Change the device IP address to the same subnet as your computer by either modifying the IP address manually or checking Enable DHCP.

- 3) Input the admin password and click Modify to activate your IP address modification.

Access Device via Web Browser

Before You Start

Check the system requirement to confirm that the operating computer and web browser meets the requirements. See System Requirement.

Procedure 6 Access the device via Web Browser

- Open the web browser like IE11, Chrome or Firefox.

- Input IP address of the device to enter the login interface.

- Input the user name and password.
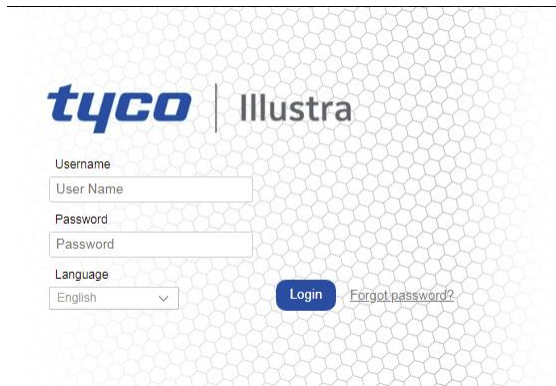
Figure 3　　　　Login Interface

Illegal login lock is activated by default. If admin user performs seven failed password attempts (five attempts for user/operator), the IP address is blocked for 10 minutes.

If illegal login lock is not needed, go to **Configuration → System → Security → Security Service** to turn it off.

- Click Login.

- Download and install appropriate plug-in for your web browser.

- For IE based web browser, webcomponents and QuickTime(TM) are optional. For non-IE based web browser, webcomponents, QuickTime(TM), VLC and MJEPG are optional.

Plug-in Installation

Certain operation systems and web browser may restrict the display and operation of the device function. You should install plug-in or complete certain settings to ensure normal display and operation.

Table 1 Plug-in Installation

Operating System	Web Browser	Operation
Windows	Internet Explorer 10+	Follow pop-up prompts to complete plug-in installation.
Windows 7 and above version	Google Chrome 57+ Mozilla Firefox 52+	Plug-in installation is not required.
Mac OS	Google Chrome 57+ Mozilla Firefox 52+ Mac Safari 12+	Plug-in installation is not required. Go to **Configuration → Network → Advanced Settings → Network Service** to enable WebSocket or Websockets for normal view. Display and operation of certain functions are restricted. For example, Playback and Picture are not available. For detailed restricted function, refer to the actual device.

Notes:

The device only supports Windows and Mac OS system and do not support Linux system.

Admin Password Recovery

If you forget the admin password, you can reset the password by clicking Forget Password on the login page after completing the account security settings.

You can reset the password by setting the security question or email.

Notes:

When you need to reset the password, make sure that the device and the PC are on the same network segment.

Security Question

You can set the account security during the activation. Or you can go to Configuration → System → User Management, click Account Security Settings, select the security question and input your answer.

You can click Forget Password and answer the security question to reset the admin password when access the device via browser.

Email

You can set the account security during the activation. Or you can go to Configuration → System → User Management, click Account Security Settings, input your email address to receive the verification code during the recovering operation process.

Illegal Login Lock

It helps to improve the security when accessing the device via Internet.

Go to **Configuration → System → Security → Security Service**, and enable Enable Illegal Login Lock. Illegal Login Attempt and Locking Duration are configurable.

Illegal Login Attempt

When your login attempts with the wrong password reach the set times, the device is locked.

Locking Duration

The device releases the lock after the setting duration.

Basic Operations

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

Power-up Action

After power up, the PTZ camera will perform self-test action. It begins with lens action and then pan/tilt movement.

After the self-test action, the system information of the speed dome including model, address, communication, version, and others will be displayed on screen for 40 seconds.

Configuring Local Parameters

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

Enter the Local Configuration interface. Go to **Configuration > Local**.

Configure the following settings:

Live View Parameters: Set the Protocol, Play Performance, Rules, Display POS Information and Image Format.

Protocol: TCP, UDP, MULTICAST and HTTP are selectable.

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

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

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

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

• **Play Performance**: Set the live view performance to Shortest Delay, Balanced, Fluent or Custom. For Custom, you can set the frame rate for live view.

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

• **Display POS Information**: Enable the function, feature information of the detected target is dynamically displayed near the target in the live image.

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

Live View Parameters				
Protocol	◉ TCP	○ UDP	○ MULTICAST	○ HTTP
Play Performance	○ Shortest Delay	○ Balanced	○ Fluent	◉ Custom 20 frame
Rules	○ Enable	◉ Disable		
Display POS Information	◉ Enable	○ Disable		
Image Format	◉ JPEG	○ BMP		
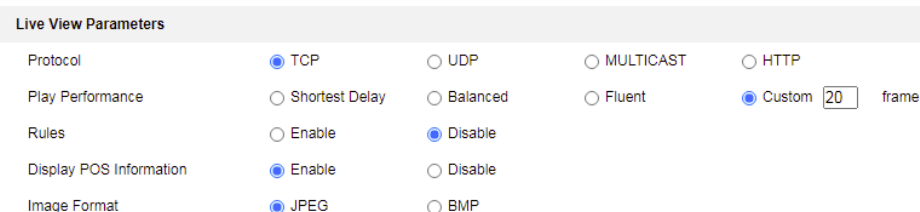
Figure 4　　Live View Parameters

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.

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

- You can click **Open** to directly open the video files, clips and pictures.

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

Live View Page

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

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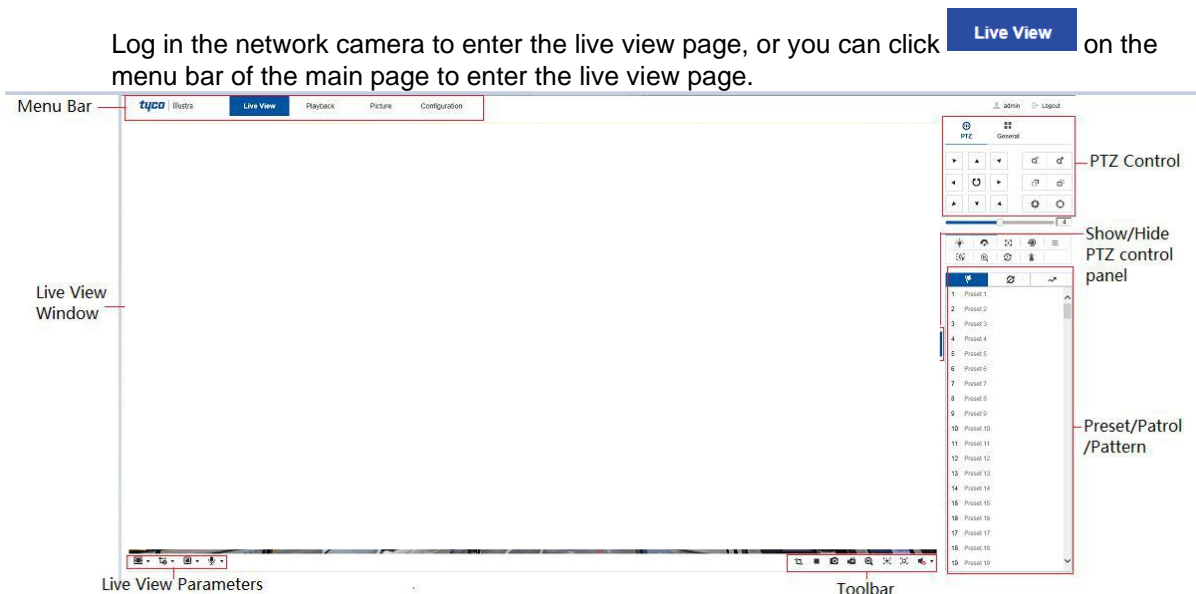

Figure 5 Live View Page

Menu Bar:

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

- Click ⤷ to logout the system.

Live View Window:

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- Display the live video.

Toolbar:

- Operations on the live view page, e.g., Count Pixel, Live View, Capture, Record, Audio on/off, Regional Exposure, Regional Focus, etc.

PTZ Control:

- Panning, Tilting, Focusing and Zooming actions of the network, as well as Light, Wiper, Auxiliary Focus, and Lens Initialization Control, etc.

Preset/Patrol/Pattern:

- Set and call the Preset/Patrol/Pattern for the camera.

Live View Parameters:

- Configure the Image Size, Stream Type, Plug-in Type, Two-way audio of the live video, and Display Captured Picture.

Starting Live View

In the live view window as shown in **Error! Reference source not found.**, click ▶ on the toolbar to start the live view of the network.

Figure 6   Start Live View

Table 2 Descriptions of the Toolbar and Live View Parameters

Icon	Description
⊡.	Click the button to enable Pixel Counter. Draw an area in live view window, and it shows the height and width of the selected area.
▶/■	Start/stop Live view.
📷	Manually capture the pictures.
⬚/⬚	Manually start/stop recording.
⊕/⊕	1. Click the button to enable Digital Zoom function. 2. Draw a rectangle on the image as the target area, and the area will be zoomed in. 3. After viewing, you can click any place of the picture to get back to normal picture.
⬚/⬚	1. Click the button to enter the regional exposure operation mode.

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	2. Draw a rectangle on the image as target exposure region.
⊙/ ⊙	1. Click the button to enter the regional focus operation mode. 2. Draw a rectangle on the image as the target focus region.
🔇 / 🔊 ▭	Mute/audio on and adjust volume
4:3/16:9/▭/⊠/▭	Click ▭ ▾ to select from 4:3 16:9 ⊠ ▭ ▭ and display live video in 4:3/16:9/ original/original ratio/self-adaptive window size.
↳₁/↳₂/↳₃	Click ↳₁ ▾ to select from ↳₁ ↳₂ ↳₃ and display live video with the main/ sub/third stream. The main stream is with a relatively high resolution and needs more bandwidth. The default setting of stream type is ↳₁.
▣/Q	Click ▣ ▾ to select between ▣ Q and play the live video via player Web Components or Quick Time. The live video is played via Web Components by default, and other types of players are supported for the browser, such as MJPEG, and VLC. You are required to download and install the player to play the live video.
🎤₀ / 🎤	Click 🎤 ▾ and it appears 🎤₀. Click 🎤₀ to enable two-way audio when the icon turns into 🎤 Click the icon again to stop two-way audio.

Notes:

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

Before using the two-way audio or recording with audio functions, set the Stream Type to Video & Audio

Operating PTZ Control

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

PTZ Control Panel

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

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

Click the zoom/iris/focus buttons to control lens.
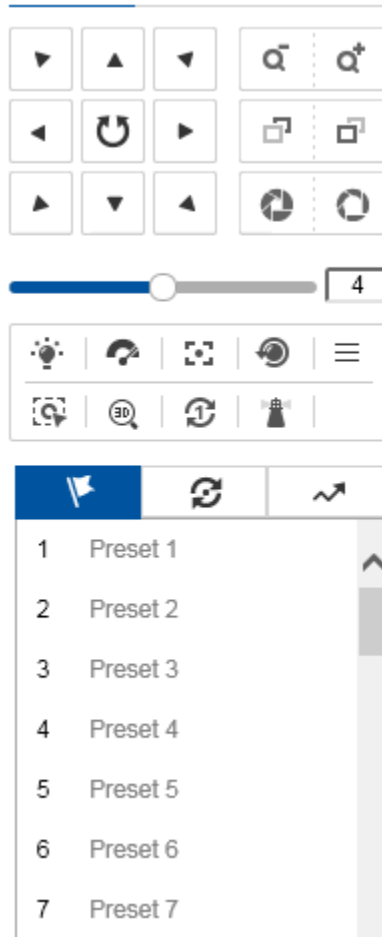
Figure 7   PTZ Control Panel

Table 3 Descriptions of PTZ Control Panel

Button	Name	Description
	PTZ Control Panel	Hold and press the directional button to pan/tilt the camera. Click ↻ , then the camera keeps panning when the icon turns into ↻ . Click the icon again to stop the camera.
	Zoom out/in	Click α⁺ , then the lens zooms in. Click α⁻ , then the lens zooms out.
	Focus near/far	Click ⌗ , then the lens focuses far and the object far away gets clear. Click ⌗ , then the lens focuses near and the object nearby gets clear.

Button	Name	Description
	Iris close/open	When the image is too dark, click to enlarge the iris. When the image is too bright, click to stop down the iris.
	Auxiliary Functions	Refer to Auxiliary Functions for detailed information of auxiliary functions.
4	Speed Adjustment	Adjust speed of pan/tilt movements.
	Preset	Refer to Setting/Calling a Preset for detailed information of setting preset.
	Patrol	Refer to Setting/Calling a Preset for detailed information of setting patrol.
	Pattern	Refer to Setting/Calling a Preset for detailed information of setting pattern.

Buttons on the Preset/Patrol/Patterns interface:

Table 4 Descriptions of Buttons

Button	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.

Auxiliary Functions

Figure 8   Auxiliary Functions

Table 5 Descriptions of Auxiliary Functions

Button	Name	Description
☀	Light	Click the button to enable/disable the light supplement of the camera.
☂	Wiper	Click the button to move the wiper once.
⬚	Auxiliary Focus	This function is reserved.
⊙	Lens Initialization	Click the button and the lens operates the movements for initialization.
≡	Menu	Click the button to call the OSD menu of the device and click again to close the OSD menu.
⬚⟳	Manual Tracking	Click ⬚⟳ on the toolbar of live view interface. Click a moving object in the live video. The camera will track the object automatically.
⊕	3D Positioning	Click ⊕ on the toolbar of live view interface. 3D positioning can be operated in three ways: Click a position of the live video. The corresponding position will be moved to the center of the live video. Hold down the left mouse button and drag the mouse to the lower right on the live video. The corresponding position will be moved to the center of the live video and zoomed in. Hold down the left mouse button and drag the mouse to the upper left on the live video. The corresponding position will be moved to the center of the live video and zoomed out.
⟳	One-touch Patrol	Click ⟳ to call one-touch patrol. For detailed information of setting one-touch patrol, refer to One-touch Patrol.
⬚	One-touch Park	Click ⬚ to save the current view as the preset No. 32 and start park at the current position.

Setting/Calling a Preset

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

Setting a Preset:

• In the PTZ control panel, select a preset number from the preset list.
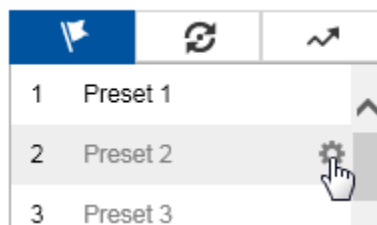
Figure 9   Setting a Preset

• Use the PTZ control buttons to move the lens to the desired position.

Pan the camera to the right or left.

Tilt the camera up or down.

Zoom in or out.

Refocus the lens.

- Click ⚙ to finish the setting of the current preset.

- Edit a preset name by double clicking on the default name such as preset 1. (The pre-defined presets are named already but not configurable. Refer to the user manual for detailed function description.)

- You can click ✕ to delete the preset.

Calling a Preset:

In the PTZ control panel, select a defined preset from the list and click ⤴ to call the preset.
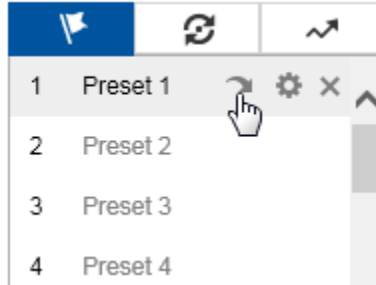
Figure 10   Calling a Preset

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

- Select any preset from the list.

- Click the preset number you need on the keyboard.

Notes:

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

- Pattern function varies depending on different camera models.

Table 6   Special Presets

Preset	Function	Preset	Function
33	Auto flip	92	Set Manual limits
34	Back to initial position	93	Save manual limits
35	Call patrol 1	94	Remote reboot
36	Call patrol 2	95	Call OSD menu
37	Call patrol 3	96	Stop a scan
38	Call patrol 4	97	Start random scan
39	Day mode (IR cut filter in)	98	Start frame scan
40	Night mode (IR cut filter out)	99	Start auto scan
41	Call pattern 1	100	Start tilt scan
42	Call pattern 2	101	Start panorama scan

43	Call pattern 3	102	Call patrol 5
44	Call pattern 4	103	Call patrol 6
45	One-touch Patrol	104	Call patrol 7
46	Day/Night Auto Mode	105	Call patrol 8
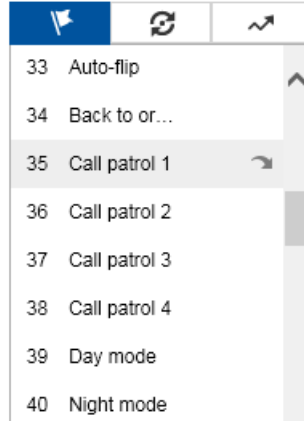
Figure 11   Special Preset

Notes:

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

Setting/Calling a Patrol

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

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

Setting a Patrol

- In the PTZ control panel, click to enter the patrol settings interface.

- Select a patrol number from the list and click .

- Click to enter the adding interface of preset.
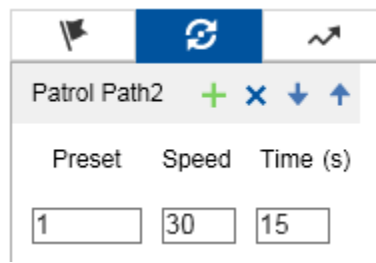
Figure 12   Adding Presets

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

	Name	Description
	Patrol Time	It is the duration staying on one patrol point. The camera moves

	to another patrol point after the patrol time.
Patrol Speed	It is the speed of moving from one preset to another.

- Click OK to save a preset into the patrol.
- Repeat the steps from 3 to 5 to add more presets.
- 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 *13***.
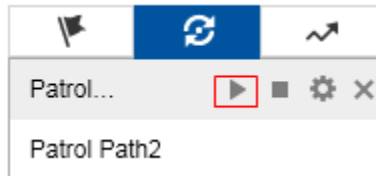
Figure 13   Calling a Preset

One-touch Patrol

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

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

Figure 14   Patrol Path 8

Setting/Calling a Pattern

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

Setting a Pattern:

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

- Select a pattern number from the list as shown in Figure 15.
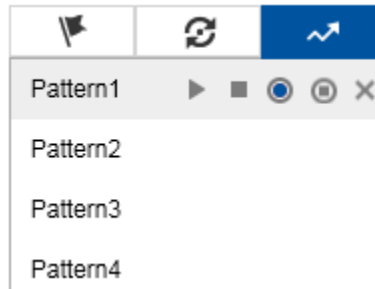
Figure 15   Patterns Settings Interface

- Click ⦿ to enable recording the panning, tilting and zooming actions.

- 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 camera to the right or left.

    Tilt the camera up or down.

    Zoom in or out.

    Refocus the lens.

- Click ⦿ to save all the pattern settings.

Table 7   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.

Notes:

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

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

Playback

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

Notes:

• If you are using Google Chrome 57 and its above version or Mozilla Firefox 52 and its above version, plug-in installation is not compulsory. But Picture and Playback of the camera are not available. If you want to use the mentioned function, change the web browser to Internet Explorer (only for Windows operation system).

Play Back Video Files

Click **Playback** on the menu bar to enter playback interface.
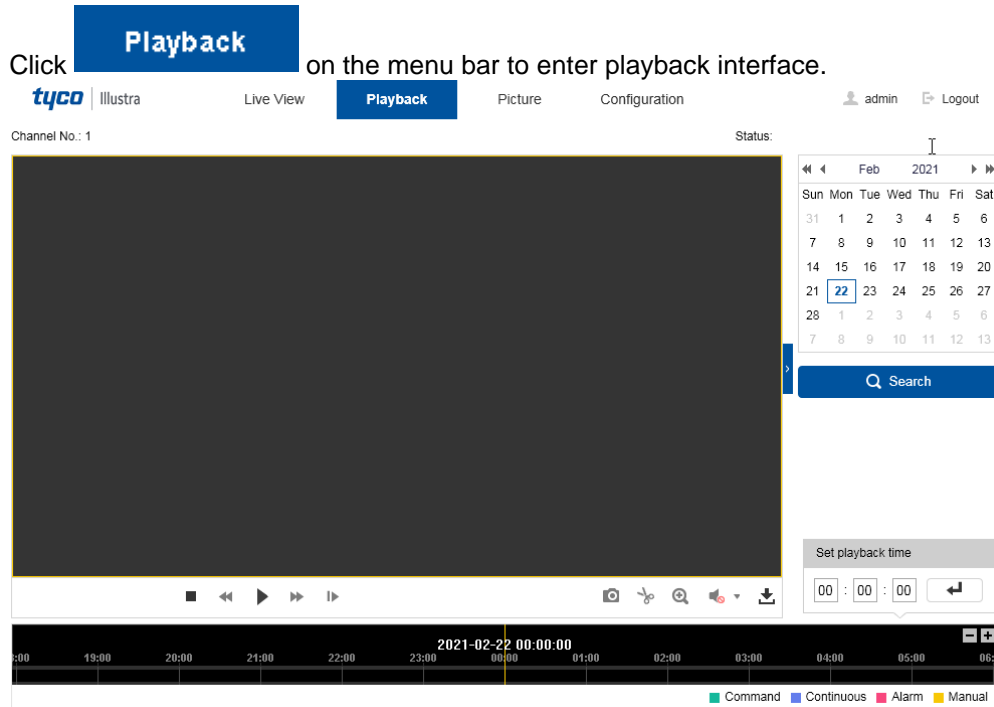
Figure 16   Playback Interface

Select the date and click **Q Search** .
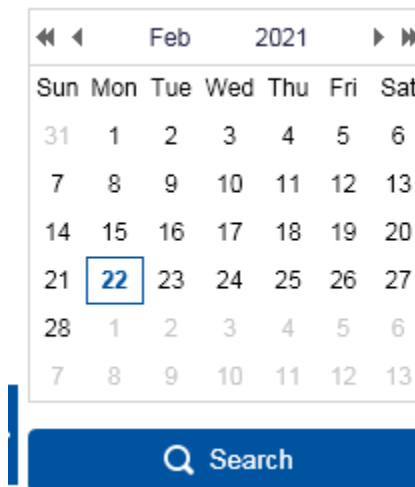
Figure 17   Search Video

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

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

Figure 18   Playback Toolbar

Table 8   Description of the buttons

Button	Operation	Button	Operation
▶	Play	📷	Capture a picture
❚❚	Pause	✂ / ✂	Start/Stop clipping video files
■	Stop	🔊 ▬▭ / 🔇	Volume up/down
◀◀	Speed down	⬇	Download
▶▶	Speed up	I▶	Playback by frame
⊕ / ⊕	Enable/Disable digital zoom		

Notes:

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

- Drag the progress bar with the mouse to locate the exact playback point. You can also input the time and click ↵   to locate the playback point in the Set playback time field. You can also click − + to zoom out/in the progress bar.
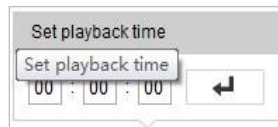
Figure 19   Set Playback Time
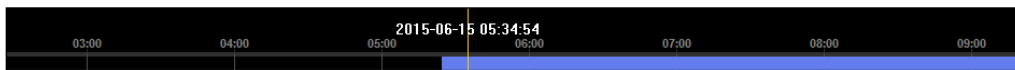
Figure 20   Progress Bar

The different colors of the video on the progress bar stand for the different video types as shown in Figure 21.
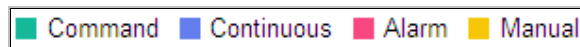
Figure 21   Video Types

Downloading Video Files

Click ⬇ on the playback interface. The pop-up menu is shown in Figure 22.

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

Figure 22   Video Downloading interface

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

Click [⬇ Download] to download the video files.

Pictures

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

Notes:

- If you are using Google Chrome 57 and its above version or Mozilla Firefox 52 and its above version, plug-in installation is not compulsory. But Picture and Playback of the camera are not available. If you want to use the mentioned function, change the web browser to Internet Explorer (only for Windows operation system).

Click [Picture] on the menu bar to enter picture interface.

Figure 23   Picture Interface

Select the file type.

Set the start time and end time. Click Search. The corresponding picture files will be listed.

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

Click to download the files.

System Configuration

Storage Settings

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

Configuring Recording Schedule

There are two kinds of recording for the camera: manual recording and scheduled recording. In this section, you can follow the instructions to configure the scheduled recording. By default, the record files of scheduled recording are stored in the memory card (if supported) or in the network disk.

- Enter the Record Schedule settings interface: **Configuration > Storage > Schedule Settings > Record Schedule**
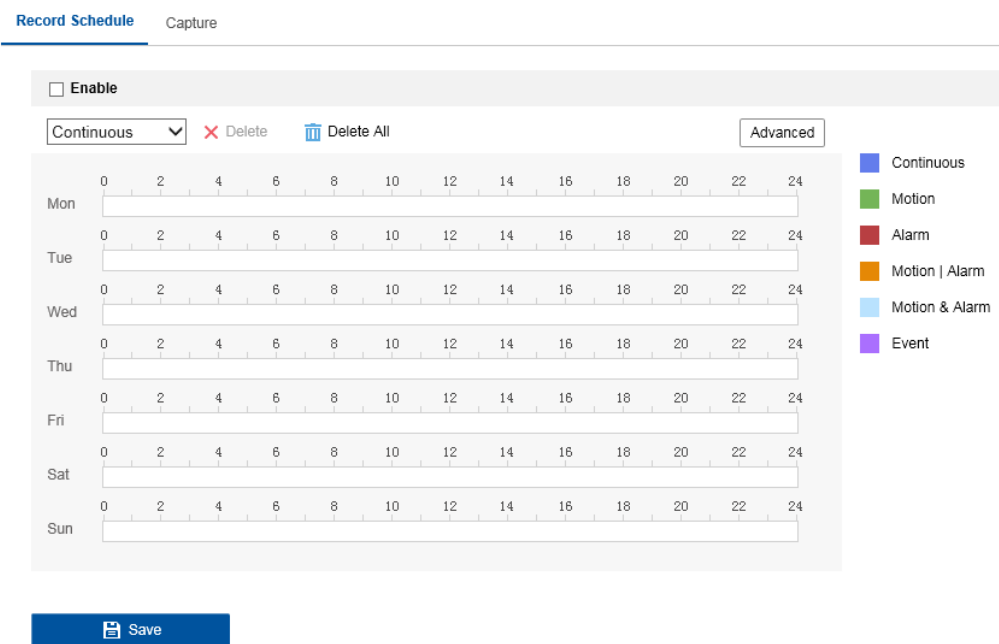
Figure 24   Recording Schedule Interface

- Check the checkbox to enable scheduled recording.

- To set the advanced settings of the camera, click Advanced to enter the advanced settings interface.
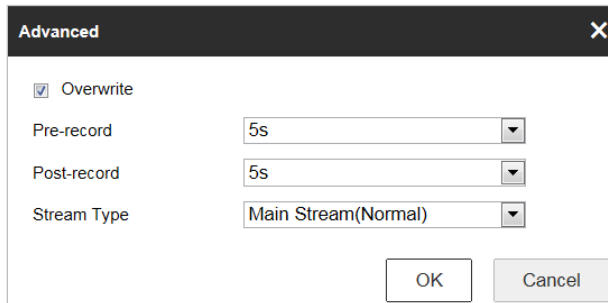
Figure 25   Record Parameters

- Pre-record: The time you set to start recording before the scheduled time or the event. For

example, if an alarm triggers recording at 10:00, and the pre-record time is set as 5 seconds, the camera starts to record at 9:59:55.

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

Notes:

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

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

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

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

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

- Click OK to save the advanced setting.

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

- Normal: If you select Continuous, the video will be recorded automatically according to the time of the schedule.

- Record Triggered by Motion Detection: If you select Motion, the video will be recorded when the motion is detected. Besides configuring the recording schedule, you have to set the motion detection area and check the checkbox of Trigger Channel in the Linkage Method of Motion Detection settings interface. For detailed information, refer to 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, refer to Configuring Alarm Input.

- 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.

- 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.

- Record Triggered by Event: If you select to record by event, the video will be recorded when any of the events is triggered.

- Click Save button to save the settings.

Configuring Capture Schedule

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

- Enter the Snapshot settings interface:
- Configuration > Storage > Storage Settings > Capture
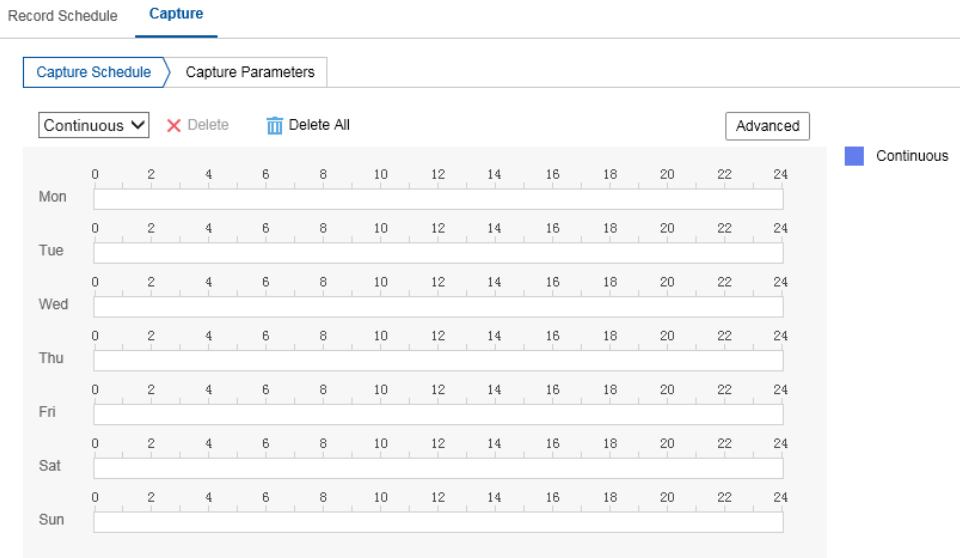
Figure 26   Snapshot Settings

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

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

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

- 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).
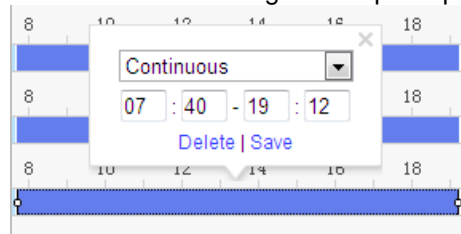
Figure 27   Segment Snapshot Settings

- Click [Advanced] to enter the advanced setting interface. You can select the stream type of the capture.

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

- 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.

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

- Set the time interval between two snapshots.

- Set Capture Number for every capture action.

- Click [Save] to save the settings.

Uploading to FTP

Notes:

- Make sure that the FTP server is online.

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

- Configure the FTP settings and check Upload Picture checkbox in FTP Settings interface

- Check the Enable Timing Snapshot checkbox.

- Click Edit to set the snapshot schedule.

Upload event-triggered snapshots to FTP

- Configure the FTP settings and check Upload Picture checkbox in FTP Settings interface. Refer to Configuring FTP Settings for more details to configure FTP parameters.

- Check Upload to FTP checkbox in Motion Detection Settings or Alarm Input interface. Refer to Configuring Motion Detection.

- Check the Enable Event-triggered Snapshot checkbox.

Configuring Net HDD

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

Add the network disk

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

Figure 28   Select Net HDD Type

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

- 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.

Notes:

- 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.

• Click Save to add the network disk.

Notes:

• After having saved successfully, you need to reboot the camera to activate the settings.

Initialize the added network disk

• 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 Management   [Format]

	HDD No.	Capacity	Free space	Status	Type	Property	Progress
☐	9	29.27GB	28.75GB	Normal	NAS	R/W	

Quota

Max.Picture Capacity	7.00GB
Free Size for Picture	7.00GB
Max. Record Capacity	21.75GB
Free Size for Record	21.75GB

Figure 29   Storage Management Interface

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

• When the initialization completed, the status of disk will become Normal as shown in **Figure 30**.

HDD Management   [Set]   [Format]

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

Figure 30   View Disk Status

Define the Quota for Record and Pictures

• Input the quota percentage for picture and for record.

• Click Save and refresh the browser page to activate the settings.

Figure 31   Quota Settings

Notes:

- Up to 8 NAS disks can be connected to the camera.
- To initialize, refer to the steps of NAS disk initialization

Configuring Cloud Storage

Figure 32   Cloud Storage configuration

- Enter the Cloud Storage settings interface: Configuration > Storage > Storage Management > Cloud Storage
- Check the checkbox to enable this function.
- Select Protocol Version from dropdown list.
- Enter the Server IP. Server Port, User Name, Password, and Picture Storage Pool ID.
- Click Save button to save the settings.

Basic Event Configuration

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

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

- On the event configuration page, click to show the PTZ control panel or click to hide it.
- Click the direction buttons to control the pan/tilt movements.

> • Click the zoom/iris/focus buttons to realize lens control.

> • The functions vary depending on different camera models.

Configuring Motion Detection

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

- • Enter the motion detection setting interface: **Configuration > Event > Basic Event > Motion Detection**

- • Check the checkbox of the Enable Motion Detection to enable this function.

- • You can check the Enable Motion Detection in PTZ Control checkbox and when the PTZ dome is performing PTZ action, motion detection can also trigger alarm.

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

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

Normal
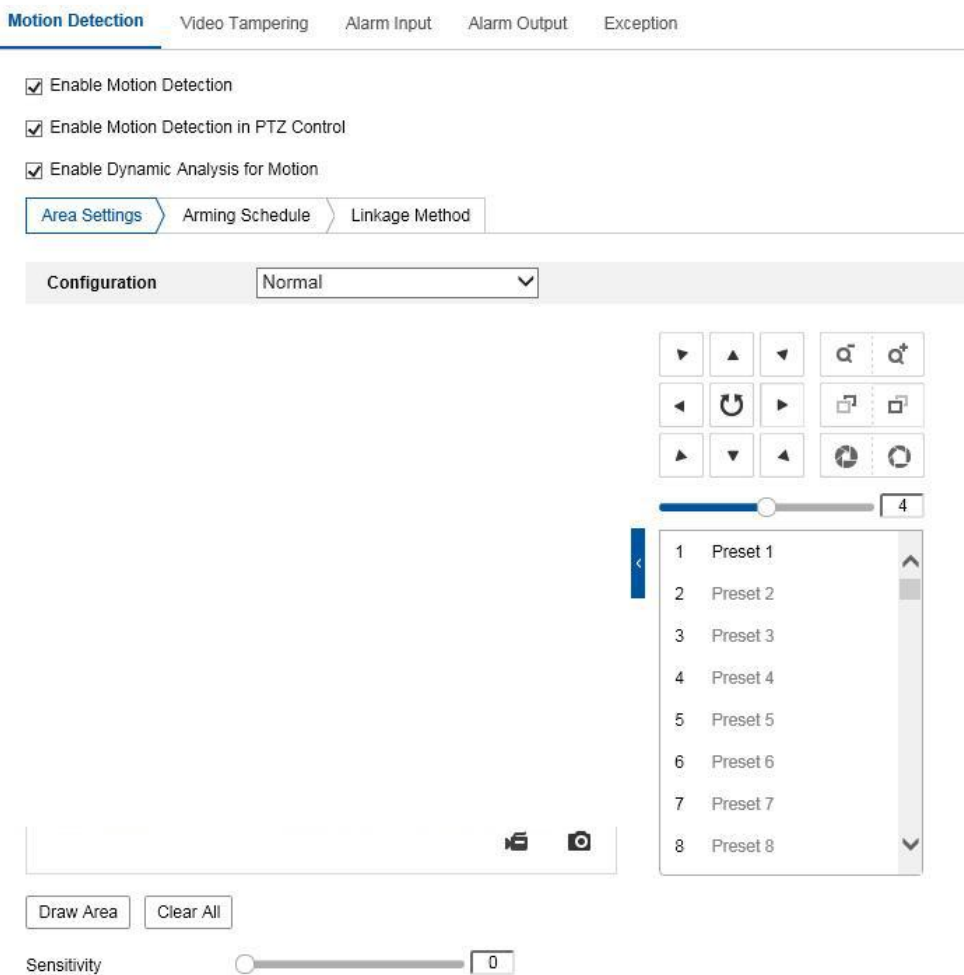
Figure 33   Motion Detection Settings-Normal

- • Click [Draw Area] and drag the mouse on the live video image to draw a motion detection area.

- • Click [Stop Drawing] to finish drawing.

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

- Move the slider Sensitivity [========== 0] to set the sensitivity of the detection.

Expert

☑ Enable Motion Detection

☑ Enable Motion Detection in PTZ Control

☑ Enable Dynamic Analysis for Motion

| Area Settings | Arming Schedule | Linkage Method |

| Configuration | Expert ▾ |
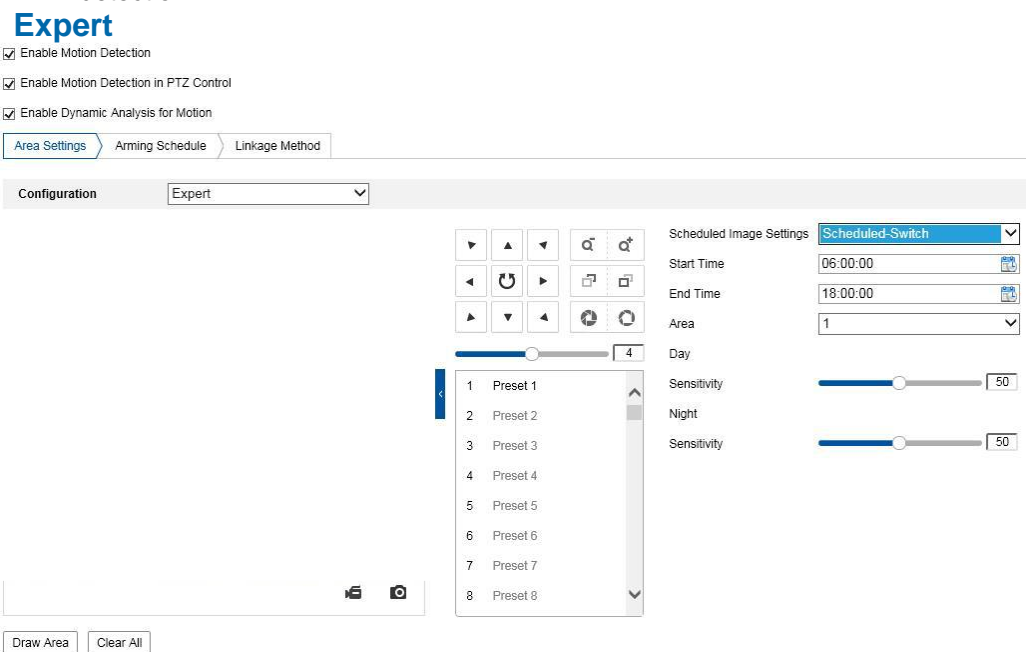
Figure 34   Motion Detection Settings-Expert

- Set the **Scheduled Image Settings**, there are **OFF, Auto-Switch** and **Scheduled-Switch** selectable. If the schedule image 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 and the night mode according to the configured time. You need to set the start time and end time.

- Select Area from the dropdown list to configure.

- Set the value of sensitivity.

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

Set the Arming Schedule for Motion Detection.

- Click [Arming Schedule] tab to enter the arming schedule setting interface.

☑ Enable Motion Detection

☑ Enable Motion Detection in PTZ Control

☑ Enable Dynamic Analysis for Motion

Figure 35   Arming Schedule

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

- After you set the scheduled task, you can click ![icon] and copy the task to other days (optional).
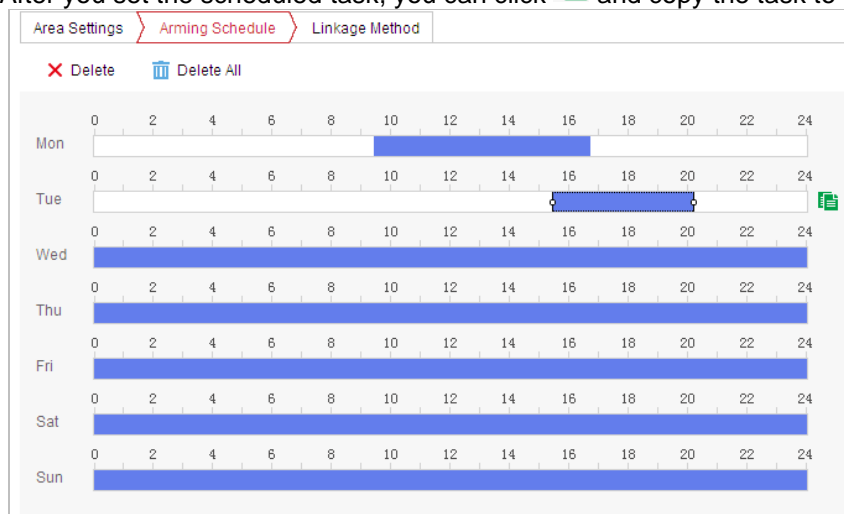
Figure 36   Arming Time Schedule

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

06 : 35 - 11 : 40

Delete | Save

Figure 37   Segment Arming Settings

- Click Save button to save the settings.

Notes:

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

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 38   Linkage Method

Check the checkbox to select the linkage method. Send Email, Notify Surveillance Center, Upload to FTP/Memory/NAS, Trigger Alarm Output, and Trigger Recording are selectable.

Send Email

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

Notify Surveillance Center

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

Upload to FTP/Memory/NAS

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

Trigger Alarm Output

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

Trigger Recording

- Record a video when an event occurs.

Configuring Video Tampering Alarm

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

- Enter the Video Tampering settings interface: **Configuration > Event > Basic Event > Video Tampering**

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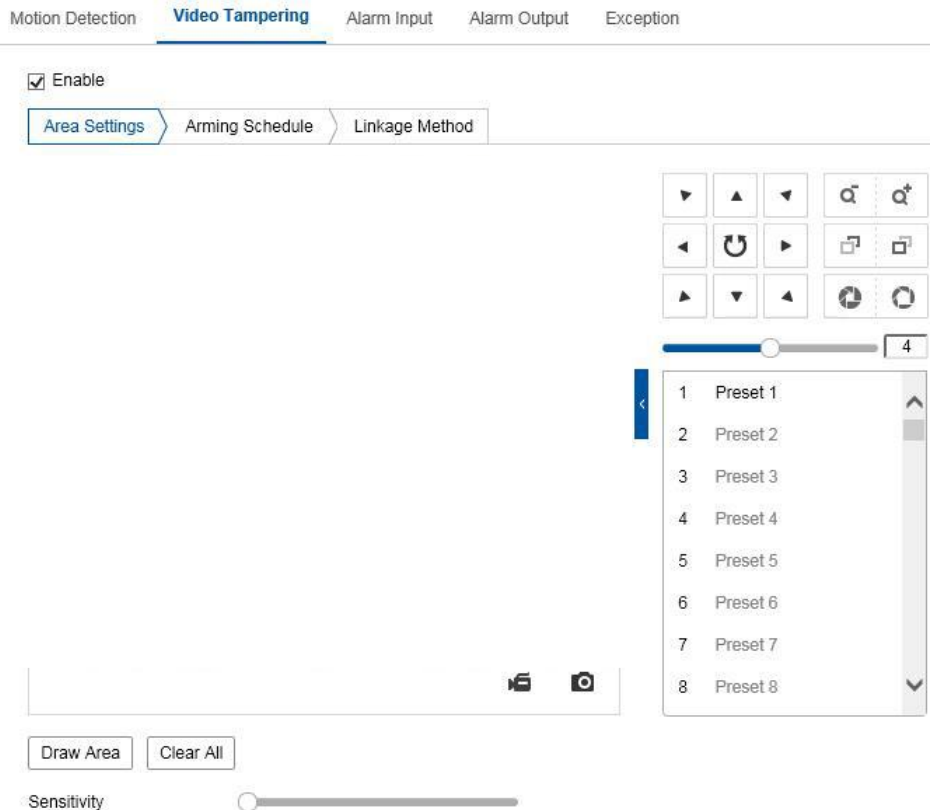
Figure 39   Tampering Alarm

- Check the checkbox to enable the tampering detection.

- Set the tampering area.

- Set Sensitivity level. Higher level means easier to trigger.

- 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 Configuring Motion Detection.

- Click **Linkage Method** tab to select the linkage method taken for tampering. Notify surveillance center, send email and trigger alarm output are selectable. Refer to Configuring Motion Detection.

- Click Save button to save the settings.

Configuring Alarm Input

- Enter the Alarm Input settings interface: **Configuration > Event > Basic Event > Alarm Input**

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

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

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Figure 40   Alarm Input Settings

- 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 Configuring Motion Detection.

- Click Linkage Method tab to select the linkage method taken for alarm input, including Send Email, Notify Surveillance Center, and Upload to FTP/Memory Card/NAS, Trigger Alarm Output and Trigger Recording. Refer to Configuring Motion Detection. for more details.

- 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.

- You can copy your settings to other alarm inputs.

- Click Save button to save the settings.

Figure 41   Linkage Method

Linkage Method

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Configuring Alarm Output

- Enter the Alarm Output settings interface**: Configuration> Event > Basic Event > Alarm Output**

- Select one alarm output channel in the Alarm Output dropdown list.

- Set a name in Alarm Name [ ] (cannot copy) for the alarm output (optional).

- The Delay time can be set to 1sec, 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.

- 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 Configuring Motion Detection for details.

Figure 42   Alarm Output Settings

- You can copy the settings to other alarm outputs.
- Click Save button to save the settings.

Handling Exception

The exception type can be HDD Full, HDD Error, Network Disconnected, IP Address Conflicted and Illegal Login.

- Enter the Exception settings interface: **Configuration > Event > Basic Event > Exception**

- Check the checkbox to set the actions taken for the Exception alarm. Refer to Configuring Motion Detection.

Figure 43   Exception Settings

- Click Save button to save the settings.

Smart Event Configuration

Before Smart Event Configuration, you need to set VCA Resource as Smart Event:

Configuration > System > System Settings > VCA Resource

Detecting Audio Exception

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

- Enter the video audio exception detection interface:
- Configuration > Event > Smart Event > Audio Exception Detection

Figure 44   Audio Exception Detection

- Check the checkbox of Audio Loss Detection to enable the audio input exception detection.
- Check the checkbox of Sudden Increase of Sound Intensity Detection checkbox to enable the sudden rise detection.
- Sensitivity: The smaller the value the more obvious sound change will trigger the detection.
- Sound Intensity Threshold: It can filter the sound in the environment, the louder the environment
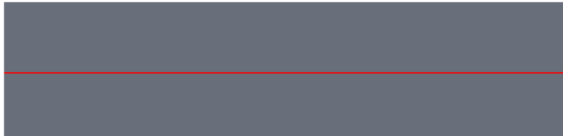
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sound, the higher the value should be. You can adjust it according to the actual environment.

- Check the checkbox of Sudden Decrease of Sound Intensity Detection checkbox to enable the sudden drop detection.

- Sensitivity: The smaller the value the more obvious sound change will trigger the detection.

- 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 Configuring Motion Detection for more details.

- Click Linkage Method tab to select the linkage method taken for the audio input exception, Send Email, Notify Surveillance Center, Trigger Alarm Output and Trigger Recording are selectable. Refer to Configuring Motion Detection for more details.

- Click Save button to save the settings.

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.

- Enter the intrusion detection interface: **Configuration > Events > Smart Event >Intrusion Detection**

- Check the Enable checkbox.
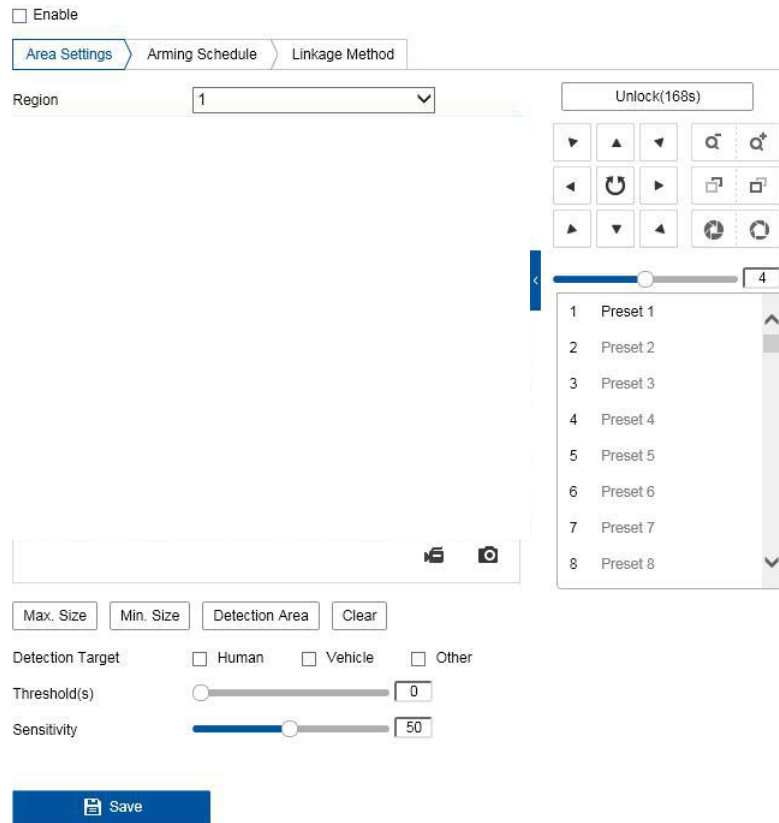
Figure 45   Configuring Intrusion Area

- 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.

- Select a region.

- Draw area.

- Select the Region No.in dropdown list.

- Click [Detection Area] to draw a rectangle on the image as a defense region.

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

- Configure the parameters for each defense region separately.

- **Threshold:** 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:** 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.

- **Detection Target**: You can select human, vehicle, or other object as the detection target. If **Human** is selected, only human beings will be identified as detection objects, so as the other two options.

- 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 Configuring Motion Detection for more details.

- Click Linkage Method tab to select the linkage method taken for intrusion detection, Notify Surveillance Center, Send Email, Upload to FTP/Memory Card/NAS, Trigger Alarm Output, Trigger Recording, Smart Tracking are selectable.

- Click Save button to save the settings.

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.

- Enter the Line Crossing Detection interface: **Configuration >Event > Smart Event > Line Crossing Detection**

- Check the Enable checkbox to enable the line crossing detection function.

- Select the Line in dropdown list to configure.

- 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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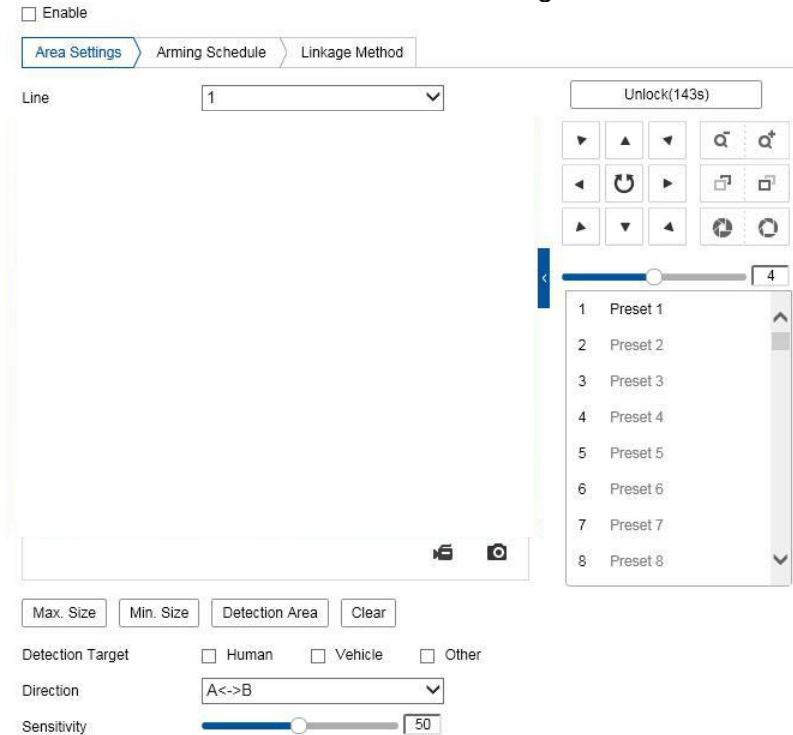
Figure 46   Configuring Line

- Draw area.

- Click [Detection Area] to draw a line on the image.

- Click the line to switch to the editing mode.

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

- 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**: 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.

- **Detection Target**: You can select human, vehicle, or all (human &vehicle) as the detection target. If **Human** is selected, only human beings will be identified as detection objects and as well as **Vehicle**.

- 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 Configuring Motion Detection for more details.

- Click Linkage Method tab to select the linkage method taken for the line crossing detection, Notify Surveillance Center, Send Email, Upload to FTP/Memory Card/NAS, Trigger Alarm Output, Trigger Recording, and Smart Tracking are selectable.

- Click Save button to save the settings.

Configuring Region Entrance Detection

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

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- Enter the Region Entrance Detection settings interface: **Configuration> Event > Smart Event> Region Entrance Detection**

- Check the checkbox of Enable to enable the Region Entrance Detection function.
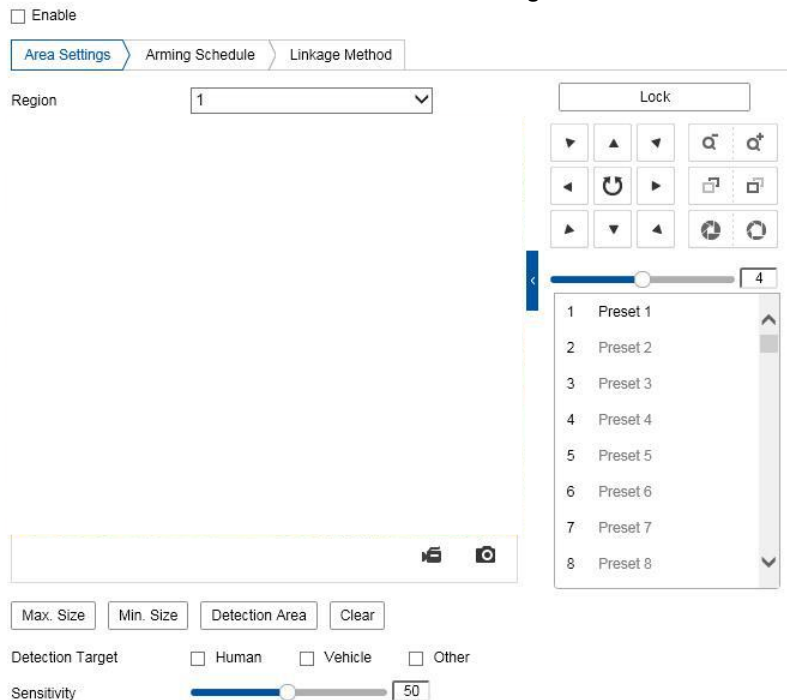
Figure 47　　　　Configuring Region Entrance Detection

- 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.

- Select the region from the dropdown list for detection settings.

- Click the ⬚Detection Area button to start the region drawing.

- Click on the live video to specify the four vertexes of the detection region, and right click to complete drawing.

- Repeat the step to configure other regions. You can click the ⬚Clear button to clear all pre-defined regions.

- Configure the parameters for each defense region separately.

- **Sensitivity**: 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.

- **Detection Target**: You can select Human, Vehicle, or Other as the detection target. If Human is selected, only human beings will be identified as detection objects and as well as Vehicle and Other.

- 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 Configuring Motion Detection for more details.

- Click Linkage Method tab to select the linkage method taken for the region entrance alarm, Notify surveillance center, send email, upload to FTP, trigger channel, smart tracking and trigger alarm output are selectable.

- Click Save button to save the settings.

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Configuring Region Exiting Detection

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

- Enter the Region Exiting Detection settings interface: **Configuration> Event > Smart Event> Region Exiting Detection**

- Check the checkbox of Enable to enable the Region Exiting Detection function.
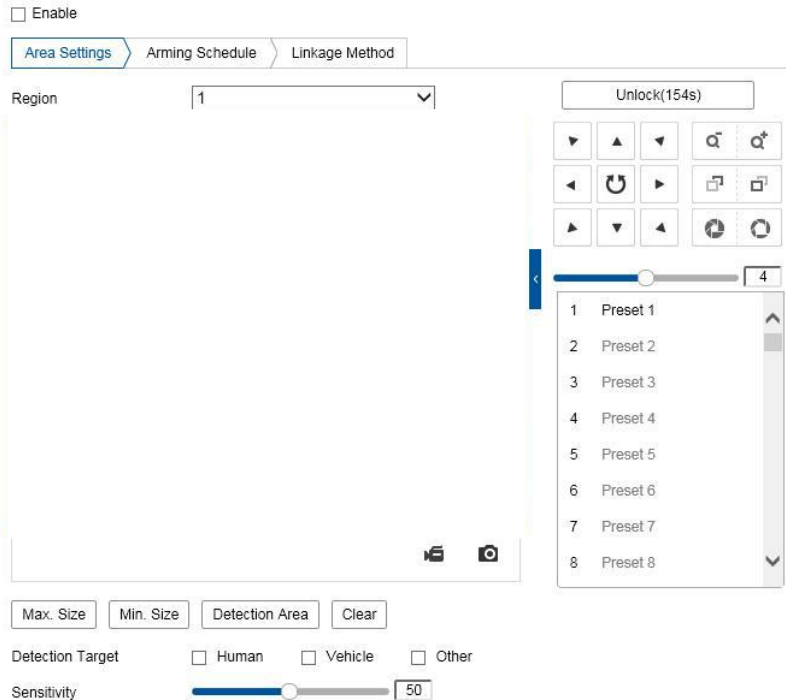
Figure 48   Configuring Region Exiting Detection

- 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.

- Select the region from the dropdown list for detection settings.

- Click the `Detection Area` button to start the region drawing.

- Click on the live video to specify the four vertexes of the detection region, and right click to complete drawing.

- Repeat the step to configure other regions. Up to 4 regions can be set. You can click the `Clear` button to clear all pre-defined regions.

- Configure the parameters for each defense region separately.

- Sensitivity: 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.

- Detection Target: You can select Human, Vehicle, or Other as the detection target. If Human is selected, only human beings will be identified as detection objects and as well as Vehicle and Other.

- 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 Configuring Motion Detection for more details.

- Click Linkage Method tab to select the linkage method taken for the region exiting alarm, Notify Surveillance Center, Send Email, Upload to FTP, Smart Tracking, and Trigger Alarm Output are selectable.
- Click Save button to save the settings.

Unattended Baggage Detection

Unattended baggage detection function detects baggage which is left in a pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.

- Enter the Unattended Baggage Detection settings interface: **Configuration> Event > Smart Event> Unattended Baggage Detection**

- Check the checkbox of Enable to enable the Unattended Baggage Detection function.
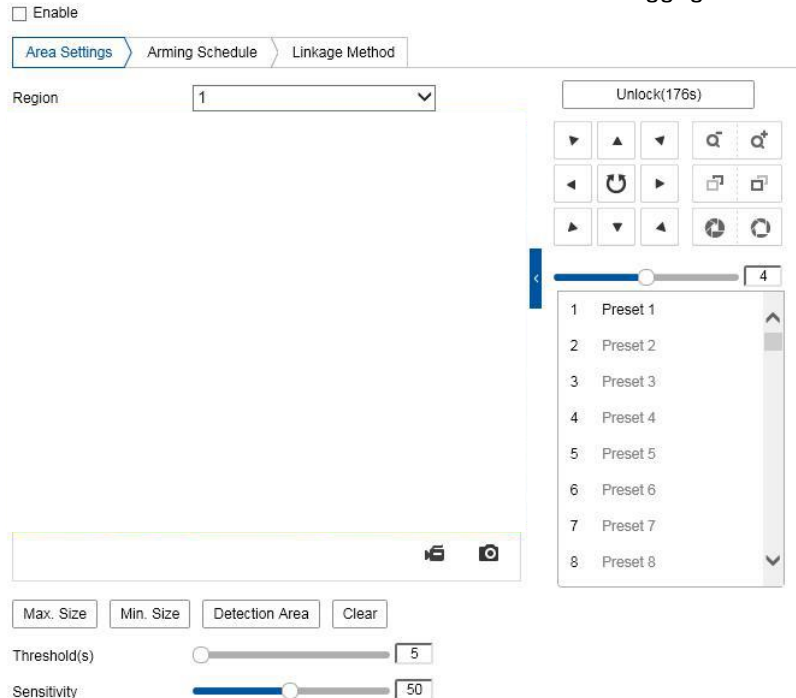
Figure 49   Configuring Unattended Baggage Detection

- The event triggered and park action related PTZ movement will be locked for 180 seconds after you enter the unattended baggage 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.

- Select the region from the dropdown list for detection settings.

- Click the Detection Area button to start the region drawing.

- Click on the live video to specify the four vertexes of the detection region, and right click to complete drawing.

- Repeat the step to configure other regions. Up to 4 regions can be set. You can click the Clear button to clear all pre-defined regions.

- Configure the parameters for each defense region separately.

- **Threshold Level**: If you set the value as 5, alarm is triggered immediately after the object entering the region.

- **Sensitivity Level**: 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.

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- 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 Configuring Motion Detection for more details.

- Click Linkage Method tab to select the linkage method taken for the unattended baggage alarm, Notify surveillance center, send email, upload to FTP, trigger channel, smart tracking and trigger alarm output are selectable. Refer to Configuring Motion Detection for more details.

- Click Save button to save the settings.

Object Removal Detection

Object removal detection function detects objects which remove in a pre-defined virtual region, and some certain actions can be taken when the alarm is triggered.
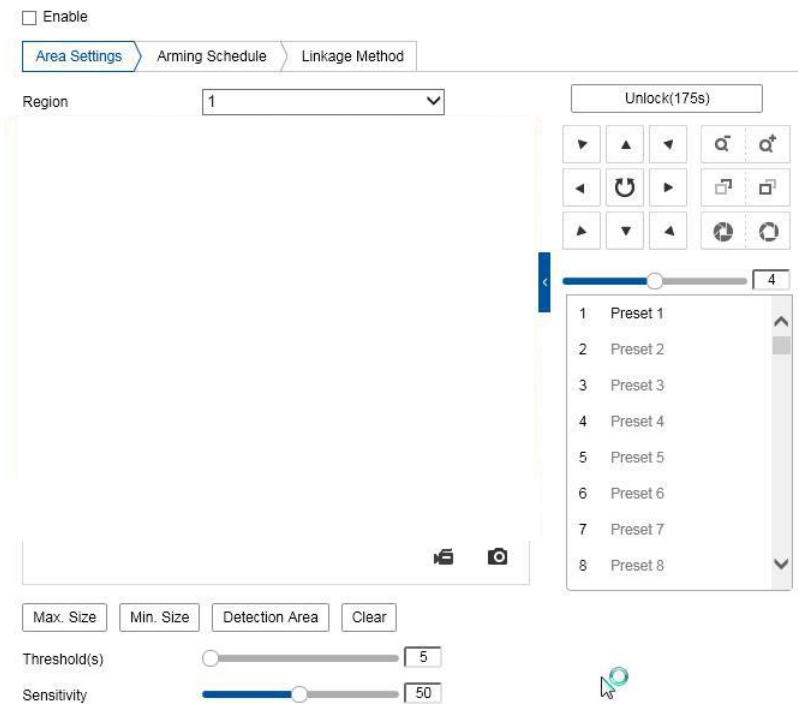
Figure 50   Configuring Object Removal Detection

- Enter the Object Removal Detection settings interface: **Configuration> Event > Smart Event> Object Removal Detection**

- Check the checkbox of Enable to enable the Object Removal Detection function.

- The event triggered and park action related PTZ movement will be locked for 180 seconds after you enter the unattended baggage 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.

- Select the region from the dropdown list for detection settings.

- Click the Detection Area button to start the region drawing.

- Click on the live video to specify the four vertexes of the detection region, and right click to complete drawing. Repeat the step to configure other regions. Up to 4 regions can be set. You can click the Clear button to clear all pre-defined regions.

- Configure the parameters for each defense region separately.

- **Threshold Level**: If you set the value as 5, alarm is triggered immediately after the object entering the region.

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- **Sensitivity Level**: 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.

- 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 Configuring Motion Detection for more details.

- Click Linkage Method tab to select the linkage method taken for the object removal alarm, Notify Surveillance Center, Send Email, Upload to FTP, Trigger Channel, Smart Tracking and Trigger Alarm Output are selectable. Refer to Configuring Motion Detection for more details.

- Click Save button to save the settings.

PTZ Configuration

- On the event configuration page, click > to show the PTZ control panel or click < to hide it.

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

- Click the zoom/iris/focus buttons to realize lens control.

- The functions vary depending on different camera models.

Configuring Basic PTZ Parameters

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

- Enter the Basic Settings interface: **Configuration > PTZ > Basic Settings**

Figure 51   Basic Settings

Configure the following settings:

- **Basic Parameters**: Set the basic parameters of PTZ.

  Proportional Pan: If you enable this function, the pan/tilt speeds change according to the amount of zoom. When there is a large amount of zoom, the pan/tilt speed will be slower for keeping the image from moving too fast on the live view image.

  Preset Freezing: This function enables the live view to switch directly from one scene defined by

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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.

Notes:

• Preset freezing function is invalid when you call a pattern.

Preset Speed: You can set the speed of a defined preset from 1 to 8.

Manual Control Speed: The manual control speed can be set as Compatible, Pedestrian, Non-motor Vehicle, Motor Vehicle or Auto.

• **Compatible**: The control speed is same as the Keyboard Control Speed.

• **Pedestrian**: Choose the Pedestrian when you monitor the pedestrians.

• **Non-motor Vehicle**: Choose the Non-motor Vehicle when you monitor the non-motor vehicles.

• **Motor Vehicle**: Choose the Motor Vehicle when you monitor the motor vehicles.

• **Auto**: You are recommended to set it as Auto when the application scene of the speed dome is complicated.

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

Auto Scan Speed: The scan speed can be set from level 1 to 40.

Max. Tilt-angle: Set the tilt-angle of the speed dome from the dropdown list.

Zooming Speed: The zoom speed is adjustable from level 1 to 3.

PTZ OSD: Set the on-screen display duration of the PTZ status.

Zoom Status: Set the OSD duration of zooming status as 2 seconds, 5 seconds, 10 seconds, NC (Normally Closed), or NO (Normally Open).

PT Status: Set the azimuth angle display duration while panning and tilting as 2 seconds, 5 seconds, 10 seconds, NC (Normally Closed), or NO (Normally Open).

Position Display Format: Set the position display format as PT or Direction and the position parameter displays in corresponding format.

Preset Status: Set the preset name display duration while calling the preset as 2 seconds, 5 seconds, 10 seconds, NC (Normally Closed), or NO (Normally Open).

Power-off Memory: The speed dome can resume its previous PTZ status or actions after it restarted from a power-off. You can set the time point to which the dome resumes its PTZ status. You can set it to resume the status of 30 seconds, 60 seconds, 300 seconds or 600 seconds before power-off.

Click Save to save the settings.

Configuring PTZ Limits

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

• Enter the Limit configuration interface: **Configuration > PTZ > Limit**
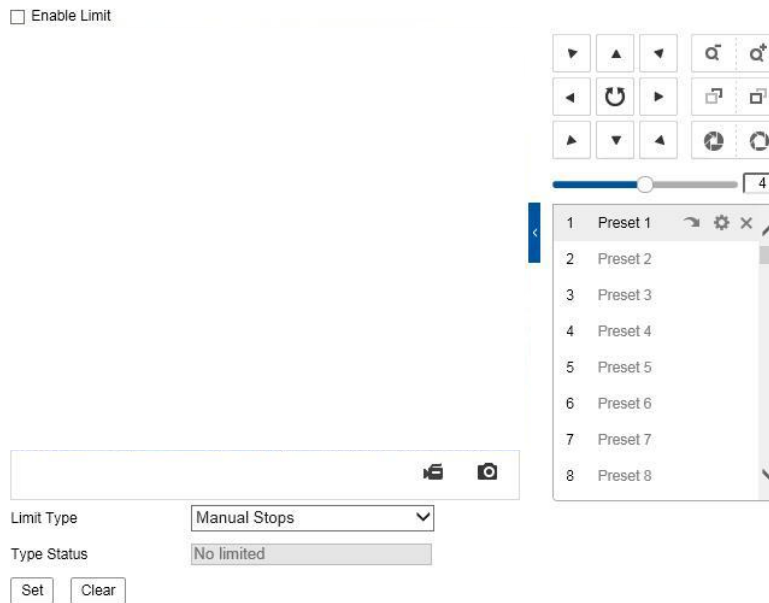
Figure 52   Configure the PTZ Limit

- Click the Enable Limit checkbox 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.

Notes:

  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.

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

Configuring Initial Position

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

Customize an Initial Position:

- Enter the Initial Position configuration interface: **Configuration > PTZ > Initial Position**
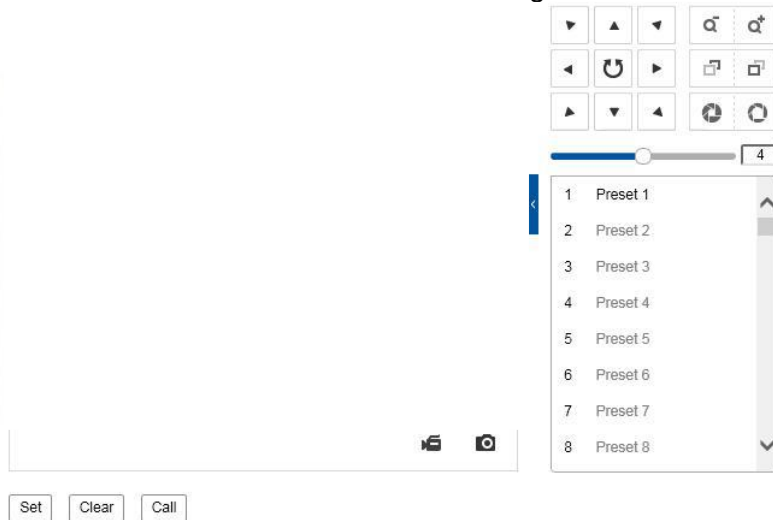
Figure 53   PTZ Configuration

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

- Click Set to save the position.

Call/delete an Initial Position:

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

Configuring Park Actions

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

- Scheduled Tasks function is prior to Park Action function. When these two functions are set at the same time, only the Scheduled Tasks function takes effect.

- Enter the Park Action settings interface: **Configuration > PTZ > Park Action**

Figure 54   Set the Park Action

- Check the Enable Park Action checkbox.

- Set the Park Time as the inactivity time of the camera before it starts the park actions.

- Choose Action Type from the dropdown list.

- If you select Patrol, Pattern, or Preset as Action Type, you need to select Action Type ID from the dropdown list.

- Click Save to save the settings.

Configuring Privacy Mask

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

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- Enter the Privacy Mask settings interface: **Configuration > PTZ > Privacy Mask**
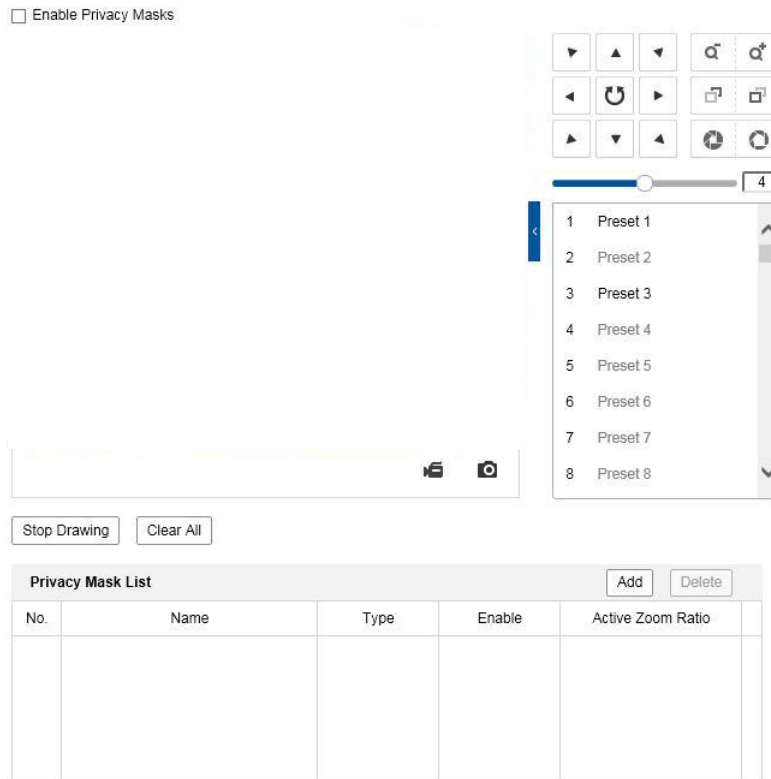
Figure 55   Draw the Privacy Mask

- Click the PTZ control buttons to find the area you want to set the privacy mask.

- Click `Draw Area` ; drag the mouse in the live video window to draw the area.

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

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

- Click `Add` to save the privacy mask, and it will be listed in the Privacy Mask List area.

  Modify the mask settings.

- **Type**: you can specify a desired color for the mask or set it as mosaic.

- **Active Zoom Ratio**: The set mask is only valid when the camera zoom ratio is equal to or larger than the set value. Click to check or change current zoom ratio (The zoom ratio value is displayed on image).

Figure 56   Privacy Mask List

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

Configuring Scheduled Tasks

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

defined time period.

- Enter the Scheduled Task settings interface: **Configuration**> **PTZ** > **Scheduled Tasks**
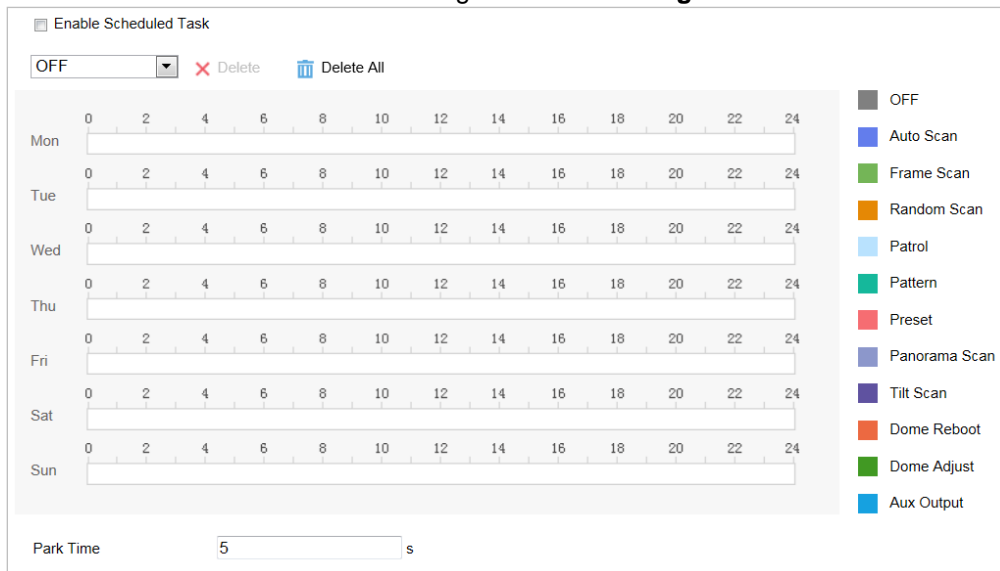
Figure 57   **Configure Scheduled Tasks**

- Check the Enable Scheduled Task checkbox.

- Set the Park Time. You can set the park time (a period of inactivity) before the speed dome starts the scheduled tasks.

- Select the task type from the dropdown list.

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

- After you set the scheduled task, you can click [icon] and copy the task to other days (optional).
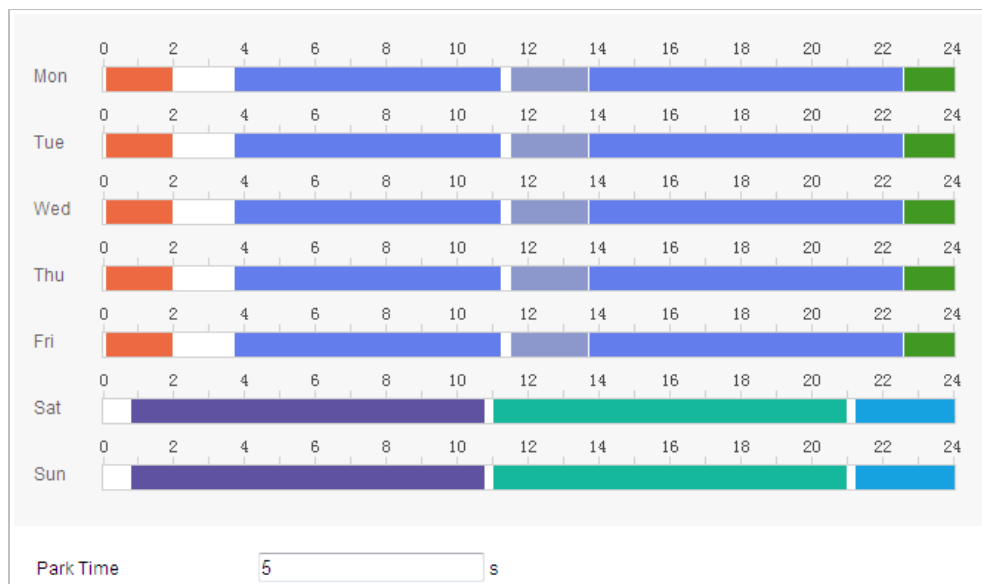
Figure 58   **Edit the Schedule and Task Type**

- Click Save button to save the settings.

Clearing PTZ Configurations

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

Steps:

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

☐ Select All

☐ Clear All Presets

☐ Clear All Patrols

☐ Clear All Patterns

☐ Clear All Privacy Masks

☐ Clear All PTZ Limited

☐ Clear All Scheduled Tasks

☐ Clear All Park Action
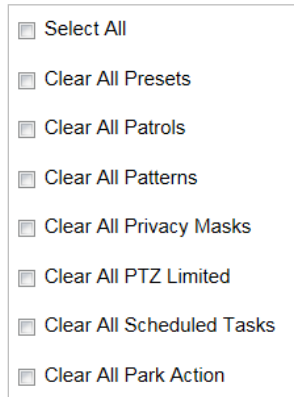
Figure 59   Clear Config

- Click Save button to clear the settings.

Configuring Smart Tracking

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

- Enter the Smart Tracking settings interface: **Configuration > PTZ > Smart Tracking**

| Duration | 300 | s |

Set Zoom Ratio

Tracking Zoom Ratio   50

Color Consistency

When zooming-in target h...   50

When tracking target hum...   50

When zooming-in target v...   50

When tracking target vehi...   50
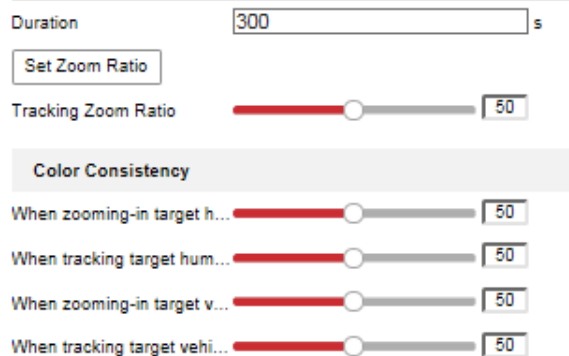
Figure 60   Configure Smart Tracking
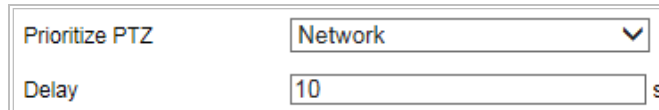
- Configure Smart Tracking
- Check the Enable Smart Tracking check box to enable smart tracking function.
- Set Zoom Ratio for tracking. You can set a fixed zoom ratio, or you can let the camera calculates the actual zoom ratio automatically.
- Set a Fixed Zoom Ratio
- Move the Tracking Zoom Ratio cursor to 1.
- Select a target in the live image and adjust the PTZ buttons to see the target at desired size.
- Click Set Zoom Ratio to set the current zoom ratio as the zoom ratio.
- Camera Calculates Zoom Ratio Automatically
- Adjust the Tracking Zoom Ratio to a desired value. Then the camera determines the actual zoom ratio dynamically according to the detected target size and the set value. Larger value means larger zoom ratio.

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- Set Duration. The speed dome stops tracking when the duration time is up.

- Set Color Consistency.

- Color Consistency: The camera checks the color of the detected target several times during tracking and compares the color resemblance to determine whether it should continue tracking the target or not. If the returned resemblance is lower than the set value, the camera stops tracking.

- You can set the resemblance thresholds for different targets at different tracking stages. Higher value means higher resemblance requirement to continue tracking.

Prioritize PTZ

- Enter the Prioritize PTZ interface: **Configuration > PTZ > Prioritize PTZ**.

Prioritize PTZ	Network	
Delay	10	s
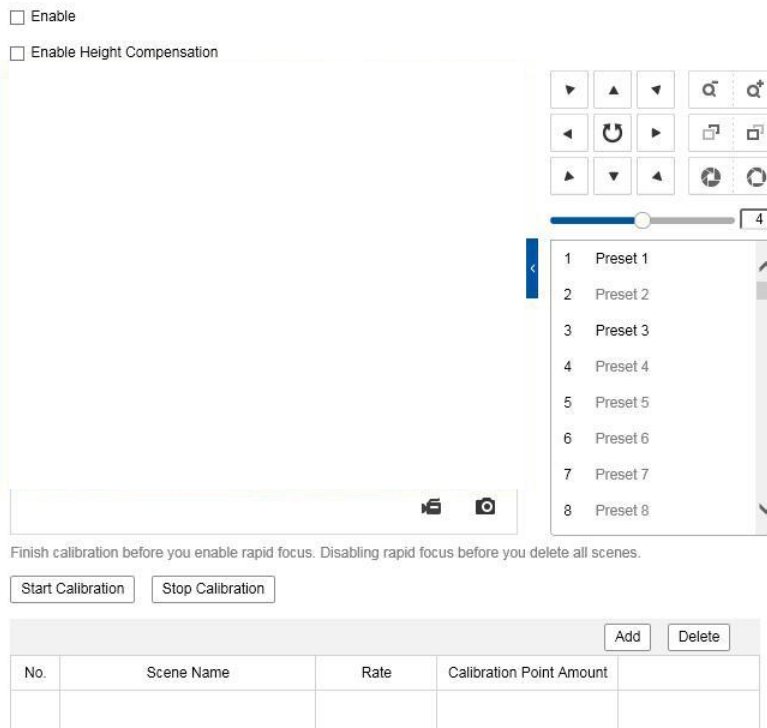
Figure 61   Prioritize PTZ

- Select Network or RS-485 from the dropdown list

- Set the delay time.

- Click Save button to save the settings.

Rapid Focus

Rapid Focus is a function to reduce time of focusing comparing with that of normal focusing. To use the function, calibration should be done first.

- Enter the rapid focus interface: **Configuration > PTZ > Rapid Focus**

Figure 62   Rapid Focus

- To increase focus accuracy, check Height Compensation, if the mounting height of the camera is lower than 3 meters.

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To Calibrate the camera.

- Add scenes for calibration.

  - Adjust the camera to a desired scene via PTZ control buttons.

  - Click Add to add the scene, and input Rate and Calibration Point Amount of the scene.

  - Repeat above steps to add other scenes.

- Adjust calibration line.

  - Select an added scene, and a red line appears on live image.

  - Adjust the length and position of the line by dragging its two endpoints.

Notes:

- The red line is recommended to stay in the center of the scene and to cover ground at the same time.

- If the line is not in the center, use PTZ control to adjust the scene.

- Click Start Calibration, and calibration status appears on the live image.

- Check Enable to enable the function after successful calibration.

- Save the settings.

Camera Configuration

Configuring Network Settings

Basic Settings

Basic Settings includes TCP/IP, DDNS, PPPoE, Port, NAT, and Multicast.

Configuring TCP/IP Settings

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

- Enter TCP/IP settings interface: **Configuration > Network > Basic Settings > TCP/IP**

Figure 63   TCP/IP Settings

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

- Click Save button to save the above settings.

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

Notes:

- If the DHCP server is available, you can check ☐ DHCP to automatically obtain an IP address and other network settings from that server.

- The valid value range of Maximum Transmission Unit (MTU) is 1280 to 1500.

- The Multicast sends a stream to the multicast group address and allows multiple clients to acquire the stream at the same time by requesting a copy from the multicast group address.

- Before utilizing this function, you have to enable the Multicast function of your router and configure the gateway of the network camera.

- If the DNS server settings are required for some applications (e.g., sending email), you should properly configure the **Preferred DNS Server** and **Alternate DNS server**.

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Figure 64   DNS Server Settings

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

Configuring DDNS Settings

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

Notes:

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

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

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

- Enter the DDNS settings interface: **Configuration > Network > Basic Settings > DDNS**

- Check the Enable DDNS checkbox to enable this feature.

- Select DDNS Type. Two DDNS types are selectable: DynDNS and NO-IP.

- **DynDNS:**

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

    In the Domain text field, enter the domain name obtained from the DynDNS website.

    Enter the Port of DynDNS server.

    Enter the User Name and Password registered on the DynDNS website.

    Click Save button to save the settings.

Figure 65   DynDNS Settings

- **NO-IP:**

    Enter Server Address of NO-IP.

    In the Domain text field, enter the domain name obtained from the NO-IP website.

    Enter the Port of NO-IP server.

    Enter the User Name and Password registered on the NO-IP website.

Click Save button to save the settings.

Configuring PPPoE Settings

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

- Enter the PPPoE settings interface: **Configuration > Network > Basic Settings > PPPoE**

Figure 66   PPPoE Settings

- Check the Enable PPPoE checkbox to enable this feature.

- Enter User Name, Password, and Confirm password for PPPoE access.
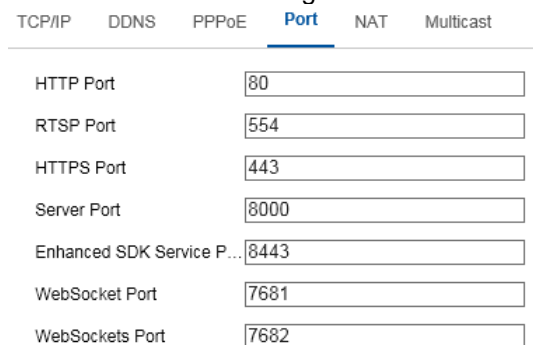
Notes:

- 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.

- Click Save button to save and exit the interface.

Configuring Port Settings

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

- Enter the Port settings interface:
- Configuration > Network > Basic Settings > Port

Figure 67   Port Settings

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

- **HTTP Port**: The default port number is 80.

- **RTSP Port**: The default port number is 554.

- **HTTPS Port**: The default port number is 443.

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- **Server Port**: The default port number is 8000.

Notes:

When you use client software to visit the camera and you have changed the server port number, you have to input the correct server port number in login interface to access to the camera.

- Enhanced SDK Service Port: The default server port number is 8443, and it can be changed to any port number ranges from 2000 to 65535.

- WebSocket Port: The default port number is 7681.

- WebSockets Port: The default server port number is 7682.

- WebSocket and WebSockets protocol are used for plug-in free live view.

- Click Save button to save the settings.

Configuring NAT (Network Address Translation) Settings

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

- Enter the UPnP™ settings interface: **Configuration >Network > Basic Settings > NAT**

- Check the checkbox to enable the UPnP™ function.

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

- 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.

☑ Enable UPnP™

Nickname: 490340679 ✅

Port Mapping Mode	Auto ▼			
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	8000	0.0.0.0	8000	Valid

Figure 68   Port Mapping Mode

- Click Save button to save the settings.

Advanced Settings

Advanced Settings includes SNMP, FTP, Email, HTTPS, QoS, 802.1x, Integration Protocol, Network Service, Alarm Server, TCP Acceleration, and Traffic Shaping.

Configuring SNMP Settings

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

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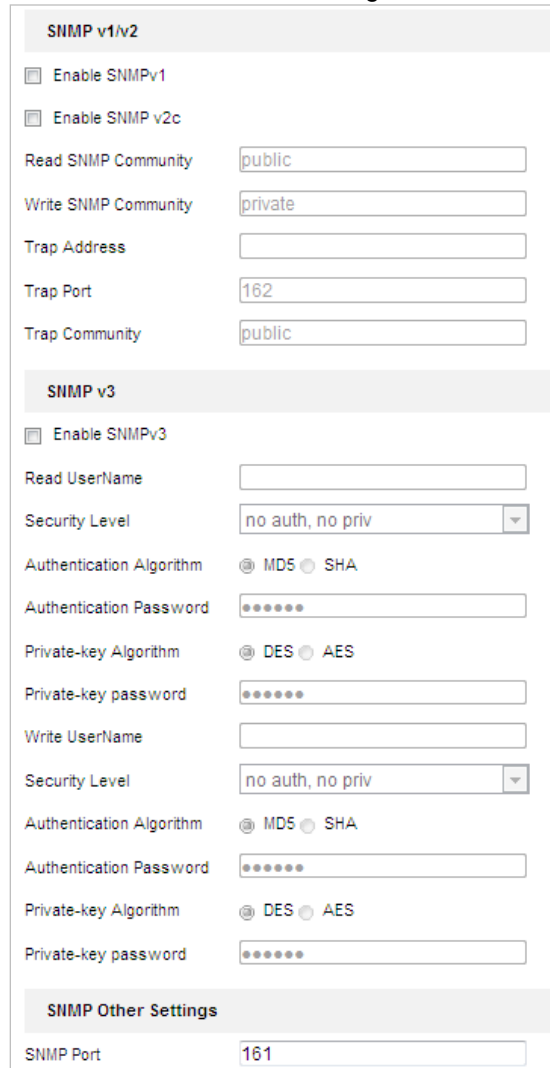
Notes:

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

- Enter the SNMP settings interface:
- Configuration > Network > Advanced Settings > SNMP

Figure 69   SNMP Settings

- Check the corresponding version checkbox (Enable SNMP v1, Enable SNMP v2c, Enable SNMP v3) to enable the feature.
- Configure the SNMP settings.
- Click Save button to save and finish the settings.

Configuring FTP Settings

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

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- Enter the FTP settings interface: **Configuration > Network > Advanced Settings > FTP**

SNMP **FTP** Email HTTPS QoS 802.1x Integration Protocol

Server Address	0.0.0.0
Port	21
User Name	
Password	
Confirm	
	☐ Anonymous
Directory Structure	Save in the root directory ⌄
Picture Filing Interval	OFF ⌄ Day(s)
Picture Name	Default ⌄
	☐ Upload Picture
	Test

Figure 70   FTP Settings

- Configure the FTP settings, including server address, port, user name, password, and directory.

Notes:

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

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

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

- Setting the directory in FTP server for saving files:

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

   Root directory: The files will be saved in the root of FTP server.

   Parent directory: The files will be saved in a folder in FTP server. The name of folder can be defined as shown in **Error! Reference source not found.**.
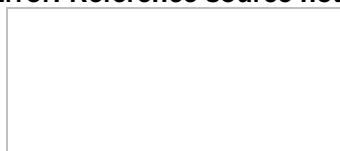
Figure 71   Parent Directory

   Child directory: It is a sub-folder which can be created in the parent directory. The files will be saved in a sub-folder in FTP server. The name of folder can be defined as shown in **Error! R eference source not found.**.

Use Camera Name ▼
Use Camera Name
Use Camera Number
Custom
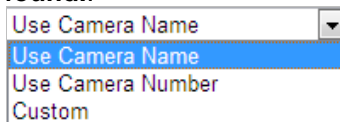
Figure 72   Child Directory

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

- Click Save button to save the settings.

- You can click Test to confirm the configuration.

Notes:

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

Configuring Email Settings

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.

Notes:

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

• Enter the Email settings interface:

• Configuration> Network > Advanced Settings > Email

Figure 73   Email Settings

• Configure the following settings:

Sender: The name of the email sender.

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

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

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

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

Notes:

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

Attached Image: Check 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: 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.

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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.)

• Click Save button to save the settings.

Configuring HTTPS Settings

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

Notes:

• If you use HTTPS to visit the camera, you should enable WebSockets for live view. Go to Configuration > Network > Advanced Settings > Network Service.

• For some camera models, HTTPS is enabled by default. The camera creates an unsigned certificate automatically. When you visit the camera via HTTPS, the web browser will send a notification about the certificate issue. Install a signed-certificate to the camera to cancel the notification.

• The default port number of HTTPS is 443. When the port number is 443, the format of the URL is https://IP address, eg., https://192.168.1.168. When the port number is not 443, the format of the URL is https://IP address:port number, eg., https://192.168.1.168:81. Go to Configuration > Network > Basic Settings > Port to see and change HTTPS port number.

• If you intend to use Security Reinforce function, the certificate is recommended to be created and installed after you enable the function.

• Enter the HTTPS settings interface: **Configuration > Network > Advanced Settings > HTTPS**

• Check the checkbox of Enable to enable the function.

• Check Enable HTTPS Browsing to access the camera only via HTTPS protocol.

• Operate with certificates:

Create and install self-signed certificate or authorized certificate.

OPTION 1: Create the self-signed certificate

Select Create Self-signed Certificate as the Installation Method.

Click Create to enter the creation interface.

Figure 74   Create Self-signed Certificate

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

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• Click OK to save the settings.

Notes:

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

• OPTION 2: Create the authorized certificate.

Select Create the certificate request first and continue the installation as the Installation Method.

Click Create to create the certificate request. Fill in the required information in the popup window.

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

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

• Update certificates

The device supports certificates changing when HTTPS is on. Before the new certificate is installed, the device uses the old certificate to maintain the access process.

Click Delete to delete the old certificate.

Repeat step 0 Create and install self-signed certificate or authorized certificate to create and install new self-signed certificate or authorized certificate.

Notes:

• If the old deleted certificate is an authorized certificate and you want to install a new authorized certificate, you should delete the old certificate request, then create new certificate request to continue.

• If the device reboots before installing the new authorized certificate, it automatically generates and installs a self-signed certificate. Delete the self-signed certificate and install the new authorized certificate to continue. DO NOT delete the new certificate request during the operation.

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

• Save the settings.

Installed Certificate	C=CN, ST=ZJ, L=HZ, OU=embeddedsofteware, H/IP=10.	Delete
Property	Subject: C=CN, ST=ZJ, L=HZ, OU=embeddedsofteware, H/IP=10.13.33.209, EM=com.cn Issuer: C=CN, ST=ZJ, L=HZ, OU=embeddedsofteware, H/IP=10.13.33.209, EM=com.cn Validity: 2015-04-29 14:25:24 ~ 2018-04-28 14:25:24	
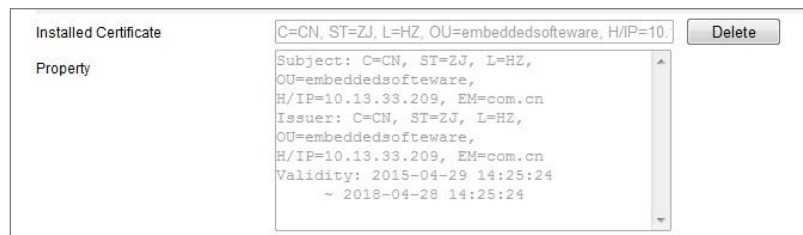
Figure 75   Installed Certificate

Notes:

• The device supports certificate updating when HTTPS is enabled.

• 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://192.168.1.168.

• When the port number is not the default number 443, the format of the URL is https://IP address:port number, eg., https://192.168.1.168:81.

Configuring QoS Settings

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

• Enter the QoS settings interface: **Configuration > Network > Advanced Configuration > QoS**

Video/Audio DSCP	0
Event/Alarm DSCP	0
Management DSCP	0

Figure 76   QoS Settings

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

• The valid DSCP value ranges from 0 to 63. The higher the DSCP value is, the higher the priority is.

• Click Save button to save the settings.

Notes:

• Make sure that you enable the QoS function of your network device (such as a router).

• It will ask for a reboot for the settings to take effect.

Configuring 802.1X Settings

The camera supports IEEE 802.1X standard.

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

The protected LAN with 802.1X standard is shown in **Error! Reference source not found.**

Authenticator
Network Switch

Network
Speed Dome

Internet

Authentication
Server

PC   PC   RADIUS Server
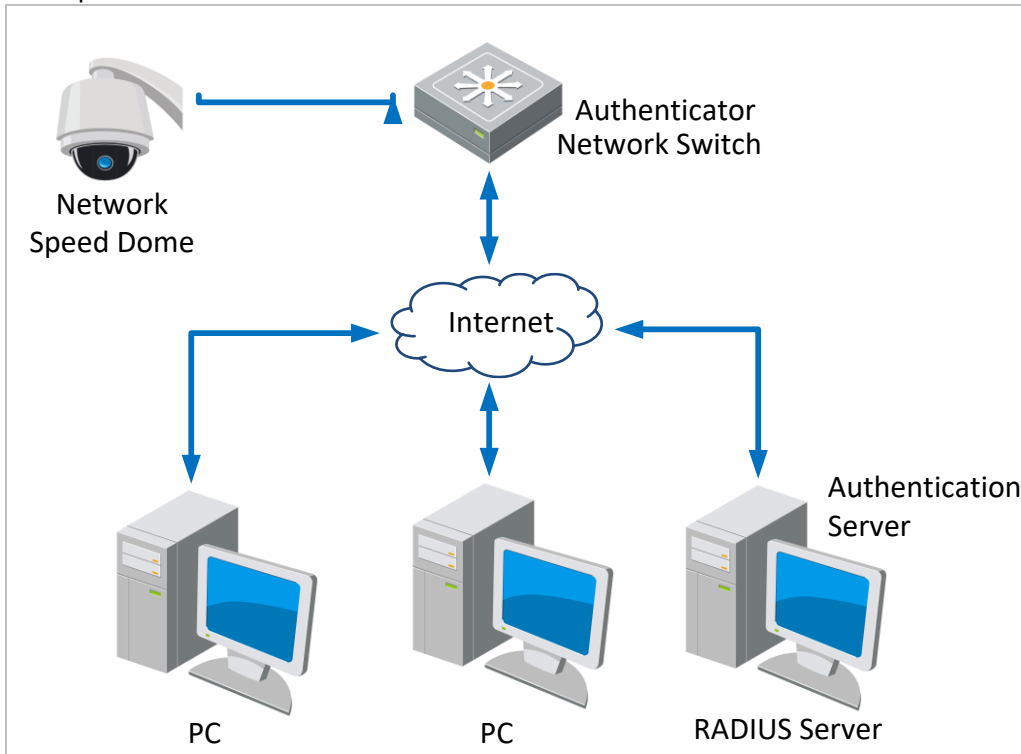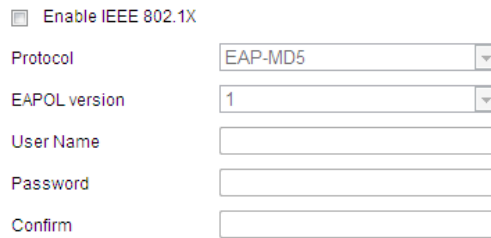
Figure 77   Protected LAN

• Before connecting the Network Camera to the protected LAN, apply a digital certificate from a Certificate Authority.

• The network camera requests access to the protected LAN via the authenticator (a switch).

• The switch forwards the identity and password to the authentication server (RADIUS server).

- The switch forwards the certificate of authentication server to the network camera.

- If all the information is validated, the switch allows the network access to the protected network.

- Connect the network camera to your PC directly with a network cable.

- Enter the 802.1X settings interface: **Configuration > Network > Advanced Settings > 802.1X**

Figure 78   802.1X Settings

- Check the Enable IEEE 802.1X checkbox to enable it.

- Select a preferred protocol. EAP-LEAP, EAP-TLS, and EAP-MD5 are selectable.

- EAP-LEAP and EAP-MD5

- If you use EAP-LEAP or EAP-MD5, the authentication server must be configured. Apply and register a user name and password for 802.1X in the server.

- Input the user name and password to access the server.

- EAP-TLS

- If you use EAP-TLS, input Identify, Private Key Password, and upload CA Certificate, User Certificate and Private Key.

- Set the EAPOL version. The EAPOL version must be identical with that of the router or the switch.

- Configure the 802.1X settings, including user name and password.

- Click Save button to finish the settings.

Notes:

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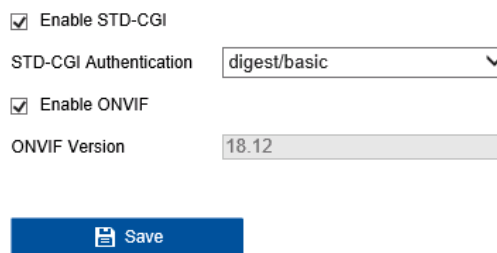
- After the configuration, connect the camera to the protected network.

Integration Protocol

If you need to access to the device through ONVIF protocol, you can configure ONVIF user in this interface. Refer to ONVIF standard for detailed configuration rules.

- Enter the Integration Protocol configuration interface.

- Configuration > Network > Advanced Settings > Integration Protocol

Figure 79   Integration Protocol Settings

- Check the Enable STD-CGI checkbox and then select the authentication from the dropdown list.

Then you can access to the camera through the third party platform.

- Check the Enable ONVIF checkbox to enable the function.

- Click Save button to save the settings.

Network Service

You can control the ON/OFF status of certain protocol that the camera supports.

Keep unused function OFF for security concern.

- WebSocket or WebSockets protocol are used for plug-in-free live view.

- When you use Google Chrome 57 and its above version or Mozilla Firefox 52 and its above version to visit your camera, you should enable WebSocket or Websokets protocol. Otherwise, live view function is not usable.

- If the camera uses HTTP, enable WebSocket.

- If the camera uses HTTPS, enable WebSockets.

- SDK Service and Enhanced SDK Service：If you want to add the device to the client software, you should enable SDK Service or Enhanced SDK Service.

- **SDK Service**: SDK protocol is used.

- **Enhanced SDK Service**: SDK over TLS protocol is used. Communication between the device and the client software is secured by using TLS (Transport Layer Security) protocol.

- **TLS (Transport Layer Security)**: The device offers TLS 1.1 and TLS 1.2. Enable one or more protocol versions according to your need.

TCP Acceleration

TCP acceleration is used to improve latency and reduce packet loss caused by network congestion in poor network condition, and guarantee the fluency of live view.

Traffic Shaping

Traffic shaping is used to shape and smooth video data packet before transmission. It helps improve latency and reduce packet loss caused by network congestion and ensure the video quality as well.

Shaping level is configurable.

Notes:

Traffic shaping takes effect only when UDP or TCP is used in live view.

Configuring Video and Audio Settings

Configuring Video Settings

- Enter the Video settings interface: **Configuration > Video/Audio > Video**

Figure 80   Configure Video Settings

- Select the **Stream Type** of the camera to Main Stream (Normal), Sub-stream or Third Stream. The main stream is usually for recording and live viewing with good bandwidth, and the sub-stream can be used for live viewing when the bandwidth is limited. Refer to the Configuring Local Parameters for switching the main stream and sub-stream for live viewing.

- You can customize the following parameters for the selected 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. Higher value corresponds to higher video quality, while the higher bandwidth is required.

- **Video Encoding**: Select Video Encoding from the dropdown list for different stream type.

- **H.264+/H.265+:** Set it as ON or OFF.

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

- **H.265+:** If you set the main stream as the stream type, and H.265 as the video encoding, you can see H.265+ available. H.265+ is an improved compression coding technology based on H.265. By enabling H.265+, users can estimate the HDD consumption by its maximum average bitrate.

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Compared to H.265, H.265+ reduces storage by up to 50% with the same maximum bitrate in most scenes.

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

- **Profile:** Basic Profile, Main Profile and High Profile are selectable.

- **I Frame Interval**: Set the I-Frame interval from 1 to 400.

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

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

- Click Save button to save the settings.

Configuring Audio Settings

- Enter the Audio settings interface: **Configuration > Video/Audio > Audio**

Figure 81   Audio Settings

Configure the following settings.

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

- **Audio Input**: When an intercom is connected to the camera, this option is set to LineIn by default.

- **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 or PCM, you can configure the Sampling Rate in the dropdown list. The greater the value is, the better the audio quality will be.

- **Input Volume**: Slide the bar to turn up/down the volume.

- **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 sampling rate is lower than 32 kHz.

- Click Save button to save the settings.

Configuring ROI Settings

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

• Enter the ROI settings interface: **Configuration >Video/Audio > ROI**
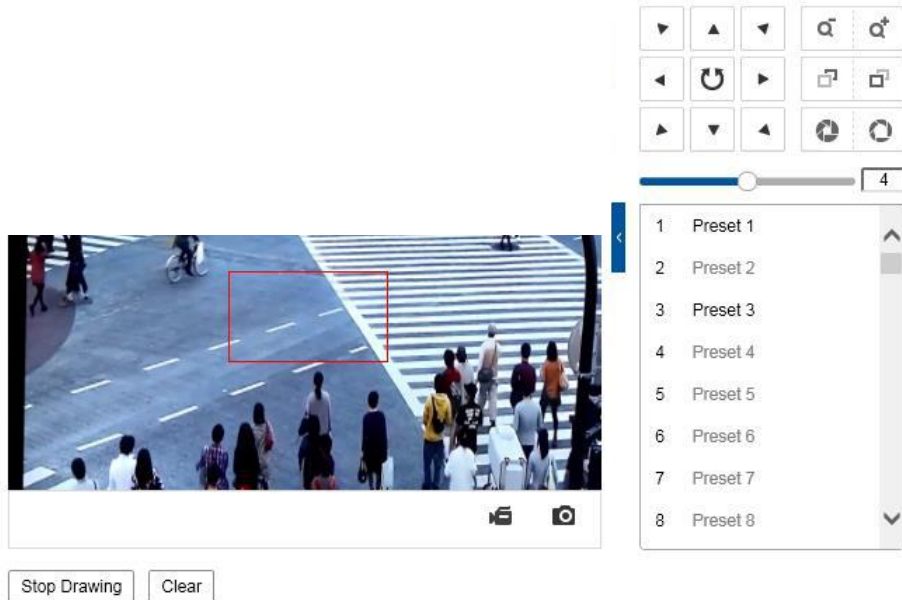
Figure 82   Region of Interest (1)

Figure 83   Region of Interest (2)

- Check Enable checkbox to enable the Fixed Region function.

- Select a stream type. You can set the ROI function for Main Stream(Normal), Sub-stream or Third Stream.

- Click [Draw Area] and then drag the mouse to draw a red frame in the live view image. You can click [Clear] to clear it.

- Select the **Region No**. from the dropdown list.

- Adjust the **ROI level**. The higher the value, the better image quality in the red frame.

- Enter a **Region Name**.

- ROI for **Dynamic Region**

- Check Enable Target Tracking checkbox to enable target tracking, and the target is set as region of interest. Adjust the ROI level from.

- Click Save button to save the settings.

Display Info. on Stream

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

Configuring Image Settings

- Click the direction buttons to control the pan/tilt movements.
- Click the zoom/iris/focus buttons to realize lens control.
- The functions vary depending on different camera models.

Configuring Display Settings

Configure the Image Adjustment, Exposure Settings, Focus, Day/Night Switch, Backlight Settings, White Balance, Image Enhancement, Video Adjustment, and other parameters in display settings.

- Enter the Display Settings interface: **Configuration > Image> Display Settings**
- You can select the Scene in the dropdown list with different predefined image parameters.
- Set the image parameters of the speed dome.

Image Adjustment

- **Brightness:** This feature is used to adjust brightness of the image.
- **Contrast**: This feature enhances the difference in color and light between parts of an image.
- **Saturation:** This feature is used to adjust color saturation of the image.
- **Sharpness:** Sharpness function enhances the detail of the image by sharpening the edges in the image.

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 limit the changing ranges of iris and shutter in Auto mode for better exposure effect.

  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.You can limit the changing range of shutter in Iris Priority mode for better exposure effect.

Exposure Mode	Iris Priority
Max.Shutter Limit	1/25
Min.Shutter Limit	1/30000
Iris	f1.6
Limit Gain	94
Slow Shutter	OFF

Figure 84   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.You can limit the changing range of iris in Shutter Priority mode for better exposure effect.

Exposure Mode	Shutter Priority
Max. Iris Limit	100
Min. Iris Limit	0
Shutter	1/25
Limit Gain	94
Slow Shutter	OFF

Figure 85   Manual Shutter

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

Exposure Mode	Manual
Iris	f1.6
Shutter	1/25
Gain	0
Limit Gain	94
Slow Shutter	OFF

Figure 86   Manual Mode

- **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. It lengthens the shutter time to ensure full exposure.

- **Slow Shutter Level:** When slow shutter is set as ON, you can select the slow shutter level from the dropdown list. The slow shutter lever can be set to Slow Shutter*1.25, *1.5, *2, *3, *4, *6, *8.

Slow Shutter	ON
Slow Shutter Level	Slow Shutter*2

Figure 87   Slow Shutter

Focus Settings

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

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

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

  Manual: In Manual mode, you need to use ⬚ ⬚ 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 10cm, 50cm, 1.0m, 1.5m, 3m, 6m, 10m and 20m.

Day/Night Switch

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

  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 1, 2, 3.

Day/Night Switch	Auto

Figure 88   Auto Mode Sensitivity

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

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

Scheduled-Switch: In Scheduled-Switch mode, you can set the start and end time for day mode

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as shown in **Figure** *89***Error! Reference source not found.**. The rest is the time for night mode.

Day/Night Switch	Scheduled-Switch ⌄
Start Time	07:00:00 📅
End Time	18:00:00 📅

Figure 89   Day Night Schedule

- **Smart Supplement Light**: It controls the power of light automatically to make image of proper exposure level. If the light supplement is on and the image center is overexposure, you can enable this function.

- **IR Light Mode/Laser Mode**: It controls the On/Off status of supplememt light.

- **Brightness Limit**: It controls the the upper limit of supplement light power.

Notes:

To use supplement light, you have to enable the supplement light first. Go to Configuration > System > Maintenance > System Service.

Backlight Settings

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

  WDR (Wide Dynamic Range): The wide dynamic range (WDR) function helps the camera provide clear images even under back light circumstances. When there are both very bright and very dark areas simultaneously in the field of view, WDR balances the brightness level of the whole image and provide clear images with details.You can enable or disable the WDR function as shown in **Figure** *90*.

WDR	ON ⌄
Wide Dynamic Level	▬▬▬●▬▬ 50

Figure 90   WDR

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

White Balance

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

- **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** *91*.

White Balance	MWB ▼
WB Gain Circuit R	▢▬▬▬ 0
WB Gain Circuit B	▢▬▬▬ 0

Figure 91   Manual White Balance

- **Outdoor**: You can select this mode when the speed dome is installed in outdoor environment.

- **Indoor**: You can select this mode when the speed dome is installed in indoor environment.

- **Fluorescent Lamp**: You can select this mode when there are fluorescent lamps installed near the speed dome.

- **Sodium Lamp**: You can select this mode when there are sodium lamps installed near the speed

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dome.

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

Image Enhancement

- **Digital Noise Reduction**: You can set Digital Noise Reduction function to Normal and adjust the Noise Reduction Level as shown in **Error! Reference source not found.**. The level ranges from 0 to 100.

Figure 92   **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. The level ranges from 0 to 100.

Figure 93   **Expert Mode**

- **Defog Mode**: You can set the Defog Mode to Auto, ON or OFF as you need.
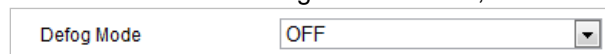
Figure 94   **Defog Mode**

- **EIS (Electronic Image Stabilization)**: You can set the EIS to ON or OFF as you need.
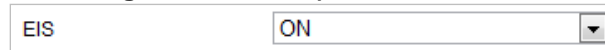
Figure 95   **Electronic Image Stabilization**

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

Other

- **Lens Initialization**: The lens operates the movements for initialization when you enable 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.

Configuring OSD Settings

OSD (On-screen Display) refers to the camera name, time/date, customized information displayed on the live view.

- Enter the OSD settings interface: **Configuration > Image > OSD Settings**
- Check the corresponding checkbox to select the display of camera name, date or week if required.

- Edit the camera name in the text field of **Camera Name**.
- Select from the dropdown list to set the Time Format, Date Format, Display Mode, OSD Size，Font Color and Alignment.
- You can use the mouse to drag the text frame IPdome in the live view window to adjust the OSD position.
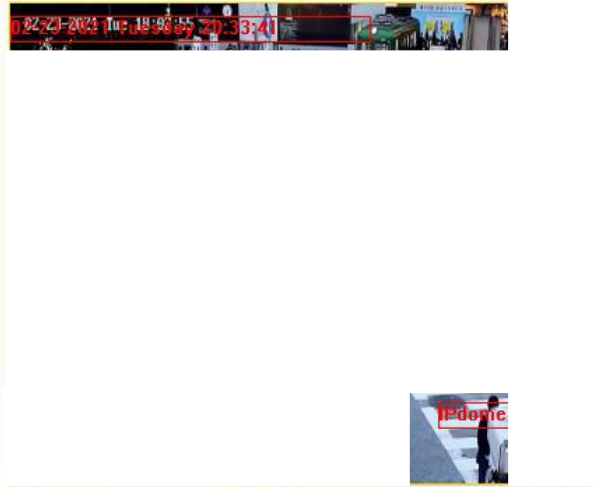
Figure 96   Adjust OSD Location

- Click Save button to activate above settings.

Configuring Text Overlay Settings

You can customize the text overlay.

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

Configuring Image Parameters Switch

You can configure Link to Preset or Scheduled-Switch in order to switch to linked scene in certain time.

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

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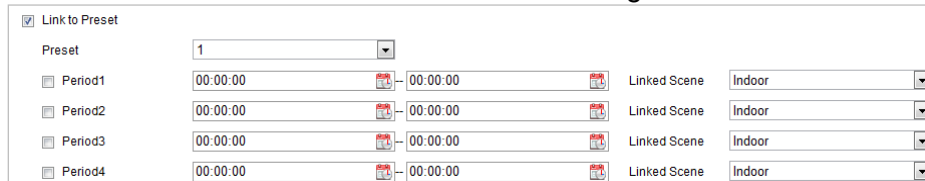
Figure 97   Link to Preset
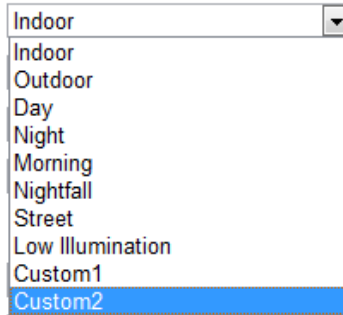
Figure 98   Linked Scene

- When you enable the function of Scheduled-Switch, check the corresponding checkbox, set the time period and the linked scene.
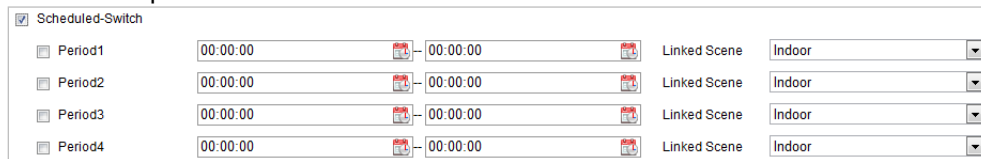
Figure 99   Schedule-Switch

- Click Save button to save the settings.

Notes:

The two functions are not enabled by default.

Configuring System Settings

System Settings

Viewing Basic Information

Enter the Device Information interface: **Configuration > System > System Settings > Basic Information**

In the Basic Information interface, you can edit the **Device Name** and **Device No**.

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

Figure 100　　Device Information

Time Settings

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

- Enter the Time Settings interface: **Configuration > System > System Settings > Time Settings**

Figure 101　　Time Settings

- Configuring Time Synchronization by NTP Server

- Check the radio button to enable the NTP function.

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.

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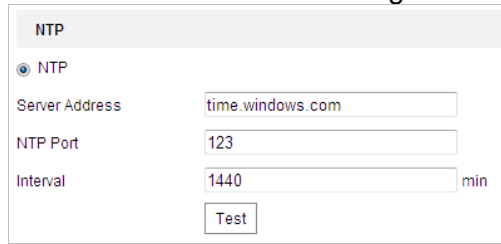
Figure 102   Time Sync by NTP Server

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

Notes:

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

Configuring Time Synchronization Manually

- Check the Manual Time Sync radio button.

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

- Click Save button to save the settings.
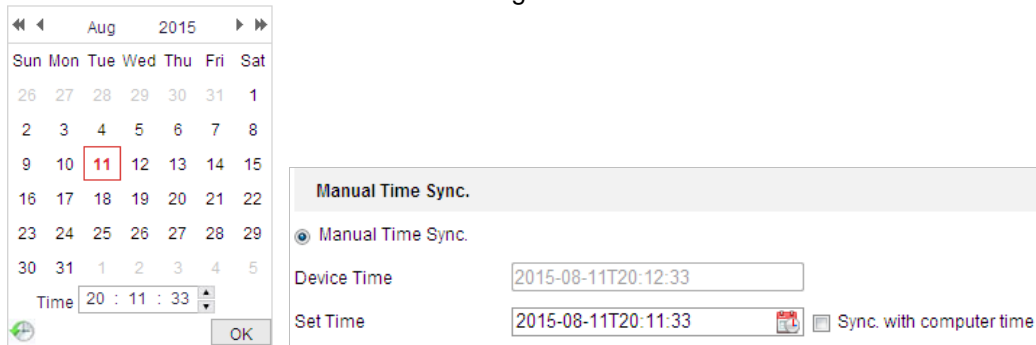
Figure 103   Time Sync Manually

- Select the Time Zone

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

Configuring DST (Daylight Saving Time)

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

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

- Enter the DST interface: **Configuration > System > System Settings > DST**
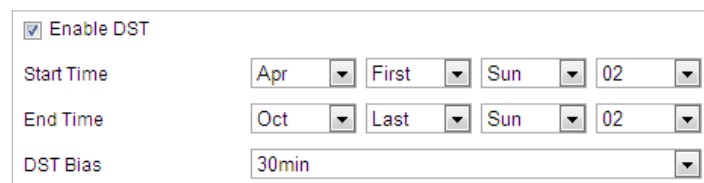
Figure 104   DST Settings

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- Check the Enable DST checkbox to enable the DST function.
- Set the date of the DST period.
- Click Save button to save the settings.

RS-485

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.

- Enter RS-485 Port Setting interface: **Configuration> System > System Settings > RS-485**

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

Figure 105   RS-485 Settings

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

Notes:

The Baud rate, PTZ Protocol and PTZ Address parameters of the camera should be exactly the same as those of the control device.

VCA Resource

VCA Resource offers options to enable certain VCA functions and hide others. It helps allocate more resources to the wanted functions. A reboot is required after setting the VCA Resource.

- Enter the VCA Resource interface: **Configuration> System > System Settings > VCA Resource**
- Select a desired VCA combination.
- Click Save button to save the settings. A reboot is needed for the settings to take effect.

About

Click **View License**, you can check Open Source Software Licenses.

Maintenance

Upgrade & Maintenance

Rebooting the Camera

- Enter the Maintenance interface: **Configuration > System > Maintenance > Upgrade & Maintenance:**
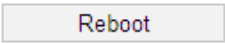- Click [Reboot] to reboot the network camera.

Restoring Default Settings

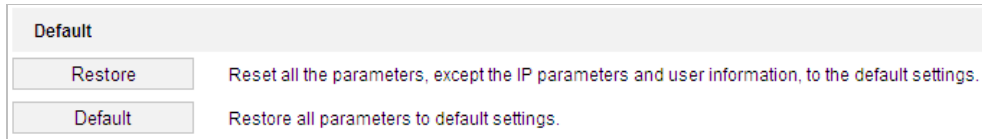- Enter the Maintenance interface**: Configuration > System > Maintenance > Upgrade & Maintenance**

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

Notes:

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

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

Figure 106   Restore Default Settings

Exporting Configuration File

- Enter the Maintenance interface: **Configuration > System > Maintenance > Upgrade & Maintenance**

- Click Device Parameters and set the encryption password to export the current configuration file.

- Set the saving path to save the configuration file in local storage.

- Click Diagnose Information to download the log and system information.

Importing Configuration File

- Enter the Maintenance interface: **Configuration > System > Maintenance > Upgrade & Maintenance**

- Click Browse to select the saved configuration file.

- Input the encryption password you have set when exporting the configuration file.

- Click Import to import configuration file.

Upgrading the System

- Enter the Maintenance interface: **Configuration > System > Maintenance > Upgrade & Maintenance**

- 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.

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

Notes:

The upgrading process will take 1 to 10 minutes. Don't disconnect power of the camera during the process. The camera reboots automatically after upgrading.

Log Searching

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

Notes:

Before you start, configure network storage for the camera or insert a memory card in the camera.

- Enter the Log interface: **Configuration > System > Maintenance > Log**

Figure 107   Log Searching Interface

- Set the log search conditions to specify the search, including the Major Type, Minor Type, Start Time and End Time as shown in **Figure** *107*.

- Click [Search] to search log files. The matched log files will be displayed on the Log interface.

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

System Service

System service offers certain controls to the hardware and software of the device.

- **Hardware**: For the supported external devices, the supplement light, , you can control the on/off status via the web browser.

- **Software:**

- **Live View Connection:** You can define the maximum live view connection that is allowed for the device. Up to 20 users are supported for live view at the same time.

Security Audit Log

- The Security Audit Log refers to the security operation logs. You can search and analyze the security log files of the camera so as to find out the illegal intrusion and troubleshoot the security events.

- Security audit logs can be saved on device internal storage . The log is saved every half hour after device booting.

- Due to limited saving space of the internal storage, you can also save the logs on a log server. Configure the server settings at Advanced Settings.

Searching Logs

- Enter the Security Audit Log interface: **Configuration > System > Maintenance > Security Audit Log**

- Set the log search conditions to specify the search, including the Major Type, Minor Type, Start Time and End Time.

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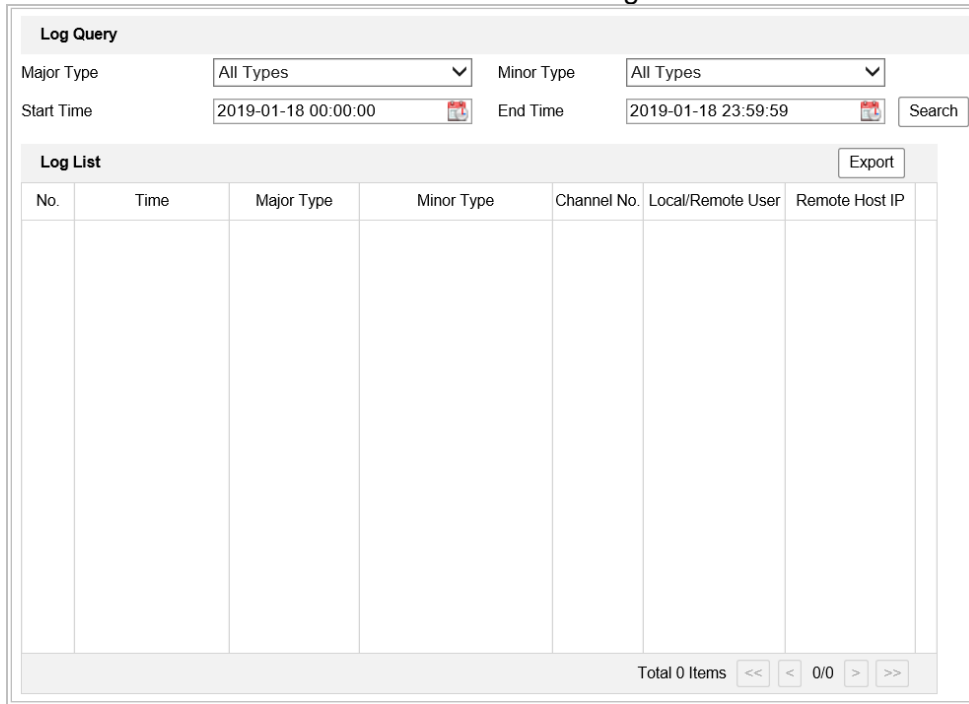
Figure 108   Log Query Interface

- Click Search to search log files. The matched log files will be displayed on the Log list interface.
- To export the log files, click Export to save the log files in your computer.

Setting Log Server

The log server supports the syslog protocol syslog(RFC 3164) over TLS.

- Check Enable Log Upload Server.
- Input Log Server IP and Log Server Port.
- Click Test to test settings.
- Install certificates. Client certificate and CA certificate are required.

   Client Certificate

   - Click Create button to create the certificate request. Fill in the required information in the popup window.
   - Click Download to download the certificate request and submit it to the trusted certificate authority for signature.
   - Install the signed certificate to the device.

   CA Certificate

   - Install the CA certificate to the device.

Security

Configuring Authentication Security

You can specifically secure the stream data of live view.

- Enter the Authentication interface: **Configuration> System> Security > Authentication**
- Set the RTSP Authentication/WEB Authentication type from the dropdown list. Digest and

digest/basic are selectable.

• Click Save button to save the settings.

Configuring IP Address Filter

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

• Enter IP Address Filter interface: **Configuration > System > Security > IP Address Filter**

Figure 109   IP Address Filter

• Check the checkbox of Enable IP Address Filter.

• Select the type of IP Address Filter in the dropdown list, Forbidden and Allowed are selectable.

• Set the IP Address Filter list.

Add an IP Address

• Click Add to add an IP.

• Input the IP Adreess.

Figure 110   Add an IP

• Click OK to finish adding.

Modify an IP Address

• Click an IP address from filter list and click Modify.

• Modify the IP address in the text filed.

Figure 111   Modify an IP

- Click OK to finish modifying.

- Delete an IP Address

- Click an IP address from filter list and click Delete.

- Delete all IP Addresses

- Click Clear to delete all the IP addresses.

- Click Save button to save the settings.

Configuring Security Service

- Enter the Security Service interface: **Configuration> System > Security > Security Service**

- Check the checkbox to enable the Illegal Login Lock function.

- Illegal Login Lock: Enabling illegal login lock function is to automatically lock the device IP after the user performing certain failed password attempts. The number of allowed attempts is configurable.

- Click Save button to save the settings.

User Account

Manage Users

- Enter the User Management interface: **Configuration > System > User Management**

- The admin user has access to create, modify or delete other accounts, and grant different permission to different user levels. We highly recommend administrator to manage the device accounts and user permissions properly. Up to 31 user accounts can be created.

Figure 112   User Information

Add a User

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

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

Notes:

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

• In the Basic Permission field and Camera Configuration field, you can check or uncheck the permissions for the new user.

• Click ⬛ OK to finish the user addition.

Figure 113   Add a User

Modify a User

• Click to select the user from the list and click ⬛ Modify .

• Modify the User Name, Level or Password.

• In the Basic Permission field and Camera Configuration field, you can check or uncheck the permissions.

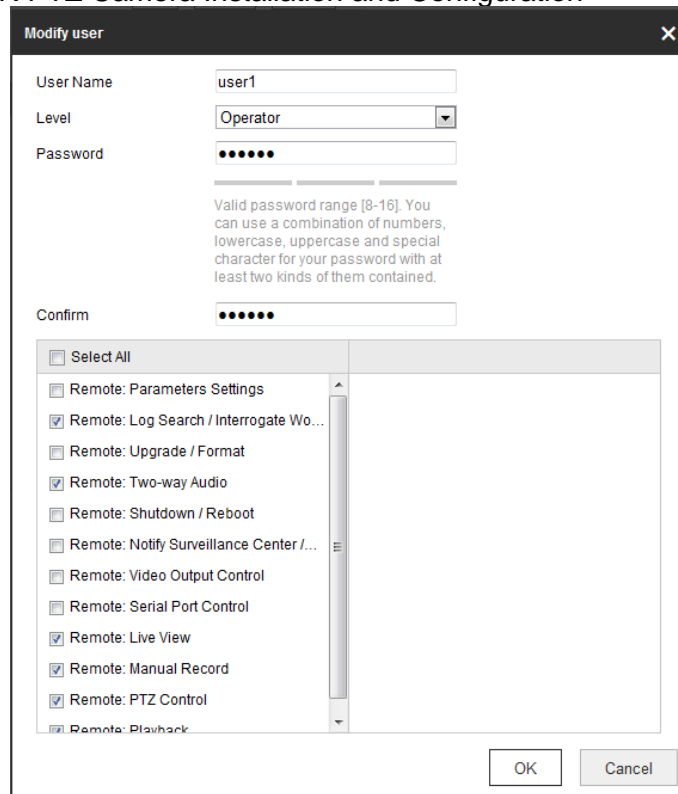• Click ⬛ OK to finish the user modification.

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Figure 114 **Modify a User**

Delete a User

- Click the user name you want to delete and click Delete .

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

-

Recover Admin Password

- The camera allows admin password recovery via security question or verification code received by configured e-mail address.

- Recovery password operation is only available to administrator.

Setup Security Question or E-mail Address for Verification Code

You should setup security questions or E-mail address to receive verification code.

- Click Account Security Settings to enter setting interface: **Configuration > System > User Management > User Management**

- Select security questions and input your answers.

- Input your E-mail address for password recovery.

- Save the settings.

Password Recovery Operation

The PC used to reset password and the camera should belong to the same IP address segment of the same LAN.

- Enter login interface via web browser.

- Click Forget Password.
- Follow pop-up message to complete operation.

Online Users

- Enter the Online Users configuration interface: **Configuration > System > User Management > Online Users**

User Management   **Online Users**

User List				Refresh
No.	User Name	Level	IP Address	User Operation Time
1	admin	Administrator	172.16.2.104	2021-02-23 19:10:32

Figure 115   **Online Users**

- You can see the current users who are visiting the device through this interface.
- User information, such as user name, level, IP address, and operation time, is displayed in the User List. Click Refresh to refresh the list.