

PTZ Network Camera

User Manual

Legal Information

©2023 Homaxi Technology Co., Ltd. All rights reserved.

About this Manual

The Manual includes instructions for using and managing the Product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version of this Manual on the Homaxi website (*https://www.Homaxi.com*).

Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

Trademarks

Homaxi and other Homaxi trademarks and logos are the properties of Homaxi in various jurisdictions.

Disclaimer

To The Maximum Extent Permitted By Applicable Law, This Manual And The Product Described, With Its Hardware, Software And Firmware, Are Provided 'As Is' And 'With All Faults And Errors'. Homaxi Makes No Warranties, Express Or Implied, Including Without Limitation, Merchantability, Satisfactory Quality, Or Fitness For a Particular Purpose. The Use Of The Product By You Is At Your Own Risk. In No Event Will Homaxi Be Liable To You For Any Special, Consequential, Incidental, Or Indirect Damages, Including, Among Others, Damages For Loss Of Business Profits, Business Interruption, Or Loss Of Data, Corruption Of Systems, Or Loss Of Documentation, Whether Based On Breach Of Contract, Tort (Including Negligence), Product Liability, Or Otherwise, In Connection With The Use Of The Product, Even If Homaxi Has Been Advised Of The Possibility Of Such Damages Or Loss.

You Acknowledge That The Nature Of The Internet Provides For Inherent Security Risks, And Homaxi Shall Not Take Any Responsibilities For Abnormal Operation, Privacy Leakage Or Other Damages Resulting From Cyber-Attack, Hacker Attack, Virus Infection, Or Other Internet Security Risks; However, Homaxi Will Provide Timely Technical Support If Required.

You Agree To Use This Product In Compliance With All Applicable Laws, And You Are Solely Responsible For Ensuring That Your Use Conforms To The Applicable Law. Especially, You Are Responsible, For Using This Product In a Manner That Does Not Infringe On The Rights Of Third Parties, Including Without Limitation, Rights Of Publicity, Intellectual Property Rights, or Data Protection and Other Privacy Rights. You Shall Not Use This Product For Any Prohibited End-Uses, Including The Development Or Production Of Weapons Of Mass Destruction, The Development Or Production Of Chemical Or Biological Weapons, Any Activities In The Context Related To Any Nuclear Explosive Or Unsafe Nuclear Fuel-Cycle, Or In Support Of Human Rights Abuses.

In The Event Of Any Conflicts Between This Manual And The Applicable Law, The Later Prevails.

Regulatory Information

FCC Information

Please take attention that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC compliance: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Conditions

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

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

Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
Danger	Indicates a hazardous situation which, if not avoided, will or could result in death or serious injury.
Caution	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
Warning	Remind the matters to be noted in the operation, improper operation may lead to data loss or equipment damage.
P Note	Provides additional information to emphasize or supplement important points of the main text.

Safety Instruction

- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.
- Firmly connect the plug to the power socket. Do not connect several devices to one power adapter.
- Power off the device before connecting and disconnecting accessories and peripherals.
- Shock hazard! Disconnect all power sources before maintenance.
- The equipment must be connected to an earthed mains socket-outlet.
- The socket-outlet shall be installed near the equipment and shall be easily accessible.
- ⁴ Indicates hazardous live and the external wiring connected to the terminals requires installation by an instructed person.
- Never place the equipment in an unstable location. The equipment may fall, causing serious personal injury or death.
- Input voltage should meet the SELV (Safety Extra Low Voltage) and the LPS (Limited Power Source) according to the IEC62368.
- High touch current! Connect to earth before connecting to the power supply.
- If smoke, odor or noise rises from the device, turn off the power at once and unplug the power cable, and then please contact the service center.
- Use the device in conjunction with an UPS, and use factory-recommended HDD if possible.
- This product contains a coin/button cell battery. If the battery is swallowed, it can cause severe internal burns in just 2 hours and can lead to death.
- This equipment is not suitable for use in locations where children are likely to be present.
- CAUTION: Risk of explosion if the battery is replaced by an incorrect type.
- Improper replacement of the battery with an incorrect type may defeat a safeguard (for example, in the case of some lithium battery types).
- Do not dispose of the battery into fire or a hot oven, or mechanically crush or cut the battery, which may result in an explosion.
- Do not leave the battery in an extremely high temperature surrounding environment, which may result in an explosion or the leakage of flammable liquid or gas.
- Do not subject the battery to extremely low air pressure, which may result in an explosion or the leakage of flammable liquid or gas.
- Dispose of used batteries according to the instructions.
- Keep body parts away from fan blades and motors. Disconnect the power source during servicing.
- Keep body parts away from motors. Disconnect the power source during servicing.

Preventive and Cautionary Tips

Before connecting and operating your device, please be advised of the following tips:

- The device is designed for indoor use only. Install it in a well-ventilated, dust-free environment without liquids.
- Ensure the recorder is properly secured to a rack or shelf. Major shocks or jolts to the recorder as a result of dropping it may cause damage to the sensitive electronics within the recorder.
- The equipment shall not be exposed to dripping or splashing and that no objects filled with liquids shall be placed on the equipment, such as vases.
- No naked flame sources, such as lighted candles, should be placed on the equipment.
- The ventilation should not be impeded by covering the ventilation openings with items, such as newspapers, tablecloths, curtains, etc. The openings shall never be blocked by placing the equipment on a bed, sofa, rug or other similar surfaces.
- For certain models, ensure correct wiring of the terminals for connection to an AC mains supply.
- For certain models, the equipment has been designed, when required, modified for connection to an IT power distribution system.
- Identifies the battery holder itself and identifies the positioning of the cell(s) inside the battery holder.
- + identifies the positive terminal(s) of equipment that is used with, or generates direct current. + identifies the negative terminal(s) of equipment that is used with, or generates direct current.
- Keep a minimum 200 mm (7.87 inches) distance around the equipment for sufficient ventilation.
- For certain models, ensure correct wiring of the terminals for connection to an AC mains supply.
- Use only power supplies listed in the user manual or user instructions.
- The USB port of the equipment is used for connecting to a mouse, keyboard, USB flash drive, or Wi-Fi dongle only.
- Use only power supplies listed in the user manual or user instructions.
- Do not touch the sharp edges or corners.

Contents

Chapter 1 Overview	1
1.1 Product Introduction	1
1.2 Key Function	1
1.3 System Requirement	1
1.4 Network Connection	1
Chapter 2 Device activation and Login	
2.1 Activate via Web Browser	
2.2 Login	
2.3 Install plug-ins	4
Chapter 3 Live View	8
3.1 Introduction of Live View	
3.2 Start and Stop Live View	9
3.3 Full Screen Preview	9
3.4 Adjust Aspect Ratio	
3.5 Preview Stream Type	10
3.6 Dynamic Tracking lines and Smart Rules	10
3.7 Multicast view	
3.8 Recording Videos and Capturing Pictures Manually	10
3.9 Audio and Talk to the Device	
Chapter 4 PTZ Control	12
4.1 PTZ control	
4.2 Set Preset	12
4.2.1 Special Presets	13
4.3 Set Patrol Scan	13
4.4 Set Linear Scan	14
4.5 Set Pattern Scan	15
4.6 Set Auto Tracking	
Chapter 5 Configuration	
5.1 Local Storage	
5.2 System Parameters	
5.2.1 Check Device Information	
5.2.2 Set Device Language, Video Format & Host Name	19
5.2.3 Time and Date	
5.2.4 User and Account Manage	21

5.3 Network Configuration	27
5.3.1 Configure Device TCP/IP Settings	27
5.3.2 Configure DDNS Settings	28
5.3.3 Configure NAT Settings	29
5.3.4 UPNP-TM	29
5.3.5 Bonjour	
5.3.6 Cloud	30
5.3.7 IPV6	
5.3.8 FTP	
5.3.9 Email	
5.3.10 SNMP	
5.3.11 Https	35
5.3.12 Multicast	35
Chapter 6 Image Parameter Configuration	
6.1 Schedule Image Modes	
6.2 Image Adjust	
6.3 Exposure	
6.4 Backlight	
6.5 White balance	
6.6 Day and Night Mode Switch	
6.7 Video Adjust	
6.8 Enhancement	39
6.9 Privacy Mask	40
6.10 Illumination Plan	40
6.10.1 Set the illumination mode Parameters	40
6.10.2 Set the illumination Plan Schedule	41
Chapter 7 Video and Audio Configuration	
7.1 Video Settings	42
7.1.1 Stream Type	
7.1.2 Video Encode	42
7.1.3 Complexity level	43
7.1.4 Video/Audio Enable	
7.1.5 Resolution	
7.1.6 Frame rate (FPS)	43
7.1.7 Bit Rate Type	

7.1.8 Quality	44
7.1.9 Bit Rate(Kb/S)	44
7.1.10 I Frame Interval	45
7.2 Audio Setting	45
7.3 ROI	45
7.4 Snapshot Settings	45
7.5 OSD Setting	46
Chapter 8 Event and Alarm Configuration	47
8.1 Motion Detection	47
8.2 Video Cover Detection	
8.3 Alarm in/out	
8.3.1 Alarm Input	50
8.3.2 Alarm Output	51
8.4 Smart Event	51
8.4.1 Line Crossing Detection	51
8.4.2 Area Intrusion Detection	52
8.4.3 Region Entrance Detection	
8.4.4 Region Exiting Detection	53
8.4.5 Scene Change Detection	
Chapter 9 Recording to Local Storage/NAS	55
9.1 Record and Snapshot	55
9.1.1 Record setting	55
9.1.2 Snapshot Setting	56
9.2 Storage Manager	56
9.2.1 Local Storage Manage (Micro-SD Card)	56
9.2.2 Connect to NAS	57
Chapter 10 Maintain	59
10.1 Reboot Device	
10.2 Restore and Default Settings	59
10.3 Config Export/Import	
10.4 Upgrade device	60
10.5 Search and Manage Log	
Chapter 11 Playback and download video	61
11.1 Playback the Recording Video	61
11.2 Download the Video File	62

Chapter 1 Overview

1.1 Product Introduction

The Network Speed Dome is an integration of the HD zoom camera and the PT module, ideal for remote monitoring. The device is easy to install and operate. Through Ethernet control, the device is able to compress and transmit images to multiple users. With network attached storage (NAS), the device is able to store and retrieve data easily.

The device is well suited for HD monitoring in various places, such as rivers, forests, roads, railways, airports, ports, oil fields posts, squares, parks, scenic areas, streets, stations, stadiums, residential blocks, libraries, shopping malls, hotels, government buildings, museums, and banks.

1.2 Key Function

The key functions of the device are as follows.

Event Function

The device detects basic events and multiple smart events.

PTZ Function

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

1.3 System Requirement

Your computer should meet the requirements for visiting and operating the product.

Items	Recommended Specifications	
Operating System	Microsoft Windows XP SP1 or later	
CPU	2.0 GHz or faster	
RAM	1GB	
Display	1024×768 resolution or higher	
Web Browser	• Apple Safari version 5.0.2 or later	
	 Mozilla Firefox version 5.0 or later 	
	 Google Chrome version 18 or later 	
	 Microsoft Edge version 107 or later 	

Table 1-1-1 System Requirements

🕑 Note

The following contents are written based on using Microsoft Windows 10 and Microsoft Edge.

1.4 Network Connection

Before you start:

- Before accessing a network camera (also known as PTZ Camera or IPD) from a PC, you need to connect the network camera to the PC directly with a network cable or via a switch or router.
- The network camera supports direct power supply and PoE power supply, please make sure the camera is properly powered up before using it.

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

1. Connecting Directly.

Connect the network camera to the PC with a network cable directly as shown in the following picture.



Figure 1-4-1 Connecting Directly

2. Connecting via a Switch or a Router.





Chapter 2 Device activation and Login

For the first-time access, you need to activate the PTZ camera by setting the admin password. No operation is allowed until the activation is done. You can activate the PTZ camera via a supported web browser, an NVR or the Homaxi Tool.

Before You Start

2.1 Activate via Web Browser

Before You Start

- The PTZ camera should be configured correctly and powered on.
- The network connection between the PC and the PTZ camera should be functioning normally.
- The IP address of the PC should be configured under the same network segment as the PTZ camera.
- The PC and web browser being used should meets the requirements.

Steps:

- 1. Open the web browser.
- 2. Enter the IP address of the camera in the address bar to open up the login page.

🕑 Note

The default IP address of the camera is 192.168.1.10, while the IP address of your PC should be 192.169.1.x.

If you don't know the IP address of the camera, you can use the Device Manager to obtain it. Please refer to the Device Manager User Manual.

3. Input Password and Confirm.

	Activation
User Name	
Password	
Confirm	
8 to 16 characters al	lowed, including upper-case letters, lower-case
letters, digits and spe	ecial characters(!?@#\$%^&*+=;<>/:,.).At least
two of above mentic	oned types are required.

Figure 2-1-1 Activation

<u> (</u>Warning

Strong Password is recommended. We highly recommend you create a strong password of your own choosing (8-16 characters allowed, including at least 2 of the following categories: upper case letters, lower case letters, digits, and special characters.) to increase the security of your product. And we recommend you reset your password regularly, especially in the high standard security system, resetting the password monthly or weekly can provide a better protection to your products.

4. Reset Type Settings. You can choose email or security questions at least one way or all.

	Reset Type settings
Please configure one pa	ssword reset method at least.
Security problem mode	
Question-1	What is your father's name?
Answer-1	
Question-2	What is your mother's name?
Answer-2	
Question-3	What is the name of your high school
Answer-3	
Reserved mailbox mode	
Secure email address	

Figure 2-1-2 Reset Type settings

2.2 Login

The following login procedure is exemplified base on Microsoft Edge.

1. Open up the login page by entering the correct IP address of your camera in the address bar.

2. Enter your username and password, and then click Login.

3. If you log in with Save Password checked, you will not need to enter your password from the next login. To ensure security, we don't recommend using this feature.

4. After login, the camera live view will be displayed by default.

2.3 Install plug-ins

If you are logging in for the first time, Please Click the '**Download**' to download the browser plug-ins (**vLocalServerSetup.exe**).

1. Click in the following order: "**Downloads-Keep-Show more-Keep anyway**". The installer of the plug-in named vLocalServerSetup.exe will be downloaded. Double click on the installer to install the plug-in. You need to refresh your browser to complete the installation.

ſ	English 💌						4	Make sure you trust vLocalServerSetup.exe before you open it
A admin	<u></u>							Microsoft Defender SmartScreen couldn't verify if this file is safe because it isn't commonly downloaded. Make sure you trust the file you're downloading or its source before you open it.
A		Downloads	ĉ	Q		\sim		Name: vLocalServerSetup.exe Publisher: Unknown
		vLocalServerSet sure you trust vi	up.exe isn't commonly localServerSetup.exe b	1				Show less
Download	Save Save	See more	Delete			1		Кеер апуwау
forget password			Кеер			1		Report this app as safe
() () () () () () () () () ()			Report this fi	e as sa	afe			Learn more
Login			Learn more				-	Delete Cancel
			Copy downlo	ad link	¢			
		Figure 2-2-1 I	Download					

Mote

When installing the vLocalServerSetup.exe, a notification may pop up on your PC. Please click **More info** and **Run anyway** to install it.

2. Install vLocalServerSetup.exe.

Setup - vLocalServer	2 <u>111</u>	
Select Destination Location		
Where should vLocalServer be installed?		Ċ
Setup will install vLocalServer into the following	g folder.	
To continue, click Next. If you would like to select a diffe	erent folder, click	Browse.
C:\vLocalServerSetup		Browse
At least 43.2 MB of free disk space is required.		

Figure 2-2-2 Select folder to install

Setup - vLocalServer		20 <u>11111</u>		×
Ready to Install				
Setup is now ready to begin instal	ling vLocalServer on your o	omputer.	Ċ	
Click Install to continue with the in change any settings.	stallation, or click Back if yo	ou want to revie	ew or	
Destination location: D:\vLocalServerSetup			0	
<			v 2	
L				
	< Back	Install	Cance	

Figure 2-2-3 Install

Setup - vLocalServer	2000		5
Installing			5
Please wait while Setup installs vLocalServer on your computer.		Ċ	4
Registering files			
			-
		Cancel	

Figure 2-2-4 Installing



Figure 2-2-5 Finish

Chapter 3 Live View

This chapter mainly introduces the parameters of live view, corresponding function of each icons and PTZ settings.

3.1 Introduction of Live View

By default the live view window is displayed when you are logged in to the Web interface. , as shown in the following picture.



Figure 3-1-1 Live View

No.	Items Description	
1	Menu	You can navigate between Live View, Playback, Set and Account pages in this area.
2	Preview window	The Live video will be displayed in this area.
3	PTZ control area	You can perform panning, tilting and zooming action of the camera.
4	Toolbar	You can adjust the size of the live view window, set stream type; You can also perform operations such as start/stop live view, capture, record, audio on/off, etc.

Table 3-1-1 Live View

Button	Description
	Live viewing the main stream
₽-° L2	Live viewing the sub stream

₽-0 L 3	Preview with 3rd stream
不 71 不 21	Full screen
	Self-adaptive screen size
4:3	Set the aspect ratio of the live view screen to 4:3
16:9	Set aspect ratio of the live view screen to 16:9
1X	Set the aspect ratio of the live view screen in accordance with the video source
	Electronic zoom on/off
	Dynamic Tracking Open/Close
E.	Talk
	Multicast (require supporting routers)
G	Device Snapshot
0	Local Snapshot
	Local Record
•	Audio
	Start/Stop live view
()	Focus/Zoom control
192.168.120.114 - 1 - 2708 kbps - M	Device IP address – Channel No.– Real-time Bitrate – Stream type(Main, Sub or Third)
	able 3-1-2 Live View Button Description

Table 3-1-2 Live View Button Description

🕑 Note

The buttons may vary depending on camera models.

3.2 Start and Stop Live View

Click Live View. Click 📧 to start live view. Click 🔲 to stop live view.

3.3 Full Screen Preview

This function is used to access full screen preview mode.

Steps:

- 1. Click Live View.
- 2. Go to toolbar click 📰 to access the full screen preview mode.
- 3. Use Esc button to quit the full screen preview mode.

3.4 Adjust Aspect Ratio

Steps:

- 1. Click Live View.
- 2. Click **1** to select the aspect ratio.
- Is refers to 4:3 window size.
- Even window size.
- IIII refers to original window size.
- Lefers to self-adaptive window size.

3.5 Preview Stream Type

This function is used to select the Preview stream type according to your needs. For the detailed information about the stream type information, please refer to Stream Type.

Steps

- 1. Click Live View.
- 2. Go to toolbar click
 - refers to Main Stream.
- III refers to Sub Stream.
- Los refers to 3rd Stream.

3.6 Dynamic Tracking lines and Smart Rules

This function is used to enable the dynamic tracking lines and smart rules in preview for the detail information about the smart rules, please refer to **8.4 Smart Event** for detail.

Steps:

to enable /disable the dynamic tracking lines and smart rules in preview.

3.7 Multicast view

This function is used to enable the multicast view. Please refer to **5.3.12** Multicast for detail.

Steps:



3.8 Recording Videos and Capturing Pictures Manually

This function is used to capture the picture and record videos from the Live View manually.

Steps:



3.9 Audio and Talk to the Device

Steps:

1. Click to enable the audio. You shall hear the sound from the microphone on the PTZ camera.

2. Click to talk to the device, the speaker on the PTZ camera will play the sound from the microphone on your end.

Note This feature is only supported on PTZ cameras with the Mic or speaker.

Chapter 4 PTZ Control

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

4.1 PTZ control

Click to show PTZ control page.



Figure 4-1-1 PTZ control page

Button	Items	Description
	Direction	Click and hold the directional button to pan/tilt the device.
	al Button	
Step	Step(1~8)	Set the step to adjust the speed of pan/tilt movement
🕀 Zoom 🧲	Zoom	Click +/- button, and the lens zoom in/out.
+ Focus	Focus	Click +/- button, and lens focuses near/far.
🕂 Iris 🗖	Iris	When the image is too dark, click the + button to enlarge
		the iris.
		When the image is too bright, click the - button to stop
		down the iris.
Start	Horizonta	Start/End horizontal rotation
	l Rotation	

Table 4-1-1 Area Functions Introduce of PTZ

4.2 Set Preset

A preset is a predefined image position. For the defined preset, you can call the preset number to view the position.

Steps:

1. Click 🖽 to show PTZ control page, and click 🛄



- 2. Use the PTZ control buttons to move the lens to the desired position.
- 3. Select a preset number from the preset list, and click 🏼 to finishing the setting.

🦉 Note

Some presets are predefined with special command. You can only call them but not configure them.

4. Repeat the steps above to set multiple presets.

Click 🌁 to c	all the preset.
--------------	-----------------

Click 🕺 to delete the preset.



You can delete all presets in Set \rightarrow System Settings \rightarrow PTZ \rightarrow Clear config. Check Clear All Presets, and click Save.

4.2.1 Special Presets

You can call the following presets with special demands to enable corresponding functions.

Preset No.	Function	Preset No.	Function
33	Back to zero	39	Horizontal scan
34	Stop scanning	40	Area scan
35	Frame scan	41	Automatic flip
36	Panorama scan	42	One-click cruise
37	Random scan	43	One-click watch
38	Vertical scan		

Table 4-2-1 Special Presets

4.3 Set Patrol Scan

Patrol scan is a function to automatically move among multiple presets.

Before You Start

Make sure that you have defined more than one presets. See 4.2 Set Presets for detailed configuration.

Steps:

- 1. Click 🖽 to show the setting panel, and click 💿 to enter patrol setting interface.
- 2. Select a patrol number from the list and click 🤷.
- 3. Click + to add presets.

Preset

Select predefined preset.

Speed

Set the speed of moving from one preset to another.

Duration

It is the duration staying on one patrol point.

Click 🕺 Delete the presets in patrol.

Click 🛨 者 Adjust the preset order.

🦉 Note

A patrol can be configured with 32 presets at most, and 2 presets at least.

- 4. Click **Save** to finish a patrol setting.
- 5. Repeat the steps above to configure multiple patrols.
- 6. Operate patrols.

Call the patrol.

Stop patrolling.

Elete the patrol.

Set the patrol.

🥙 Note

You can delete all patrols in Set → System Settings → PTZ → Clear config. Check Clear All Patrol Routs, and click Save.

4.4 Set Linear Scan

This function sets two vertical boundaries for the camera's movements, the device can only move within the limited range.

Steps:

1. Click 🖽 to show the setting panel, and click 🕅 to enter linear setting interface.

2. Use the direction button to move the camera to the estimated position for the left boundary, click 🛄 save the left limit.

3. Use the direction button to move the camera to the estimated position for the left boundary, click save the right limit.

- 4. Call the linear scan.
- 5. Stop the linear scan.
- 6. Click + to add presets.

Mote

You can delete all limit in Set → System Settings → PTZ → Clear config. Check Clear all limit settings, and click Save.

4.5 Set Pattern Scan

This function records the movement pattern and the device can move as the recorded pattern.

	Note This function is only supported by certain models.
1.	Click 🗄 to show the PTZ control panel, and click 🔯.
2.	Select one pattern scan path that needs to be set.
3.	Click to start recording pattern scan.
4.	Click PTZ control buttons as demands.
	Note Recording stops when the space for pattern scan is 0%.
	Click to complete one pattern scan path settings.
6.	Click k to call pattern scan.
	You can delete all patrols in Set → System Settings → PTZ → Clear config. Check Clear all the tracks, and click Save.

4.6 Set Auto Tracking

Before You Start

Make sure that you have defined presets. See 4.2 Set Presets for detailed configuration.

Steps:

Go to Set → Event → Smart Event → Area Intrusion.



This article uses **Area Intrusion** as an example to illustrate the example, other smart event, such as Line Crossing/Region Entrance/Region Exiting are the same configuration steps.

- 2. Check the checkbox of **Enable** to enable the function.
- 3. Select the **PreSet**. This is used for camera repositioning after the auto tracking completes.

Note This article uses PreSet2 as an example to illustrate the example, please refer to the actual situation.



4. Select the Human/Vehicle Shape Filter, the Area Intrusion will be triggered only by Human/Car.

Figure 4-6-1 Set Auto Tracking

5. Draw Area :

- 1) Click the **Plot Area** button, and a virtual rectangle is displayed on the live image.
- 2) Click-and-drag the rectangle, so you can modify the rectangle's position as desired.

3) Click on the line, the vertices of the rectangle represented by the red squares, can be dragged around to modify the shape of the area as you desire.



Figure 4-6-2 Draw Area

6. Set Auto Track and Auto Track Time, click Save.

PreSet	PreSet2	•
Switch Setting	Alarm Output	1
Anning Calculula	Alarm Delay	10 Sec 10~300
Arming Schedule	Show Message	🗌 Send Email 🗌 Buzzer
Actions	Record Delay	10 Sec 10~300
	Record Channel	
	1	
	PTZ Act	Set
	Tour	
	1 Snapshot	
	Snapshot	
	2 AutoTrack	
	3 AutoTrack Time	30 Sec 0~300
Save	Refresh	

Figure 4-6-2 Actions

Chapter 5 Configuration

5.1 Local Storage

You can specify the path for saving the record files, snapshot pictures on your PC by performing the following steps.

Go to Set → Local Storage.

Record video

Record size: Set the maximum package size of the record file. Available options are **256MB**, **512 MB**, **1GB**. **Record Path**: Specify the path for saving the videos recorded manually from the Live View mode. You can click **Browse** and select a folder as the storage path.

Remote Path: Specify the path for saving the videos recorded manually or downloaded from the Playback mode. You can click **Browse** and select a folder as the storage path.

Recorded Video				
Record Size	256MB	512MB	🗆 1G	В
Record File Size	C:\Use	lecordPath,	Browse	Open
Save Downloaded Files to	C:\Use	lemote/fathi,	Browse	Open

Figure 5-1-1 Recorded Video

• Snapshot

Picture Path: Specify the path for saving the snapshots taken manually from the Live View mode. You can click **Browse** to select a folder as the storage path.

Picture Path: Specify the path for saving the snapshots taken manually from the Playback mode. You can click **Browse** to select a folder as the storage path.

12	C:\Users	SnapPath	Browse	Open
Save Snapshots when Pl	C:\Users	PicturePath\	Browse	Open

5.2 System Parameters

In this section, you can configure device system parameters.

5.2.1 Check Device Information

In this page you can view the device information such as firmware version, MAC address, model, etc. **Steps:**

Go to **Set** \rightarrow **System**-**Settings**, you will see the device information.

Homaxi	Live View	Playback	Set			
LocalStorage		ltem	Information			
 System Settings Basic Info 	MAC		00:04:56:ab:de:79			
• Base	Record	Channel	1			
 Time & DST Account 	Audio P	Port I/O	1/1			
• PTZ	Alarm P	Port I/O	1/1			
Network	System		V500.R008.EE11.0499.C0115.B021			
Image	Model		IPT641R4-Z25-I2-TP			
Video/Audio	Release		2023-05-29 14:39:22			
Event	Web Ve		V7.9.115.18			
X Maintain	Plugin		vLocalServer V1.0.115.15			
	Update	Firmware Version	This is the latest version!			
	Refres	h				
		Figure 5-2-1 Sys	tem Settings			

🕑 Note

When you see "New version available!" on the interface, it is recommended you manually to download the new software and update it.

5.2.2 Set Device Language, Video Format & Host Name

You can perform the following steps to set Device Language, Video Format and Host name. **Steps:**

Go to Set \rightarrow System Settings \rightarrow Base.

- Language: Click *intersection*, and select the language you want to set. Click **Sav**e to save the settings.
- Video standard: Click *Model*, and select the video format PAL / NTSC you want to set. And click Save to save the settings.
- Host name: You can edit the Host name as you want to set. Click **Save** to save the settings.

Mote Note

The host name will show on Network and when using the Email function. Please refer to **5.3.9 Email** for detail.

5.2.3 Time and Date

You can perform the following steps to set time format, DST, etc.

• Set Manually or Sync with PC

Steps:

1. Go to Set → System Settings → Time & DST.

Time Zone	[GMT+08:00]Beijing,Urumqi,Singapore	*	Auto Sync PC ti
System time	2022-12-16 08:20:44		SyncPC
Date format	yyyy mm dd	٣	
Date separator	•	۳	
Time format	24-Hours	-	

Figure 5-2-2 Time

- 2. Set the correct time zone and system time.
- 3. Optional: Click SyncPC to synchronize the time settings of your camera with your PC.
- 4. Set the date and time format.
- 5. Click Save.
- Set DST (Daylight Saving Time)

Support to auto-change the device time. **Steps**:

1. Go to Set → System Settings → Time & DST.

DST	Day of We	ek	○ Date				
Start	Mar 💌	Last	•	Sun.	•	01 💌	00 🕶
End	Oct 💌	Last		Sun.	-	01 🔻	00 🔻

Figure 5-2-3 DST

- 2. Enable DST.
- 3. Choose the DST format **Day of Week** or **Date**.

- 4. Set the start date and end date.
- 5. Click Save.

• Set NTP

Device time will be synchronized with the NTP server.

Steps:

1. Go to Set \rightarrow System Settings \rightarrow Time & DST.

NTP	Enable	
Host IP	time.nist.gov	
Port	123	
Update Time	10	min



2. Enable NTP.

- 3. Set Host IP (NTP Server).
- 4. Set the **Port** number.
- 5. Set **Update Time**. The device will synchronize the time with the NTP server at this interval.
- 6. Click Save.

5.2.4 User and Account Manage

You can add/delete users, modify passwords of certain users and block IP addresses in this section.

• Create group and user account

Steps:

1. Go to Set → System Settings → Account.

No.	Group	User Name	Edit	Modify Password	Delete User
1	admin	admin(Reuseable)	G	⊕	×
2	user				
1					
Add Group	Add User	Modify group	Delete Group	Set/change s	Set/Change S
	Aud User	would group	Delete Group	servenange s	sey change s

Figure 5-2-4-1 Account

- 2. Click Add Group to create a new group, set the group name and authority, click OK.
- 3. Click Add User to create a new user, set the username, password, group and authority, click OK.
- Set/Change security mailbox

Steps:

- 1. Go to Set → System Settings → Account.
- 2. Select the user you want to modify.
- 3. Click Set/Change secure mailbox.
- 4. Enter a New security email address and the user's password.

🕑 Note

After the forgotten password is used for the security mailbox, the password is retrieved. Please make sure that the mailbox is available and carefully write it in mind.

5. Click change and wait for the prompt "Modify successfully".

Secure ma	ilbox s	etting	IS	
Original security email	address			
ť***@****4				
New secure email add	ress			
Password				
Message: After the fo mailbox, the password available and carefully	is retrieved.	^p lease ma <mark>k</mark> e		-
[change	Cancel		

Figure 5-2-4-2 Set/Change security mailbox

- Set/Change security issue Steps:
- 1. Go to Set \rightarrow System Settings \rightarrow Account.
- 2. Select the user you want to modify.
- 3. Click Set/Change security Issue.
- 4. Select the question and enter the answer, enter the user's password.
- 5. Click change and wait for the prompt "Modify successfully".

Security Issue Settings

Question-1	What is your father's name?
Answer-1	
Question-2	What is your mother's name? 💌
Answer-2	
Question-3	What is the name of your high sch
Answer-3	
Password	
	change Cancel

Figure 5-2-4-3 Set/Change security issue

• Modify user password

Steps:

- 1. Go to Set → System Settings → Account.
- 2. Select the user whose password you want to change.
- 3. Click **Modify Password** (a), input the Old Password, New password and Confirm password.
- 4. Click Save.
- Modify username and authority

Steps:

- 1. Go to **Set** → **System Settings** → **Account**.
- 2. Select the user whose information you want to modify.
- 3. Click III . You can change the user name, select the authority you want to change.

4. Click OK.

Delete User

Steps:

- 1. Go to Set \rightarrow System Settings \rightarrow Account.
- 2. Click the **Delete User** button (\times) after the user need to be deleted.
- 3. Enter the username into the popup dialog window to confirm.
- 4. Click **OK**.
- IP Block

You can add and delete IP addresses to and from the blacklist. Blocked IP addresses will not be permitted to access the device.

Steps:

- 1. Go to Set → System Settings → Account → Access Control.
- 2. Under Restriction Type, select Blocked Sites.

3. Enter the IP address you would like to block in the input box and click **Add IP**. This IP address will be added to the blacklist.

Optional: If you need to remove an IP address from the blacklist, you can select the IP address and click **Delete IP**.

4. Click Save.

Restricted Type	Blocked Sites	¥	
			Add IP
No.		IP Blocked	
Save	tefresh Delet	e IP	

Figure 5-2-4-4 Access Control

• IP Trust

You can add IP addresses to the whitelist. IP addresses not included in the whitelist will not be permitted to access the device.

Steps:

- 1. Go to Set → System Settings → Account → Access Control.
- 2. Under Restricted Type, select Trusted Sites.

3. Enter the IP address you would like to add to the whitelist and click **Add IP**. This IP address will be added to the whitelist.

Optional: If you need to remove an IP address from the whitelist, you can select the IP address and click

4. Click Save.

	٣	rusted Sites	ted Type	lestricted
Add IP				
	IP Allowed		No.	
		Delet	we Refr	

Figure 5-2-4-5 Access Control

• View Online Users

You can view the list of current online users in this section.

Steps:

1. Go to Set → System Settings → Account → Online Users.

The information (Username, IP address, Login Way and Login Time) of the users online would be displayed as the following picture.

No.	User Name	IP address	Login Way	Login Time
1	admin	192.168.120.11	XVR	2023-01-04 13:55:39
] 2	admin	192.168.120.41	Web	2023-01-04 01:21:19
3	admin	192.168.120.7	Web	2023-01-04 01:20:17
4	admin	192.168.120.9	XVR	2023-01-04 14:00:49
Disconnect	Block	0 Sec 0~1	65535	Refresh

Figure 5-2-4-6 Online Users

Optional:

If you need to disconnect a user from the device, you can select the user and click the **Disconnect** button. The selected user will be disconnected from the device instantly.

If you need to block an IP address of an online user from logging in, you can select the user from the online users list, enter a block duration, and click the **Block** button. IP addresses blocked by this method will not have the access to the device for the set duration.

5.3 Network Configuration

P Note

Network Configuration page may vary depending on the model. Please be subject to the actual web interface.

5.3.1 Configure Device TCP/IP Settings

TCP/IP settings must be configured properly before you operate the device over a network.

• NIC Type

Setting Adaptive as default is recommended.

• DHCP

By enabling DHCP, the device will automatically obtain an IP address and other network configurations (subnet mask, default gateway) from the DHCP server. Please note that the IP address of the device might be changed by enabling this feature.

Steps:

1. Go to Set \rightarrow Network \rightarrow General \rightarrow TCP/IP.

- 2. Enable DHCP.
- 3. Click Save.

NIC Туре	Adaptive	•	DHCP(IPV4)
IP Address	192.168.120.250		
MAC	00:04:56:ab:de:79		IP conflict
Subnet Mask	255.255.255.0		
Default Gateway	192.168.120.1		

Figure 5-3-1-1 TCP/IP

Manual Configuration

You can configure the network of the device manually. Input device IP Address, IP Subnet Mask, and Gateway, and click IP conflict to test check if the IP address is available. **Steps:**

- 1. Go to Set \rightarrow Network \rightarrow General \rightarrow TCP/IP.
- 2. Confirm that **DHCP** is disabled.
- 3. Enter IP address, Sub Net Mask, and Default Gateway.
- 4. Click the IP conflict button to check if there is an IP conflict.
5. Click Save.

• DNS Server

DNS is the abbreviation for domain name server. A DNS server is requisite if you want to access a site from the device through a domain name. It is also required for some features (e.g., sending emails, cloud storage). You need to configure **Preferred DNS Server** and **Alternate DNS Server** properly if you need to utilize these features.

Steps:

- 1. Go to Set \rightarrow Network \rightarrow General \rightarrow TCP/IP.
- 2. Enter in Preferred DNS Server and Alternate DNS Server.
- 3. Click Save.

• Transfer Mode

You can specify the Transfer Mode as self-adaptive, fluency preferred or quality preferred.



Figure 5-3-1-2 Transfer Mode

Max Users

You can set the maximum number of IP addresses connected concurrently to the device.

• Ports

You can configure the ports of HTTP, HTTPS, Media, RTSP, RTMP in this section.

HTTP port	80	
HTTPS Port	443	
Media port	34567	
RTSP port	554	
RTMP port	1936	Enable

Figure 5-3-1-3 Ports

URL Templates

This section provides templates for RTMP and RTSP URLs, you can use them after modifications according to your specific situation.

RTMP URL	rtmp://[IP]:[PORT]/[Optional:stream?]mode=real&idc=[*]&ids=[*]
RTSP URL	rtsp://[IP]:[PORT]/[Optional:stream?]mode=real&idc=[*]&ids=[*]

Figure 5-3-1-4 URL Templates

5.3.2 Configure DDNS Settings

Support use the Dynamic DNS (DDNS) for network access.

DDNS is the abbreviation of Dynamic DNS, it maps the dynamically allocated IP address of the device to a static domain name that can be accessed by the external network.

Steps:

- 1. Go to Set \rightarrow Network \rightarrow General \rightarrow DDNS.
- 2. Check the Enable checkbox.
- 3. Select your DDNS provider under DDNS Type, enter your Domain Name, Username, and Password.
- 4. Click Save.

🕑 Note

Our devices support multiple DDNS providers, such as Oray DDNS, CN99 DDNS, DynDNS DDNS, and NO-IP DDNS. You need to register an account before using. The following table includes the websites of our supported DDNS providers for your reference.

DDNS type	Website
Oray	http://www.oray.com/
DynDNS	http://dyn.com/dns/
NOIP	https://www.noip.com/
CN99	http://www.pubyun.com/

Table 5-3-2 DDNS Provider Websites

5.3.3 Configure NAT Settings

NAT is the abbreviation for Network Address Translation, it maps addresses and ports between your internal network and external network. You can configure the UPnP[™] settings in this section.

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

By enabling this feature, you will not need to configure the port mapping for each port manually. The camera will be connected to the Wide Area Network via the router automatically. **Steps:**

- 1. Go to Set \rightarrow Network \rightarrow General \rightarrow NAT.
- 2. Click Enable.
- 3. Click Save.



To ensure this feature can properly function, please make sure the UPnP feature on your router is enabled.

5.3.4 UPNP-TM

By enabling this feature, your network camera can be found as a network device on your network. **Steps:**

1. Go to Set \rightarrow Network \rightarrow General \rightarrow UPNP-TM.

- 2. Click Enable and enter the device name as you want.
- 3. Click Save.

🕑 Note

The default name of a device is its Cloud ID.

5.3.5 Bonjour

The same as UPNP-TM which is used in iMAC. Support Safari to check the device via bookmark-bonjour protocol.

Steps:

- 1. Go to **Set** \rightarrow **Network** \rightarrow **General** \rightarrow **Bonjour**.
- 2. Click Enable, and input the device name you want to set.
- 3. Click Save.

14

5.3.6 Cloud

Note

By enabling Cloud features, users can access the information of the device (video, alarm, etc.) via APP and our IE Web platform.

The default name of the device would be the Cloud ID of the Network Camera.

Steps:

- 1. Go to Set \rightarrow Network \rightarrow General \rightarrow P2P.
- 2. Click Enable.
- 3. Click Save.

4. Click the **Refresh** button to reload the page. Your device is connected to the Cloud when **Status** changed to **Connected**.

• Access the device via APP

- Steps:
- 1. Ensure the device connected with Cloud.
- 2. Scan the iPhone/Android QR code to download the APP.
- 3. Scan the Cloud ID QR code to bind the device and access the device.

🞐 Note

You can download our **Homaxi View** App by scanning the QR code on the page corresponding to your platform. To bind your cameras for later access, scan the Cloud ID QR code on the right. Note that you will be required to register an account prior to using **Homaxi View**.

• Access the device via web Steps:

- 1. Ensure the device connected with Cloud.
- 2. Open your browser, enter the URL displayed by **IE Web** in the URL bar.

1000 1200 III			
Status: Online		Cloud:	
W: http	.com	Verific :	



3. Switch to By device, input Cloud ID Device username and Device password.



Figure 4-3-5-2 By device

4. Click Login.

5.3.7 IPV6

Support to set the IPV6 address, subnet prefix length, Gateway, Preferred DNS, Secondary DNS. **Steps:**

- 1. Go to Set \rightarrow Network \rightarrow General \rightarrow IPV6.
- 2. Click DHCP or set the parameter settings.

3. Click Save.

5.3.8 FTP

FTP is the abbreviation for File Transfer Protocol, which is quintessentially designed for file transferring. In this section, you can configure FTP server related settings to enable the uploading of the captured pictures or recorded videos to the FTP server. The uploading process can be triggered by events or timed snapshot tasks.

Steps:

- 1. Go to Set → Network → Advanced → FTP.
- 2. Select **Type**: Record FTP/Picture FTP.
- 3. Check Enable checkbox.
- 4. Enter the IP address in the **Server** input box and **Port** to your FTP Server.

5. Configure the FTP settings: enter the username and password required for logging into the FTP server.

6. Specify the directory and the file length for uploading.

Directory: Device will create a new folder on your FTP if specified directory doesn't exist.

File length: Recorded videos will be segmented into files with size that is not larger than the specified file length (Max. 65535 MB).

- 7. Click **FTP Test** to test the connection to your FTP server.
- 8. Set the FTP Schedule.

Channel	1-Network	*		
Week Day	Sun.	Ŧ	Standard	Event
Schedule1	00:00:00	23:59:59		
Schedule2	00:00:00	23:59:59		

Figure 5-3-8 FTP Schedule

9. Click Save.

🕑 Note

To anonymously access (access without authentication) the FTP Server, check the **Anonymous** checkbox. Note that the anonymous access feature must be supported by the FTP server.

5.3.9 Email

The device can send Email notifications to all designated receivers when an alarm event (e.g., motion detection event, video loss, video tampering, etc.) is detected.

Before you start:

Please make sure the TCP/IP Settings has been configured properly.

Steps:

1. Go to Set \rightarrow Network \rightarrow Advanced \rightarrow Email.

2. Configure the following settings:

SMTP Server: The IP address or the domain name (e.g., smtp.263xmail.com) of the SMTP Server.
Email Encryption: None or SSL. When SSL is selected, emails will be sent after SSL encryption.
Port: The SMTP port. The default SMTP port is 25 (not secured) and the default SSL SMTP port is 465.
Snap Interval time: The time interval of snapshots.

Username: The email account of the sender.
Password: The password to the email account.
Sender: The name of the email sender.
Subject: The subject of emails.
Receiver 1/2/3: The email addresses of the receivers of the emails.

3. Click the Mail Test to test whether the settings are configured properly.

🕑 Note

You can check with your email service provider for the SMTP settings.

5.3.10 SNMP

By enabling the SNMP feature, you can obtain the camera status, configurations, and alarm-related information. You can also manage the camera remotely when it is connected to the network.

Before you start:

Prior to configuring SNMP, please download the SNMP client and make sure you can receive information from camera via a SNMP port. Trap is the terminology in SNMP for a message sent from one device to another to notify a specific event. By setting the **Trap Address** (the IP address of the trap receiver), the camera can send alarm events and exception messages to the surveillance center.

🕑 Note

The SNMP version you select should be the same as that of the SNMP client. You need to select from different versions according to the security level you required: SNMP v1 provides no security; SNMP v2 requires authentication for the access; SNMP v3 provides encryption and prior to using SNMP v3, HTTPS protocol must be enabled.

Steps:

1. Go to Set \rightarrow Network \rightarrow Advanced \rightarrow SNMP.

2. Check one or multiple checkboxes in Enable SNMP v1, Enable SNMP v2, Enable SNMP v3 to enable the feature depending on your need.

- 3. Configure the **SNMP settings**.
- 4. Click Save.

🕑 Note

For a lower risk of information leakage, SNMP v3 is highly recommended instead of SNMP v1 or v2.

SNMP v1/v2

Enable SNMPv1

Read Community

Write Community

Trap Address

Trap Port

Trap Community Name

Enable SNMPv2	
public	
private	
127.0.0.1	
162	
public	

SNMP v3	Enable SNMPv3							
Read Security Name	public							
Security Level	no auth_no priv		•					
Authentication Algorithm	MD5	◯ SHA						
Authentication Password								
Private-key Algorithm	DES	O AES						
Private-key Password								
Write Security Name	private							
Security Level	no auth_no priv		v					
Authentication Algorithm	MD5	◯ SHA						
Authentication Password								
Private-key Algorithm	DES	O AES						
Private-key Password								
SNMP Port	<mark>1</mark> 61							

Figure 5-3-10 SNMP Settings

5.3.11 Https

HTTPS supplies authentication of the website and its associated web server, which protects you against Man-inthe-middle attacks.

Before you start:

Make sure HTTPS Port is configured properly in **Geneal** \rightarrow **TCP/IP** section before you enable the HTTPS feature on a device. For example, if the port number is set to 443 and the IP address is 192.168.1.64, you may access the device by entering https://192.168.1.64:443 in the address bar of a supported web browser.

Steps:

1. Go to Set → Network → Advanced → Https.

2. Check the **Enable** checkbox.

Enable	
Installed Certificates	C=CN,ST=,L=,O=,OU=,H/IP=eziotest,EM= Download Delete
ATTR	Owner C=CN,ST=,L=,O=,OU=,H/IP=eziotest,EM= Issuer C=CN,ST=,L=,O=,OU=,H/IP=eziotest,EM= Validity period 2023-06-01 20:53:27 ~ 2023-06-01 20:53:27
Save Refresh	

Figure 5-3-11 HTTPS

- 3. You need to **Download** the certificate and install it on your PC before visit the device via HTTPS.
- 4. Click Save.
- 5. The device will reboot to apply the settings.



If the HTTPS feature is enabled but the certificate has not been installed on your PC, a notification about 'the certificate of this site has an issue' will be displayed when accessing the device webpage.

5.3.12 Multicast

In computer networking, multicast (one-to-many or many-to-many distribution) is group communication where data transmission is addressed to a group of destination computers simultaneously.

When multiple servers ask for the same information, the source device only needs to send the information only once. Hence, the most important benefit of the multicast is saving transmission bandwidth when the device is accessed by multiple remote clients.

Before you start:

Please confirm the router to which the device is connected supports Multicast feature.

Steps:

- 1. Go to Set \rightarrow Network \rightarrow Advanced \rightarrow Multicast.
- 2. Set the Multicast IP(224.0.0.0~239.255.255.255) and port(1025~65534) $_{\circ}$
- 3. Click Save.

Chapter 6 Image Parameter Configuration

Mote Note

The Image Configuration page may vary depending on the model. Please be subject to the actual web interface.

6.1 Schedule Image Modes

You can select image mode amongst three options: Auto Switch, Scheduled Switch and Universal Day And Night.

- Universal Day And Night: The same configurations of the image will be applied to both day and night modes.
- Schedule Switch: You can configure image parameters for Daytime and Night modes individually. You need to set up a schedule for shifting between Daytime and Night modes if you select this option.
- Auto Switch: You can configure image parameters for Daytime and Night modes individually, and the device will switch the Daytime Night image parameters synchronize with the day/night mode.

Steps:

- 1. Go to Set \rightarrow Image \rightarrow Image Configuration.
- 2. Click the Image Mode drop-down box to select a mode.

6.2 Image Adjust

- **Brightness:** Specifies the brightness/luminance of the image. The parameter ranges from 0 to 100 with a default value of 50.
- **Contrast**: Specifies the ratio of tones or the ratio between the light and dark areas of an image. The parameter ranges from 0 to 100 with a default value of 50.
- **Saturation**: Specifies the colorfulness of the image. The parameter ranges from 0 to 100 with a default value of 50.
- **Hue**: Defines the quality of the color by its dominant wavelength. The parameter ranges from 0 to 100 with a default value is 50.
- **Sharpnes**s: Specifies the contrast of edges in the image. The parameter ranges from 0 to 100 with a default value of 50.

Steps:

- 1. Go to Set \rightarrow Image \rightarrow Image Configuration.
- 2. Click Image Configuration and set the parameters by sliding on the seek bars for each parameter.

6.3 Exposure

You can select the correct exposure mode to achieve the desired exposure effect.

• Anti-Flicker: Outdoor/50Hz/60Hz anti-flickering modes are supported. You can select depending on the environment.

Note: 50Hz/60Hz: Reduces stripes by limiting shutter frequency.

Exposure mode: Auto/Manual.

Auto: the camera will auto-adjust the exposure time according to the environment.

Exposure time: Refers to the shutter time of the electronic shutter. 1/3, 1/4, 1/5, 1/6, 1/8, 1/10, 1/12, 1/15, 1/25, 1/30, 1/50, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 are selectable. You can adjust according to the actual luminance condition.

Note: Exposure time is used to control the light that comes into the lens. A fast shutter speed is ideal for scenes in quick motion. A slow shutter speed is ideal for scenes that change slowly.

• **Gain**: Control image signals so that the camera outputs standard video signals according to the light condition. To compensate the sensitivity of the sensor, the default value is 50. The bigger the value is, the brighter would the image be, and the noise would also be amplified to a larger extent.

Note: You can configure Gain parameter only when Exposure Mode is set to Auto. Steps:

- 1. Go to Set \rightarrow Image \rightarrow Image Configuration.
- 2. Click **Exposure** and set the parameters.

6.<u>4 Backlight</u>

Note Only one of the function can be enabled at the same time.

- **Highlight Compensation**: This feature should be enabled when there is a bright light in the view. You can adjust Highlight Compensation parameter only when it's enabled. The parameter ranges from 0 to 100. Bigger the number is stronger the effect takes.
- **Backlight**: This feature of compensates light to an object in the front to make it clearer. You can select amongst Close, Default and Custom.
- WDR/DWDR: (Digital) Wide Dynamic Range can be enabled when there is a sharp contrast between the bright area and the dark area of the scene. You can configure the parameter (limit) of WDR/DWDR feature only when it's enabled. Bigger the parameter is, wider the dynamic range is.

Steps:

- 1. Go to Set \rightarrow Image \rightarrow Image Configuration.
- 2. Click **Backlight** and set the parameters.

6.5 White balance

White balance is the white rendition function of the camera, and it's used to adjust the color temperature according to the environment.

Auto Mode: Camera will adjust the color temperature according to the environment automatically. Manual Mode: User can set the R (red) gain and the B (blue) gain manually.

Steps:

- 1. Go to Set \rightarrow Image \rightarrow Image Configuration.
- 2. Click White balance and set the parameters.

6.6 Day and Night Mode Switch

 Day/Night Switch: You can select the Day/Night Switch mode according to different surveillance demand. Daytime, Night, Auto are selectable for day/night switch.
 Daytime: The camera will stay in the day (color) mode.

Night: The camera will stay in the night (black and white) mode.

Auto: The camera outputs the optimum images according to the luminance condition. In this mode. The camera can switch between night mode and day mode automatically.

- Filter time: Refers to the interval time between the day/night switch range from 5-120s.
- Fill type: Support the select the Infrared Lamp, Warm light.
- Smart illumination : Under low luminance condition, When Smart motion detection or Perimeter Protection alarm are turned on, as long as there are human or vehicles in the monitoring screen, the warm light will turn on, and image switch to color, even if the alarm is not triggered.
- Warm light: You can set it to Close, Auto and Manual. Close: the warm light will not on;
 Auto: the warm light will turn on automatically when the environment brightness is lower. Manual : the warm light always turn on.
- Infrared Lamp: You can set it to Close, Auto and Manual mode. Close: the Infrared lamp will not on. Auto: when the environment brightness is lower, the Infrared lamp will on and auto-adjust the lamp brightness to get the best image; Manual: when the environment brightness is lower, the Infrared lamp will on and the lamp brightness will be the highest.
- Smart IR: Adjustable IR brightness feature, it can adjust the IR automatically according to the image brightness. When the object is very close to the camera, the IR will be too bright for the object and it will be totally white to see the details. So Smart IR will adjust the output of IR brightness so that the object would not be so white and missing details. There are three options: Close, Manual and Auto. Close option is to close the IR, Manual is to adjust the IR brightness manually, Auto is to adjust the IR brightness automatically.

Steps:

- 1. Go to Set-Image-Image Configuration.
- 2. Click Day/Night Switch, and set the parameters.

6.7 Video Adjust

You can adjust the video image to the correct position as you want.

- Image: This feature allows you to view the image in different flipped directions. Left Right, Up Down, Centre and Close are the selectable options.
- **Rotate:** This function rotates the image with certain degrees, is essential for Corridor display mode. You can select the angle 90°, 180°, 270°.

Steps:

- 1. Go to Set \rightarrow Image \rightarrow Image Configuration.
- 2. Click Video Adjust, and set the parameters.

6.8 Enhancement

The device supports Noise Reduction and Defog features to enhance the camera image quality. You can adjust the NR Level to configure the intensity of Noise Reduction. Note that this feature may result in a blurry image.

You can enable the Defog feature to adjust the clarity of images captured in foggy or hazy conditions.

- **NR Level**: Noise Reduction Level, ranges from 0 to 6, the higher the value, the less noisy the video.
- Defog: You can enable the Defog feature when the environment is foggy and the image is misty. It enhances subtle details so that the image appears more clearly.

Steps:

- 1. Go to Set → Image → Image Configuration.
- 2. Click Enhancement and set the parameters.
- Smart Light: Stop-Smart Light will not on, Auto-Smart light will on when the linkage action occurs.

6.9 Privacy Mask

On certain occasions, you may need to set a masked area on the camera image to protect privacy. For example, the keyboard of an ATM machine. When a PTZ camera changes its position or zooms, you should make manual adjustment to the Privacy Mask accordingly to protect the area all along. **Steps**:

- 1. Go to Set \rightarrow Image \rightarrow Privacy Mask.
- 2. Check the **Enable** checkbox.

3. Left click the mouse on the preview on the left and drag to draw a masked area (up to 4 areas for Fisheye Cameras).

Optional:

Move a mask area: Left click the mouse on a masked area and then drag it to the destination position.

Delete a mask area: Left click the mouse on a masked area and then click Delete. You can also click Clear id you want to delete all masked areas.

4. Click Save.

6.10 Illumination Plan

Using this function, camera will auto-turn on/off warm light or Infrared lamp at the set time, to get the best image of surveillance.



Only certain device models support the function.

6.10.1 Set the illumination mode Parameters

There are three modes, you set the Illumination mode parameter from **Set-Image-Image Configuration-Day** and night model-Fill type.

Camera will follow the Illumination Plan schedule, as the current illumination mode to work.

• Smart illumination : When current illumination mode is Smart illumination,

Under low luminance condition, and motion detection(with human or vehicle) or Perimeter Protection alarm are turned on, as long as there are human or vehicles in the monitoring screen, the warm light will turn on, and image switch to color, even if the alarm is not triggered.

- Warm light: You can set it to Close, Auto and Manual. When current illumination mode is warm light,
 Close: the warm light will not on;
 Auto: the warm light will turn on automatically when the environment brightness is lower;
 Manual: the warm light always turn on.
- Infrared Lamp: You can set it to Close, Auto and Manual.
 When current illumination mode is Infrared Lamp,
 Close: the Infrared lamp will not on;

Auto: when the environment brightness is lower, the Infrared lamp will on and auto-adjust the lamp brightness to get the best image;

Manual: when the environment brightness is lower, the Infrared lamp will on and the lamp brightness will be the highest.

6.10.2 Set the illumination Plan Schedule

User can set which illumination mode to run for which time period. **Steps:**

- 1. Go to Set \rightarrow Image \rightarrow Illumination Plan.
- 2. Select any mode, and then drag it with the left mouse button on the time bar below.

The camera will follow this schedule to work: which time period working under which mode.

3. Click Save.

	0	Sm	art l	llum	inati	on			0	Wari	m lig	jht			۲	Infra	red l	amp						
٥.	1.	2	3	4	5	Ģ	. 7	ş	9	10	11	12	13	14	15	16	. 17	18	19	20	21	. 22	23	24
												Sun	0											
2	1.	2	3	4	5	6	7	8	, 9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
											- 3	Mon	ķ:											
٥.	1.	2	3	4	5	6	. 7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
												Tue.												
<u>e</u> .	1.	2	3	4	5	6	. 7	8	9	10				14	15	16	17	18	19	20	21	22	23	24
												Wed												
٥.	1.	2	3	4	5	ę	. 7	8	, 9	10	11	12	13	14	15	16	. 17	18	19	20	21	22	23	24
												Thu.												
٥.	1.	? .	3	. 4	5	6	. 7	8	9	10	. 11	1000	13	14	15	16	17	18	19	20	21	.22	23	24
		-								40		Fri.	40		45			40	10	-	-		-	
Ľ.	1.	4.	3	4		- P	- í-	9	à	10	11	Sat.	13	14	15	16	.17	18	19	20	.21	. 22	23	24

Figure 6-10-2 illumination Plan Schedule

Chapter 7 Video and Audio Configuration

This part introduces the configuration of video and audio related parameters.



The Video/Audio configurations may vary depending on the model. Please be subject to the actual web interface.

7.1 Video Settings

This part introduces the configurations of video parameters such as stream type, video encoding, and resolution. To configure, go to Set \rightarrow Video/Audio \rightarrow Video Settings.

7.1.1 Stream Type

For devices that supports more than one stream, you can specify the type for each stream.

Main Stream

This stream type stands for the stream of the best quality that the device supports. It usually provides the best resolution and the highest frame rate that the device supports. But high resolution and frame rate usually requires a larger storage space and a higher transmission bandwidth.

• Sub Stream

The stream usually offers comparatively low-resolution images, which consumes less bandwidth and storage space.

Mobile Stream

The stream usually used for mobile APP preview, which consumes smallest bandwidth and storage space.

Steps:

- 1. Go to **Set → Video/Audio**.
- 2. Click Video Settings, Stream type and select the Stream you want to configure.

7.1.2 Video Encode

It stands for the compression standard the device adopts for video encoding.

• H.264

H.264, also known as MPEG-4 Part 10 and Advanced Video Coding (AVC), is a compression standard. Without losing too much image quality, it increases compression ratio and reduces the size of video file (in comparison to MJPEG or MPEG-4 Part 2 standards).

• H.264+

H.264+ is an improved compression coding technology based on H.264. By enabling H.264+, you 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

H.265, also known as High Efficiency Video Coding (HEVC) and MPEG-H Part 2, is a compression standard. In comparison to H.264, it offers better video compression at the same resolution frame rate and image quality.

• H.265+

H.265+ is an improved compression coding technology based on H.265. By enabling H.265+, you can estimate the HDD consumption by its maximum average bitrate. Compared to H.265, H.265+ reduces storage by up to 50% with the same maximum bitrate in most scenes. **Steps**:

- 1. Go to Set → Video/Audio → Video Settings.
- 2. Go to **Compression** to select the H.264/H.265.
- 3. Check the Encode Enable checkbox to enable H.264+/H.265+.
- 4. Click Save.

7.1.3 Complexity level

You can select the encode complexity level for your device: Baseline/Main Profile/High Profile. The higher complexity level, the smaller video stream code. (Selectable options may vary depending on the model) **Steps**:

- 1. Go to Set → Video/Audio → Video Settings → Complexity level.
- 2. Select amongst Baseline/Main Profile/High Profile.
- 3. Click Save.

7.1.4 Video/Audio Enable

Configure the stream the Video and Audio support for a specific stream. **Steps**:

- 1. Go to Set \rightarrow Video/Audio \rightarrow Video Settings \rightarrow Enable.
- 2. Select the Video/Audio.
- 3. Click Save.

Note Disabling the Main Stream video is not supported.

7.1.5 Resolution

You can select video resolution according to actual needs on Main/Sub/Mobile Stream. Higher resolution requires a higher bandwidth and takes up a larger storage space. **Steps**:

- 1. Go to Set \rightarrow Video/Audio \rightarrow Video Settings \rightarrow Resolution.
- 2. Select the Resolution you want to set.
- 3. Click **Save** to save and finish the settings.

7.1.6 Frame rate (FPS)

Frame rate is used 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. Note that a higher frame rate requires a higher bandwidth and takes up a larger storage space.

Steps:

1. Go to Set → Video/Audio → Video Settings → Frame rate (FPS).

- 2. Select the **Resolution** you want to set.
- 3. Click Save.

7.1.7 Bit Rate Type

CBR: Abbreviation for Constant Bit Rate. It means that the stream is compressed and transmitted at a comparatively fixed bitrate. The compression speed is fast, but mosaic may occur on the image. **VBR**: Abbreviation for Variable Bit Rate. It means that the device automatically adjust the bitrate under the set Bitrate. The compression speed is slower than that of the constant bitrate. But it guarantees the image quality of complex scenes.

Steps:

- 1. Go to Set \rightarrow Video/Audio \rightarrow Video Settings \rightarrow Bit rate Type.
- 2. Select a Bit rate Type according to the needs.
- 3. Click Save.

7.1.8 Quality

When Bitrate Type is set as VBR, video quality would be configurable. You can select a video quality according to your actual needs. Note that higher video quality often requires higher bandwidth. **Steps**:

- 1. Go to Set → Video/Audio → Video Settings → Video Quality.
- 2. Select a Image quality.
- 3. Click Save.

7.1.9 Bit Rate (Kb/S)

The value of the bit rate is related on the video quality, higher video quality results in higher bit rate and requires a higher bandwidth. The limit of the bit rate value varies according to different resolution and image quality.

Steps:

- 1. Go to Set → Video/Audio → Video Settings → Bit Rate (Kb/S).
- 2. Select the **Bit Rate** you want to set.
- 3. Click Save.

7.1.10 | Frame Interval

Frame interval defines the number of frames between 2 I-frames. In H.264 and H.265, an I-frame, or intra frame, is a self-contained frame that can be independently decoded without any reference to other images. An I-frame consumes more bits than other frames.

Thus, video with more I-frames, in other words, smaller I-frame interval, generates more steady and reliable data bits while requiring more storage space. **Steps**:

1. Go to Set → Video/Audio → Video Settings → I Frame Interval.

- 2. Enter I-Frame Interval (from 10 to 100 ms) in the input box.
- 3. Click Save.

7.2 Audio Setting

You can set audio parameters such as audio encoding, environment noise filtering in this section.

- Audio coding type: 2 coding methods are supported: G.711A/G.711U.
- Volume input: Ranges from 0-100 with a default value of 50.
- Noise reduction: By enabling, the audio noise will be reduced. Steps:
- steps.
- 1. Go to Set \rightarrow Video/Audio \rightarrow Audio Settings.
- 2. Configure the parameters.
- 3. Click Save.

7.3 ROI

ROI (Region of Interest) encoding helps to assign more encoding resource to the region of interest. This feature can increase the quality of the ROI while the background information is less focused. **Steps**:

- 1. Go to Set \rightarrow Video/Audio \rightarrow ROI.
- 2. Check the Enable checkbox.
- 3. Select a Stream Type.
- 4. Select a **Region No** and draw an ROI region.
- 5. Select an option under Level Up and input the Regional Name.
- 6. Click Save.

7. Optional: You can select unused region No. and repeat the steps above if you need to draw multiple ROI regions.

7.4 Snapshot Settings

You can configure the snapshot settings in this section. The snapshots will be taken when events trigger snapshot.

Steps:

- 1. Go to Set → Video/Audio → Snapshot Settings.
- 2. Select the **Resolution** and **Quality**.
- 3. Click Save.

7.5 OSD Setting

In this section, you can customize OSD (On-screen Display) information such as device name, time/date, font, color, and text overlay displayed on video stream. **Steps**:

- 1. Go to Set \rightarrow Video/Audio \rightarrow OSD.
- 2. Enter in the **Channel Name** to be set.
- 3. Check and uncheck the **Channel title**, **Time title** checkbox to specify whether they are displayed on screen.
- 4. Optional: Left click the OSD information on live video and drag it to the ideal position.
- 5. Optional: Left click the OSD information on live video, move to the position you want to set.
- 6. Click Save.

Chapter 8 Event and Alarm Configuration

This part introduces the configuration of events and how the device responds to a triggered alarm.



The Event and Alarm configuration may vary depending on the model. Please be subject to the actual Web interface.

8.1 Motion Detection

This feature detects moving objects in the detection area and trigger actions set for this event.

Steps:

1. Go to Set → Event → Basic Event → Motion detection.

		Enable
Switch Setting	Human Shape Filter	
Arming Schedule	Vehicle Shape Filter	
Arming schedule	Sensitivity	3
Actions		
	Enable	ZD0 1/1:00

Figure 8-1-1 Switch Setting

- 2. Check the Enable checkbox.
- 3. Set **Detect Target**. Support to detect the Human shape/Vehicle shape detection.

Optional:

Detect all motions: Disable the Human and Car filter check box.

Detect Human shape only: Enable the Human filter check box and disable the car filter check box.

Detect Car shape only: Enable the Car filter and disable the Human filter.

Detect the Car and Human shape: Enable the Car filter and Human filter.

4. Set the **Sensitivity**: Motion detection alarm event is more prone to be triggered with a higher sensitivity.

5. Set the **Detect Region**: Drag the mouse in the preview area to specify the detection area (Red marked areas are selected).

6. Set the Arming Schedule for Motion Detection.

0	2	4	6	8	10	12	14	16	18	20	22	24	
		1			1	Sun.			12	1	1		Set
	<u>.</u>	8	8	5 <u>1</u>	5	Mon.		2	53	8	1		Set
		- 1		1	1	Tue.	e l	-1	12	r	r		Set
		1	-	10	15	Wed.		2	1	1.	1		Set
		- Si				Thu.	į.						Set
		3	븮	5	16	Fri.	- (†	2		<i>1</i> 5	*		Set
		1				Sat.					1		Set
nt	erva	I			Γ	5	Sec	0~	600				

Figure 8-1-2 Schedule

1) Click **Set** to set the detect time for each day.

chedule1	00:00:00	∂~ 23:59	:59 \ominus 🗹	Schedule2	00:00:00 🔶 ~ 23:	59:59 \ominus 🗆	
chedule3	00:00:00		:59 \ominus 🗆	Schedule4	00:00:00 🔷 ~ 23:	59:59	
chedule5	00:00:00	∂ ~ 23:59	:59 \ominus 🗆	Schedule6	00:00:00 🔶~ 23:	59:59 \ominus 🗆	
Copy to othe					-		
	Mon.	Tue.	Wed.	Thu. 🗌 🛛 Fri.	. Sat.		

Figure 8-1-3 Set

- 2) Set the Interval time (During the interval time, device will detect/alarm).
- 7. To set the actions performed after being triggered, click Actions.

Alarm Output	1
Alarm Delay	10 Sec 10~300
Show Message	Send Email Buzzer
Record Delay	10 Sec 10~300
Record Channel	
1	
PTZ Act	Set
Tour	
1	
Snapshot	
1	

Figure 8-1-4 Actions

Alarm Delay : Duration of the alarms.

Send Email: When motion detection is triggered, the device will send emails to configured email addresses. Please refer to *5.3.9 Email* for detail.

Record Channe: When motion detection is triggered, the device will start to record with this channel. **Record delay time**: The device will keep recording for this period after the motion detect event ends. **PTZ Act:**

Mote Note		
Only support the PTZ camera.		

Set Snapshot: When motion detection is triggered, the device will take snapshots of the video.

8. Click Save.

8.2 Video Cover Detection

When the configured area is covered and cannot be monitored normally, the alarm is triggered and the device takes certain alarm response actions. **Steps**:

- 1. Go to Set → Event → Basic Event → Video Cover Detection.
- 2. Check the **Enable** checkbox.
- 3. Set the **Sensitivity**: The higher the value is, the easier to detect the area covering.

- 4. Set the Arming Schedule for Motion Detection. Click Set to set the detect time for each day.
- 5. Set the linkage actions. Click Actions.
 - 1) Set the Alarm out, Alarm delay, send email.
 - Alarm delay time: Duration of the alarms.

Send email: When alarm input event is triggered, the device will send emails to configured email addresses. For Email Setting please refer to **5.3.9 Email.**

Note: Alarm out function only support the camera which support the alarm out.

2) Set Record delay time, record channel.

Record Channel: When alarm input event is triggered, it will start to record with this channel.

Note: Record delay time: The device will keep recording for this period after the alarm input event ends.

3) Set PTZ Act.

Note: Only support the PTZ camera.

4) Set **Smart light, Smartlight delay**. When motion detection is triggered, the smart light will on. **Note**: Only support the camera which has the Smart light.

5) Set **Snapshot.** When motion detection is triggered, the device will take snapshots of the video.

6. Click Save.

8.3 Alarm in/out

8.3.1 Alarm Input

Alarm signal from the external device triggers the corresponding actions of the current device.

Before you start

Alarm signal from the external device triggers the corresponding actions of the current device. **Steps**:

- 1. Go to Set \rightarrow Event \rightarrow Camera I/O \rightarrow Alarm Input.
- 2. Check the **Enable** checkbox.
- 3. Set the Type: Normal Close/Normal Open.
- 4. Set the Arming Schedule for Motion Detection.
 - 1) Click **Set** to set the detect time for each day.
 - 2) Set the Interval time (During the interval time, device will alarm)
- 5. To set the linkage actions performed after being triggered. Click Actions.

1) Set the Alarm out, Alarm delay, send email.

Alarm delay time: Duration of the alarms.

Send email: When alarm input event is triggered, the device will send emails to configured email addresses. For Email Setting please refer to **5.3.9 Email.**

Note: Alarm out function only support the camera which support the alarm out.

2) Set Record delay time, record channel.

Record Channel: When alarm input event is triggered, it will start to record with this channel. **Note**: Record delay time: The device will keep recording for this period after the alarm input event ends.

3) Set PTZ Act.

Note: Only support the PTZ camera.

4) Set Smart light, Smartlight delay. When motion detection is triggered, the smart light will on.

Note: Only support the camera which has the Smart light.

- 5) Set **Snapshot.** When motion detection is triggered, the device will take snapshots of the video.
- 6. Click Save.

8.3.2 Alarm Output

If the device is connected to an alarm output device, and the alarm output No. is configured properly, the device will send alarm information to the connected alarm output device when an alarm is triggered.

Steps:

1. Go to Set \rightarrow Event \rightarrow Camera I/O \rightarrow Alarm Output.

- 2. Set the Type: Schedule, Manual, Stop.
 - 1) Schedule: Alarm output will be on, when an alarm is triggered in the configured schedule.
 - 2) Manual: Alarm out will always be on.
 - 3) **Stop**: Alarm out will always be off.

Note: You can check the Alarm Out status via the status: white - no alarm out; red - alarm out is on.

3. Click Save.

8.4 Smart Event

8.4.1 Line Crossing Detection

It is used to detect objects crossing a pre-defined virtual line. When it occurs, the device can take linkage actions. **Steps**:

- 1. Go to Set \rightarrow Event \rightarrow Smart Event \rightarrow Line Crossing.
- Check the checkbox of Enable to enable the function.
 Optional: You can select the Human/Car filter, the Line crossing will be triggered only by Human/Car.
- 3. Select Warning Surfaces you want to set.
- 4. Click the **Plot Area** button, and a virtual line is displayed on the live image.
- 5. Click-and-drag the line, and you can locate it on the live image as desired.

6. Click on the line, two red squares are displayed on each end, and you can Click-and-drag one of the red squares to define the shape and length of the line.

- 7. Select the Direction for line cross detection. And you can select the directions:
- A<->B: When an object goes across the configured line from both direction can be detected and alarms are triggered.
- A->B: Only the object crossing the configured line from the A side to the B side can be detected.
- **B->A**: Only the object crossing the configured line from the B side to the A side can be detected.



Figure 8-4-1 Line Crossing

- 8. Set the **Sensitivity**: The Line Crossing is easier to detect when the value is higher.
- 9. Set the Arming Schedule and Actions. Please refer to 8.1 Motion Detection for detail.
- 10. Click Save.

8.4.2 Area Intrusion Detection

It is used to detect objects entering and loitering in a pre-defined virtual region. When it occurs, the device can take linkage actions.

Steps:

- 1. Go to Set → Event → Smart Event → Aera Intrusion.
- 2. Check the checkbox of **Enable** to enable the function. **Optional**: You can select the Human/Car filter, the Area Intrusion will be triggered only by Human/Car.
- 3. Select Warning surfaces you want to set.
- 4. Draw Area :
 - 1) Click the **Plot Area** button, and a virtual rectangle is displayed on the live image.
 - 2) Click-and-drag the rectangle, and you can locate it on the live image as desired.

3) Click on the line, four red squares are displayed on each end, and you can Click-and-drag one of the red squares to define the shape and length of the line.



Figure 8-4-2 Area Intrusion

5. Set the Time Threshold.

Indicates that an alarm will be generated after the target object enters the warning area and stays for this period of time. For example, if it is set to 0, the alarm will be triggered immediately after the target object invades the area. The maximum is 10 seconds.

6. Set the Sensitivity.

The sensitivity setting affects the size of the intruding object that will be judged as the target object. A higher sensitivity setting may identify smaller objects as the target, while a lower sensitivity setting may identify larger objects as the target.

7. Set the Percent.

It indicates how much of the invaded area is required to trigger the alarm, the percentage value is taken for input.

- 8. Set the Arming schedule and Actions. Please refer to 8.1 Motion Detection for detail.
- 9. Click Save.

8.4.3 Region Entrance Detection

It is used to detect objects entering a pre-defined virtual region from the outside place. When it occurs, the device can take linkage actions.

Steps:

1. Go to Set → Event → Smart Event → Region Entrance.

2. Check the checkbox of Enable to enable the function.

Optional: You can select the Human/Car filter, the Region Entrance will be triggered only by Human/Car.

3. Select Warning Surfaces you want to set.

4. Draw Area :

- 1) Click the **Plot Area** button, and a virtual rectangle is displayed on the live image.
- 2) Click-and-drag the rectangle, and you can locate it on the live image as desired.
- 3) Click on the line, four red squares are displayed on each end, and you can Click-and-drag one of the red squares to define the shape and length of the line.



Figure 8-4-3 Region Entrance Detection

5. Set the **Sensitivity**.

The sensitivity setting affects the size of the intruding object that will be judged as the target object. A higher sensitivity setting may identify smaller objects as the target, while a lower sensitivity setting may identify larger objects as the target.

- 6. Set the Arming Schedule and Actions. Please refer to 8.1 Motion Detection for detail.
- 7. Click Save.

8.4.4 Region Exiting Detection

It is used to detect objects exiting from a pre-defined virtual region. When it occurs, the device can take linkage actions.

Steps:

1. Go Set \rightarrow Event \rightarrow Smart Event \rightarrow Region Exiting.

2. Check the checkbox of Enable to enable the function.

Optional: You can select the Human/Car filter, the Region Exiting will be triggered only by Human/Car.

- 3. Select Warning Surfaces you want to set.
- 4. Draw Area :
 - 1) Click the **Plot Area** button, and a virtual rectangle is displayed on the live image.
 - 2) Click-and-drag the rectangle, and you can locate it on the live image as desired.
 - 3) Click on the line, four red squares are displayed on each end, and you can Click-and-drag one of the red squares to define the shape and length of the line.



Figure 8-4-4 Region Exiting Detection

5. Set the Sensitivity.

It is used to set and control the size of the target object. The higher the sensitivity setting, the smaller the object entering the area will be judged as the target object. The lower the sensitivity setting, the larger the object entering the area will be judged as the target object.

6. Set the Arming schedule and Actions. Please refer to 8.1 Motion Detection for detail.

7. Click Save.

8.4.5 Scene Change Detection

Scene change detection function detects the change of surveillance scene. When it occurs, the device can take linkage actions.

Steps:

- 1. Go to Set → Event → Smart Event → Scene Change Detection.
- 2. Check the checkbox of **Enable** to enable the function.
- 3. Set the **Sensitivity**. The Scene Change Detection is easier to trigger if the sensitivity is higher.
- 4. Set the Arming Schedule and Actions. Please refer to **8.1 Motion Detection** for detail.
- 5. Click Save.

Chapter 9 Recording to Local Storage/NAS

This chapter introduces the functions for recording management and configuration.

🕑 Note

Only certain device models which support the Local Storage (Micro-SD card) or the NAS features support these features.

9.1 Record and Snapshot

You can configure the record and snapshot behaviors in this section.

9.1.1 Record setting

Steps:

- 1. Go to Set → Storage → Record → Record Schedule.
- 2. You can enable the checkbox to choose recording the videos with Main stream or Sub stream.
- 3. Set the Pack Duration and Pre-Record.
- Pack duration: The length of time that cameras will segment the video file into.
- Pre-Record: The length of camera's pre-record time for the event recordings (0-30s).
- 4. Set the Record type at Record Control: Schedule, Manual, Stop.
- Schedule: Camera will follow the Record Plan to record.
- **Manual**: Camera will always be recording (7*24h).
- **Stop**: Camera will stop recording.
- 5. Set the Record Plan.
- 1) Select the Record type Normal, MD and Alarm.
- 2) And click Set to set each day's record Plan, click OK.

1		ormal			1000	MD					arm		
)	2	4	6	8	10	12	14	16	18	20	22	24	
	- 8	- 24 -	2	- 33	<u>.</u>	Sun.	- 22		10	2	8		Delete
						Sum							Set
		1.0	e.			Mon.	10	100	-				Delete
						wion.							Set
	- 5	- <u>*</u>	19 19	- 2			- C		- 25		- 22		Delete
						Tue.							Set
		8	22	- 22 -			- 2		- 2	- 2	<u>.</u>		Delete
						Wed.							Set
-		2	2	- 31	-	k	- 2		10	2		= 1	Delete
						Thu.							Set
-	*	÷	ю.,	- 1		T.	·			-			Delete
						Fri.							Set
			ke.										
						Sat.		_	_	_	_	_	Delete

Figure 9-1-1 Set Record Plan

- 6. Set the Record type at Record Control section: Schedule, Manual and Stop.
- Schedule: Camera will follow the Record Plan to record.
- Manual: Camera will always in record (7*24h).
- **Stop**: Camera will stop recording.
- 7. Click **Save** to save and finish the settings.

9.1.2 Snapshot Setting

This section involves settings of the snapshot features.

• Set Parameter of interval snapshot

Camera will take snapshots at the configured time interval. **Steps:**

- 1. Go to Set \rightarrow Storage \rightarrow Record \rightarrow Snapshot Setting \rightarrow Time Picture.
- 2. Check the **Enable** checkbox to enable snapshot by interval time.
- 3. Set the Interval time you want to set.
- 4. Set the Schedule.
- 5. Click **Save** to save and finish the settings.

Set Parameter of Alarm Snapshot

Camera will snapshot when the alarm in has the signal input. **Steps:**

- 1. Go to Set \rightarrow Storage \rightarrow Record \rightarrow Snapshot Setting \rightarrow Alarm Snapshot.
- 2. Check the checkbox to enable snapshot by Alarm.
- 3. Set the Interval time you want to set.
- 4. Set the Snap Count.
- 5. Click **Save** to save and finish the settings.

• Event-Triggered Snapshot

Camera will snapshot when the Event-Triggered. **Steps:**

- 1. Go to Set \rightarrow Storage \rightarrow Record \rightarrow Snapshot Setting \rightarrow Event-Triggered Snapshot.
- 2. Check the checkbox to enable snapshot by Event-Triggered.
- 3. Set the Interval time you want to set.
- 4. Set the Snap Count.
- 5. Click **Save** to save and finish the settings.

9.2 Storage Manager

9.2.1 Local Storage Manage (Micro-SD Card)

After inserting the Micro-SD Card properly, you can access its information as a local storage device, and our devices support to manage it. Go to Set \rightarrow Storage \rightarrow Storage Management.

• Format/Delete the Micro-SD Card

The function is used to Format/Delete the Micro-SD Card. **Steps:**

- 1. Select the device you want to manage.
- 2. Click Format/Delete.

Set the storage rule when HDD full

Steps:

1. Click the **HDD Full** Overwrite/Stop from the drop down menu. **Overwrite**: When storage is full, camera will overwrite the oldest file.

Stop: When storage is full, camera will stop recording.

2. Click Save to save and finish the settings.

• Quota Storage for record and picture Steps:

1. Click the **Record Quota (%)** / **Picture Quota (%)** to set the parameters. Camera will quota the capacity for record and picture storage as you set.

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

9.2.2 Connect to NAS

The function used to save the recording/picture file to the NAS.

Before you start:

Valid NAS service is needed within the same network section. **Steps**:

1. Go to Set → Storage → Storage Management → NAS.

1	NAS		2
2	NAS		2
3	NAS		2
4	NAS		2
	10.000		
		Figure 9-2-2-1 NAS	

- 2. Double click one of the option to access its **Config**.
- 3. Input the NAS Server Address, File Path, Mount Type, Space (GB).
- 4. Click **Test** if success click OK; if failed please check the parameters again.
- 5. Click **Save** to save and finish the settings.

		Conf	ig		
Disk No.	1				
Туре	NAS				
Server Address					
File Path					
Mount Type	NFS		•		
Space(GB)	2				
User Name					
Password					
_					
Test		Save		Return	

Figure 9-2-2-2 Config

Chapter 10 Maintain

This chapter introduces the maintenance details.

10.1 Reboot Device

You can the reboot the device via web access. The devices also support Auto-reboot with configured schedules.

• Reboot device manually via browser

Steps:

- 1. Go to Set → Maintain → Auto Reboot.
- 2. Click the **Reboot**, and click **OK** to confirm the operation.
- 3. Device will reboot, and re-route your web page back to the login page.
- Auto-reboot the device at the certain time

Steps:

- 1. Go to Set → Maintain → Auto Reboot.
- 2. Set the time you want to reboot.
- 3. Click **Save** to save changes.

10.2 Restore and Default Settings

Restore and Default helps restore the device parameters to the default values.

• Restore default setting

Steps:

- 1. Go to Set \rightarrow Maintain \rightarrow Default Settings.
- 2. Select the type of settings you want to restore.
- 3. Click **Execute** to perform the operation.

• Restore factory setting

Steps:

- 1. Go to Set \rightarrow Maintain \rightarrow Default Settings.
- 2. Click Restore factory and **Execute** to restore everything to default.

🖉 Note

Be careful when using this function. After resetting to the factory default, all the parameters are reset to the default settings.

10.3 Config Export/Import

It helps speed up batch configuration on other devices that need to have the same parameters. **Steps:**

- 1. Go to Set → Maintain → Import/Export.
- 2. Click Export Config **Execute**, select the folder you want to save the config file.
- 3. Click Import Config Execute, select the config file you want to Import.

10.4 Upgrade device

Before You Start

You need to obtain the correct upgrade package.

<u>/!</u> Caution

DO NOT disconnect power during the process, the device reboots automatically after the upgrade.

Steps:

- 1. Go to Set \rightarrow Maintain \rightarrow Upgrade.
- 2. Click Select upgrade file.
- 3. Click Upgrade.

10.5 Search and Manage Log

Log will record the device operations, it helps to locate and analyze problems. **Steps:**

- 1. Go to Set \rightarrow Maintain \rightarrow Log.
- 2. Set the Type, Start time, End time.
- 3. Click **Search**. The matched log will be displayed on the log list.
- 4. Additionally, click **Backup** to save the log files in your computer.

Chapter 11 Playback and download video

This chapter introduces how to use the playback functions and download video from the local storage. **Before you start**

Insert the Micro-SD card and configure a valid recording schedule for device.

11.1 Playback the Recording Video

Steps:

- 1. Go to Playback.
- Click the date you want to search for the recordings. Black marked date means it has the record video.
 Device will search the record file on this date.
- 3. Select the type of video you want to play,



- 4. Click Late to play the video or left click on the video timeline you want to play.
- 5. Additionally, click to switch to video list page, Click the operation button.

Click to stop video	Click to Play the video with slow speed (x1/2,x1/4,x1/8)
Click to Pause the video	Click to play the video with fast Speed (x2,x4, x8, x16)
Click to Play the video by frame	Click to snapshot current picture
Click to Enable/Disable the audio	Click to Switch to the video file list page
Click to Control and sv	witch the time bar
Click to access the record file downlo	bad list

Table 11-1 Description of the items

11.2 Download the Video File

Steps:

- 1. Go to Playback.
- 2. Click I to enter the download page.
- 3. Select the **Type (**Record/Picture) you want to download.
- 4. Set the Start time, End time, click **Search.** It will show the video/picture list.
- 5. Select the file you want to download.
- 6. Select the video file format (DAV/AVI).
- 7. Click Download.

Operation 1	Туре	No.	Start Time	End Time	Record File Size(KB)	Channel	Туре	Encoding Format
• All Accord	Record 💌	01	2023- 1:59:59	2023 00:00:00	308	1	Time Record	H265
• Event Record 3 2023 00.1821 253739 1 Time Record H265 • Manual Record -4 2023 11821 2021 00.230 253739 1 Time Record H265 • Time Record -5 2023 15828 2023 00.59.28 253740 1 Time Record H265 • Fameter -7 2023 159.28 2023 011311 253740 1 Time Record H265 • Rameter -7 2023 159.28 2023 012.633 253740 1 Time Record H265 • Start Time -9 2023 12.633 2023 014318 253739 1 Time Record H265 • 0.00 00 -111 2023 154.18 2023 02310.12 253740 1 Time Record H265 • 0.00 00 -111 2023 154.18 2023 02310.23 253740 1 Time Record H265 • 0.00 00 <td< td=""><td>All Record</td><td>2</td><td>2023-):00:00</td><td>2023 00.04:38</td><td></td><td></td><td>Time Record</td><td></td></td<>	All Record	2	2023-):00:00	2023 00.04:38			Time Record	
Manual Record 4 2021 11 Constraints 1 Time Record H265 0 5 2021 132.03 2033 0.045.46 2037 1 Time Record H265 0 5 2022 132.03 0.045.46 2037 0.059.28 2037 1 Time Record H265 0 7 2022 175.92 2023 014.03 253740 1 Time Record H265 0 7 2022 13.11 2023 014.03 253740 1 Time Record H265 2023 10.01 2023 11.01 2023 014.03 253740 1 Time Record H265 2023 10.00.00 11 2023 154.18 2023 023.10 253740 1 Time Record H265 2023 2024 12.14 2023 023.10 253740 1 Time Record H265 2024 13 2024 12.1		3	2023-):04:38	2023 00:18:21	253739	1	Time Record	H265
Time Record S 2023 32.03 2023 004546 233741 1 Time Record H265 Parameter 6 2023 145.46 2021 0.59.24 253740 1 Time Record H265 Parameter 6 2023 13111 2021 0.59.24 253740 1 Time Record H265 Start Time 9 2023 132.11 2021 0.126.53 253740 1 Time Record H265 2023 0.00.00 1 1 Time Record H265 H265 2024 2021 140.36 2023 0.140.36 253740 1 Time Record H265 2023 2024 1202 0.221 1202 0.221 1 1 H265 2024 2025 121.42 2023 0.221.62.62 253740 1 Time Record H265 2024 2024 125.52 2023 0.25.52 253740 1 Time		4	2023-):18:21	2023 00:32:03	253739	1	Time Record	H265
Parameter 7 2023 15928 2023 011311 253740 1 Time Aecord H265 itart Time 8 2023 11311 2023 01263 253739 1 Time Aecord H265 itart Time 9 2023- 1263 2023 014036 253739 1 Time Aecord H265 2023- 50 00:00 11 2023- 16436 2023 014036 253739 1 Time Record H265 2023- 2000:0 2031 253740 1 Time Record H265 111 2023- 15418 2023 0208:01 253740 1 Time Record H265 12 2023- 15418 2023 024908 253740 1 Time Record H265 13 2023- 1532 2023- 03201 253740 1 Time Record H265 14 2023- 1532 023- 033016 253740 1 <td></td> <td>5</td> <td>2023- 1:32:03</td> <td>2023 00:45:46</td> <td>253741</td> <td>1</td> <td>Time Record</td> <td>H265</td>		5	2023- 1:32:03	2023 00:45:46	253741	1	Time Record	H265
Parameter 8 2023 113.11 2023 0126.53 253739 1 Time Record H265 Start Time 9 2023-1<26.53		6	2023-):45:46	2023 00:59:28	253740	1	Time Record	H265
B 2023 11211 2023 01233 23339 1 Image Record 1265 b 2023 2023 0140.36 253740 1 Time Record 1265 b000000 10 2023 154.18 253740 1 Time Record 1265 b000000 11 2023 154.18 2023 0214.32 253740 1 Time Record 1265 b000000 11 2023 0214.32 253740 1 Time Record 1265 b0023 235.959 13 2023 0214.32 253740 1 Time Record 1265 b0023 235.959 14 2023 023.051 253740 1 Time Record 1265 b0023 2024 149.08 2023 03.051 253740 1 Time Record 1265 b14 2023 16.34 2023 03.051 253740 1 Time Record 1265 b15 2024		07	2023- 1:59:28	2023 01:13:11	253740	1	Time Record	H265
And run Image: Constraint of the second of the	Parameter	8	2023- :13:11	2023 01:26:53	253739	1	Time Record	H265
2023 0000000 11 2023 154.18 2028 020.01 253740 1 Time Record H265 cmd Time 12 2023 023.1 2023 023.1.32 253790 1 Time Record H265 2023 123.69.59 13 2023 124.14 2023 023.62 253740 1 Time Record H265 channel 14 2023 124.14 2028 023.62 253740 1 Time Record H265 channel 15 2023 149.09 2028 024.908 253740 1 Time Record H265 NI Channel 16 2023 149.09 2028 03.02.51 253740 1 Time Record H265 Search 16 2023 149.09 2028 03.02.51 253740 1 Time Record H265 18 2023 143.01 2023 03.02.51 253740 1 Time Record H265 19 2023 143.01 2023 034.58 253799 1 Time Record H265 20 2023 143.05 2023 034.58 253740 1 Time Record H265 20 2023 143.50 2023 045.56	Start Time	0 9	2023- :26:53	2023 01:40:36	253740	1	Time Record	H265
Int 2023 isistility 2023 0228 0230 253740 1 Time Record H265 12 2023 60201 2023 022143 253740 1 Time Record H265 2023.4 235659 13 2023 0221424 2023 02230 253740 1 Time Record H265 Channel 14 2023 2023 0224 22144 2023 0230 253740 1 Time Record H265 Channel 15 2023 490.90 2023 030.51 253740 1 Time Record H265 All Channel 16 2023 490.90 203 031633 253740 1 Time Record H265 Intersection 16 2023 157.41 2023 031633 253740 1 Time Record H265 Intersection 18 2023 157.41 2023 0457.41 203 0457.41 1 Time Record H265 Intersection 2024 457.41 2023 0457.41	2022 (00:00:00	10	2023- :40:36	2023 01:54:18	253739	1	Time Record	H265
0 12 2023 1201 0213 223 1 <	2023-(00.00.00	0 11	2023- :54:18	2023 02:08:01	253740	1	Time Record	H265
Channel 1 2023 135.26 2023 02.49.08 253740 1 Time Record H265 channel 15 2023 49.09 2023 03.02.51 253740 1 Time Record H265 All Channel 16 2023 102.21 2023 03.02.51 253740 1 Time Record H265 Operation 17 2023 16.22 2023 03.03.016 253739 1 Time Record H265 Search 19 2023 15.714 2023 03.43.68 253739 1 Time Record H265 Step Download 19 2023 15.714 2023 04.1124 253739 1 Time Record H265 20 2023 15.714 2023 04.1124 253739 1 Time Record H265 21 2023 15.741 2023 04.21.06 253740 1 Time Record H265 224 2025 15.741<	End Time	12	2023- ::08:01	2023 02:21:43	253739	1	Time Record	H265
Channel 15 2023 249.09 2023 03.02.51 253740 1 Time Record H265 All Channel 16 2023- 10.231 203 03.1633 253739 1 Time Record H265 Operation 17 2023- 16.42 2023 03.1633 253739 1 Time Record H265 Search 19 2023- 16.42 2023 03.456 253739 1 Time Record H265 20 2023- 16.42 2023 03.456 253739 1 Time Record H265 20 2023- 16.42 2023 03.457.81 253739 1 Time Record H265 20 2023- 15.741 2023 04.1124 253740 1 Time Record H265 21 2023- 11.24 2023 04.35.06 253741 1 Time Record H265 22 2023- 14.364 20.32 04.35.06	2023-(23:59:59	13	2023- 2023-	2023 02:35:26	253740	1	Time Record	H265
Indicational If 2023 2023 030231 253740 1 Time Record H265 Indicational Indicational 2023 030231 253740 1 Time Record H265 Indicational 2023 0301633 253740 1 Time Record H265 Indicational 2023 030163 253740 1 Time Record H265 Indicational 2023 030163 253740 1 Time Record H265 Indicational 2023 031636 253740 1 Time Record H265 Indicational 2023 031636 253740 1 Time Record H265 Indicational 2023 031636 253740 1 Time Record H265 Indicational 2023 03216 2023 035741 253740 1 Time Record H265 Indicational 2023 04256 2023 04256 253740 1 Time Record H265 Indicational 2024 4203 04256 253740 1		14	2023- 1:35:26	2023 02:49:08	253740	1	Time Record	H265
Operation I ImmeReduct	hannel	15	2023- ::49:09	2023 03:02:51	253740	1	Time Record	H265
Operation 18 2023 isol6 2023 03:43:58 253739 1 Time Record H265 Search 19 2023 isol6 2023 03:57:41 253739 1 Time Record H265 20 2023 isol6 2023 03:57:41 253739 1 Time Record H265 20 2023 isol6 2023 04:124 253740 1 Time Record H265 Stop Download 22 2023 isol6 2023 04:250 253741 1 Time Record H265 21 2023 isol6 2032 04:250 253741 1 Time Record H265 22 2023 isol6 2032 04:25:14 253747 1 Time Record H265	All Channel 🛛 🔻	16	2023- 02:51	2023 03:16:33	253739	1	Time Record	H265
Image: Note of the state of the st	Operation	17	2023- 16:34	2023 03:30:16	253740	1	Time Record	H265
Search 20 2023 157.41 2023 0.411.24 253740 1 Time Record H265 Stop Download 21 2023 1.412.4 2033 0.425.06 253739 1 Time Record H265 22 2023 k25.06 2023 0.438.49 253741 1 Time Record H265 DAV AVI 23 2023 k38.49 2023 0.452.31 253747 1 Time Record H265	Орегации	18	2023- 1:30:16	2023 03:43:58	253739	1	Time Record	H265
Stop Download 21 2023 k11:24 2023 0425.06 253739 1 Time Record H265 2 2023 k25.06 2023 04.38.49 253741 1 Time Record H265 DAV AVI 23 2023 k38.49 2023 04.52.31 253747 1 Time Record H265	Search	19	2023- 1:43:59	2023 03:57:41	253739	1	Time Record	H265
Stop Download 22 2023- k25.06 2023 04.38.49 253741 1 Time Record H265 © DAV AVI 23 2023- k38.49 2023 04.52.31 253747 1 Time Record H265		20	2023- 1:57:41	2023 04:11:24	253740	1	Time Record	H265
DAV AVI 22 2023- L25.06 2023 04.38.49 253741 1 Time Record H265 DAV AVI 23 2023- k38.49 2023 04.52.31 253747 1 Time Record H265		21	2023- 1:11:24	2023 04:25:06	253739	1	Time Record	H265
	Stop Download	22	2023- k:25:06	2023 04:38:49	253741	1	Time Record	H265
24 2023 152-31 2023 05:06:14 253750 1 Time Record H265		23	2023- k:38:49	2023 04:52:31	253747	1	Time Record	H265
	OAV AVI	24	2023- k:52:31	2023 05:06:14	253750	1	Time Record	H265
25 2023- i:06:14 2023 05:19:56 253746 1 Time Record H265		25	2023- ::06:14	2023 05:19:56	253746	1	Time Record	H265

Figure 11-2 Download

The video file will start to download, and save to the PC folder.

To find the file, check the configured saving path from **5.1** Local Storage.