Dahua Network Camera Web3.0 Operation Manual

Version 1.0.6

ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD

Table of Contents

1 Product Overview 1
2 Initial Config 2
2.1 Device Initialization 2
2.2 Login and Logout 5
2.2.1 Log in WEB Interface 5
2.2.2 Logout 6
2.3 Reset Password 6
3 Live 9
3.1 Encode Setup 9
3.2 System Menu 10
3.3 Video Window Function Option 10
3.4 Video Window Setup 11
3.4.1 Image Adjustment 11
3.4.2 Original Size 12
3.4.3 Full Screen 12
3.4.4 Width and Height Ratio 13
3.4.5 Fluency Adjustment 13
3.4.6 Rules Info 13
3.4.7 Zoom and Focus 13
3.4.8 Fisheye/Trigger Track 14
4 PTZ Control 5
4.1 Scan 6
4.2 Preset 7
4.3 Tour 7
4.4 Pattern 8
4.5 Assistant 9
4.6 Light/Wiper 9
5 Playback 10
5.1 Playback 10
5.1.1 Function of Play 11
5.1.2 Playback File 12
5.1.3 Playback Cut 14
5.1.4 Record Type 14
5.1.5 Progress Bar 14
5.1.6 Assistant Function 15
5.2 Picture Playback 15
5.2.1 Play 16

5.2.2 Playback File 16
5.2.3 Snapshot Type 18
6 Setup 20
6.1 Camera 20
6.1.1 Conditions 20
6.1.2 Video 32
6.1.3 Audio 44
6.2 Network 46
6.2.1 TCP/IP 46
6.2.2 Connection 48
6.2.3 PPPoE 51
6.2.4 DDNS 52
6.2.5 IP filter 54
6.2.6 SMTP (e-mail) 54
6.2.7 UPnP 56
6.2.8 SNMP 57
6.2.9 Bonjour 59
6.2.10 Multicast 60
6.2.11 4G 60
6.2.12 WIFI 62
6.2.13 802.1x 65
6.2.14 QoS 66
6.2.15 HTTPs 67
6.3 Event 76
6.3.1 Video detection 76
6.3.2 Audio Detection 83
6.3.3 Smart Plan 85
6.3.4 Intelligence Behavior Analytics 85
6.3.5 Face Detection 94
6.3.6 Face Recognition 97
6.3.7 People Counting 111
6.3.8 Heat Map 119
6.3.9 Video Structuralization 122
6.3.10 ANPR 125
6.3.11 Alarm 129
6.3.12 Abnormity 133
6.4 Storage Management 136
6.4.1 Schedule 136
6.4.2 Destination 140

6.4.3 Record control 143
6.5 System 143
6.5.1 General 143
6.5.2 Account 145
6.5.3 PTZ 149
6.5.4 Default 150
6.5.5 Import/Export 151
5.5.6 Remote control 151
6.5.6 Auto Maintenance 152
6.5.7 Upgrade 153
6.6 Information 153
6.6.1 Version 153
6.6.2 Log 154
6.6.3 Online User 154
7 Alarm 156
8 Log out 158

Important

The following functions are for reference only. Some series products may not support all the functions listed below.

Cybersecurity Recommendations

1. Change Passwords and Use Strong Passwords

The number one reason systems get “hacked” is due to having weak or default passwords. It is recommended to change default passwords immediately and choose a strong password whenever possible. A strong password should be made up of at least 8 characters and a combination of special characters, numbers, and upper and lower case letters.

2. Update Firmware

As is standard procedure in the tech-industry, we recommend keeping NVR, DVR, and IP camera firmware up-to-date to ensure the system is current with the latest security patches and fixes.

“Nice to have” recommendations to improve your network security

1. Change Passwords Regularly

Regularly change the credentials to your devices to help ensure that only authorized users are able to access the system.

2. Change Default HTTP and TCP Ports:

● Change default HTTP and TCP ports for systems. These are the two ports used to communicate and to view video feeds remotely.

● These ports can be changed to any set of numbers between 1025-65535. Avoiding the default ports reduces the risk of outsiders being able to guess which ports you are using.

3. Enable HTTPS/SSL:

Set up an SSL Certificate to enable HTTPS. This will encrypt all communication between your devices and recorder.

4. Enable IP Filter:

Enabling your IP filter will prevent everyone, except those with specified IP addresses, from accessing the system.

5. Change ONVIF Password:

On older IP Camera firmware, the ONVIF password does not change when you change the system's credentials. You will need to either update the camera's firmware to the latest revision or manually change the ONVIF password.

6. Forward Only Ports You Need:

● Only forward the HTTP and TCP ports that you need to use. Do not forward a huge range of numbers to the device. Do not DMZ the device's IP address.

● You do not need to forward any ports for individual cameras if they are all connected to a recorder on site; just the NVR is needed.

7. Disable Auto-Login on SmartPSS:

Those using SmartPSS to view their system and on a computer that is used by multiple people should disable auto-login. This adds a layer of security to prevent users without the appropriate credentials from accessing the system.

8. Use a Different Username and Password for SmartPSS:

In the event that your social media, bank, email, etc. account is compromised, you would not want someone collecting those passwords and trying them out on your video surveillance system. Using a different username and password for your security system will make it more difficult for someone to guess their way into your system.

9. Limit Features of Guest Accounts:

If your system is set up for multiple users, ensure that each user only has rights to features and functions they need to use to perform their job.

10. UPnP:

● UPnP will automatically try to forward ports in your router or modem. Normally this would be a good thing. However, if your system automatically forwards the ports and you leave the credentials defaulted, you may end up with unwanted visitors.

● If you manually forwarded the HTTP and TCP ports in your router/modem, this feature should be turned off regardless. Disabling UPnP is recommended when the function is not used in real applications.

11. SNMP:

Disable SNMP if you are not using it. If you are using SNMP, you should do so only temporarily, for tracing and testing purposes only.

12. Multicast:

Multicast is used to share video streams between two recorders. Currently there are no known issues involving Multicast, but if you are not using this feature, deactivation can enhance your network security.

13. Check the Log:

If you suspect that someone has gained unauthorized access to your system, you can check the system log. The system log will show you which IP addresses were used to login to your system and what was accessed.

14. Physically Lock Down the Device:

Ideally, you want to prevent any unauthorized physical access to your system. The best way to achieve this is to install the recorder in a lockbox, locking server rack, or in a room that is behind a lock and key.

15. Connect IP Cameras to the PoE Ports on the Back of an NVR:

Cameras connected to the PoE ports on the back of an NVR are isolated from the outside world and cannot be accessed directly.

16. Isolate NVR and IP Camera Network

The network your NVR and IP camera resides on should not be the same network as your public computer network. This will prevent any visitors or unwanted guests from getting access to the same network the security system needs in order to function properly.

Electrical safety

- All installation and operation should conform to your local electrical safety codes.
- The power source shall conform to the requirement of the Safety Extra Low Voltage (SELV) standard, and supply power with voltage rated by DC 12 V or AC 24 V according to the Limited power Source requirement of IEC60950-1. Please note that the power supply requirement is subject to the device label.
- Make sure the power supply is correct before operating the device.
- A readily accessible disconnect device shall be incorporated in the building installation wiring
- Prevent the power cable from being trampled or pressed, especially the plug, power socket and the junction extruded from the device.
- We assume no liability or responsibility for all the fires or electrical shock caused by improper handling or installation.
-

Environment

- Do not aim the device at strong light to focus, such as lamp light and sun light, otherwise it might cause over brightness or light marks, which are not the device malfunction, and affect the longevity of Charge Coupled Device (CCD) or Complementary Metal-Oxide Semiconductor (CMOS).
- Do not place the device in a damp or dusty environment, extremely hot or cold temperatures, or the locations with strong electromagnetic radiation or unstable lighting.
- Keep the camera away from water or other liquid to avoid damages to the internal components.
- Keep the indoor device away from rain or damp to avoid fire or lightning.
- Keep sound ventilation to avoid heat accumulation.
- Transport, use and store the device within the range of allowed humidity and temperature.
- Heavy stress, violent vibration or water splash are not allowed during transportation, storage and installation.
- Pack the device with standard factory packaging or the equivalent material when transporting the device.

Privacy Protection Notice

As the device user or data controller, you might collect personal data of others' such as face, fingerprints, car plate number, Email address, phone number, GPS and so on. You need to be in compliance with the local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures include but not limited to: providing clear and visible identification to inform data subject the existence of surveillance area and providing related contact.

About the Manual

- The Manual is for reference only. If there is inconsistency between the Manual and the actual product, the actual product shall govern.
- We are not liable for any loss caused by the operations that do not comply with the Manual.
- The Manual would be updated according to the latest laws and regulations of related regions. For detailed information, see the paper Manual, CD-ROM, QR code or our official website. If there is inconsistency between paper User's Manual and the electronic version, the electronic version shall prevail.
- All the designs and software are subject to change without prior written notice. The product updates might cause some differences between the actual product and the Manual. Please contact the customer service for the latest program and supplementary documentation.
- There still might be deviation in technical data, functions and operations description, or errors in print. If there is any doubt or dispute, please refer to our final explanation.
- Upgrade the reader software or try other mainstream reader software if the Guide (in PDF format) cannot be opened.

- All trademarks, registered trademarks and the company names in the Manual are the properties of their respective owners.
- Please visit our website, contact the supplier or customer service if there is any problem occurred when using the device.
- If there is any uncertainty or controversy, please refer to our final explanation.

1 Product Overview

The common networking mode for IPC is to connect IPC to PC via switch or router. The common network mode is shown in Figure 1-1.

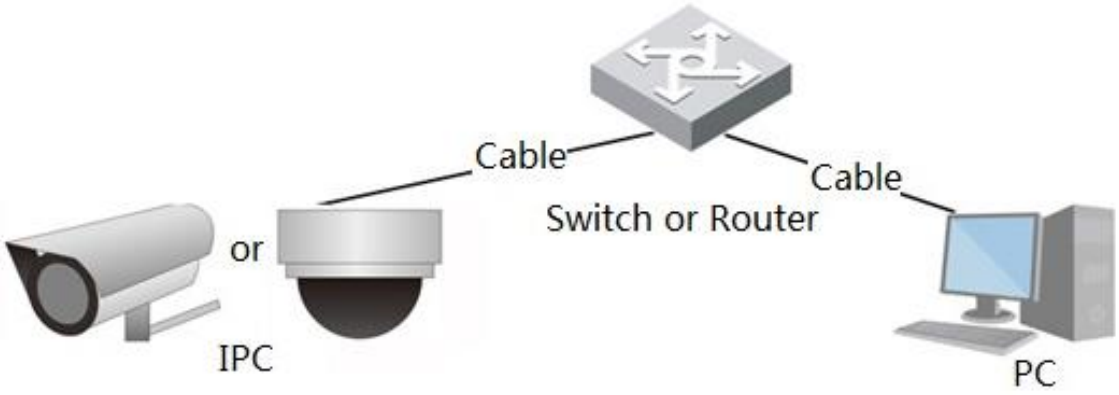


Figure 1-1

Before you have access to network camera via the Internet, you need to acquire its IP address. Users can search IP address of network camera via *Quick Config Tool*.

2 Initial Config

In this chapter it is to introduce the device initial config operation, which includes device initialization, login device, log out WEB interface and password reset.

2.1 Device Initialization

It needs to implement device initialization when you use the device for the first time. Here it is to take WEB operation as an example to introduce device initialization. You can also initialize device via *Quick Config Tool*, NVR and platform etc.

Note

In order to guarantee device safety, please keep admin login password properly after device initialization, and modify the password regularly.

Step 1

Open IE browser, input camera IP address in the address bar and click **Enter**.

The system will display the interface of *Device Initialization* after it is connected successfully, which is shown in Figure 2-1.

Note

The default IP address is 192.168.1.108.

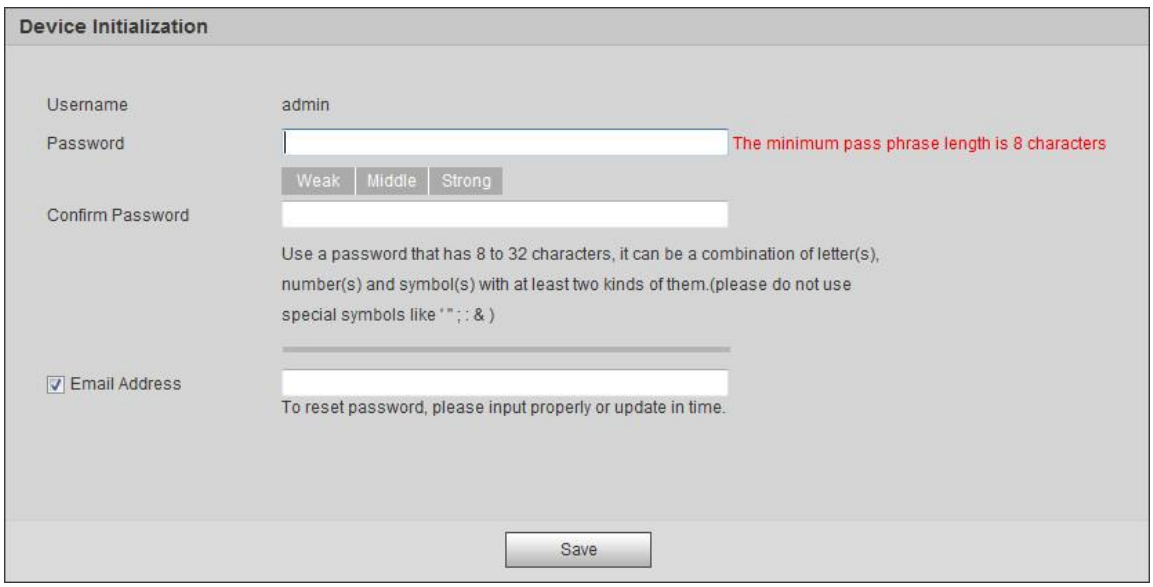


Figure 2-1

Step 2

It is to set admin login password, please refer to Table 2-1 for more details.

Parameter	Note
User name	The default user name is **admin**
Password	The password ranges from 8 to 32 digitals. It can contain letters, numbers and special characters (excluding “’”,“"”,“;”,“:”,“&”) . The password shall contain at least two categories. Usually we recommend the strong password.
Confirm password	
Email	Input an email address for reset password purpose. In case you forgot password in the future, input the security code you got on the assigned email to reset the password of admin.

Table 2-1

Step 3

Click **Save**.

The system will display the interface of *End-User License Agreement,* which is shown in Figure 2-2.

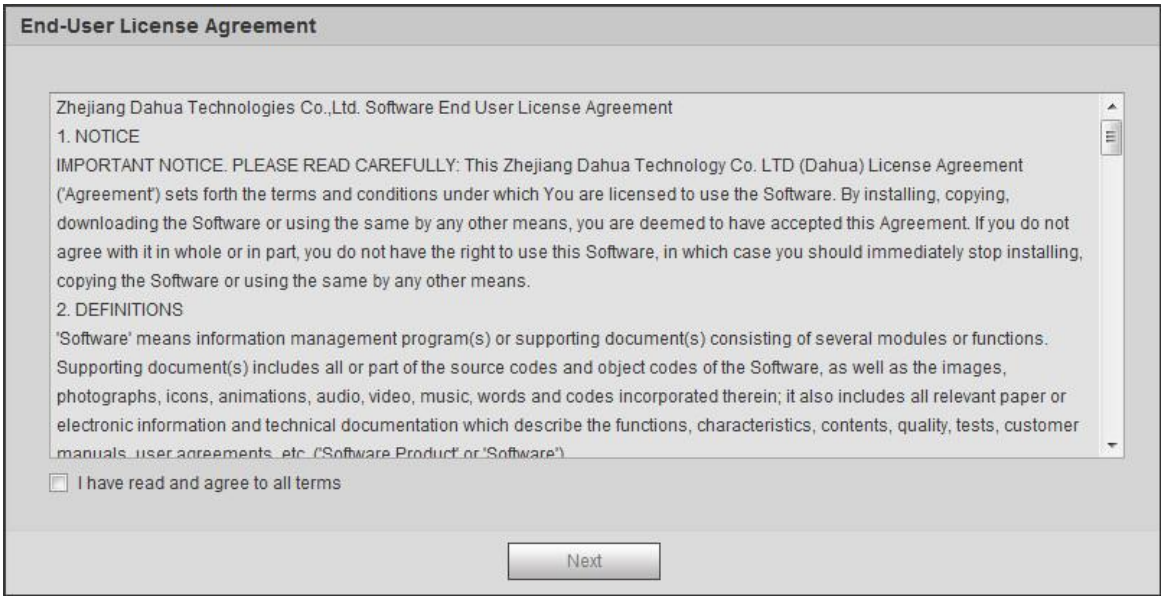


Figure 2-2

Step 4

Select *I have read and agree to all terms* and click **Next**.

The system will display the interface of P2P, which is shown in Figure 2-3.

Figure 2-3

Step 5

Select P2P according to actual needs and realize P2P registration for device, click **next**. The system will display the interface of Online Upgrade, which is shown in Figure 2-4

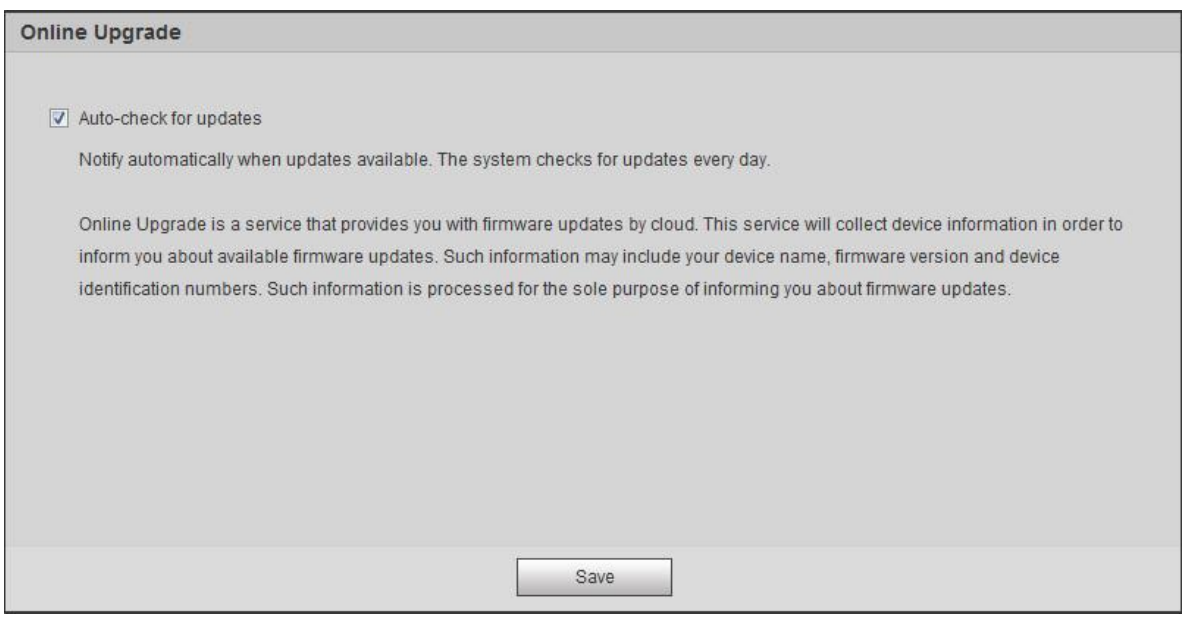


Figure 2-4

Step 6

It is to set upgrade method according to the actual requirements.

Select *Auto-check for upgrade* and the system will check once daily automatically when there is system upgrade prompt.

Note

After login, you can make setting in ‘Setup > System > Upgrade > Online Upgrade’.

Step 7

Click **Save** and device initialization is completed.

2.2 Login and Logout

Here it is to introduce device login and WEB interface logout via browser, it is to take IE Explorer 8 as an example to make introduction.

2.2.1 Log in WEB Interface

Users can make operations such as live, playback and config upon the device after logging in device WEB interface via browser.

Note

- It can log in WEB interface after device initialization is completed.
- It will prompt to install plug-in when logging in the system for the first time, please download and install plug-in according to prompt.

Step 1

Open IE browser, input camera IP address in the address bar and click **Enter** button.

The system will display the Login interface after it is successfully connected, which is shown in Figure 2-5.

Figure 2-5

Step 2

Input the password of admin user.

Step 3

Click **Login**.

It will display the **Live** interface after it logged in successfully, which is shown in Figure 2-6.

Note

Different devices have different functions with different interface display; please refer to the actual interface for more details.

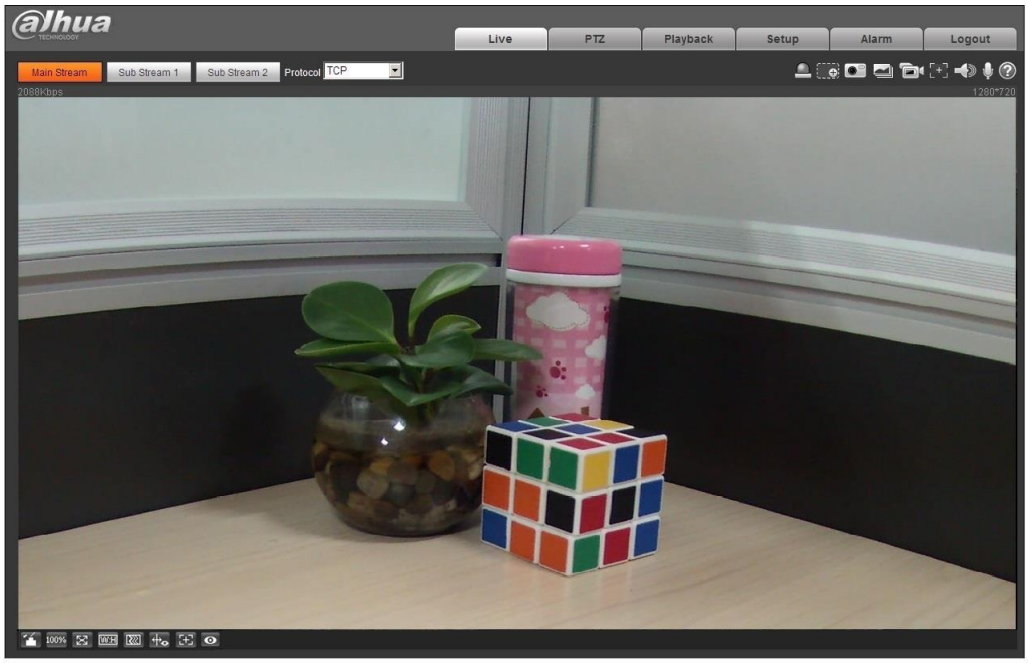


Figure 2-6

2.2.2 Logout

Click **Logout** and return to WEB login interface. After logging in the device WEB, the system will hibernate automatically if it fails to operate the device for a period of time. It can recover to normal working status quickly after entering password.

2.3 Reset Password

Users can reset password via reserved email when you forget the password of admin user.

Step 1

Open IE browser, input camera IP address in the address bar and click **Enter** button.

The system will display the Login interface after it is successfully connected, which is shown in Figure 2-7.

Figure 2-7

Step 2

Click *Forgot password?*

The system will display the interface of *Reset Password*, which is shown in Figure 2-8.

Figure 2-8

Step 3

Reset login password.

Scan the QR code according to the interface prompt and acquire security code, then input the security code which is received via your reserved email.

Caution

- Please use the security code to reset the password within 24 hours after you received the security code via your reserved email. Otherwise the security code will be invalid.
- If you fail to use security code for twice continuously, then the system will prompt that it fails to acquire security code for the third time. It needs hardware to restore device default setting and acquire security code again or wait for 24 hours and acquire it again if it needs to use the device normally.

Step 4

Click **next**.

The system will display the interface where you can set the new password, which is shown in Figure 2-9.

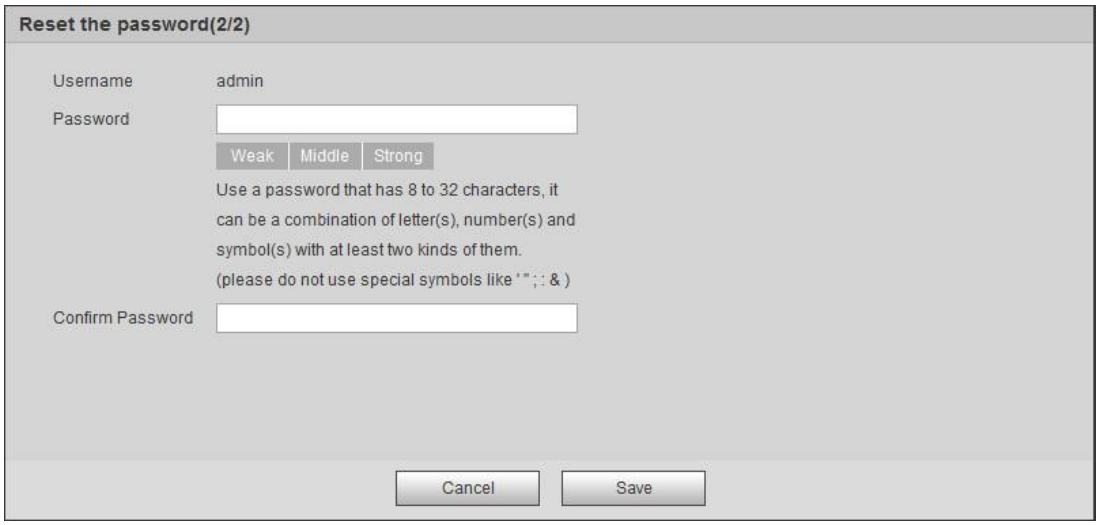


Figure 2-9

Step 5

Reset *Password* and *Confirm Password*.

The password ranges from 8 to 32 digitals. It can contain letters, numbers and special characters (excluding “‘”,“"”,“;”,“:”,“&”) . The password shall contain at least two categories. Usually we recommend the strong password.

Step 6

Click **Save** and complete password reset.

The system will display the *Login* interface.

3 Live

After you logged in, you can see the live monitor window. See Figure 3-1.

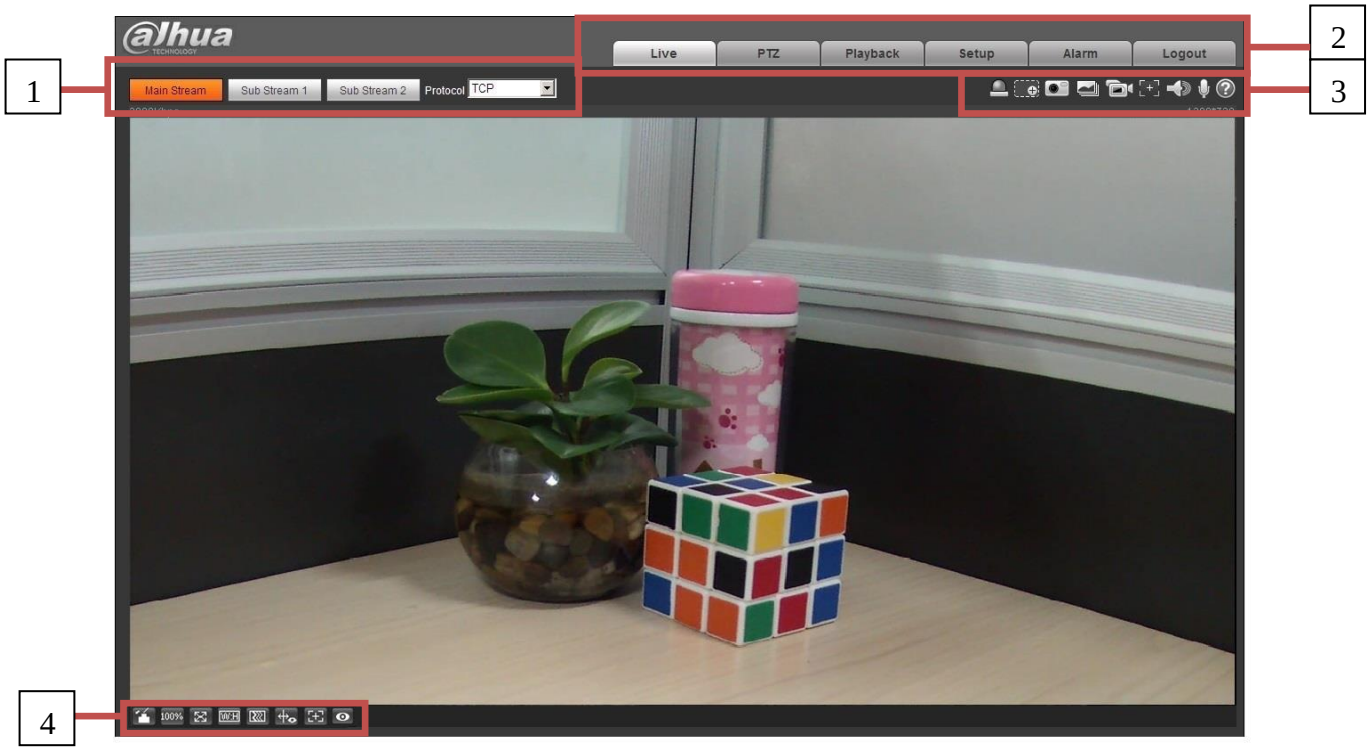


Figure 3-1

There are four sections:

- Section 1: Encode setup bar
- Section 2: System menu
- Section 3: Window function option bar
- Section 4: Window adjust bar

3.1 Encode Setup

Note: Some series don't support sub stream 2.

The encode setup interface is shown as in Figure 3-2.

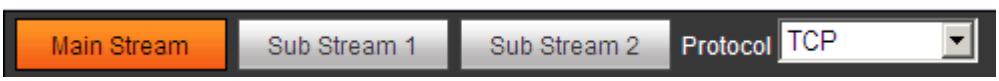


Figure 3-2

Please refer to the following sheet for detailed information.

Parameter	Description
Main stream	Click it to enable main stream video monitoring and click again to disable it. Generally for storage and monitor.
Sub Stream 1	Click it to enable Sub Stream1 video monitoring and click again to disable it. When network bandwidth is insufficient, it substitutes main stream for monitoring.
Sub Stream 2	Click it to enable Sub Stream 2 video monitoring and click again to disable it. When network bandwidth is insufficient, it substitutes main stream for monitoring.
Protocol	You can select stream media protocol from the dropdown list. There are three options: TCP/UDP/Multicast

3.2 System Menu

System menu is shown as in Figure 3-3.

Please refer to chapter 2 Live, chapter 3 PTZ, chapter 4 Playback, chapter 5 Setup, chapter 6 Alarm, chapter 7 Log out for detailed information.

Figure 3-3

3.3 Video Window Function Option

The interface is shown as below. See Figure 3-4.

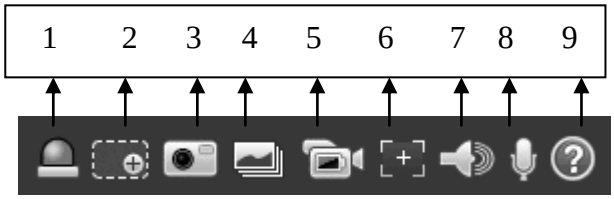


Figure 3-4

Please refer to the following sheet for detailed information.

SN	Parameter	Description
1	Relay-out	It shows if there is any alarm output, status description is as follows: ● Red: means there is alarm output. ● Grey: means alarm is over. Click on the button to force alarm to be on or off.

2	Digital Zoom	● When the video is in the original status, click it you can select any zone to zoom in. In the non-original status, you can drag the zoom-in zone in specified range. Right click mouse to restore previous status. ● Click it; you can use the middle button of the mouse to zoom in/out the video size.
3	Snapshot	Click on the button to snapshot, save picture to path in Ch 5.1.2.5.
4	Triple Snapshot	Click it to take snapshot upon the video at the frequency of one picture per second. All images are saved to path in Ch 5.1.2.5.
5	Record	Click it to record the video. All videos are saved to path in Chapter 5.1.2.5.
6	Easy focus	Click it, you can see there are two parameters on the preview video：AF Peak and AF Max. AF Peak: It is to display the video definition during the focus process. AF Max: It is the most suitable value for the video definition. The close the AF Peak and AF Max is, the better the focus effect is.
7	Audio	Turn on or off audio when you are monitoring.
8	Talk	Click it to start or end bidirectional talk.
9	Help	Click it to open help file.

3.4 Video Window Setup

The interface is shown as in Figure 3-5.

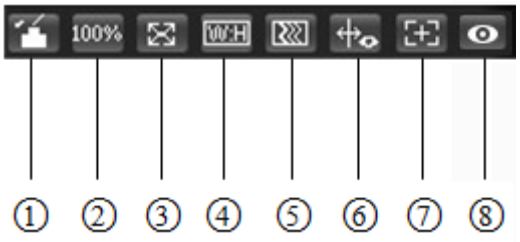


Figure 3-5

3.4.1 Image Adjustment

See Figure 3-6 for image adjustment.

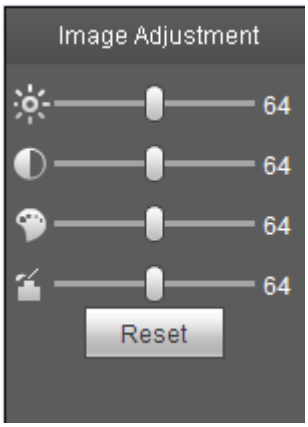


Figure 3-6

Click this button to display/hide image control interface. Click it to open picture setup interface. This interface is on the top right pane.

Please refer to the following sheet for detailed information.

Parameter		Description	
Video setup		It is to adjust monitor video brightness.	Note: ● All the operations here apply to WEB end only. ● Please go to Setup->Camera->Conditions to adjust corresponding items.
		It is to adjust monitor video contrastness.	
		It is to adjust monitor video hue.	
		It is to adjust monitor video saturation.	
	Reset	Restore brightness, contrastness saturation and hue to system default setup.	

3.4.2 Original Size

Click this button to go to original size. It is to display the actual size of the video stream. It depends on the resolution of the bit stream.

3.4.3 Full Screen

Click it to go to full-screen mode. Double click the mouse or click the Esc button to exit the full screen.

3.4.4 Width and Height Ratio

Click it to restore original ratio or suitable window.

3.4.5 Fluency Adjustment

There are three levels of fluency for you to select (Realtime, Normal, and Fluency). The default is normal.

3.4.6 Rules Info

Click the button, preview image will display intelligent rules after enabling; it is “enable” by default.

3.4.7 Zoom and Focus

Click this button and the focus zooming interface appears on the right of preview interface, as shown in Figure 2-7, click left mouse button to adjust focus zooming configuration.

Note:

- The product series which support motorized zoom, synchronous focus and back focus have this button.
- Auto-focus after zoom and focus adjustment.

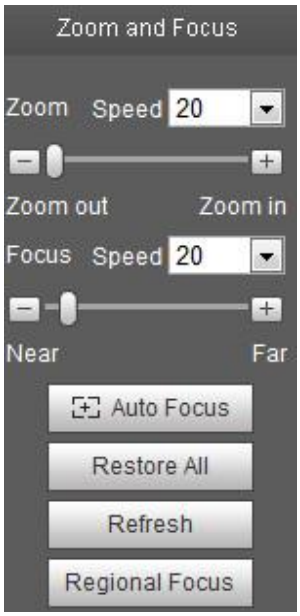


Figure 3-7

Parameter	Description
Zoom	Adjust the focal length of the lens by clicking or long pressing “+”“-”buttons. The speed is used to adjust the length of one step during single click.
Focus	Adjust the sharpness of the lens by clicking or long pressing“+”、“-” buttons. Step length is used to adjust the length of one step with one click.

Parameter	Description
Auto-focus	Click to adjust the image definition automatically. Note: Other lens operations are not allowed during the process of auto-focus.
Reset All	Reset the lens to zero position to eliminate the accumulative error of lens. Note: Please reset when the image adjustment is not clear or operating zoom focus many times.
Refresh	Synchronize the location of drag slider of lens and zoom focus after hardware zoom focusing.
Regional Focus	Click it and use the mouse to select a zone, then the device can auto focus within the specific region.

3.4.8 Fisheye/Trigger Track

Set installation mode, displayed mode and VR mode according to the actual situation.

Note:

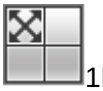
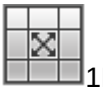
This function is available on some select models.

Click on the left corner of the interface. The setting interface is interface is displayed on the right of the live view interface. See Figure 3-8.

Figure 3-8

Parameter	Description
Installation Mode	Three modes: ceiling mount, wall mount and ground mount.
Display Mode	It represents the display mode of the current image (default supports original image mode), the display modes may be different according to different installation modes. It is shown as follows: ● Ceiling: 1P+1、2P、1+2、1+3、1+4、1P+6、1+8。 ● Wall: 1P、1P+3、1P+4、1P+8。 ● Ground: 1P+1、2P、1+3、1+4、1P+6、1+8。 Note: The default displays original image mode when switching installation mode.

Parameter	Description	
VR Mode	Panorama	Drag or cross the screen 360° to unfold the distortion panorama, and you can drag the image in left/right direction.
	Semi-circle	● You can drag the image in upper/lower/left/right direction. Press I to display the panorama, and press O to return the orignal size. ● Press S to rotate the image in anticlockwise direction, and press E to stop the rotation. ● Scroll the mouse wheel to zoom the image.
	Cylinder	Display the distortion panorama in 360°circularity. ● You can drag the image in upper/lower/left/right direction. Press I to display the panorama, and press O to return the orignal size. ● Press S to rotate the image in anticlockwise direction, and press E to stop the rotation. ● Scroll the mouse wheel to zoom the image.
	Asteroid	● You can drag the image in upper/lower/left/right direction. Press I to display the panorama, and press O to return the orignal size. ● Press the left mouse-button to slide down to display the image on the planet surface. ● Scroll the mouse wheel to zoom the image.
In-ceiling/Wall/Ground	Original image	It menas the original image without de-warpping
In-ceiling/Ground	1P+1	360°expanded rectangular panorama + independent sub image, the sub image and the subbox in the expanded rectangular panorama support zoom and movement, for the expanded rectangular panorama also supports left and right starting point movement.
	2P	Two related 180° expanded rectangular pictures, two subwindows form 360° panorama anytime, which is also called “dual panorama”. Two expanded rectangular pictures both support left and right movement starting point, which are also linked by eachother.
	1+2	Original image + 2 independent sub images, both the sub image and the subbox in the original image support zoom and movement. The original image also supports changing starting point by rotation (no such display mode for ground installation).

Parameter	Description	
	1+3	Original image + 2 independent sub images, both the sub image and the subbox in the original image support zoom and movement. The original image also supports changing starting point by rotation
	1+4	Original image + 4 independent sub images, both the sub image and the subbox in the original image support zoom and movement. The original image also supports changing starting point by rotation
	1P+6	360°expanded rectangular panorama +6 independent sub image, both the sub image and the subbox in the expanded rectangular panorama support zoom and movement, for the expanded rectangular panorama also supports left and right starting point movement.
	1+8	Original image + 8 independent sub images, both the sub image and the subbox in the original image support zoom and movement. The original image also supports changing starting point by rotation
Wall	1P	From left to right 180° expanded rectangular panorama, which supports up and down movement and changes vertical angle of view.
	 1P+3	180° expanded rectangular panorama+3 independent sub images, both the sub images and the sub box in the expanded rectangular panorama support zoom and movement, expanded rectangular panorama supports up and down movement and changes vertical angle of view.
	1P+4	180° expanded rectangular panorama+4 independent sub images, both the sub images and the sub box in the expanded rectangular panorama support zoom and movement, expanded rectangular panorama supports up and down movement and changes vertical angle of view.
	 1P+8	180° expanded rectangular panorama+8 independent sub images, both the sub images and the sub box in the expanded rectangular panorama support zoom and movement, expanded rectangular panorama supports up and down movement and changes vertical angle of view.

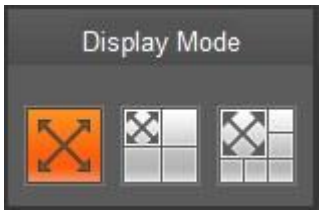


Figure 3-9

Enable the trigger track on the interface of tripwire or intrusion, and draw the rule of tripwire or intrusion, the scene of trigger track window will change according to the moving object when it triggers rule alarm until the moving object disappears from the view range of the camera. Please refer to “5.3.4 IVS” for more details about the rules drawing and parameter config of tripwire and intrusion.
Trigger track includes three modes which are 1P, 1P+3 and 1P+5.

- 1P: Original picture
- 1P+3: Original picture and three trigger track windows, it can adjust the location and size of three trigger track windows on the original picture.
- 1P+5: Original picture and five trigger track windows, it can adjust the location and size of five trigger track windows on the original picture.

4 PTZ Control

Here you can view direction keys, speed, zoom, focus, iris, preset, tour, scan, pattern, aux on, off and PTZ setup button.

Note

Before PTZ operation, please make sure you have properly set PTZ protocol. (Please refer to Ch 5.5.3).

Currently only IPC-HFXXXX series and –PT series products can support PTZ function.

Parameter	Description
PTZ direction	PTZ supports eight directions: left/right/up/down/upper left/upper right/bottom left/bottom right.
Speed	It controls rotation speed. The longer the step length, the higher the speed. Step length control PTZ, zoom, focus and iris.
Quick Position	Use mouse to draw a box in monitoring video, PTZ will rotate and focus to quickly positioning.

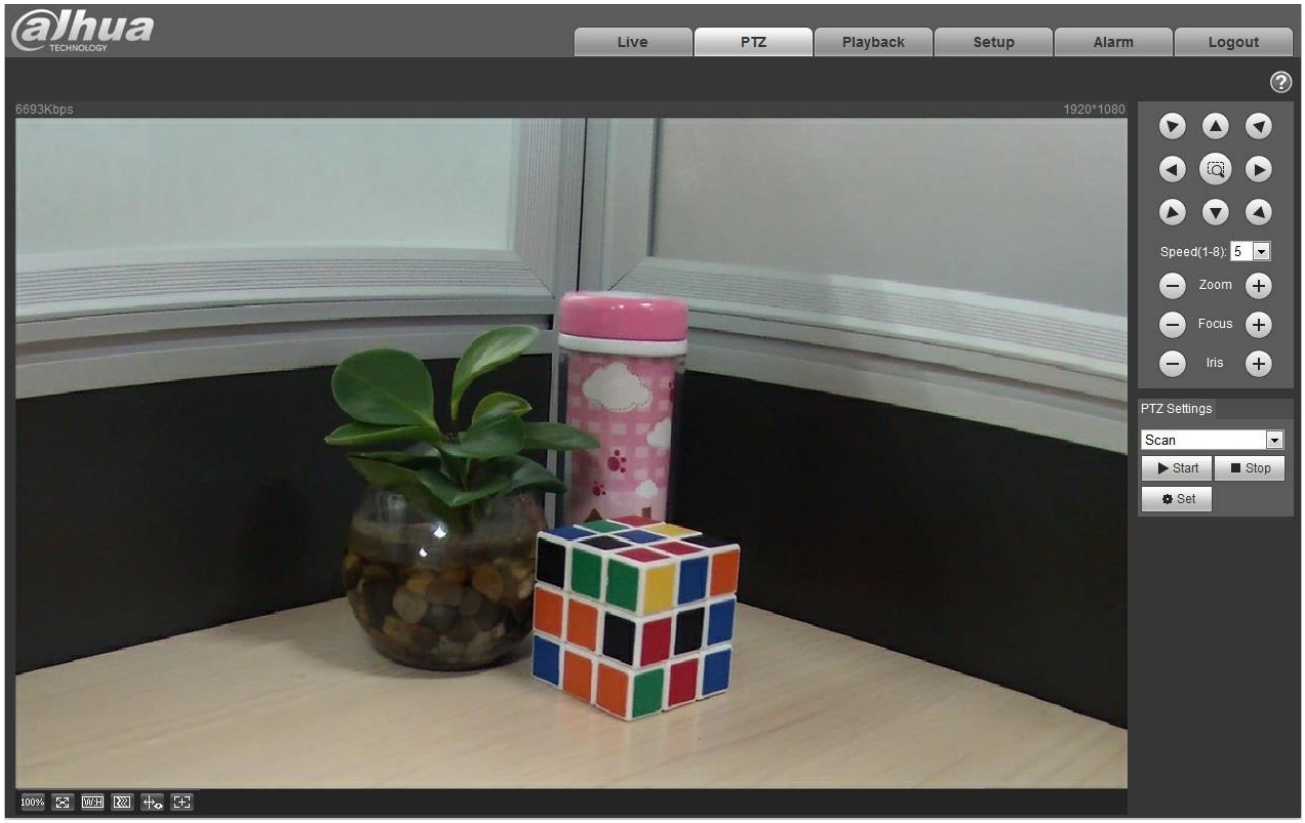


Figure 4-1

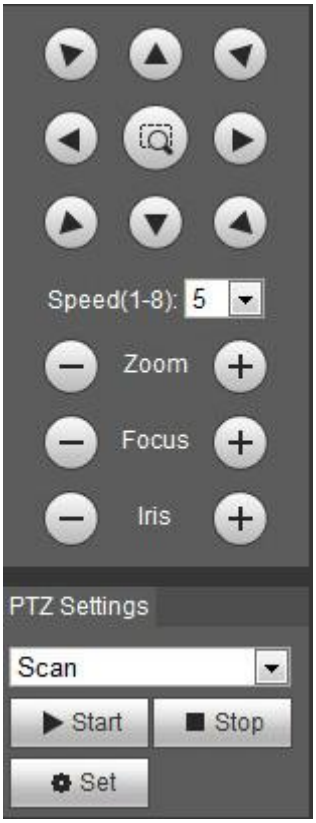


Figure 4-2

PTZ setting interface is shown as in Figure 4-3.

Here you can set scan, preset, tour, pattern, assistant function and light and wiper plus view coordinate.

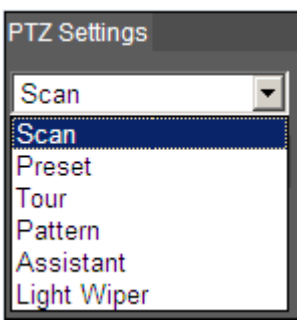


Figure 4-3

4.1 Scan

Scan interface is shown in Figure 4-4.

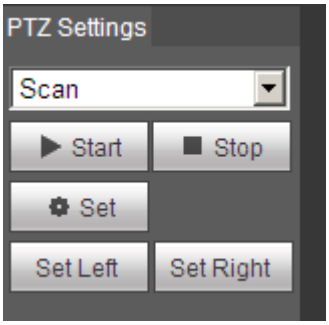


Figure 4-4

Steps to scan are:

Step 1. Click on Set button, display icon.

Step 2. Move via direction key to select left, click on Set Left to set left border of camera

Step 3. Move via direction key to select right, click on Set Right to set right border of camera.

Step 4. Complete scan path setup.

4.2 Preset

Preset interface is shown in Figure 4-5.

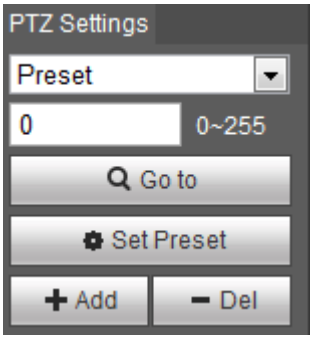


Figure 4-5

Steps to preset are:

Step 1. In preset box, input preset value.

Step 2. Click on Go to, camera rotates to preset position.

Step 3. Use direction key to rotate camera, and in preset box input preset value.

Step 4. Click on Add to add a preset. Range of preset relates to PTZ protocol.

4.3 Tour

Tour interface is shown in Figure 4-6.

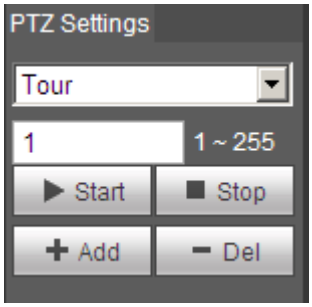


Figure 4-6

Steps to tour are:
Step 1. In tour box, input tour path value.
Step 2. Click on Add. Range of tour relates to PTZ protocol.
Step 3. In preset box, input preset value.
Step 4. Click on Add as to add a preset in this tour. If click on Del, it deletes this preset in tour.
Note:
You can add more than one preset here, or delete more than one preset.

4.4 Pattern

Pattern interface is shown in Figure 4-7.

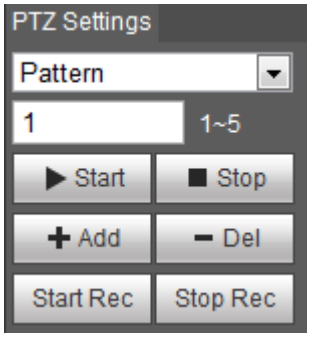


Figure 4-7

Steps to set pattern are shown as follows:
Step 1
Input pattern serial number value in the box, click “Add” and it will display “Start Rec” and “Stop Rec”.
Step 2
Click “Start Rec” to implement a series of operations such as zoom, focus, iris, direction and so on.
Step 3

Click “Stop Rec” to complete the setting of a pattern path.

Step 4

Click “Start” and it will start pattern according to the pattern path which has been set; click “Stop” and the pattern ends.

4.5 Assistant

Assistant interface is shown in Figure 4-8.

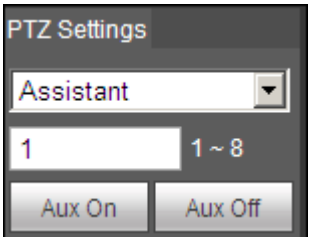


Figure 4-8

Steps to assistant are:

Step 1. In assistant box input assistant value.

Step 2. Click on Aux On to turn on aux function.

Click on Aux off to turn off aux function.

4.6 Light/Wiper

Light wiper interface is shown in Figure 4-9.

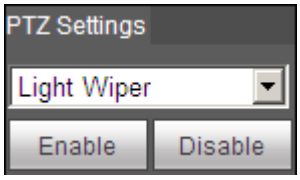


Figure 4-9

Steps to light wiper are:

- Click on Enable to enable light wiper function.
- Click on Disable to disable light wiper function.

5 Playback

Web client playback supports video playback and picture playback.

Note:

Before playback, user shall set storage management as in Ch. 5.4.

5.1 Playback

The playback interface is shown as in Figure 5-1.

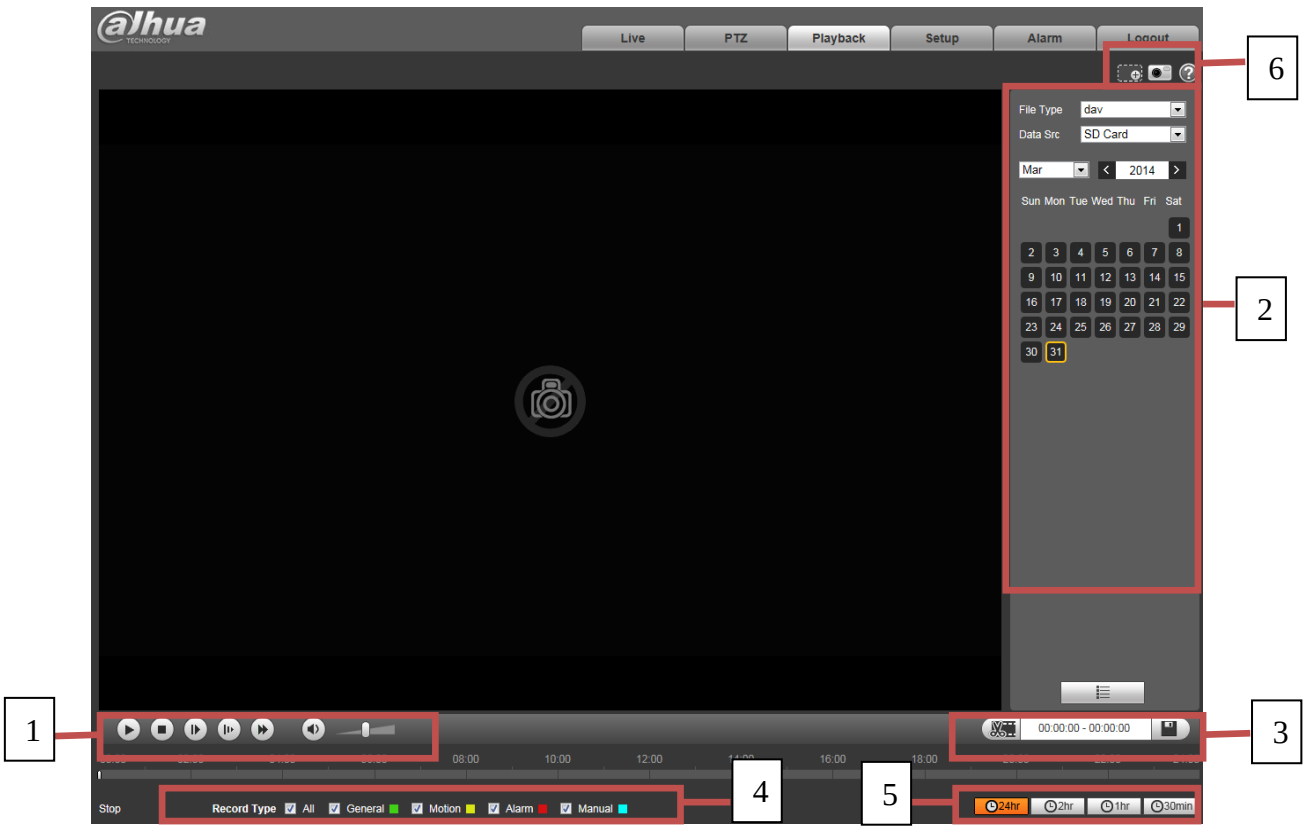


Figure 5-1

There are four sections:

- Section 1: Function of play
- Section 2: Playback file
- Section 3: Play time cut
- Section 4: Record type
- Section 5: Progress bar
- Section 6: Assistant function

5.1.1 Function of Play

The function of play is shown as in Figure 5-2 and Figure 5-3.

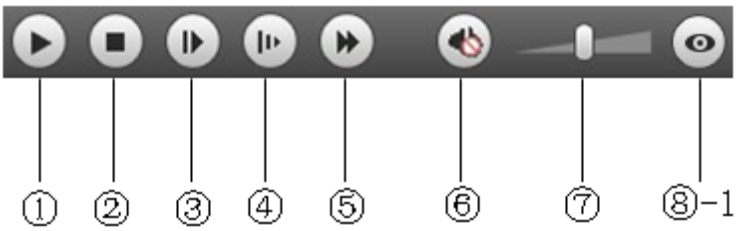


Figure 5-2

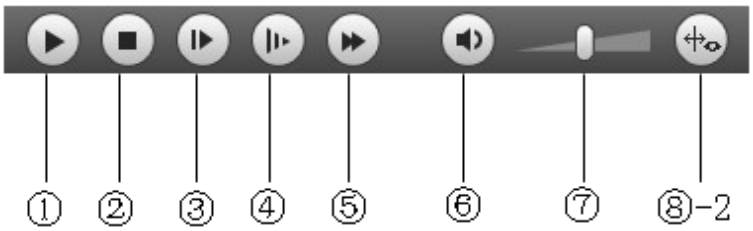


Figure 5-3

Parameter	Description
① Play	When you see this button, it means pause or not played record. Click on this button, switch to normal play status.
② Stop	Click this button to stop playing.
③ Play by frame	Click on this button to go to next frame. Note: You shall pause record when you use this function.
④ Slow	Click on this button to play slowly.
⑤ Quick	Click on this button to play quickly.
⑥ Silent	When this button displays, it means audio is silent. Click on this button to switch back to normal.
⑦ Volume	Click on left mouse to adjust volume.
⑧ -1 Fisheye	Click this button and fisheye device can adjust display mode according to different installation mode during the process of playback.
⑧ -2 Rule Info	Click the button and it will playback and display intelligent rules and object detection box if the video is equipped with intelligent rule info after the function is enabled, it is off by default.

5.1.2 Playback File

In calendar, blue date represents data currently has video record or snapshot. See Figure 5-4.

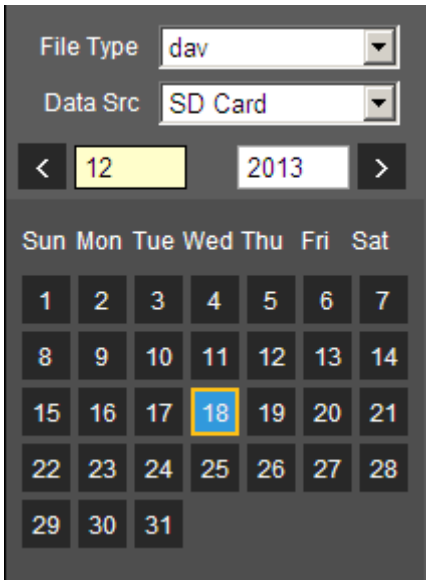


Figure 5-4

Parameter	Description
File Type	● Select “dav”, as video playback. ● Select “jpg” as picture playback.
Data Source	Default is SD card.

Step 1. Click on data in blue, time axis displays record file progress bar in color. While, green represents normal record, yellow represents motion detect record, red represents alarm record, and blue represents manual record.

Step 2. Click on certain time on progress bar, playback starts from this time. See Figure 5-5.

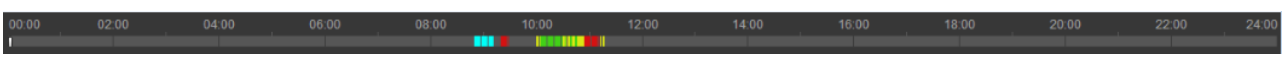


Figure 5-5

Step 3. Click on file list , select date file will be displayed in list.

Step 4. Double click on file in list, playback this file and display file size, start time and end time. See Figure 5-6.

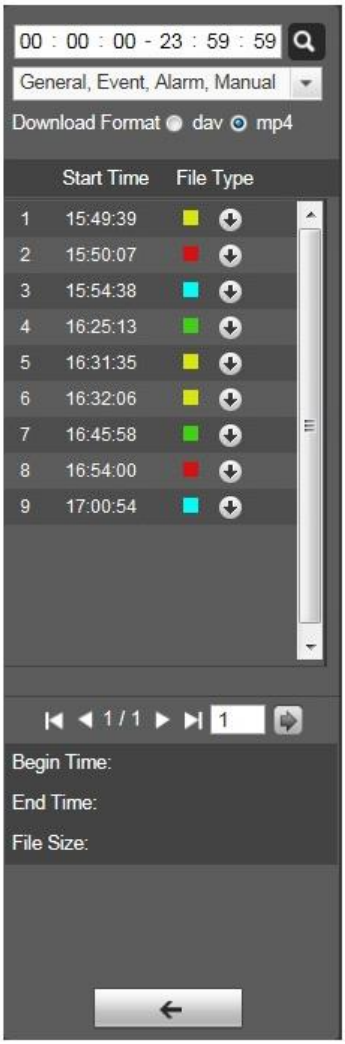


Figure 5-6

Parameter	Description
Search	It means records within searched start time and end time on the date.
Download Format	There are two formats: dav, mp4.
Download	• click the download button and download file to path in Ch. 5.1.2.5. • System does not support download and playback at the same time.

Parameter	Description
Back	Click on back button to go to calendar interface.

5.1.3 Playback Cut

Note:

Playback cut function will automatically pause playing record as playback cut and playback cannot be at the same time.

Step 1. Click on start time to cut on time axis. This time must be within progress bar range.

Step 2. Move mouse to cut icon. You will be ask to select start time. Click on cur icon as finish cutting.

Step 3. Click on playback cut end time on time axis. This time must be within progress bar range.

Step 4. Move mouse to cut icon you will be asked to select end time. Click on cut icon as finish cutting.

Step 5. Click on Save button to save file cut to path in Ch 5.1.2.5. See Figure 5-7.

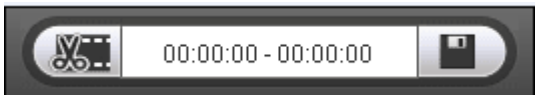


Figure 5-7

5.1.4 Record Type

After checking record file type, only selected file will be displayed in progress bar and file list. Users can also select the record type to be displayed via the dropdown box which is above the file list. See Figure 5-8.

Figure 5-8

5.1.5 Progress Bar

Figure 5-9

Parameter	Description
24hr 24 hours	Click on it, means video in past 24 hours.
2hr 2 hours	Click on it, means video in past 2 hours.
1hr 1 hour	Click on it, means video in past 1 hour.
30min 30 min	Click on it, means video in past 30 min.

5.1.6 Assistant Function

Video playback assistant function is shown in Figure 5-10.

Figure 5-10

Parameter	Description
Digital Zoom	● Click on it, video in playback status if is in original size, user can zoom in any area, If it is not in its original size, Right mouse click to restore its original size. ● Click on this button, you can scroll to zoom in.
Snapshot	Click on this button, you can snapshot video under playback status. Snapshot will be saved to path in Ch. 5.1.2.5.

5.2 Picture Playback

Web client picture playback interface has the following three functions:

Parameter	Description
1	Play function bar
2	Playback file bar
3	Snapshot type bar

See Figure 5-11.

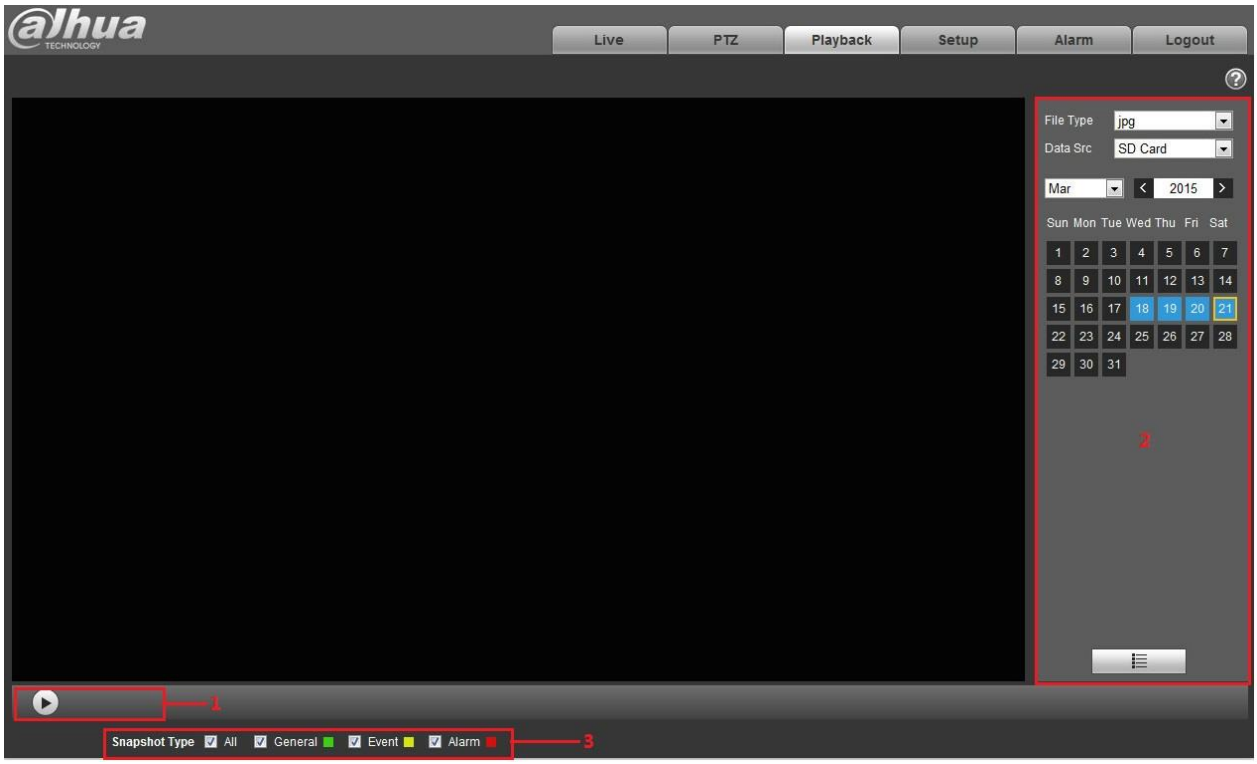


Figure 5-11

5.2.1 Play

Figure 5-12

Default icon is and it means pause or not played picture. Click on play button to switch to normal play status. Icon become
Click on it to pause.

5.2.2 Playback File

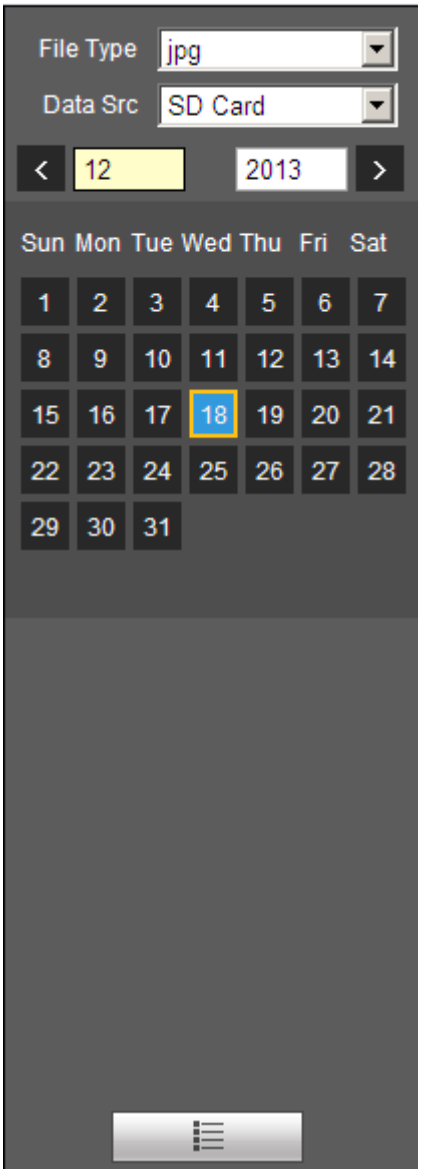


Figure 5-13

Step 1. Click on file list , select snapshot file of the date.

Step 2. Double click on file in list, to play this snapshot.

Parameter	Description
Search	It means all snapshot files within the start time and end time of selected date.

Parameter	Description
Download	Click the download button to open snapshot file or directly download to local according to the browser types.
Back	Click the back button to return to calendar interface and re-select time.

Figure 5-14

5.2.3 Snapshot Type

After checking snapshot file type, in file list only display file of selected type. Users can also select the snapshot type to be displayed via the dropdown box above the file list. See Figure 5-15.

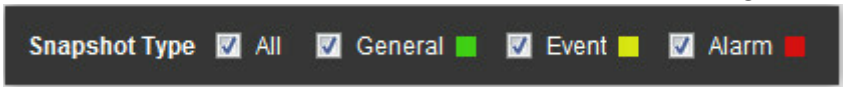


Figure 5-15

6 Setup

Web client setup support camera, network, time, storage, system and system info view.

6.1 Camera

The camera setting includes conditions, profile management, zoom and focus.

6.1.1 Conditions

Note:

The camera parameter may be different according to different models, please refer to the actual product for more details.

6.1.1.1 **Picture**

Note:

The device which supports true WDR fails to support long exposure when true WDR is enabled.

Step 1

Select “Setup > Camera > Conditions > Picture” and the system will display the “Picture” image which is shown in Figure 6-1.

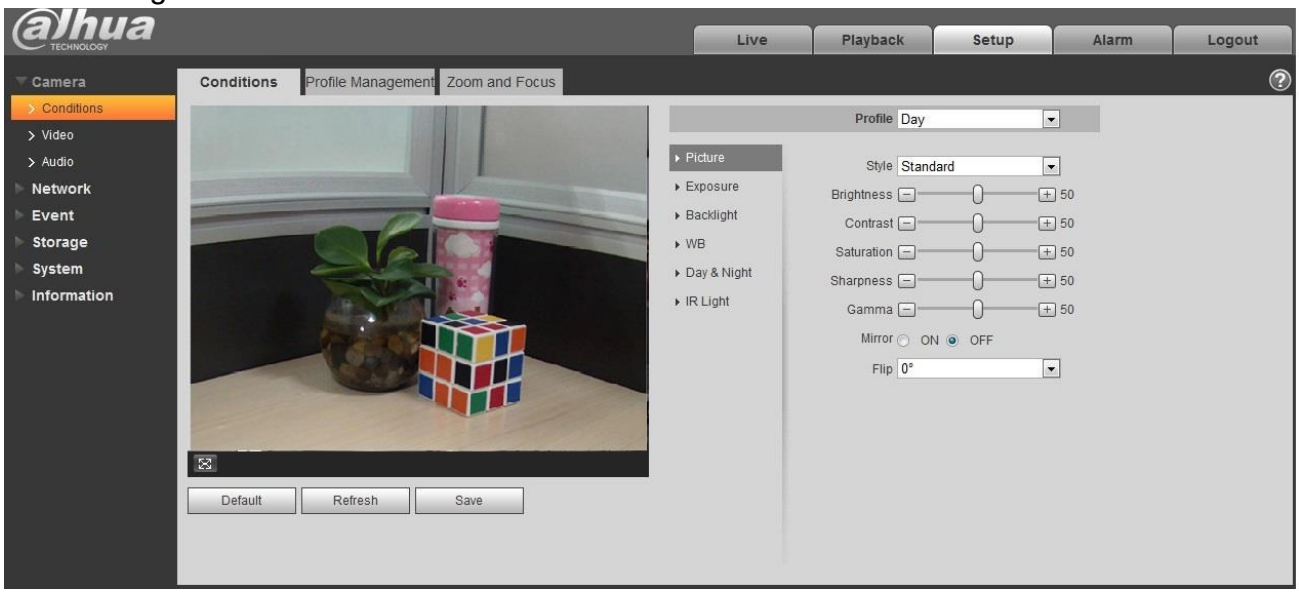


Figure 6-1

Step 2

Set picture parameters; please refer to the following sheet for more details about parameter setting.

Parameter	Description
Style	It is to set the picture style, which includes standard, soft and vivid.

Parameter	Description
Brightness	It is to adjust the image overall brightness via linear adjustment mode. The larger the number is, the brighter the picture is, and on the contrary it is opposite. The picture get blurry easily when the value is set too big.
Contrast	It is to adjust the picture contrast. The bigger the value is, the bigger the bright contrast becomes, and on the contrary it is smaller. The dark area becomes darker and the bright area becomes overexposed easily when the value is set too big. The picture becomes blurry when the value is set too small.
Saturation	It is to adjust the color darkness and lightness. The color becomes darker when the value is bigger; on the contrary it becomes lighter. The value causes no influence to the overall brightness of the image.
Sharpness	It is to adjust the sharpness level of the picture edge. The bigger the sharpness value is, the more obvious the image edge becomes, the image is likely to generate noise more easily when the value is set too big.
Gamma	It is to change image brightness and improve the dynamic display range of the image via nonlinear adjustment mode. The bigger the value is, the brighter the picture becomes, and on the contrary it is opposite.
Mirror	After mirror is enabled, the monitoring image will be displayed invertedly.
Flip	It is to change the display direction of the monitoring image. It includes following options: ● Normal: The monitoring picture is normally displayed. ● Flip mode 1: The monitoring picture is displayed with clockwise rotation 90° ● Flip mode 2: The monitoring picture is displayed with anticlockwise rotation 90° ● 180°: The monitoring picture is displayed upside down. **Note:** Please set the video resolution as 1080P or lower when applying flip mode for some devices.
EIS	It can realize electronic anti-flicker function via comparison algorithm of image difference, which can effectively solve the problem of image jittering during application and it can make the image clearer.

Step 3

Click “Save” and complete the image parameter config of the camera.

6.1.1.2 **Exposure**

Step 1

Select “Setup > Camera > Conditions > Exposure”. The system will display the “Exposure” interface which is shown in Figure 6-2.

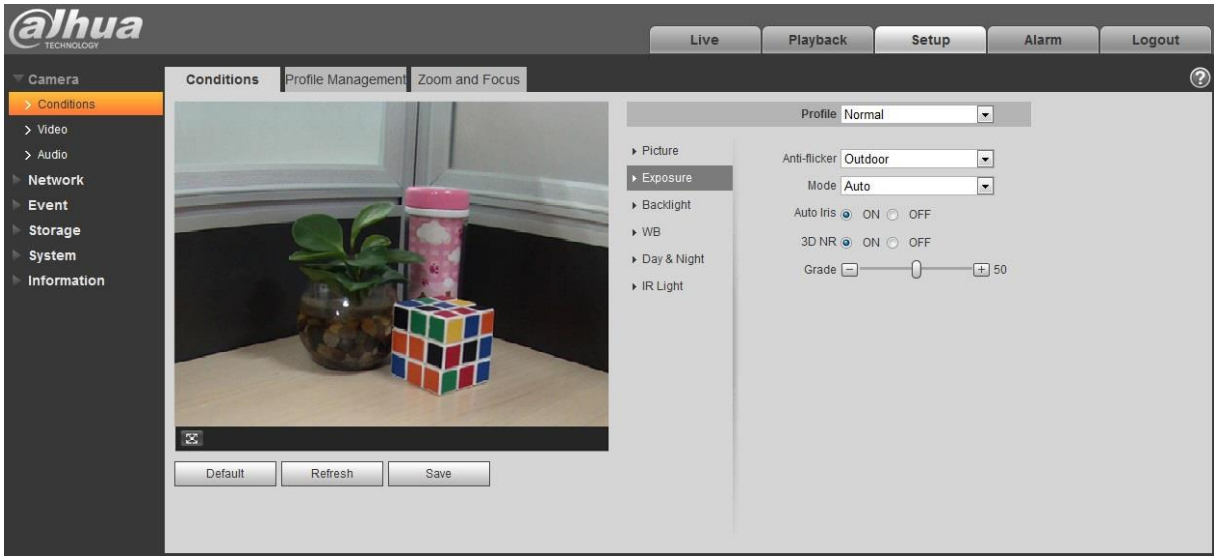


Figure 6-2

Step 2

It is to set the exposure parameter, please refer to the following sheet for more details.

Parameter	Description
Anti-flicker	● You can switch to exposure mode when it is in outdoor mode, it can realize the result in the corresponding exposure mode. ● 50Hz: When the current is 50Hz, system can auto adjust the exposure according to the environment brightness in case there is any stripe. ● 60Hz: When the current is 60Hz, system can auto adjust the exposure according to the environment brightness in case there is any stripe.

Parameter	Description
Mode	It is the camera exposure mode. **Note:** ● When “Anti-flicker” is “Outdor”, the “exposure mode” can be set as “gain priority” or “shutter priority” mode. ● Different devices have different exposure modes; please refer to the actual interface. It includes the following options: ● Auto: It can auto adjust the image brightness according to the environment. ● Gain priority: The device can auto adjust according to the gain range which is set by priority during normal exposure range according to the different scene brightness. The device will auto adjust shutter value if the image brightness fails to reach the effect and the gain value has reached to upper limit or lower limit, which is to make the image reach the best brightness. ● Shutter priority: The device can auto adjust according to the shutter range which is set by priority during normal exposure range according to the different scene brightness. The device will auto adjust shutter value if the image brightness fails to reach the effect and the shutter value has reached to upper limit or lower limit, which is to make the image reach the best brightness. ● Iris priority: Iris value is fixed, the device can auto adjust the shutter value if the image brightness fails to reach effect and the shutter value has reached the upper limit or lower limit, the device can auto adjust the gain value to make the image reach the best brightness. ● Manual: It is to manually set gain value and shutter value, adjust the the displayed brightness of the image.
Auto Iris	It can set the parameter when the camera installs auto iris. ● The lens iris can auto adjust the size according to the environment after auto iris is enabled, then the image brightness will change accordingly. ● The iris value reaches the max when disabling auto iris, the lens iris will not change according to the environment brightness.
3D NR	It is to process the image with multiframe (at least two frames), it can realize noise reduction of the image by using the interframe information between the previous and latter frame.
Grade	It can set the parameter when “3D NR” is enabled. The bigger the grade is, the better NR effect it can realize.

Step 3

Click “Save” to complete the parameter config of camera exposure.

6.1.1.3 **Backlight**

Backlight mode can be divided into BLC, WDR and HLS.

BLC: it can avoid cucoloris phenomenon of the darker area in the backlight environment.

WDR: It can suppress the overbright area and compensate darker area by enabling WDR, which can make the overall image clear.

HLC: It is to weaken the high light, which can be applied in the areas such as toll gate, entrance and exit of the parking lot and etc. As for extreme light, it can snapshot the human face in the dark environment and it can realize better effect for the details of the plate number.

Step 1

Select “Setup > Camera > Condition > Backlight”, the system will display the interface of “Backlight” which is shown in Figure 6-3.

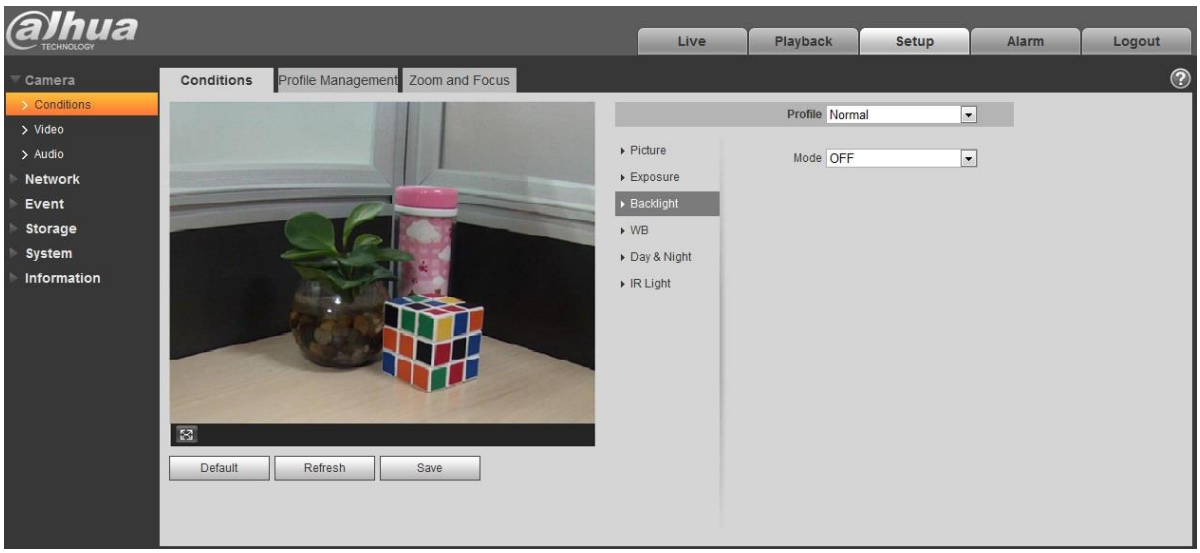


Figure 6-3

Step 2

Set the backlight parameter.

- When the “Mode” is set as “Scene Self-adaptation”, the system will auto adjust the image brightness according to the environmental brightness, which is to make the object display clearly in the scene.
- When the “Mode” is set as “BLC”, it can select default mode or customized mode.
  - ◆ When selecting “Default” mode, the system can realize auto exposure according to the environment, which is to make the image in the darkest area clear to be seen.

- When selecting “Customized” mode, the system can realize exposure upon the selected area after it set customized area, which is to make the image of the selected area reach appropriate brightness.

- When the “Mode” is set as “WDR”, it will lower the brightness of the area with high brightness and enhance the brightness of the area with low brightness, which is to make the objects in both high brightness and low brightness area display clearly.

Note:

There may be video loss of a few seconds when the camera is switched from non WDR mode to WDR mode.

- When the “Mode” is set as “HLC”, the system will constrain the brightness of the area with high brightness and decrease the size of the halo area, which is to lower the brightness of the whole image.

Step 3

Click “Save” to complete the config of the backlight mode.

6.1.1.4 **WB**

WB is used to restore the white object in the scene by the camera, after WB mode is set, it can make the white object look white in different environments.

Step 1

Select “Setup > Camera > Conditions > WB”, the system will display the interface of “WB”, which is shown in Figure 6-4.

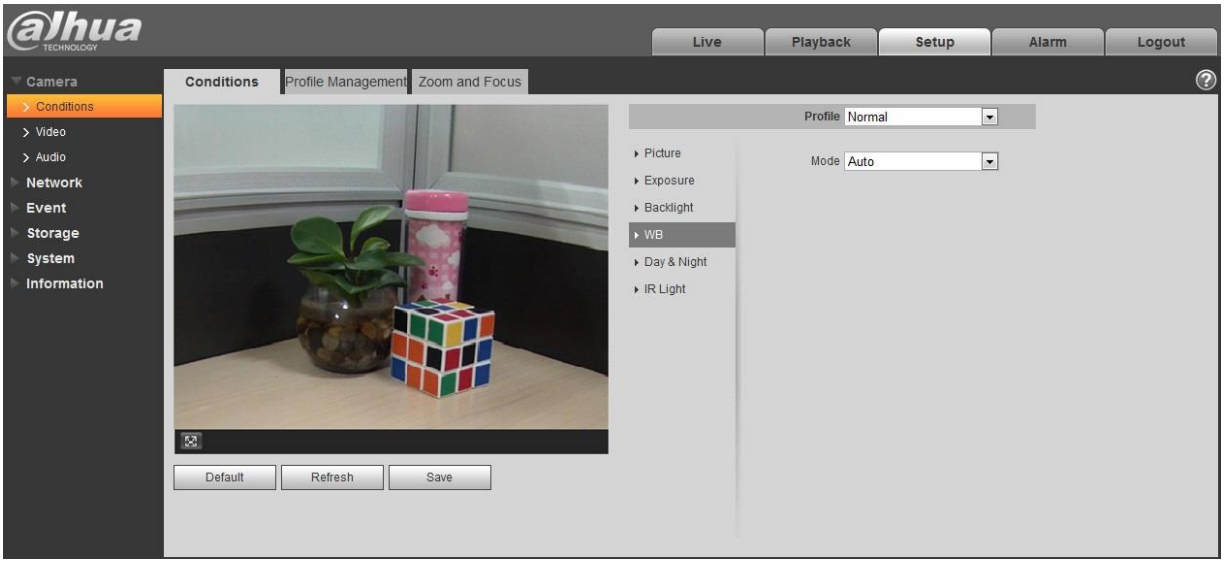


Figure 6-4

Step 2

Set WB mode.

- When the “Mode” is set as “Auto”, the system can auto compensate white balance upon different color temperatures, which is to make the image color normal.
- When the “Mode” is set as “Natural”, the system can auto compensate white balance to the scene without artificial light, which is to make the image color normal.
- When the “Mode” is set as “Street Lamp”, the system can auto compensate white balance to the outdoor scene at night, which is to make the image color normal.
- When the “Mode” is set as “Outdoor”, the system can auto compensate white balance to the most outdoor scenes with natural light and artificial light, which is to make the image color normal.
- When the “Mode” is set as “Manual”, it can manually set the value of red gain and blue gain; the system can compensate the different color temperatures in the environment according to the settings.
- When the “Mode” is set as “Regional Custom”, it is to set customized area, the system can compensate white balance to different color temperature of the images in the area, which is to make the image color normal.

Step 3

Click “Save” to complete the config of WB mode.

6.1.1.5 **Day & Night**

It is to set the switch between color mode and black & white mode.

Step 1

Select “Setup > Camera > Conditions > Day & Night” and the system will display the interface of “Day & Night”, which is shown in Figure 6-5.

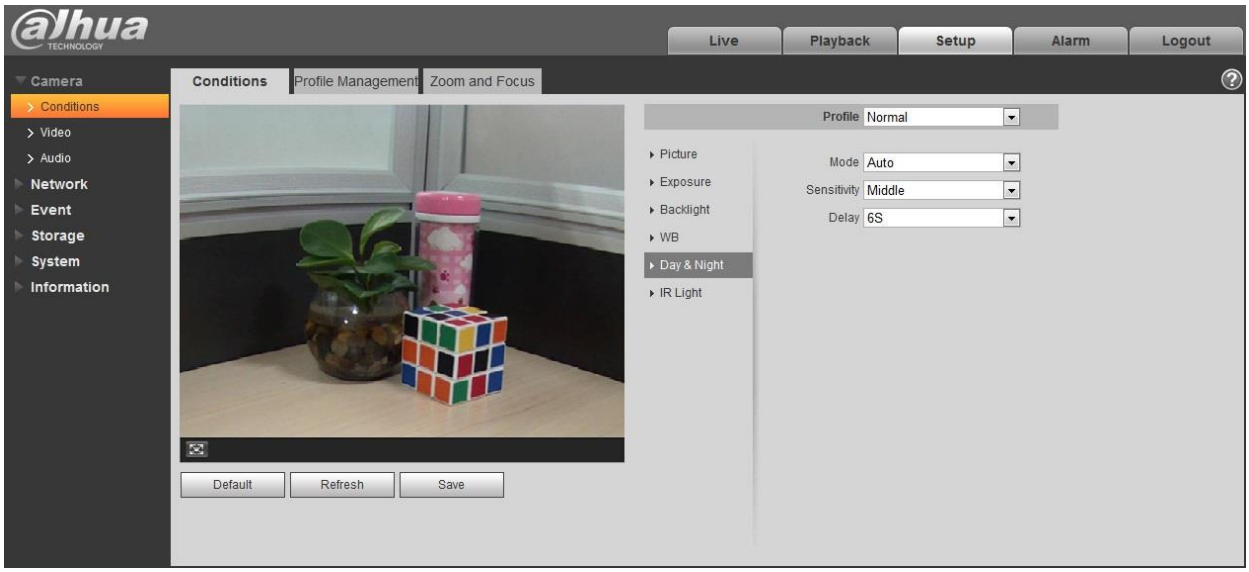


Figure 6-5

Step 2

Set day & night parameter; please refer to the following sheet for more details.

Parameter	Description
Mode	It is to set the camera image displayed as color or black & white mode. **Note:** The setting of “Day/Night Mode” is not affected by the setting of “Profile Management”. It includes the following options: ● Color: The camera image is displayed as color image. ● Auto: The camera can auto select color image or black & white image to be displayed according to the environmental brightness. ● Black & white: The camera image is displayed as black & white image.
Sensitivity	The parameter can be set when the “Day/Night Mode” is “Auto”. It is to set the sensitivity of the switch between image color display and black & white display.
Delay	The parameter can be set when the “Day/Night Mode” is “Auto”. It is to set the switch delay between image color display and white & black display. The smaller the delay is, the faster of the switch becomes between color display and black & white display.

Step 3

Click “Save” to complete the config of day/night mode.

6.1.1.6 **Defog**

The image quality will become weak when the device is in the environment with fog or haze, you can enable defog function to adjust the image definition.

Step 1

Select “Setup > Camera > Conditions > Defog” and the system will display the interface of “Defog” which is shown in Figure 6-6.

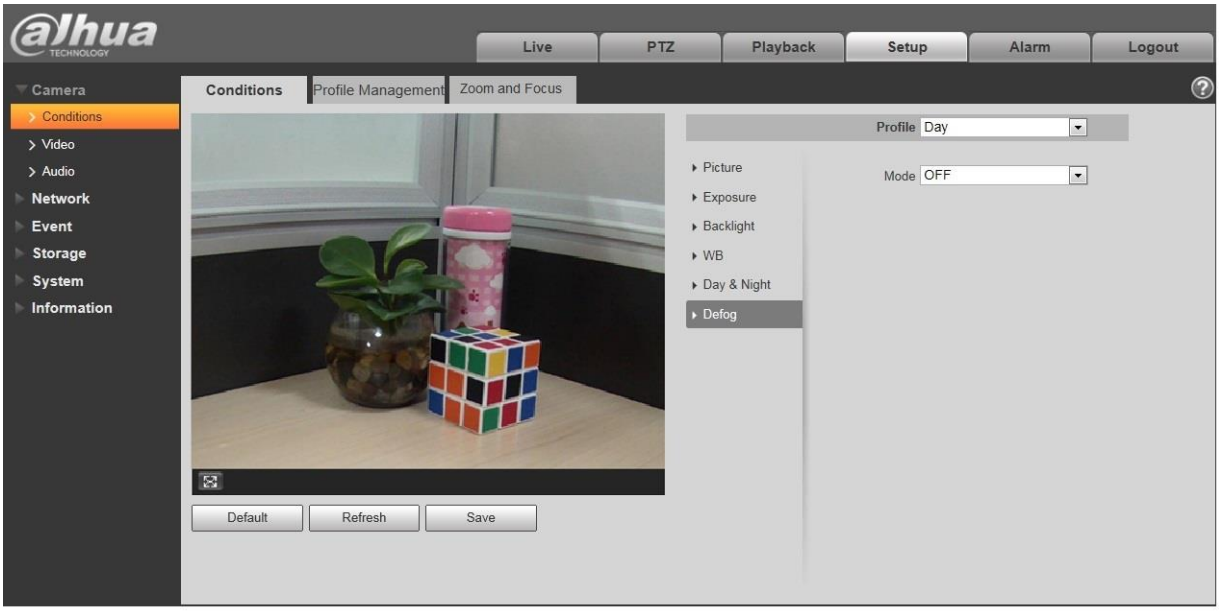


Figure 6-6

Step 2

It is to set defog mode according to the actual scene.

- When the “Mode” is set as “Manual”, it is to manually set intensity and air light mode, the system will adjust the image definition according to the intensity and air light mode which have been set previously. As for air light mode, you can set manual or auto.
- When the “Mode” is set as “Auto”, the system will auto adjust the image definition according to the actual scene.
- When the “Mode” is set as “Off”, then the defog function is disabled.

Step 3

Click “Save” to complete the config of defog mode.

6.1.1.7 **IR Light**

You can directly set the mode of IR light if the device is equipped with IR light.

Step 1

Select “Setup > Camera > Conditions > IR Light” and the system will display the interface of “IR Light” which is shown in Figure 6-7.

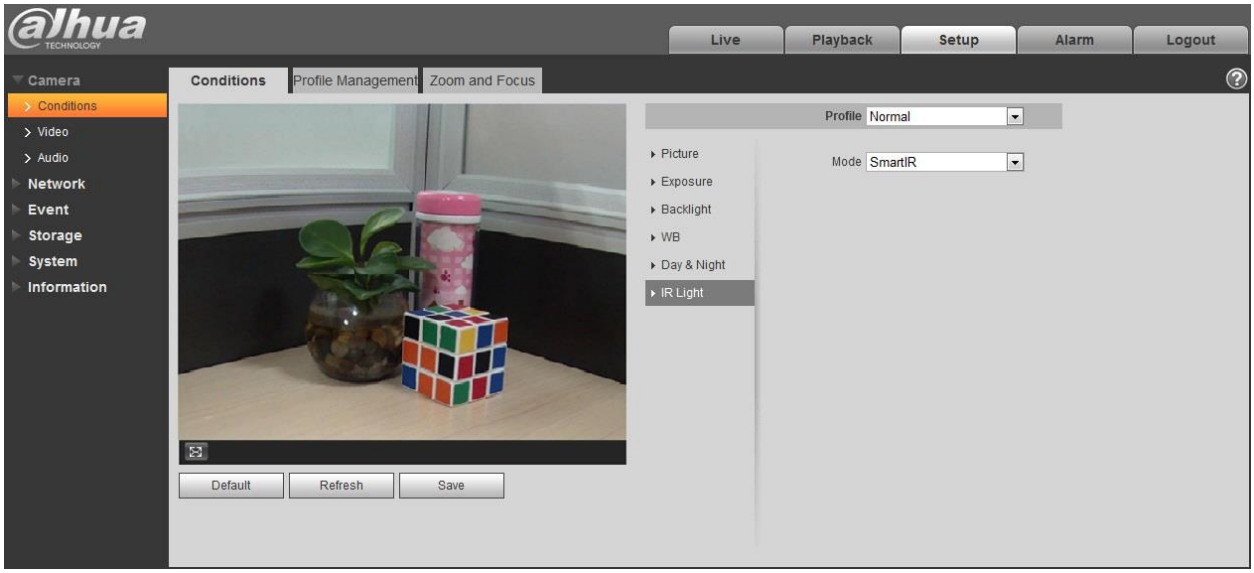


Figure 6-7

Step 2

It is to set IR light mode according to the actual scene.

- When the “Mode” is set as “Manual”, it can manually set the brightness of IR light; the system will realize light compensation to the image according to the IR light intensity.
- When the “Mode” is set as “Smart IR”, the system can adjust the light brightness according to the actual scene.
- When the “Mode” is set as “Zoomprio”, the system can auto adjust the IR light according to the brightness change of the actual scene.
  - The system will enable near light by priority when the actual scene becomes dark, the system will enable the far light when the near light fails to meet the requirement of scene brightness even if it is adjusted to the brightest.
  - The system will adjust far light brightness by priority to off and then adjust the brightness of near light when the actual scene becomes bright. The system will always disable far light when the focal length of the lens is adjusted to a certain wide angle, which is to avoid near overexposure. Meanwhile, it can manually set light compensation to slightly adjust the brightness of IR light.
- When the “mode” is set as “Off”, it will not enable the IR light.

Step 3

Click “Save” and complete the config of IR light.

6.1.1.8 **Profile Management**

Step 1

Select “Setup > Camera > Conditions > Profile Management” and the system will display the interface of “Profile Management”.

Step 2

Set profile management.

- When the “Profile Management” is set as “Normal”, the system will monitor according to the normal config.

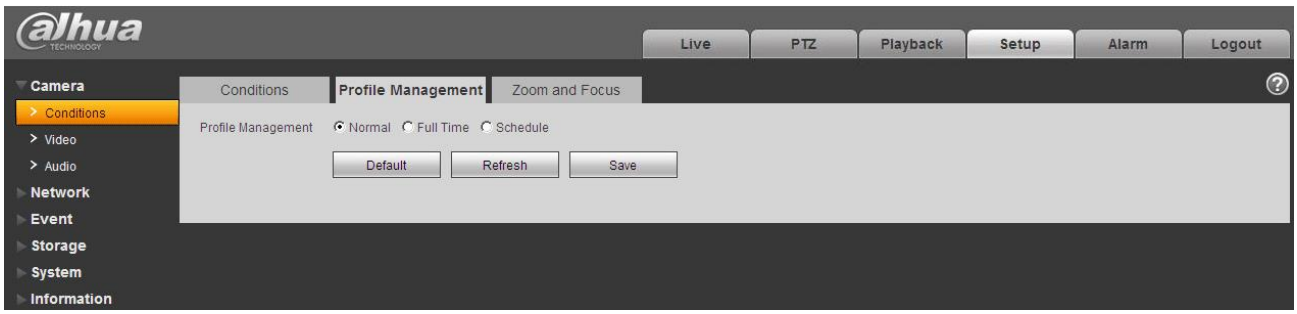


Figure 6-8

- When the “Profile Management” is set as “Full Time”, you can select “Always Enable” in “Day” or “Night’, the system will monitor according to the config of “always enable”.

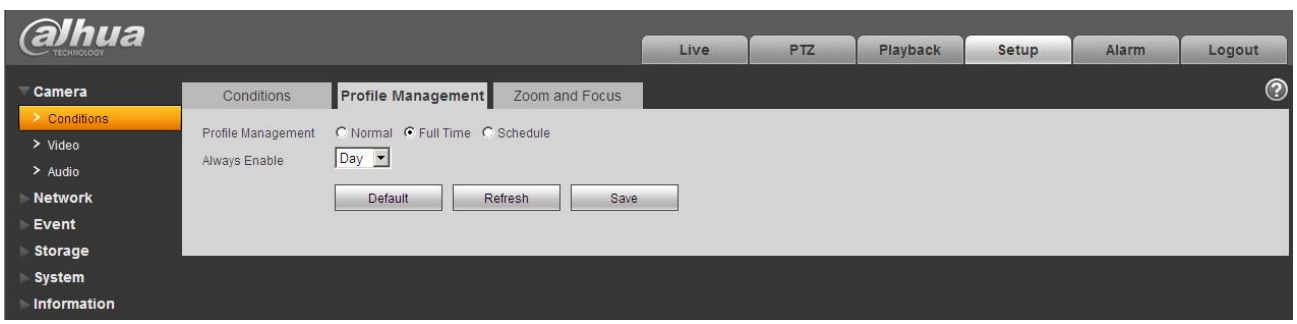


Figure 6-9

- When the “Profile Management” is set as “Schedule”, you can set some period as day and another period as night, for example, if it sets 0:00~12:00 as day, 12:00~24:00 as night, then the system will monitor by adopting corresponding config in different periods.

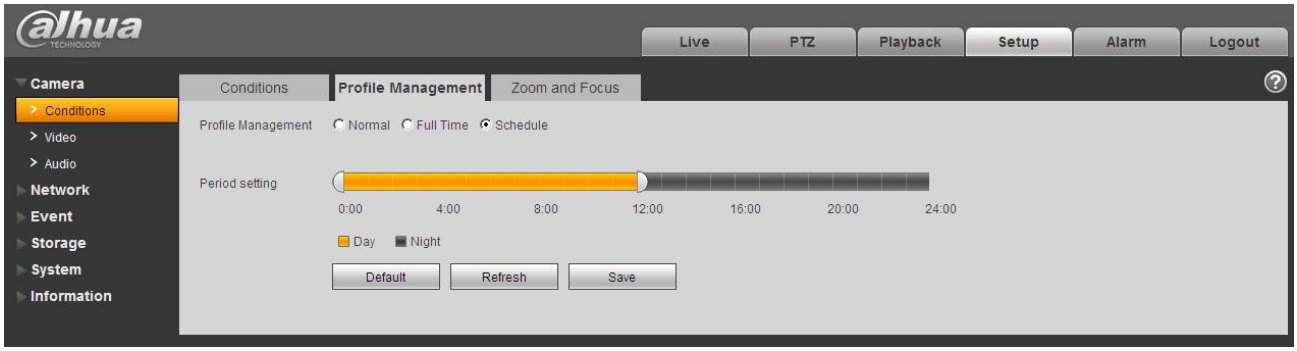


Figure 6-10

Step 3

Click “Save” to complete the settings of profile management.

Note:

Click “Default” to restore the device to default config; click “Refresh” to check the latest config file of the device.

6.1.1.9 **Zoom and Focus**

Note:

Only motorized vari-focal devices support focus and zoom function.

Step 1

Select “Setup > Camera > Conditions > Zoom and Focus” and the system will display the interface of “Zoom and Focus” which is shown in Figure 6-11.

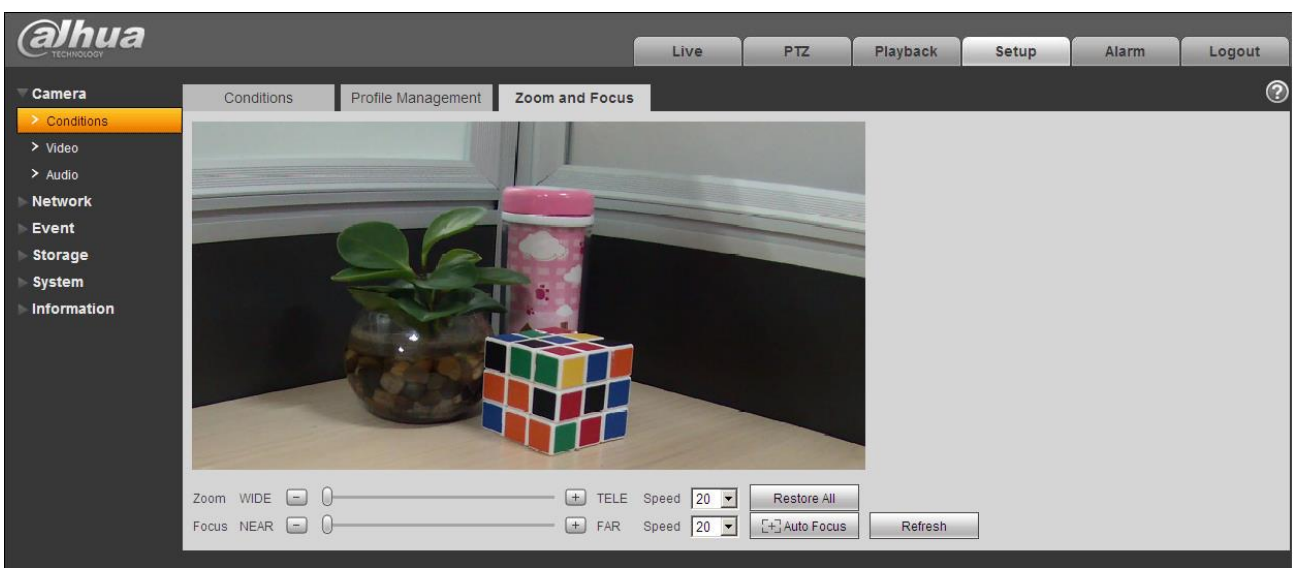


Figure 6-11

Step 2

Adjust the focal length of the lens.

After it is zoomed, set “Speed” and press “+”, “-“or drag the sliding block directly to adjust.

Step 3

Adjust the lens definition.

After it is focused, set “Speed” and press “+”, “-“or drag the sliding block directly to adjust.

Note:

- Speed is used to set the length by pressing “+” and “-“.
- After adjusting the focal length of the lens or click “Auto Focus”, the device will auto adjust the image definition, it is not allowed to implement other lens operation during auto focus.
- After several times of zoom and focus, the image fails to be adjusted clear, click “Restore All’ to reset the lens to zero and remove the accumulative error of the lens.
- Click “Refresh” and the device will automatically synchronize the hardware to the location of sliding block of lens zoom and focus.

6.1.2 Video

6.1.2.1 Video

Step 1

Select “Setup > Camera > Video > Video” and the system will display the interface of “Video” which is shown in Figure 6-12 (Non fisheye) or Figure 6-13 (Fisheye).

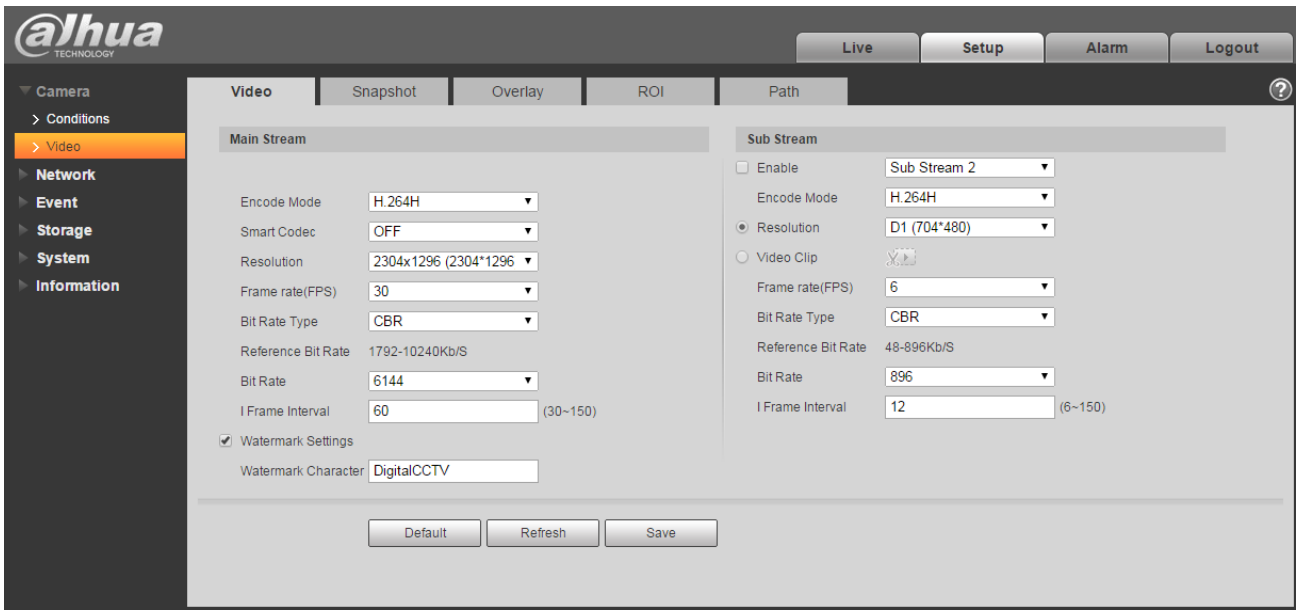


Figure 6-12 (Non fisheye)

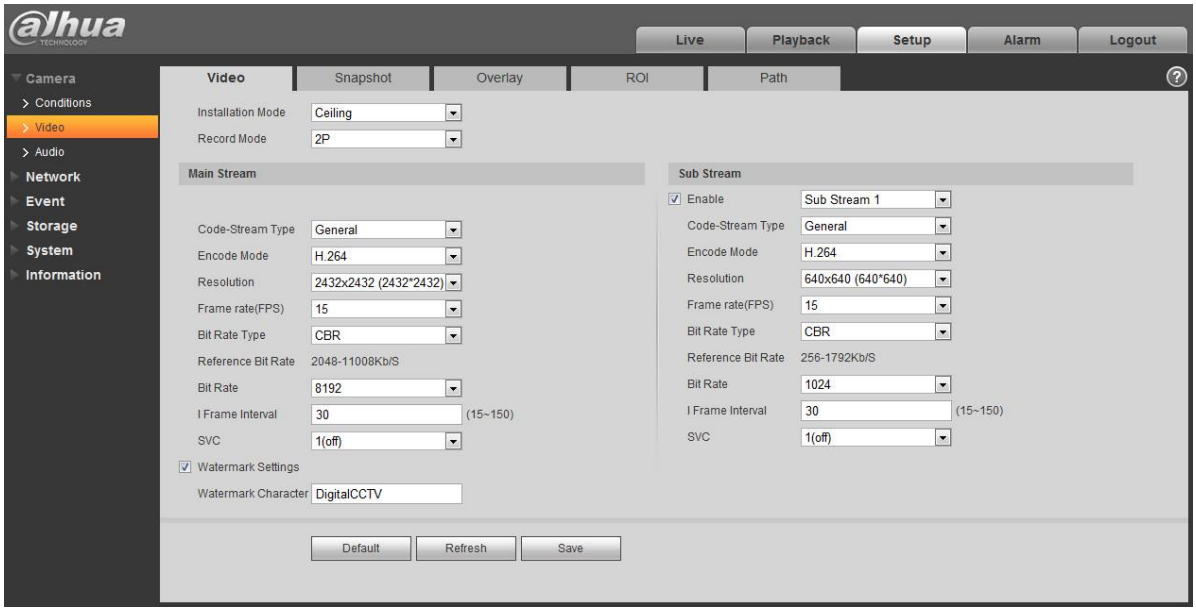


Figure 6-13 (Fisheye)

Step 2

Set video bit stream, please refer to the following sheet for more details about the parameters.

Parameter	Description
Installation Mode	It will display the parameter when the device is fisheye. There are three installation modes for fisheye which are ceiling, wall mount and ground installation, please select installation mode according to the actual installation scene of the fisheye. The system will begin to switch after switching installation mode, it will prompt successfully saved after it is switched successfully. **Note:** The device end will output the dewarped video stream after configuring installation and record mode, when the device is accessed to third-party platform, it will directly display the dewarped image on the third-party platform.

Parameter	Description
Record Mode	It will display the parameter when the device is fisheye. The system will begin to switch after record mode is switched, it will prompt saved successfully after it is switched successfully. The record mode will change according to the different installation modes. ● 1O: the original picture which is not dewarped. ● 1P: 360°rectangular panorama. ● 2P: The mode can be set when the “Installation Mode” is set as “Ceiling” or “Ground”. It is the 2 related 180°rectangular image, the two sub windows can both form 360°panorama anytime. ● 1O+3R: original image + 3 independent sub images, both the sub image and sub boxes in the original image can support zoom and movement. ● 1R: Original image + independent sub image, the sub boxes of the original image support zoom and movement. ● 4R: original image + 4 independent sub images, both the sub image and sub boxes in the original image support zoom and movement. ● 2R: Original image + 2 independent sub images, the sub boxes of the original image can support zoom and movement, the sub image supports up and down movement, which can change the vertical angle of view. **Note:** The device end will output dewarped video stream after configuring installation and record mode, when the device is accessed to the third-party platform, it will directly display the dewarped image on the third-party platform.
Sub Stream Enable	Select “Enable” to enable sub stream. The device supports enabling sub stream 1 and sub stream 2 at the same time.
Smart Codec	It can enhance image compression performance and reduce storage space by enabling intelligent encoding. **Note:** After intelligent encoding is enabled, the device will not support third stream, ROI or intelligent event detection, please refer to the actual interface for more details.

Parameter	Description
Encode mode	There are five options: H.264 (main profile standard, H.264H (high profile standard), H.264B (Baseline Profile), H.265 (main profile standard) and MJPEG encode. ● The H.264, H.264H both are H264 bit stream. H.264 is the Main Profile encode and you need to enable the sub stream function in your camera and set the resolution as CIF. Then you can monitor via the Blackberry cell phone. ● The H.265 is the main profile encode mode. ● MJPEG: In this encode mode, the video needs to large bit stream to guarantee the video definition. You can use the max bit stream value in the recommend bit to get the better video output effect.
Resolution	There are multiple resolutions. You can select from the dropdown list. For each resolution, the recommended bit stream value is different. Note: When video is under rotating status, you cannot set resolution higher than 1080P (excluding 1080P).
Video Clip	The function is only supported by sub stream 2, please refer to “Video Clip” for more details below the sheet.
Frame Rate (FPS)	PAL: 1～25f/s，1-50f/s NTSC: 1～30f/s or 1~60f/s. The frame rate may vary due to different resolutions.
Bit Rate Type	There are two options: VBR and CBR. Please note, you can set video quality in VBR mode. Under MJPEG mode, only CBR is available.
Recommended Bit	Recommended bit rate value according to the resolution and frame rate you have set.
Bit Rate	● In CBR, the bit rate here is the max value. In dynamic video, system needs to low frame rate or video quality to guarantee the value. ● The value is null in VBR mode. ● Please refer to recommend bit rate for the detailed information.
SVC	Frame rate can be encoded by layer. It is a flexible encoding method. By default, it is 1 as 1 layer. You also can set 2/3/4 layers.
I Frame	Here you can set the P frame amount between two I frames. The value ranges from 1 to 150. Default value is 50. Recommended value is frame rate *2.

Parameter	Description
Watermark Settings	Select “Watermark Setting” and enable watermark function. After the watermark function is enabled, you can check if the video is tampered via verifying watermark character.
Watermark Character	It is the character of watermark verification; it is Digital CCTV by default.

- Video Clip

1. Select “Sub Stream 2” in the drop-down box, click “Enable”.
2. Enable “Video Clip”, click .

The system will display the interface of “Area”, which is shown in Figure 6-14.

Figure 6-14

3. Select the needed resolution and clip the needed image on the interface, which is shown in Figure 5-15.
4. Click “Save”. You can check the clipped video in the preview interface (the sub stream 2 preview interface only displays the clipped area), which is shown in Figure 6-15.

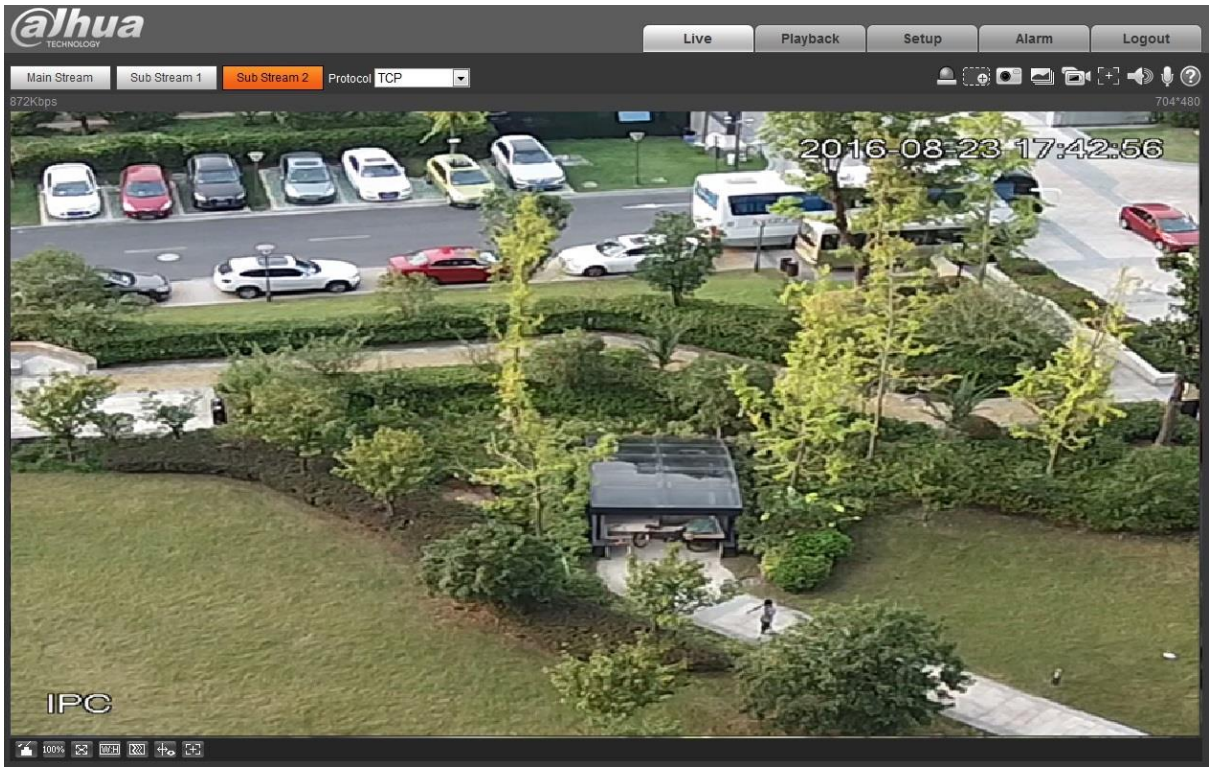


Figure 6-15

Step 3

Click “Save” to complete video stream setup.

6.1.2.2 Snapshot

The snapshot interface is shown as in Figure 6-16.

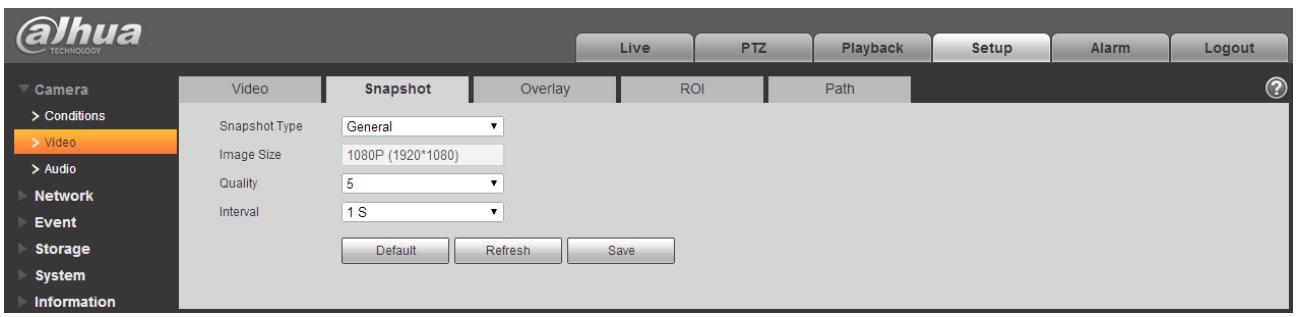


Figure 6-16

Please refer to the following sheet for detailed information.

Parameter	Description
Snapshot type	There are two modes: general (schedule) and Event (activation).
Image size	It is the same as the resolution of main stream.
Quality	It is to set the image quality. There are six levels.
Interval	It is to set snapshot frequency. Optional1~7s/picture, customized.

6.1.2.3 Video Overlay

The video overlay interface is shown as in Figure 6-17.

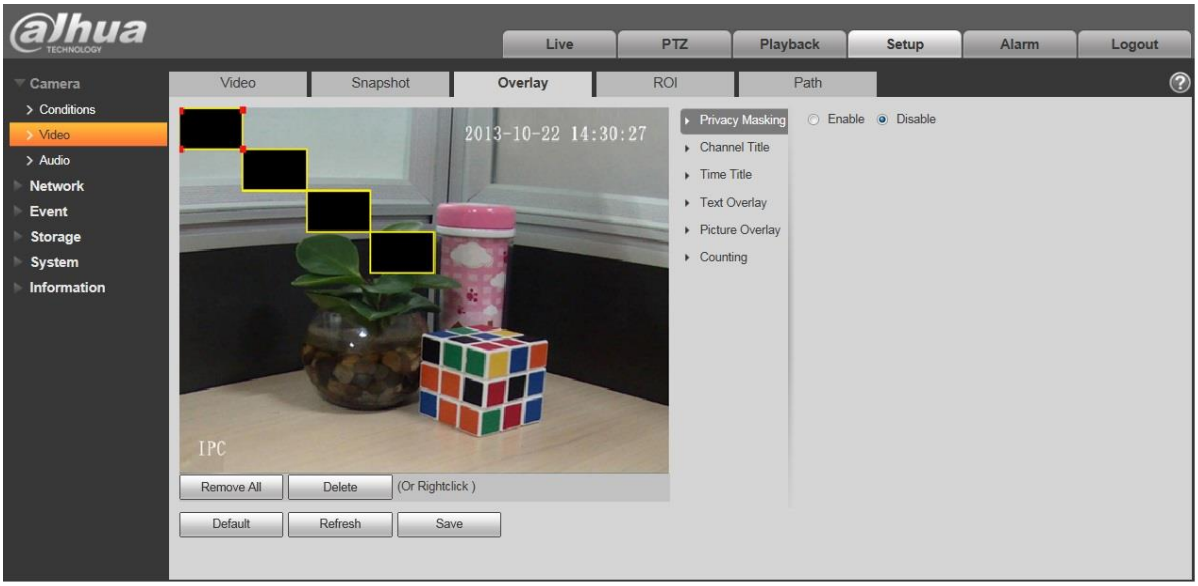


Figure 6-17

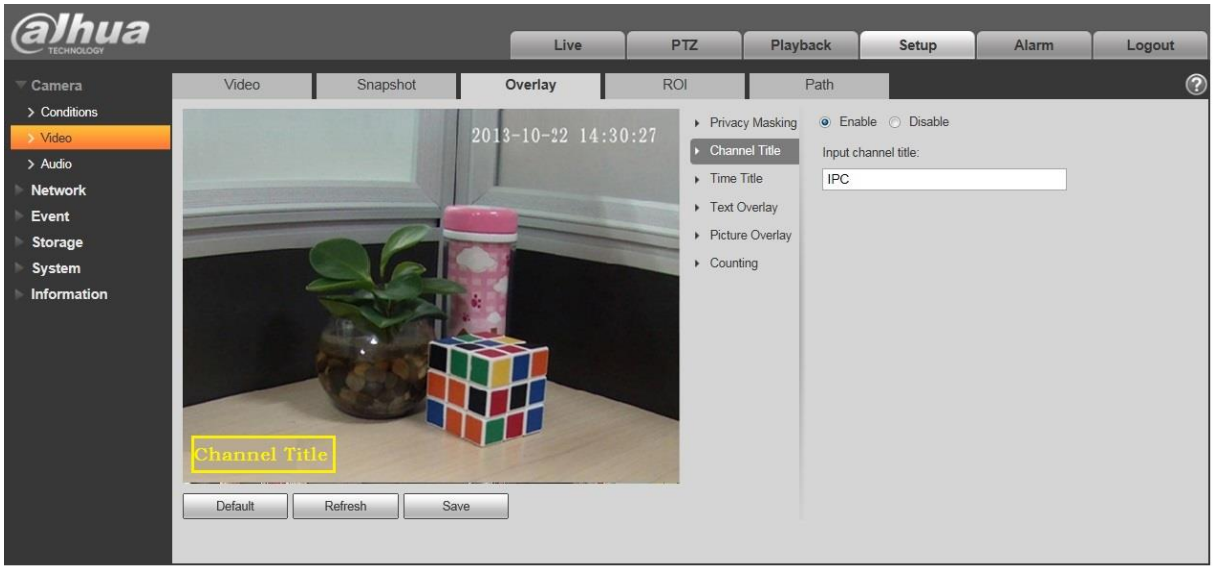


Figure 6-18

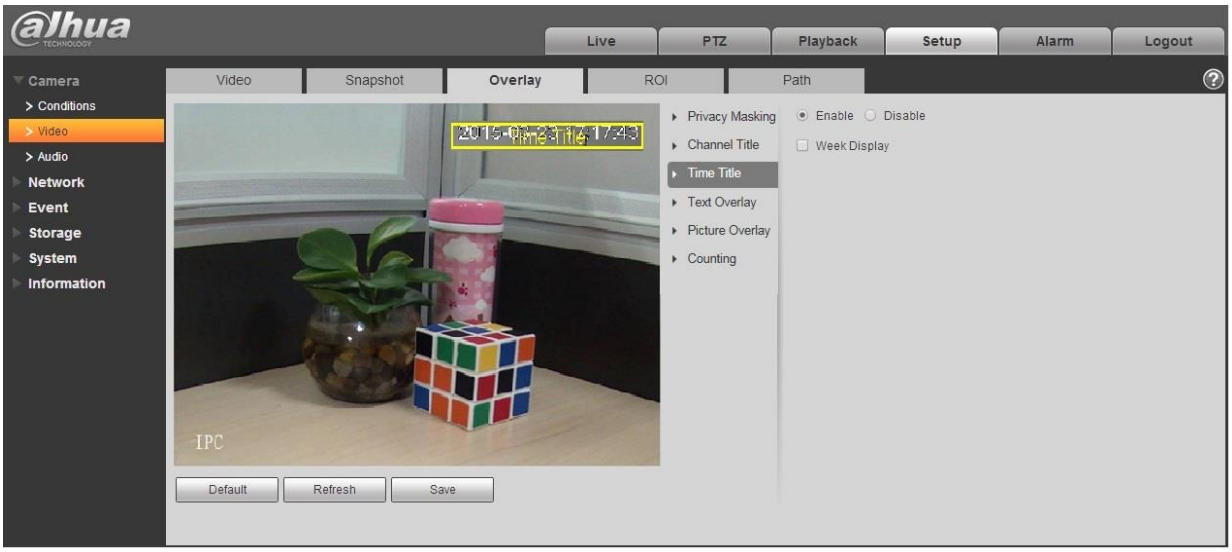


Figure 6-19

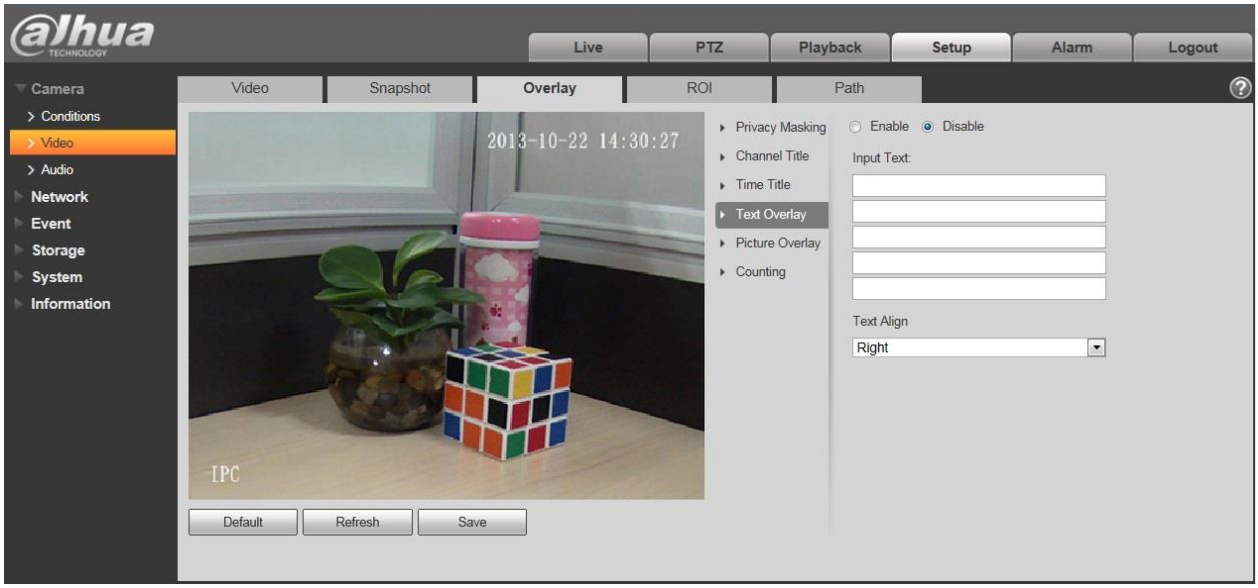


Figure 6-20

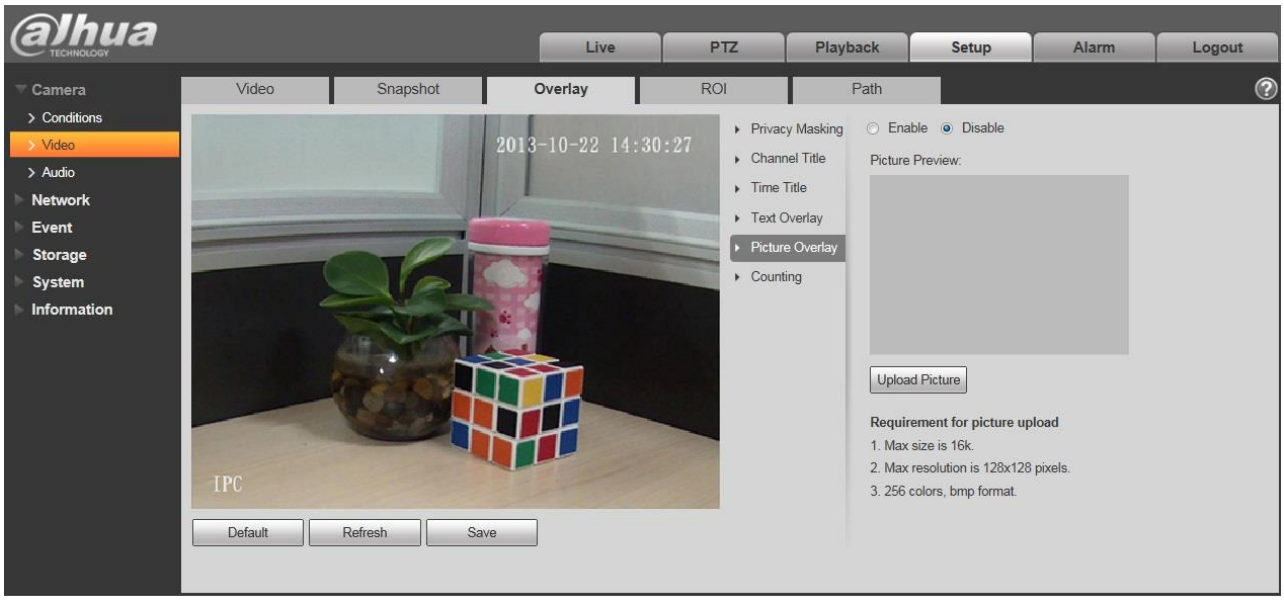


Figure 6-21

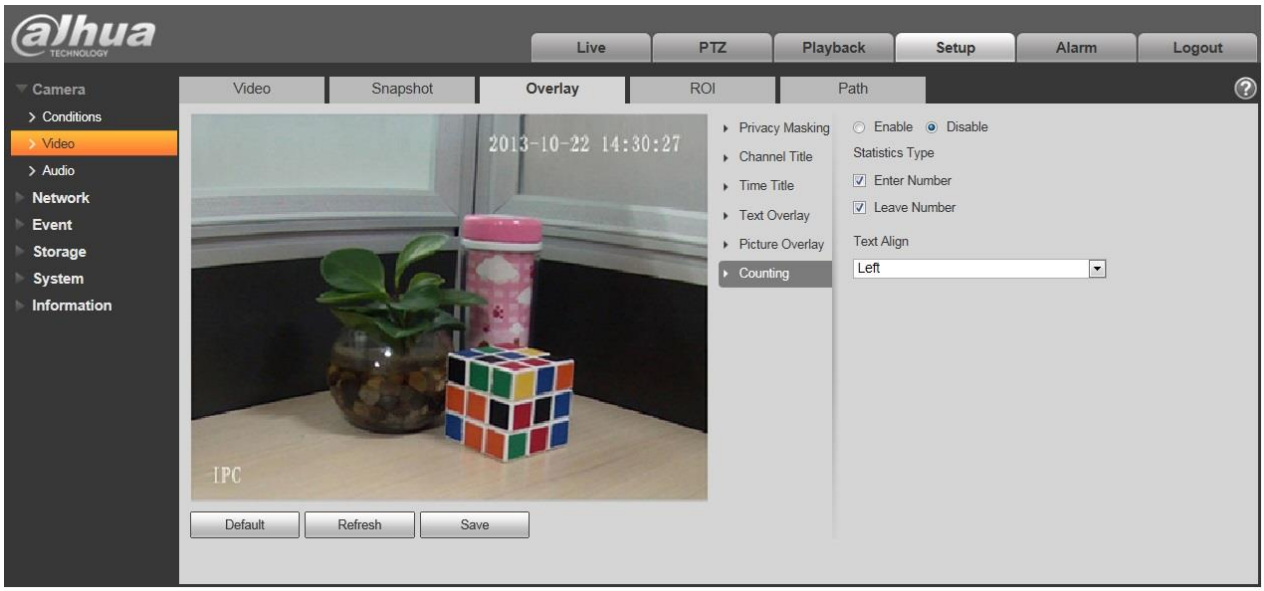


Figure 6-22

Please refer to the following sheet for detailed information.

Parameter	Description
Privacy Masking	● Here you can privacy mask the specified video in the monitor video. ● System max supports 4 privacy mask zones.
Time Title	● You can enable this function so that system overlays time information in video window. ● You can use the mouse to drag the time tile position.
Channel Title	● You can enable this function so that system overlays channel information in video window. ● You can use the mouse to drag the channel tile position.
Text Overlay	● You can enable this function to overlay text in video window. ● Private protocol is connected to mobile NVR, support GPS information overlay. ● You can use the mouse to drag location box to adjust its position. Alignment include align left and align right.
Picture Overlay	● You can enable this function to display overlay picture. Click on disable to turn it off. ● Click on Upload Picture to overlay local picture into monitoring window. You can drag the yellow box to move it. **Note:** You cannot enable text and picture overlay at the same time.

Counting	● Check “Enable” to display the counting statistics data in the video monitoring window; check “Disable” not to display. ● There are enter number and leave number for statistics type and left align and right align for OSD info.
Refresh	● Set privacy mask, channel title, time title, location, overlay and save the change. You can click on Refresh to see effect.
Default	● Click it to restore default config.
Save	● Click it to complete video settings.

6.1.2.4 ROI

Note: Some series don’t support ROI setup function.

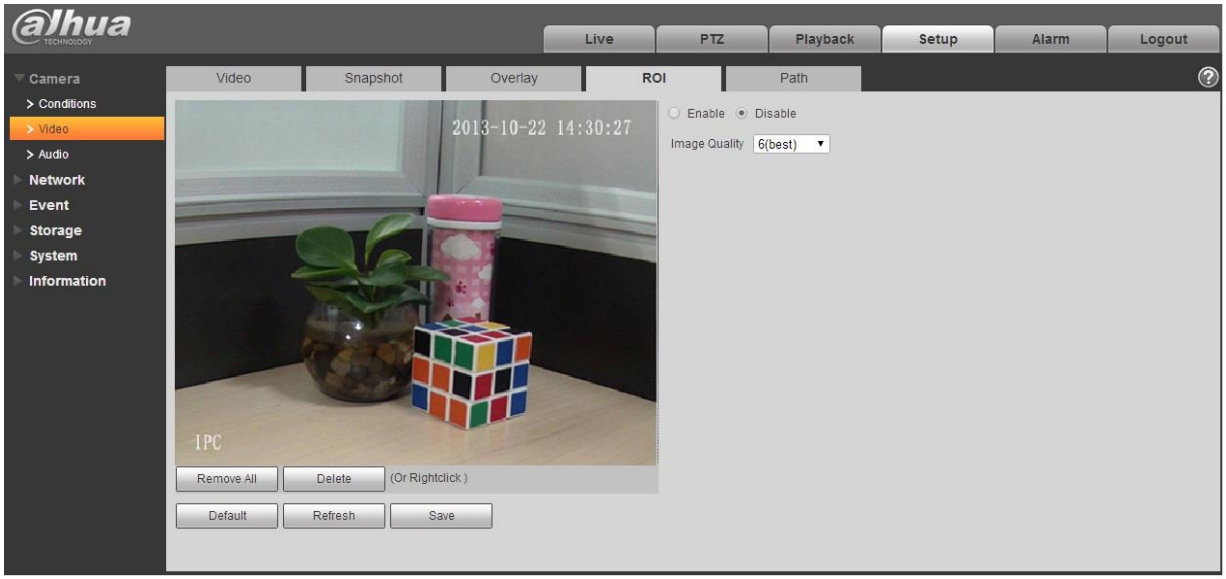


Figure 6-23

Figure 6-24

Parameters	Description
Enable	Check “Enable”, then it will display the ROI in the video monitoring window; Check “Disable”, then it won’t display.
Image Quality	● Set the image quality of ROI, ranging from 1～6, default is 6. Note: For fisheye device, it ranges from 1~6 (best), default is 6 (best) ● Able to set area block, max 4 areas.

6.1.2.5 Path

The storage path interface is shown as in Figure 6-25.

Here you can set snap image saved path and the record storage path.

- The default monitor image path is C:\Users\admin\WebDownload\LiveSnapshot.
- The default monitor record path is C:\Users\admin\WebDownload\LiveRecord.
- The default playback snapshot path is C:\Users\admin\WebDownload\PlaybackSnapshot.

The default playback download path is C:\Users\admin\WebDownload\PlaybackRecord.

The default playback cut path is: C:\Users\admin\WebDownload\VideoClips.

Note:

Admin is locally logged in PC account.

Please click the Save button to save current setup.

Figure 6-25

6.1.3 Audio

Please note some series devices do not support audio function.

6.1.3.1 Audio

The audio interface is shown as below. See Figure 6-26.

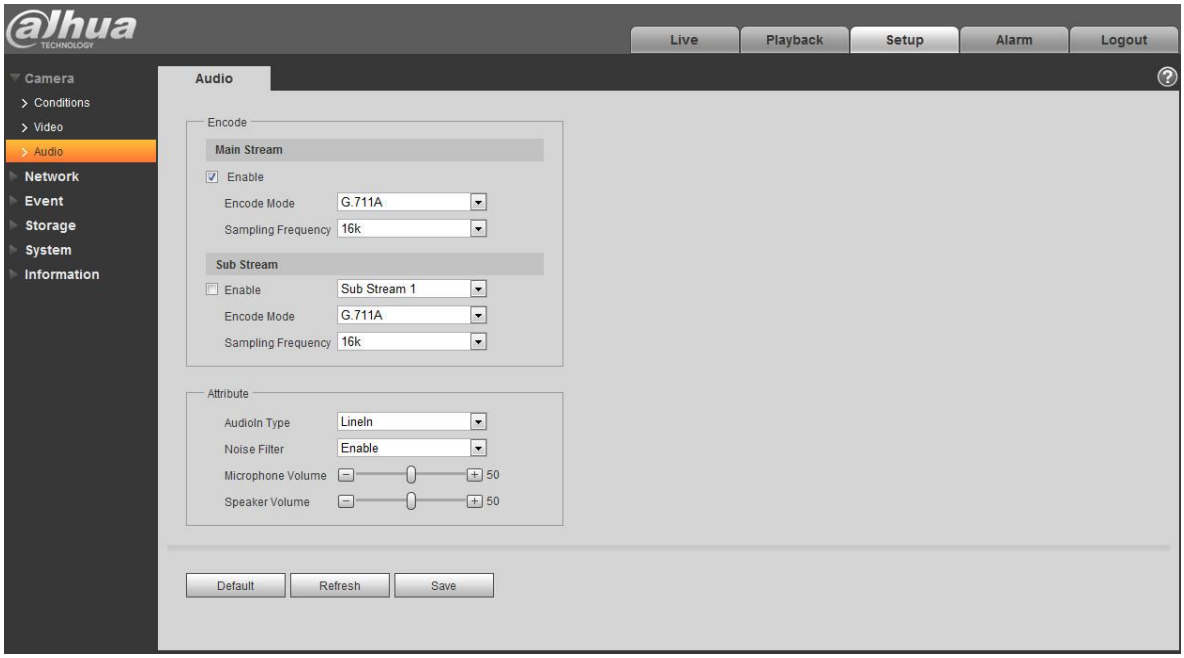


Figure 6-26

Please refer to the following sheet for detailed information.

Parameter	Description
Enable	You can enable audio only when video is enabled. After selecting the “Enable” of main stream or sub stream, the network transmission stream is the audio/video composite stream, otherwise it only includes video image.
Encode mode	The encode mode of the main stream and extra stream include G.711A, G.711Mu, G.726 and ACC. The default mode is G.711A. The setup here is for audio encode mode and the bidirectional talk encode both.
Sampling Frequency	The sampling frequency of audio. It includes the following options: ● 8K ● 16K ● 32K ● 48K ● 64K
AudioIn Type	Two modes to select: LineIn, Mic. Device needs to connect external audio input source under LineIn mode, and it doesn’t need to connect external audio input source under Mic mode.
Noise Filter	Enable the function and it can filter relevant noise.
Microphone Volume	Adjust microphone volume from 0～100. Note: Supported by some devices.
Speaker Volume	Adjust speaker volume from 0～100. Note: Supported by some devices.

6.1.3.2 Alarm audio

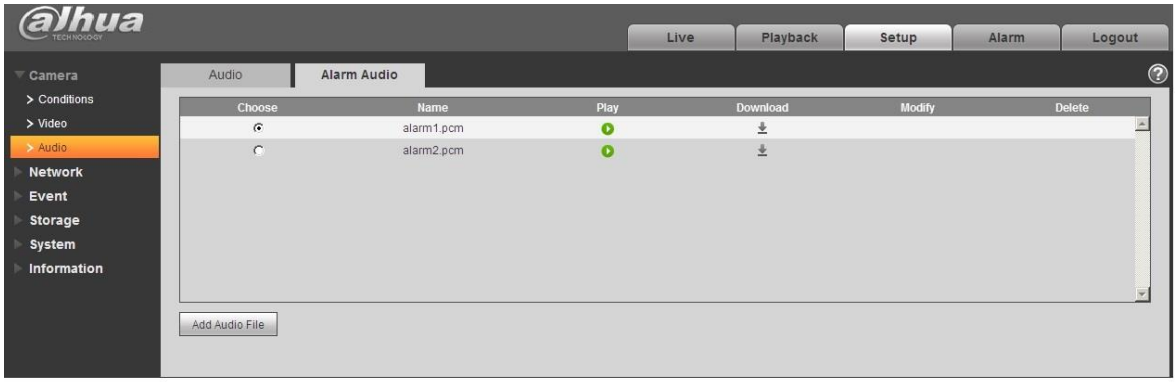


Figure 6-27

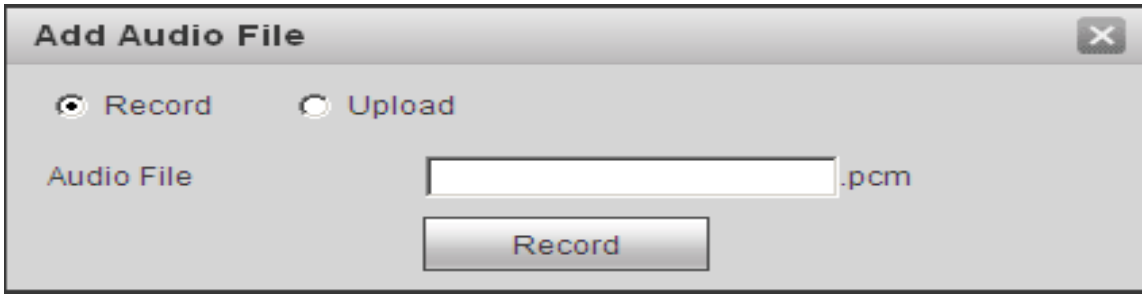


Figure 6-28

Audio management currently supports PCM format to record and PCM, wav two forms to upload，and can select an audio file for the audio alarm linkage.
The way to download the web alarm playback audio file into local is as follows:

Step 1 Use the left mouse button to click the hollow circle in the “choice” column on the left, and shows，which means effective choice of alarm audio.

Step 2 Use the right mouse button to click ，select “save target as” to download.

6.2 Network

6.2.1 TCP/IP

The TCP/IP interface is shown as in Figure 6-29. It supports IPv4 and IPv6. IPv4 supports static IP and DHCP. IPv6 supports static IP only. When users manually modify IP address, WEB will automatically jump to the new IP address.

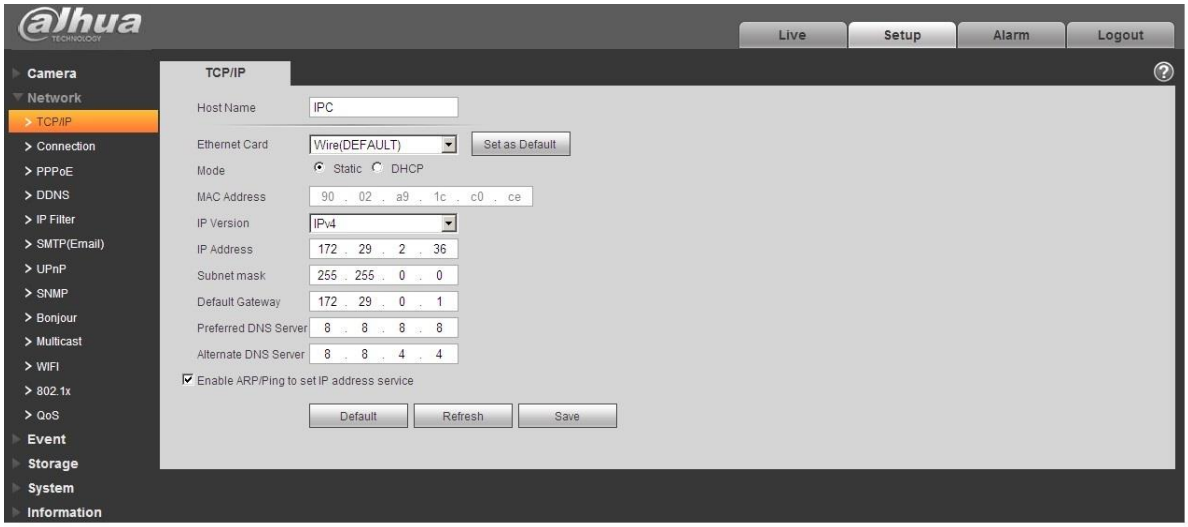


Figure 6-29

Please refer to the following sheet for detailed information.

Parameter	Description
Host Name	It is to set current host device name. It max supports 15 characters.
Ethernet Card	Please select the Ethernet port. Default is wired. Please note you can modify the default Ethernet card if there is more than one card.
Mode	There are two modes: static mode and the DHCP mode. Select DHCP mode, it auto searches IP, and you cannot set IP/subnet mask/gateway. Select static mode, you must manually set IP/subnet mask/gateway.
Mac Address	It is to display hose Mac address.
IP Version	It is to select IP version. IPV4 or IPV6. You can access the IP address of these two versions.
IP Address	Please use the keyboard to input the corresponding number to modify the IP address and then set the corresponding subnet mask and the default gateway.
Preferred DNS	DNS IP address.
Alternate DNS	Alternate DNS IP address.

Enable ARP/Ping set device IP address service.	You can use ARP/Ping command to modify or set the device IP address if you know the device MAC address. Before the operation, please make sure the network camera and the PC in the same LAN. This function is on by default. You can refer to the steps listed below. **Step 1**: Get an IP address. Set the network camera and the PC in the same LAN. **Step 2**: Get the physical address from the label of the network camera. **Step 3**: Go to the Run interface and then input the following commands. arp –s <IP Address> <MAC> ping –l 480 –t <IP Address> Such as：arp -s 192.168.0.125 11-40-8c-18-10-11 ping -l 480 -t 192.168.0.125 **Step 4**: Reboot the device. **Step 5**: You can see the setup is OK if you can see there are output information such as “Reply from 192.168.0.125 …” from the command output lines. Now you can close the command line. **Step 6**: Open the browse and then input http://<IP address>. Click the Enter button, you can access now.

6.2.1.1 **Easy4ip**

Click “Enable” to connect the device to network, and then you can connect to the device via mobile client of Easy4ip after “Online” is displayed on the interface (connection mode: add device serial number or scan QR code). See Figure 6-30.

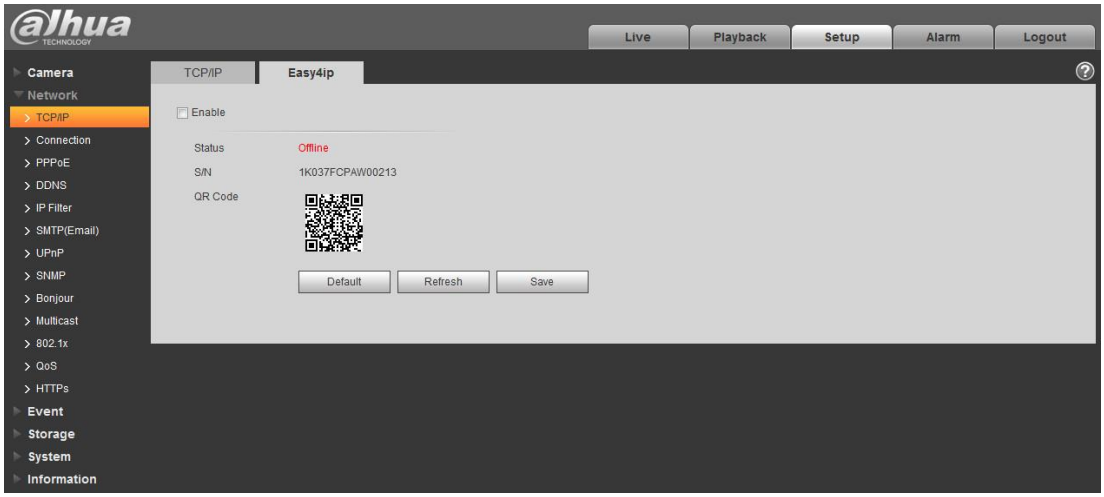


Figure 6-30

6.2.2 Connection

6.2.2.1 **Connection**

The connection interface is shown as in Figure 6-31.

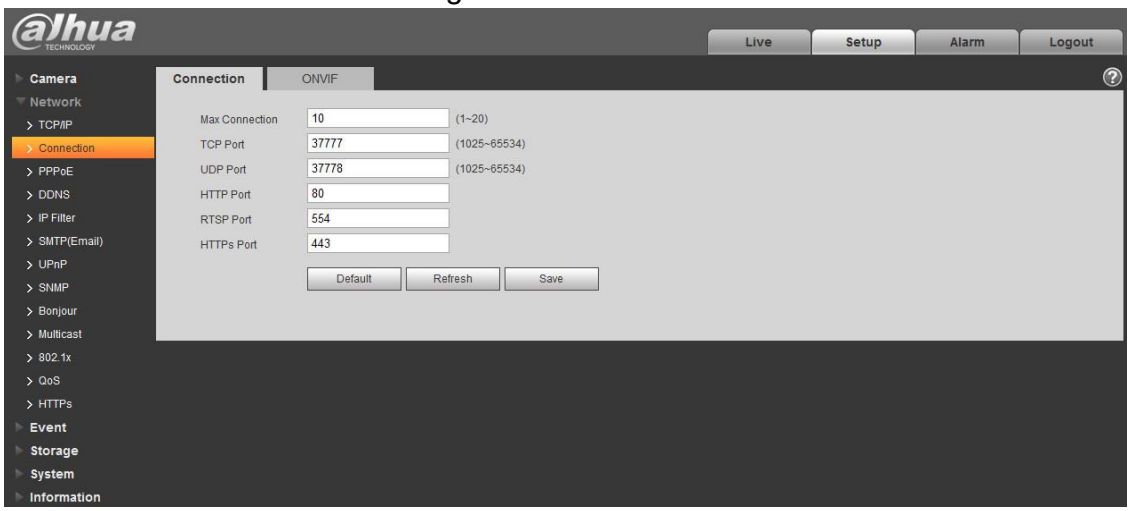


Figure 6-31

Please refer to the following sheet for detailed information.

Parameter	Description
Max connection	It is the max Web connection for the same device. The value ranges from 1 to 20. Default connection amount is 10.
TCP port	Port range is 1025~65534. The default value is 37777. You can input the actual port number if necessary.
UDP port	Port range is 1025~65534. The default value is 37778. You can input the actual port number if necessary.
HTTP port	Port range is 1025~65524. The default value is 80. You can input the actual port number if necessary.

RTSP port	● The default value is 554. Please leave blank if use default. User uses QuickTime or VLC can play the following formats. BlackBerry can play too. ● Real-time monitoring URL format, please require real-time RTSP media server, require channel no., bit stream type in URL. You may need username and password. ● User uses BlackBerry need to set encode mode to H.264B, resolution to CIF and turn off audio. URL format is: rtsp://username:password@ip:port/cam/realmonitor?channel=1&subtype=0 Username/password/IP and port. The IP is device IP and the port default value is 554. You can leave it in blank if it is the default value. Follow standard RTP protocol and when encode mode is MJPEG, the max resolution only supports 2040*2040.
HTTPs Port	HTTPs communication port, range is 1025~65534, default is 443.

Note:

- 0～1024, 37780～37880, 1900, 3800, 5000, 5050, 9999, 37776, 39999, 42323 are all special ports. User cannot modify them.
- Avoid using default port value of other ports.

6.2.2.2 **ONVIF**

ONVIF（Open Network Video Interface Forum），this standard describes network video mode, interface, data type and data interaction mode. ONVIF Standard's aim is to achieve a network video frame agreement and makes the network video products (including video front-end, video equipment, etc.) from different manufacturers completely compatible.

ONVIF function is on by default.

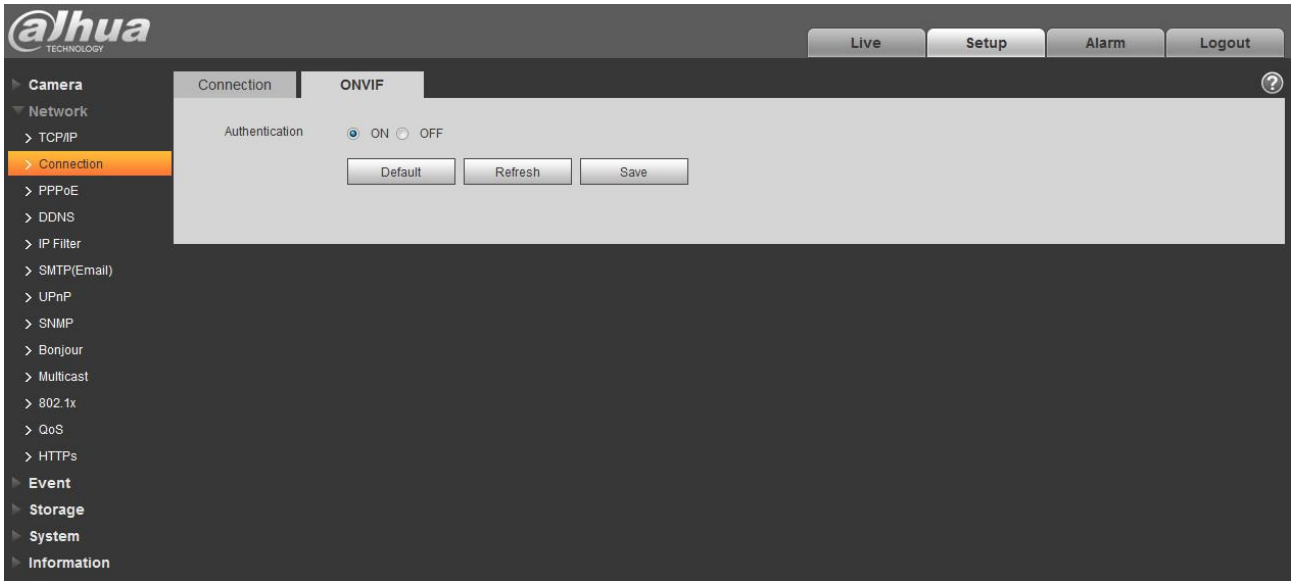


Figure 6-32

6.2.3 PPPoE

The PPPoE interface is shown as in Figure 6-33.

Enter the PPPoE username and password which are provided by ISP (Internet Service Provider), and click “Enable”. The network camera will automatically establish network connection in the mode of PPPoE after it is enabled; after it is successful, the IP of the “IP Address” will be automatically modified into the dynamic IP address of the acquired WAN.

Note:

After PPPoE dial-up is successful, it needs to log in the device via the IP which is set before dial-up; in the PPPoE setup interface, it will display the registered IP address, and then it can visit the IP address via client.

Please disable UPnP when clicking PPPoE enable, which is to avoid causing influence to PPPoE dial-up.

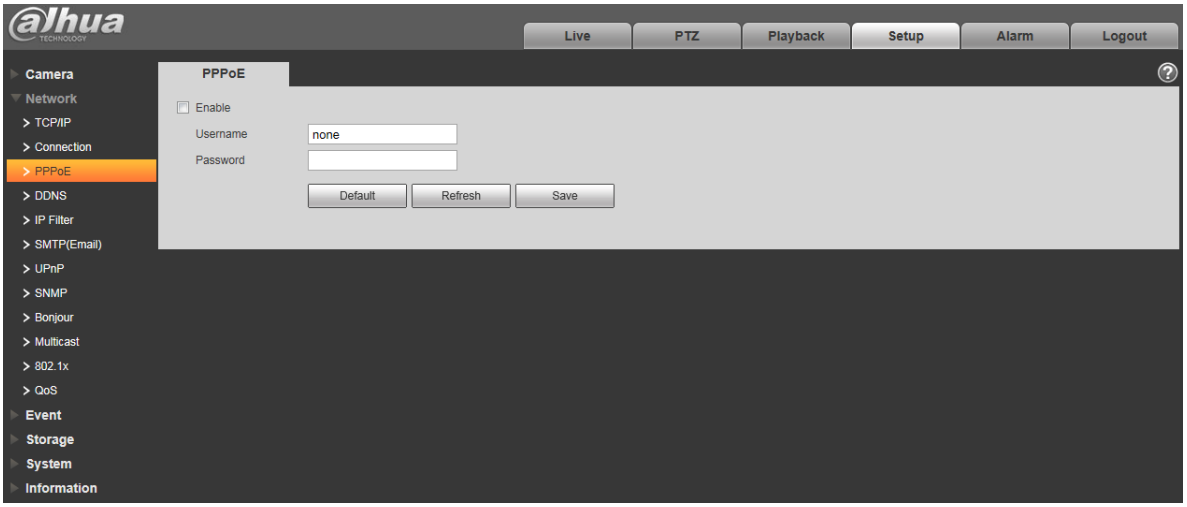


Figure 6-33

6.2.4 DDNS

The DDNS interface is shown as in Figure 6-34.

The DDNS is to set to connect the various servers so that you can access the system via the server. Please go to the corresponding service website to apply a domain name and then access the system via the domain. It works even your IP address has changed. When the device connects to WLAN, you should disable UPnP.

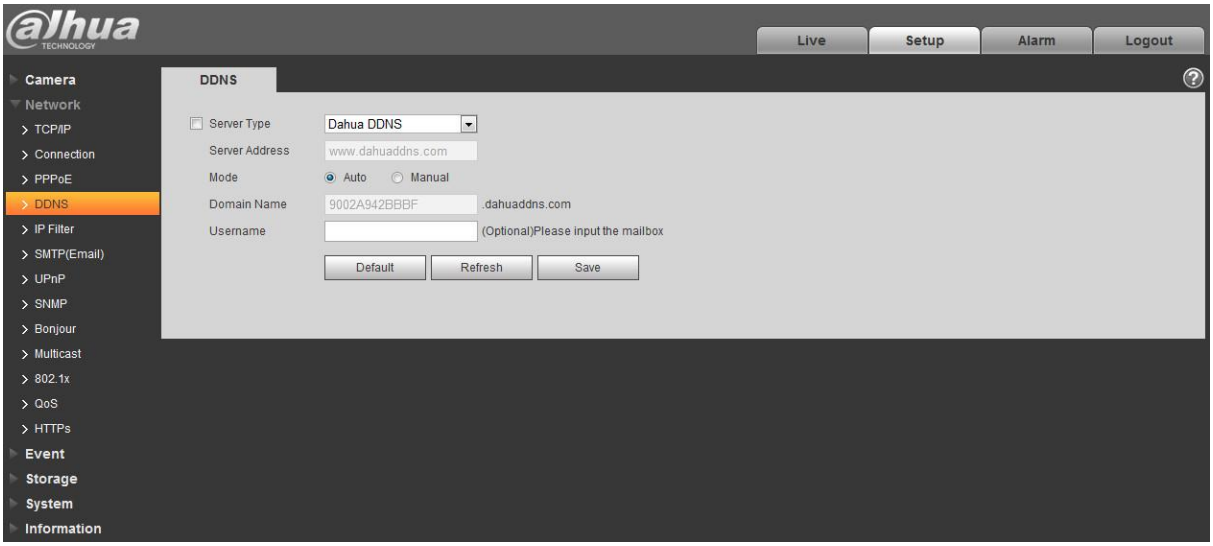


Figure 6-34

Please refer to the following sheet for detailed information.

Parameter	Description
Server Type	You can select DDNS protocol from the dropdown list: CN99 DDNS, NO-IP DDNS, Dyndns DDNS, and Dahua DDNS. The default is Dahua DDNS.
Server Address	DDNS server IP address CN99 DDNS Server address: www.3322.org NO-IP DDNS Server address: dynupdate.no-ip.com Dyndns DDNS Server address: members.dyndns.org Dahua DDNS Server address：www.dahuaddns.com
Mode	Default is auto, able to choose manual
Domain Name	Both auto and manual are “MAC addresss.dahuaddns.com”by default, able to set prefix manually.
Username	The user name you input to log in the server, optional.

The CN99 DDNS interface is shown as in Figure 6-35.

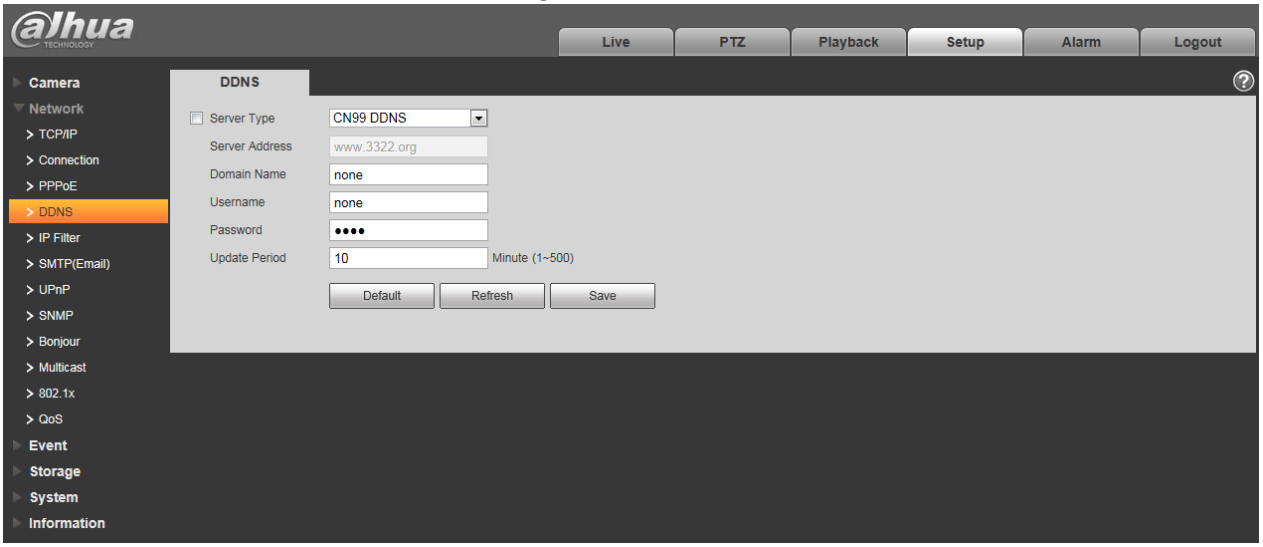


Figure 6-35

Parameter	Description
Server Type	You can select CN99 DDNS protocol
Server Address	Under CN99 DDNS the default server address is “www.3322.org”
Domain Name	Self-defined domain name
Username	The user name you input to log in the server.
Password	The password you input to log in the server
Refresh Period	The refresh period of the connection between the device IP and the server, default is 10 minutes.

6.2.5 IP filter

The IP filter interface is shown as in Figure 6-36.

You can enable IP filter function so that some specified IP/MAC user can access the network camera.

You can add IP address or IP segment.

If you do not check the box here, it means there is on access limit.

Here you can add IP address and MAC address. You must add these addresses before enabling the trusted sites.

Please note: You must set MAC address in the same network segment.

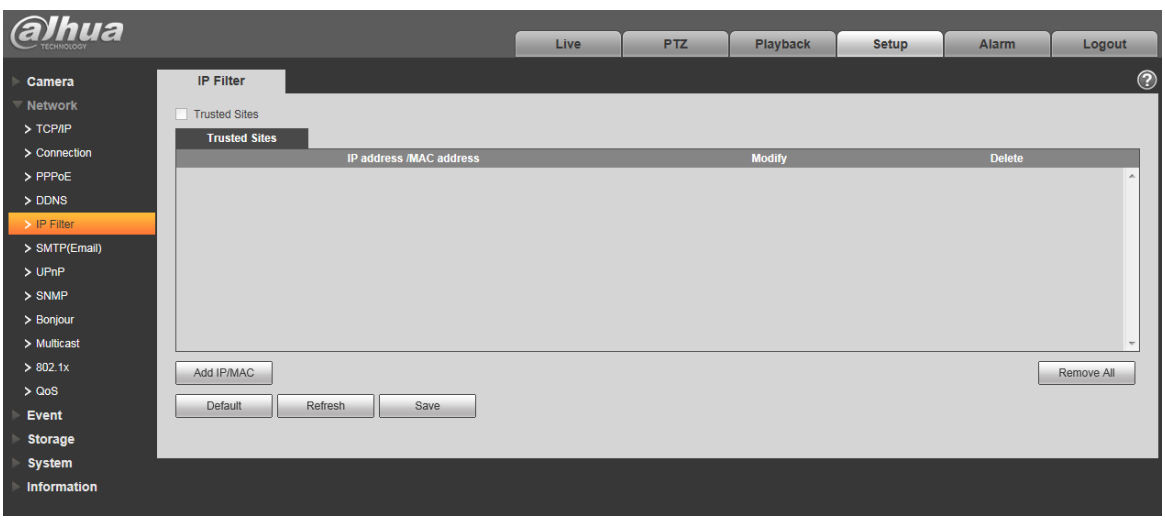


Figure 6-36

6.2.6 SMTP (e-mail)

The SMTP interface is shown as in Figure 6-37.

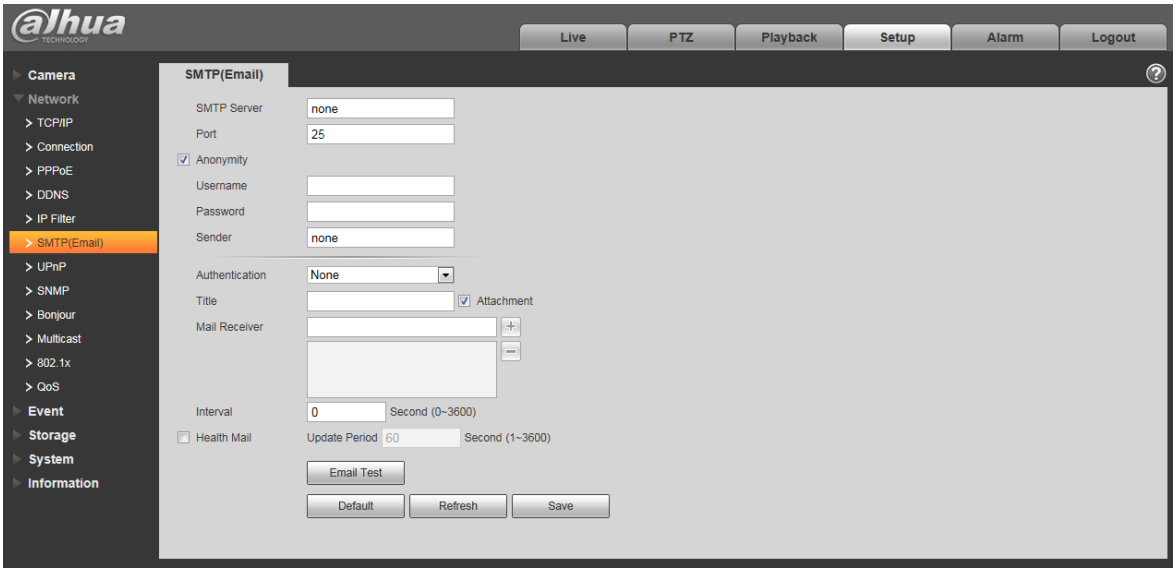


Figure 6-37

Please refer to the following sheet for detailed information.

Parameter	Description
SMTP Server	Input server address and then enable this function.
Port	Default value is 25. You can modify it if necessary.
Anonymity	For the server which supports the anonymity email function, it won't display the information of the sender.
User Name	The user name of the sender email account.
Password	The password of sender email account.
Sender	Sender email address.
Authentication (Encryption mode)	You can select SSL, TLS or none.
Title (Subject)	Input email subject here.
Attachment	System can send out the email of the snapshot picture once you check the box here.
Mail receiver	Input receiver email address here. Max three addresses.

Parameter	Description
Interval	The send interval ranges from 0 to 3600 seconds. 0 means there is no interval. Please note system will not send out the email immediately when the alarm occurs. When the alarm, motion detection or the abnormity event activates the email, system sends out the email according to the interval you specified here. This function is very useful when there are too many emails activated by the abnormity events, which may result in heavy load for the email server.
Health mail enable	Please check the box here to enable this function.
Email test	The system will automatically sent out a email once to test the connection is OK or not .Before the email test, please save the email setup information.

6.2.7 UPnP

It allows you to establish the mapping relationship between the LAN and the public network.

Here you can also add, modify or remove UPnP item. For UPnP on different routers, you must disable UPnP function. See Figure 6-38.

In the Windows OS, From Start->Control Panel->Add or remove programs. Click the “Add/Remove Windows Components” and then select the “Network Services” from the Windows Components Wizard. Click the Details button and then check the “Internet Gateway Device Discovery and Control client” and “UPnP User Interface”. Please click OK to begin installation.

Enable UPnP from the Web. If your UPnP is enabled in the Windows OS, the network camera can auto detect it via the “My Network Places”.

Under manual mode, you can modify external port. Under auto mode, select idle port for auto port mapping without user modification.

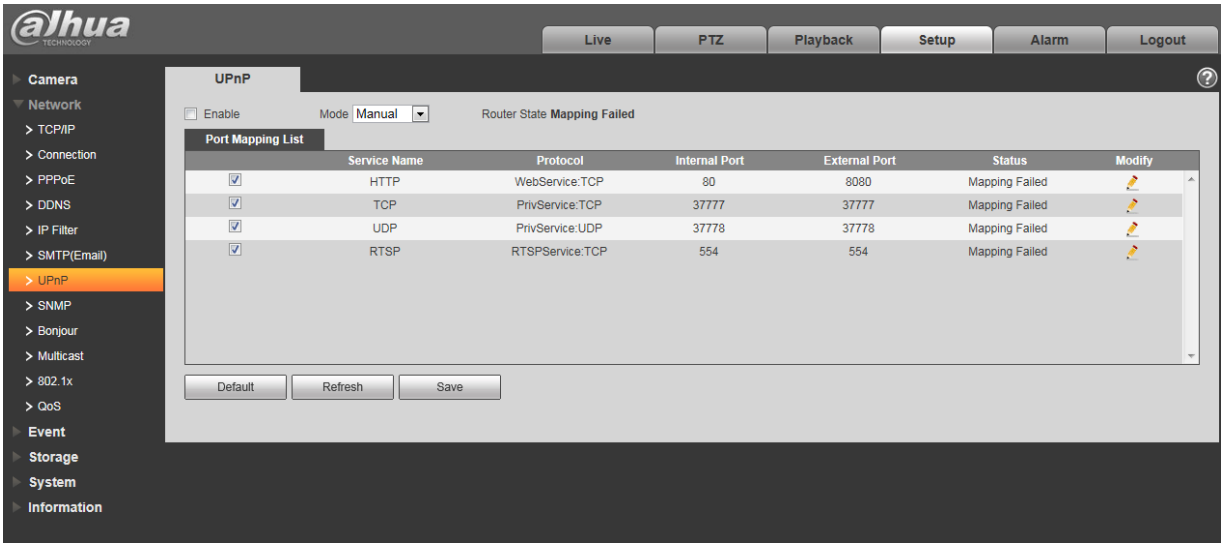


Figure 6-38

6.2.8 SNMP

The SNMP interface is shown as in Figure 6-39 and Figure 6-40.

The SNMP allows the communication between the network management work station software and the proxy of the managed device. Please install the software such as MG MibBrowser 8.0c software or establish the SNMP service before you use this function. You need to reboot the device to activate the new setup.

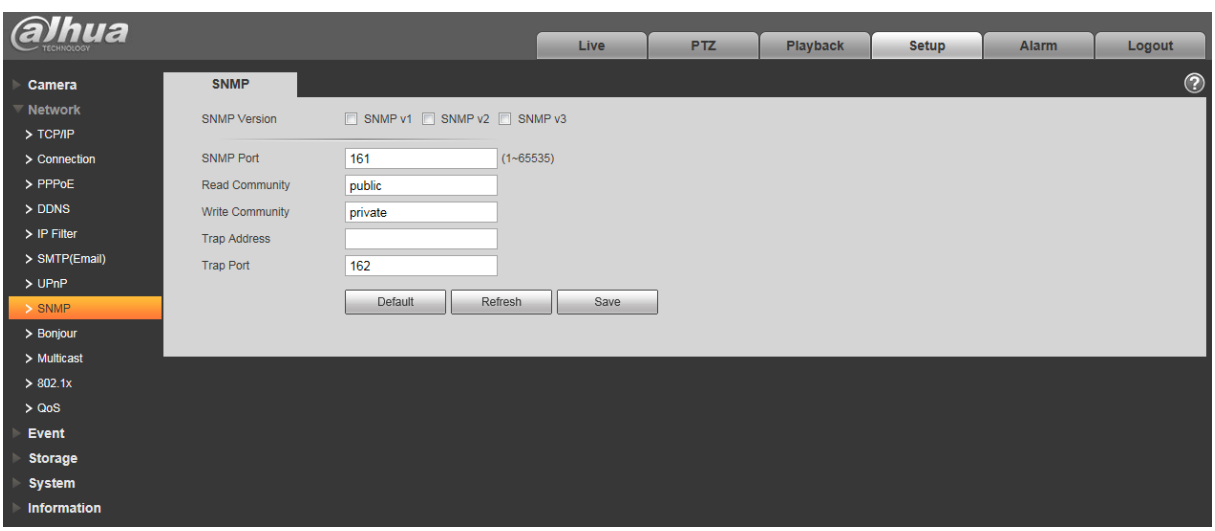


Figure 6-39

Please refer to the following sheet for detailed information.

Parameter	Description
SNMP Version	● Check SNMP v1, device only process v1 info. ● Check SNMP v2, device only process v2 info. ● Check SNMP v3, can set username, password and encryption method. Server calibrate corresponding username, password and encryption method too access device and v1/v2 are unavailable.
SNMP port	The listening port of the proxy program of the device. It is a UDP port not a TCP port. The value ranges from 1 to 65535. The default value is 161
Community	It is a string, as command between management and proxy, , defining a proxy, and a manager's authentication.
Read community	Read-only access to all SNMP targets, default is public. Note: Only number, letter, _, and – supported.
Write community	Read/write access to all SNMP targets, default is private. Note: Only number, letter, _, and – supported.
Trap address	The destination address of the Trap information from the proxy program of the device.
Trap Address	Address where to send Trap message.
Trap Port	Port which send Trap message, default is 162, range 1~65535.

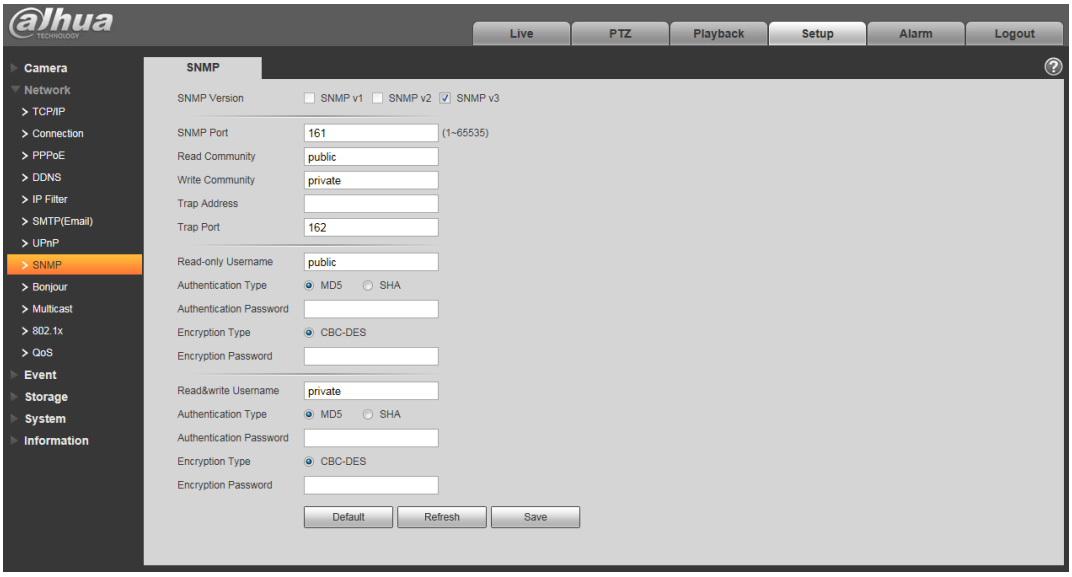


Figure 6-40

Check SNMP v3 version and SNMP port, read community, write community, Trap address, Trap port are same with SNMP v1 and SNMP v2 versions. Only when SNMP version is SNMP v3, users need to configure parameter in chart.

Parameter	Description
SNMP Version	SNMP v3
Read-only Username	Default is public. Note: Name only can be number, letter and underline.
Read/Write Username	Default is private. Note: Name only can be number, letter and underline.
Authentication	You may select MD5 or SHA, default is MD5.
Authentication Password	Password not less than 8 characters.
Encryption	Default is CBC-DES.
Encryption Password	Password not less than 8 characters.

6.2.9 Bonjour

The Bonjour interface is shown as below. See Figure 6-41.

Bonjour is based on the multicast DNS service from the Apple. The Bonjour device can automatically broadcast its service information and listen to the service information from other device.

You can use the browse of the Bonjour service in the same LAN to search the network camera device and then access if you do not know the network camera information such as IP address.

You can view the server name when the network camera is detected by the Bonjour. Please note the safari browse support this function. Click the “Display All Bookmarks: and open the Bonjour, system can auto detect the network camera of the Bonjour function in the LAN.

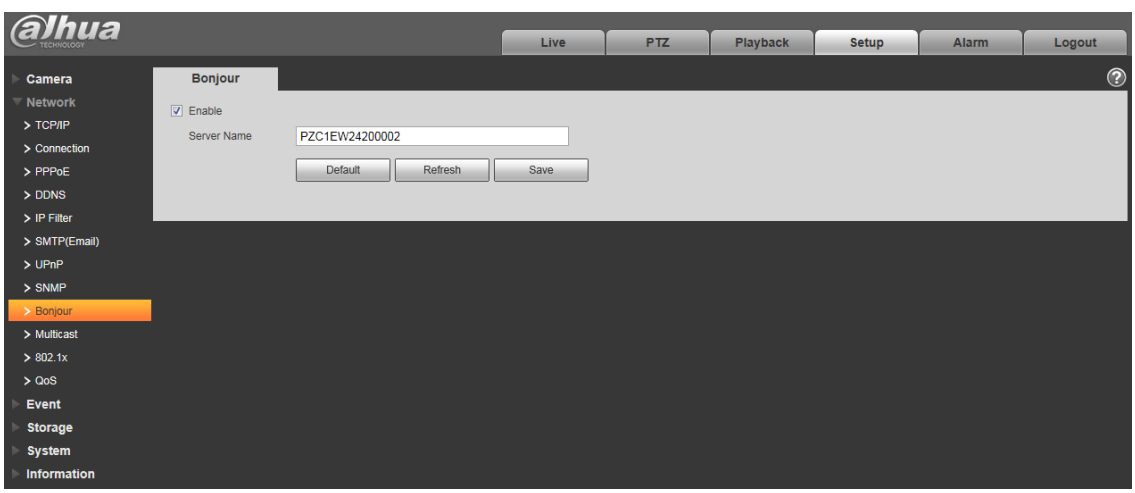


Figure 6-41

6.2.10 Multicast

The multicast interface is shown as in Figure 6-42.

Multicast is a transmission mode of data packet. When there is multiple-host to receive the same data packet, multiple-cast is the best option to reduce the broad width and the CPU load. The source host can just send out one data to transit. This function also depends on the relationship of the group member and group of the outer.

Note

- Open preview, streaming media protocol, select multicast, and monitor via multicast format.
- Here you can set multicast address and port. You also need to go to Live interface to set the protocol as Multicast.

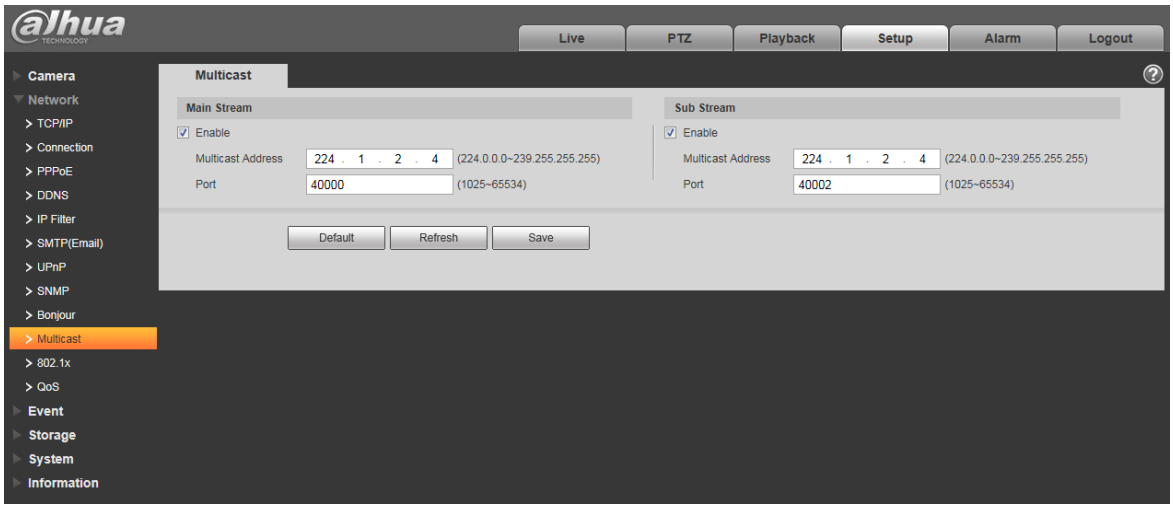


Figure 6-42

Please refer to the following sheet for detailed information.

Parameter	Description
Enable	Select to enable multicast function. Main stream and sub stream cannot be used at the same time.
Multicast address	Main/sub stream multicast default address is 224.1.2.4 and its range is 224.0.0.0～239.255.255.255.
Port	Multicast port. Main stream is 40000, sub stream1 is 40016,sub stream2 is 40032 and the range is 1025～65534.

6.2.11 4G

Note: This function is only for series with 4G module.

4G is a mobile communication system which makes wireless communication integrates with Internet and multimedia communication.

6.2.11.1 Dialing Setting

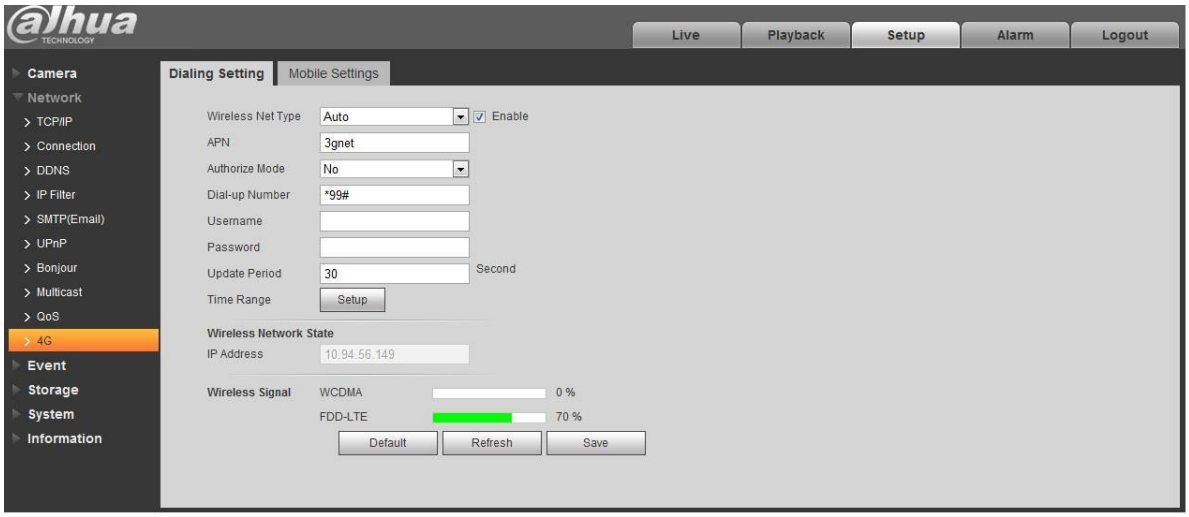


Figure 6-43

Parameter	Description
Wireless Net Type	Auto, WCDMA, FDD-LTE optional, you can select according to the operator.
Enable	Check to enable 4G module.
APN	It shall be acquired from the operator according to the setup of operator.
Authentication Mode	Auto, PAP and CHAP, the authentication algorithm is different according to different operators.
Dial-up Number	The number is different according to different operator, it can be acquired from operator.
User name	It shall be acquired from the operator.
Password	It shall be acquired from the operator.
Update Period	It is the period beyond the dial-up period which has been set, it is 30s by default, which means the device can auto acquire 4G dial-up status, cut off dial-up to save flow.

Time Range	It is the time period to set dial-up. It can activate the function via message to enable/disable dial-up function if it is beyond the time period.
IP Address	It will display the acquired IP after the dial-up is successful via 4G.

6.2.11.2 Mobile Setting

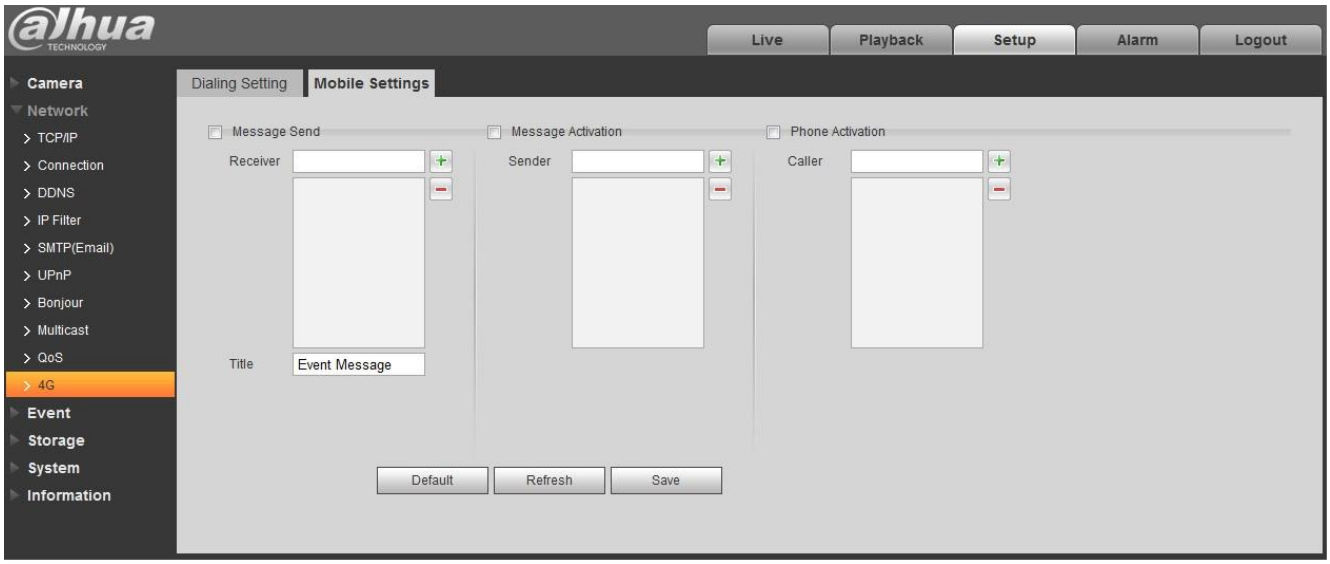


Figure 6-44

Please refer to the following sheet for detailed information.

Parameter	Description
Message Send	In the event, after the corresponding message activation is enabled, it will send message to the phone of receiver when event happens. It needs to enable the function of message activation function in the event interface when using the function.
Message Activation	It can send message ON/OFF to the SIM card inside the device by the mobile phone in the list, which is to enable /disable the dial-up function and send REBOOT to restart the device.
Phone Activation	You can use the mobile phone in the calling list to call the SIM card inside the device to enable dial-up function.

6.2.12 WIFI

Note:

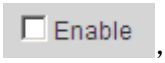
Some series devices don't support WIFI and WPS function.
WPS function is supported by the devices with WPS button.

6.2.12.1 WIFI

WIFI info can show the name, status, IP information of the Current Hot Spot. Usually please "Refresh" WIFI work information after reconnection to ensure the real-time display of the work status, because it often takes some time to connect WIFI Hot Spot, which depends on the network signal strength.

Figure 6-45

WIFI setting method is as follows:

Step 1 Click 

, show as

, means enabling WIFI function.

Step 2 Click " Search SSID", and shows the wireless network hot spot of the current network camera environment in the list.

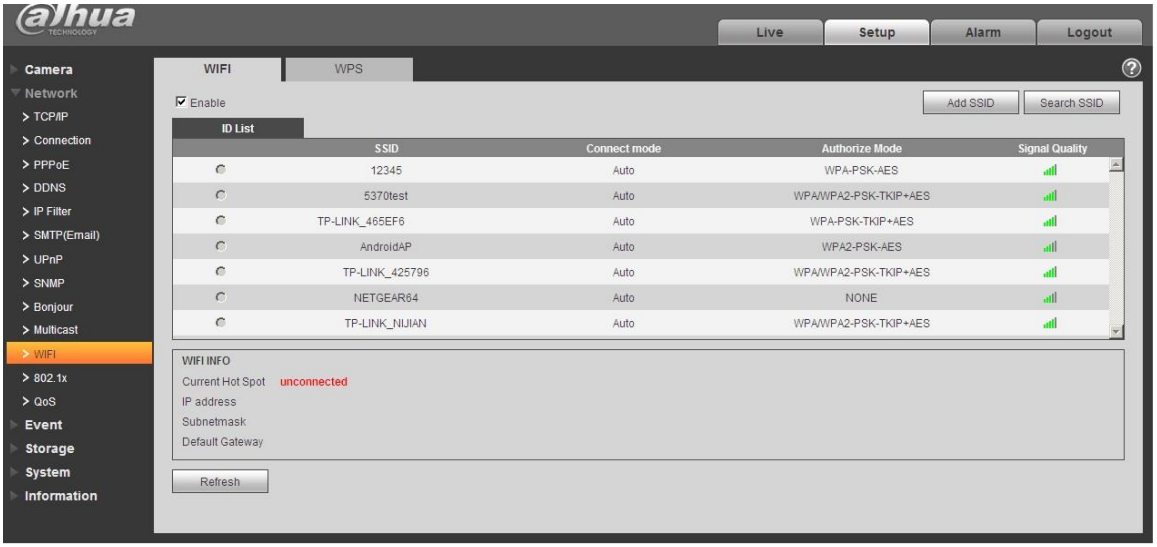


Figure 6-46

Step 3 Click “Add SSID” when need to add a wireless network manually pop out an interface in the figure below, and enter network ID in the dialog box.

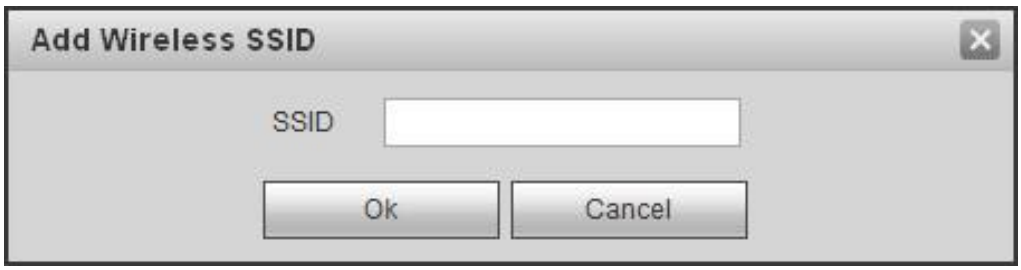


Figure 6-47

Step 4 Double click on one can pop out the signal intensity and authentication of the hot spot.

- Please enter the password if necessary. Please keep the choice of password index number same as the router when entering password.
- Please click “connect” if it is unnecessary to enter the password.

6.2.12.2 WPS

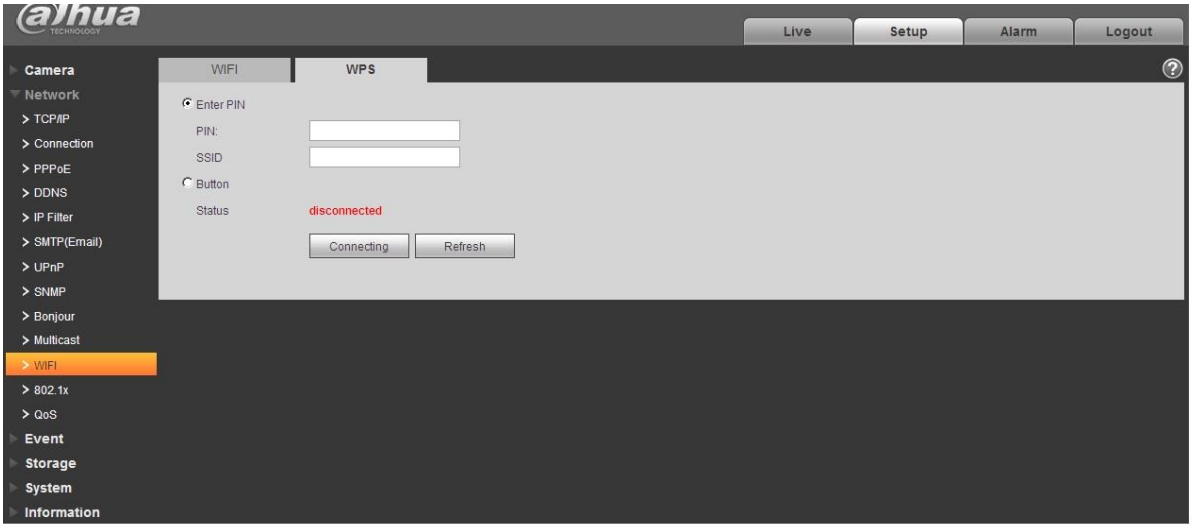


Figure 6-48

PIN Number and SSID are both acquired from the router, please “refresh” the work information of WIFI to ensure the real-time display of work state after filling in correctly.

6.2.13 802.1x

802.1x (port based network access control protocol) supports manual selection of authentication method to control if device connected to LAN can join the LAN. It well supports authentication, charging, safety and management requirement of network.

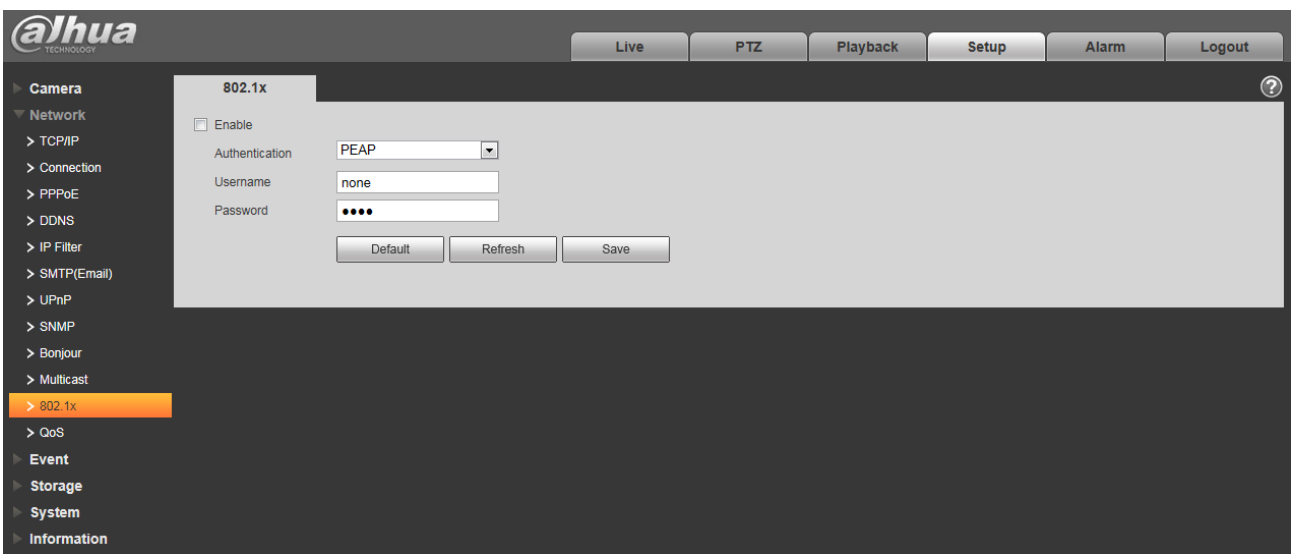


Figure 6-49

Please refer to the following sheet for detailed information.

Parameter	Description
Authentication	PEAP (protected EAP protocol).
Username	It needs the username to login, which is authenticated by the server.
Password	Please input password here.

6.2.14 QoS

The QoS interface is shown as below. See Figure 6-50.

Qos (Quality of Service) is network security mechanism. It is a technology to fix the network delay and jam problem and etc. For the network service, the quality of service includes the transmission bandwidth, delay, the packet loss and etc. We can guarantee the transmission bandwidth, lower the delay, and reduce the loss of the data packet and anti-dither to enhance the quality.

We can set the DSCP (Differentiated Services Code Point) of the IP to distinguish the data packet so that the router or the hub can provide different services for various data packets. It can select the different queues according to the priority (64 different priority levels) of the packets and select the bandwidth of the each queue. Level 0 is the lowest, and level 63 is the highest. It can also discard at the different ratio when the broad bandwidth is jam.

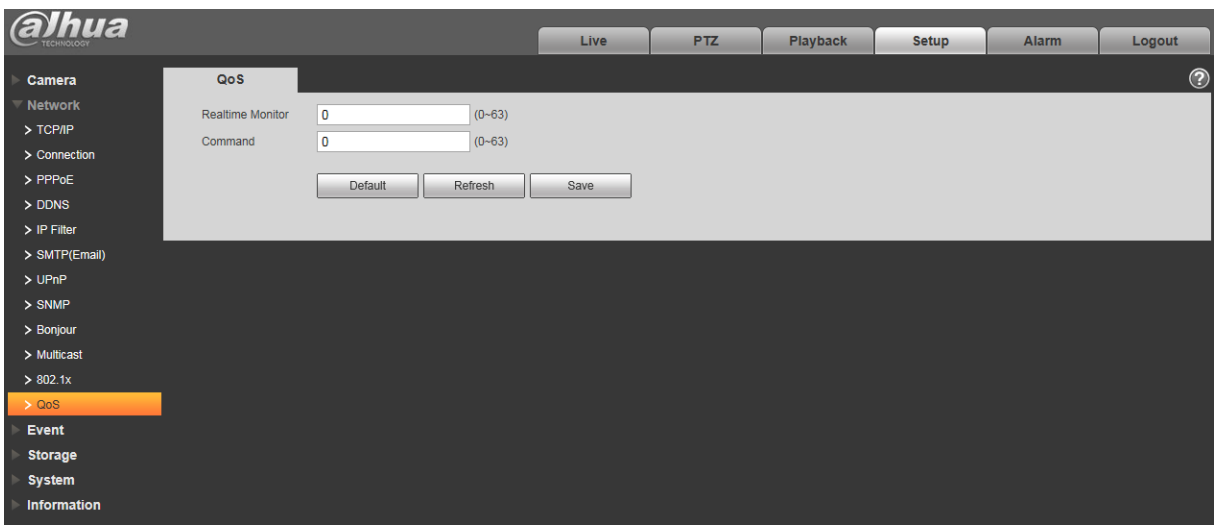


Figure 6-50

Please refer to the following sheet for detailed information.

Parameter	Description
Real-time monitor	The value ranges from 0 to 63. The router or the switcher can provide different service for various data packets.
Command	The value ranges from 0 to 63. The router or the switcher can provide different service for various data packets.

Parameter	Description
Enable Wireless QoS	Check it to enable QoS.

6.2.15 HTTPs

In the HTTPs setting interface, users can make PC log in normally via HTTPs by creating certificate or uploading signed certificate, which is to guarantee the security of communication data and provide safeguard for user information and device security with reliable and stable technical means.

Step 1

Create certificate or upload the signed certificate.

- Please refer to the following steps if you select “Create Certificate”.

1. Select “Setup > Network > HTTPs”, and the system will display the interface of HTTPs, which is shown in Figure 6-51.

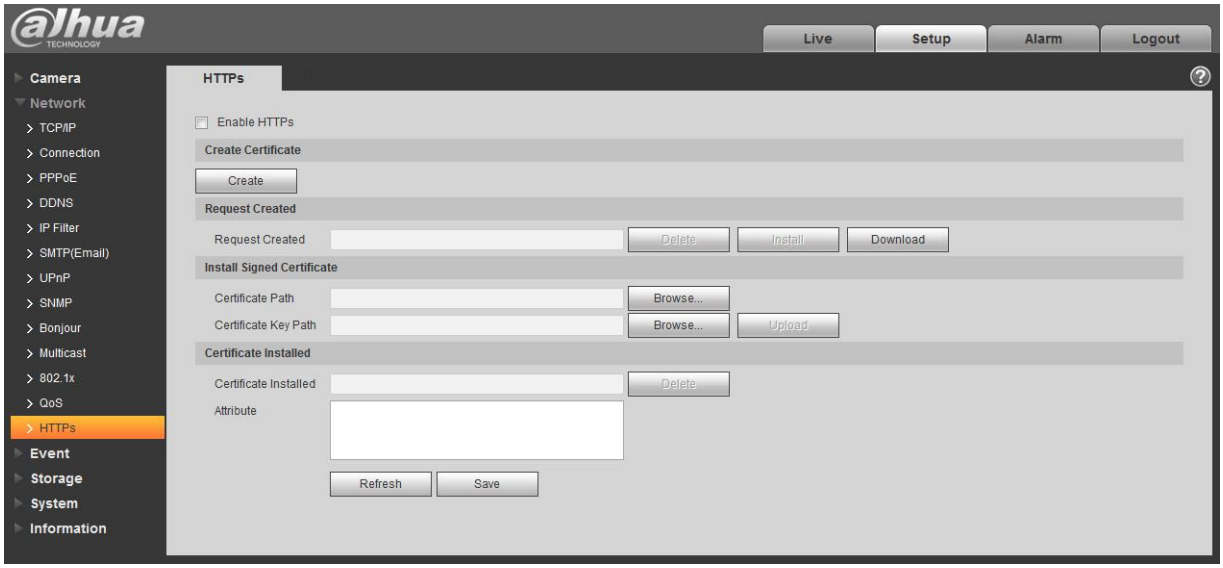


Figure 6-51

2. Click “Create” and it will pop out the dialog box of “HTTPs”, which is shown in Figure 6-52.

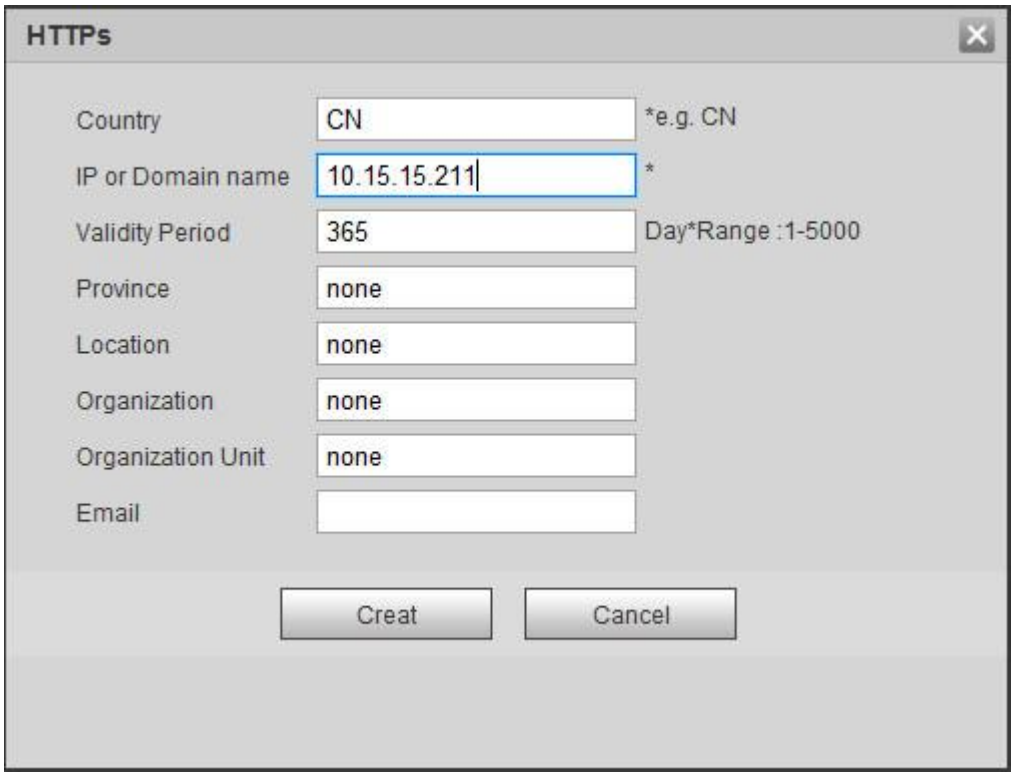


Figure 6-52

3. Fill in corresponding “Country”, “Province” and some other information; click “Create” after filling in. It will show the prompt of “Create Successfully”, which means the server certificate has been successfully created.

Note:

Make sure the “IP or domain name” is the same as that of the device.

4. Click “Install” and it will install the certificate on the device end, which is shown in Figure 6-53.

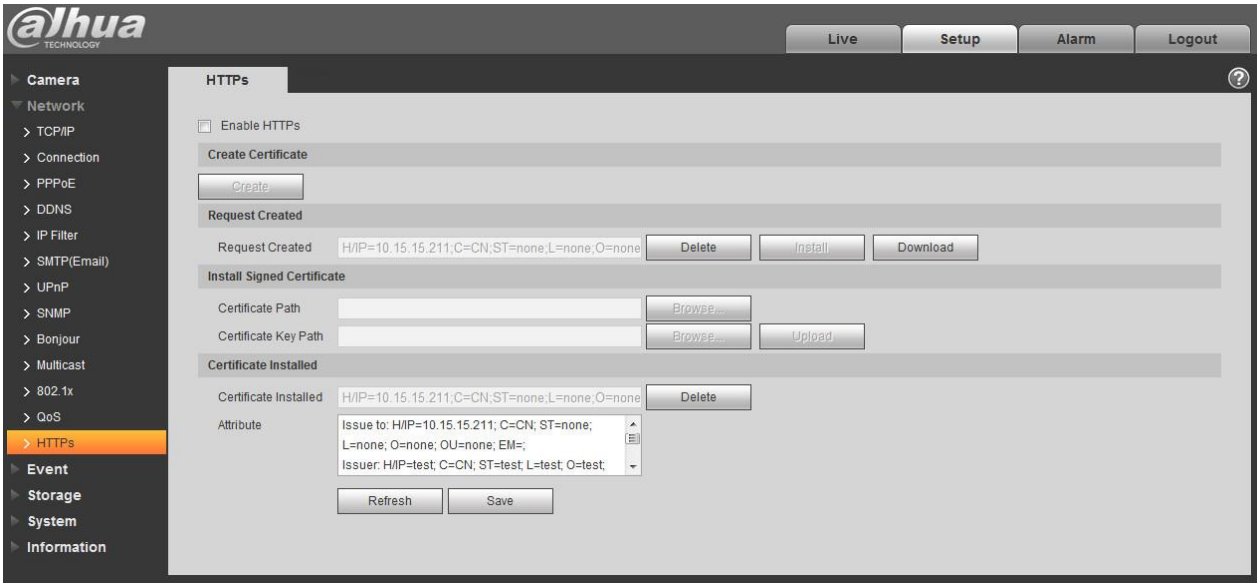


Figure 6-53

5. Click “Download”. It will pop out the dialog box of “Save as”, save the file into the computer.

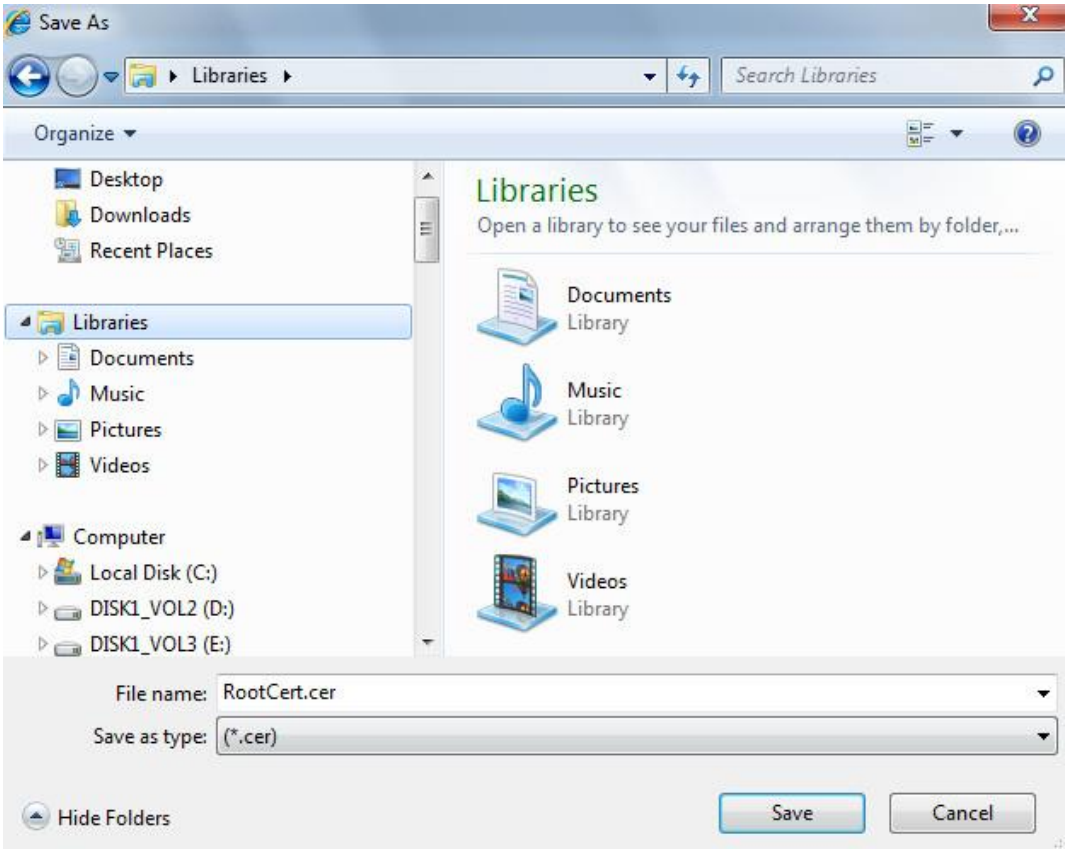


Figure 6-54

6. Double click the downloaded icon of “RootCert.cer”. The system will display the information interface of “Certificate”, which is shown in Figure 5-55.

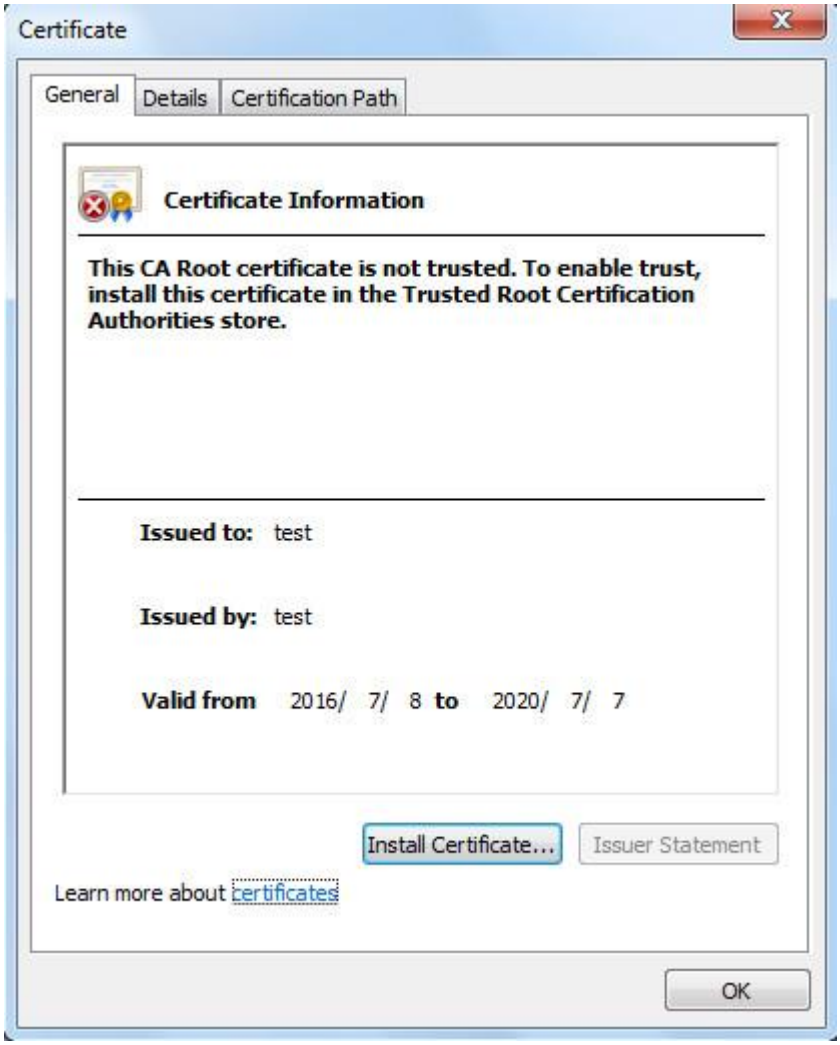


Figure 6-55

7. Click “Install Certificate” and it will pop out the interface of “Certificate Import Wizard”, which is shown in Figure 6-56.

Figure 6-56

8. Click “Next”. Select “Trusted Root Certification Authorities”, which is shown in Figure 6-57.

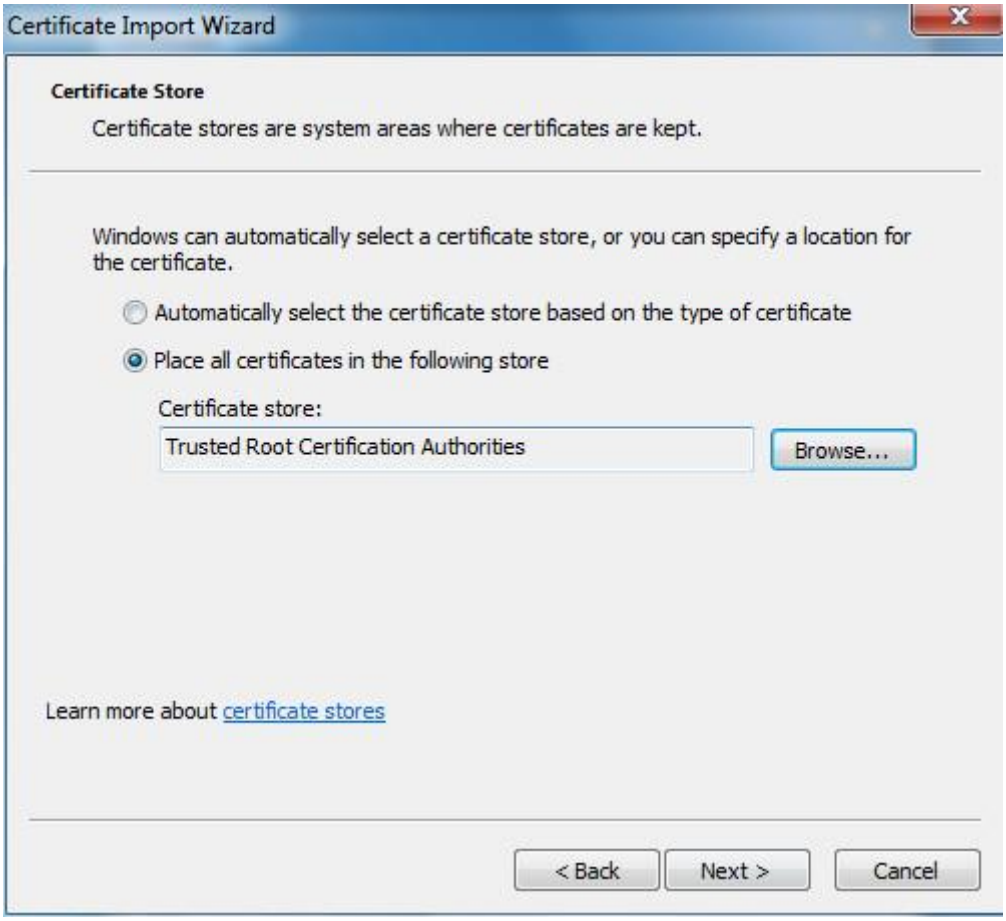


Figure 6-57

9. Click “Next”. The system will display the interface of “Completing the Certificate Import Wizard”, which is shown in Figure 6-58.

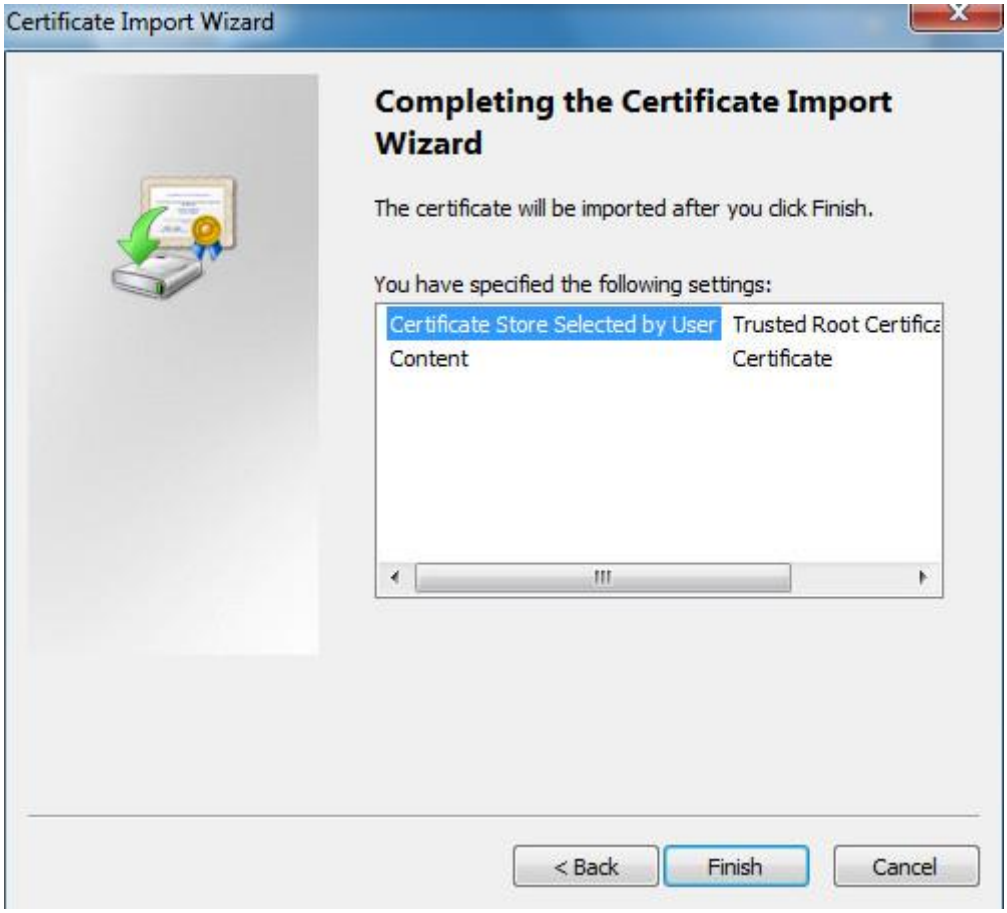


Figure 6-58

10. Click “Finish”, and it will pop out the dialog box of “Security Warning”, which is shown in Figure 6-59.

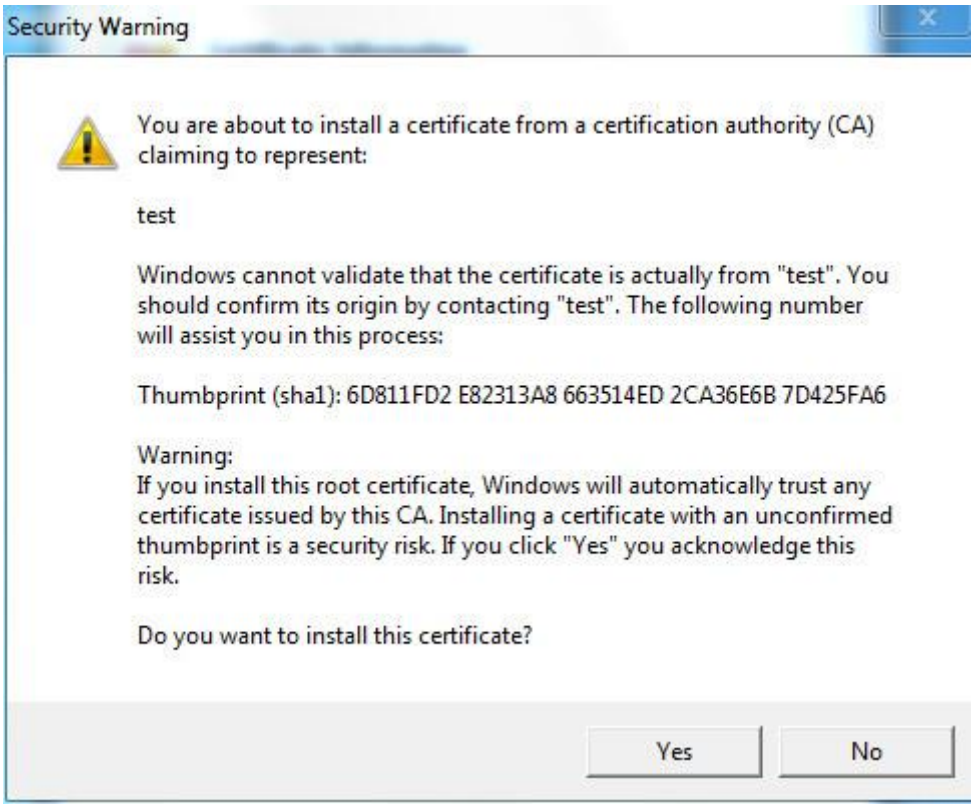


Figure 6-59

11. Click “Yes”. It will pop out the dialog box of “Import Successful”, click “Ok” to complete downloading certificate, which is shown in Figure 6-60.

Figure 6-60

- Please refer to the following steps if you select “Install Signed Certificate”.

1. Select “Setup > Network > HTTPs”. The system will display the interface of HTTPs, which is shown in Figure 6-61.

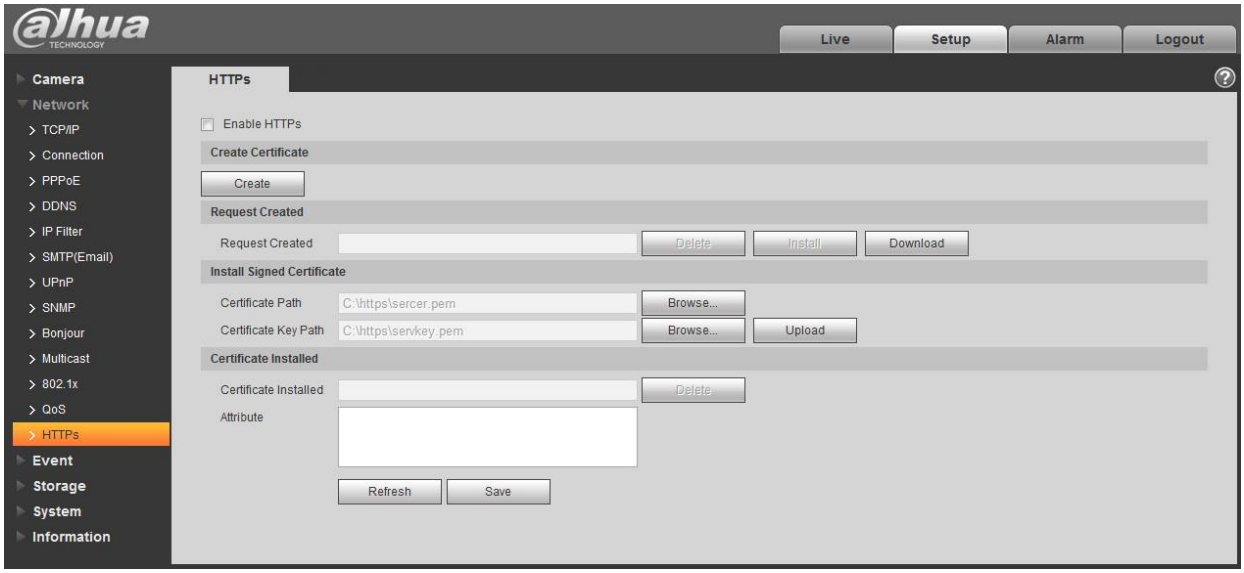


Figure 6-61

2. Select signed certificate and certificate key path respectively via “Browse”, click “Upload”.
3. Install root certificate, please refer to step 6~11 for more details.
4. Check “Enable HTTPs”, click “Save”. The system will display the dialog box of “Need to reboot the device”, and then the config is valid.

Figure 6-62

5. Use HTTPs

Use HTTPs to log in.

Enter https://xx.xx.xx.xx in the browser, and it will pop out normal login interface; the browser will prompt certificate error if the certificate is not installed, which is shown in Figure 6-63.

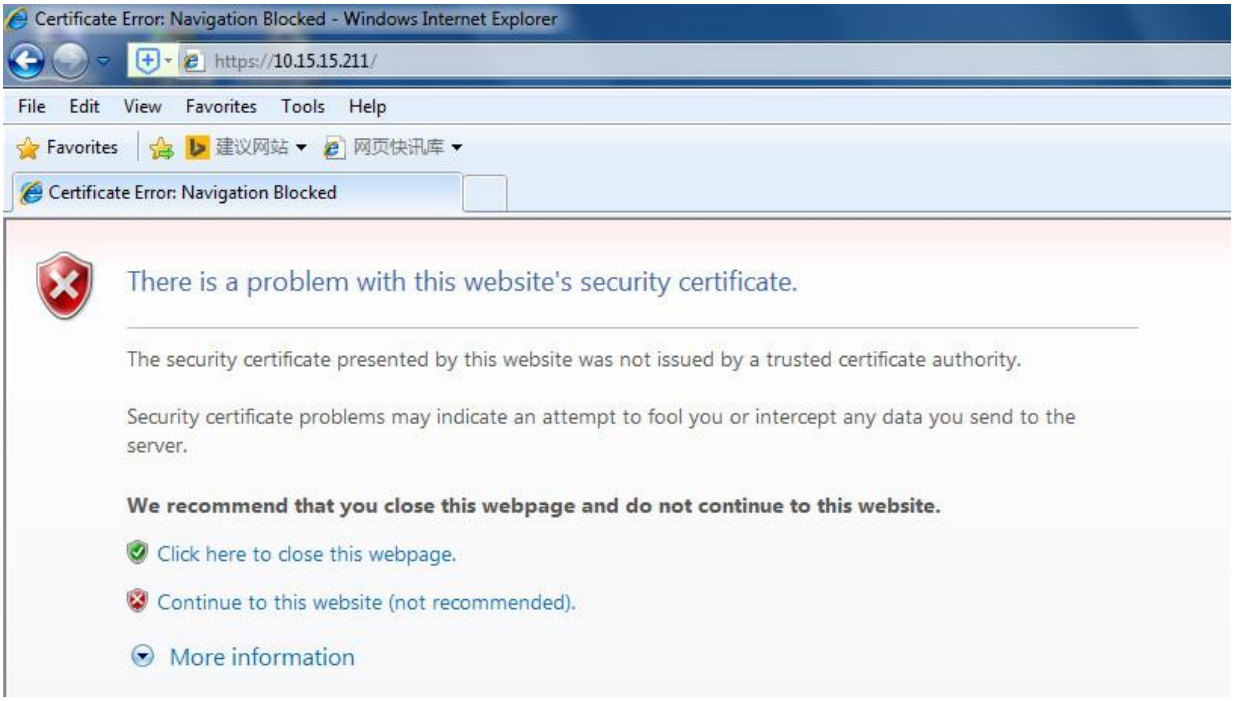


Figure 6-63

Note:

"xx.xx.xx.xx" is corresponding to your IP or domain name.

6.3 Event

6.3.1 Video detection

6.3.1.1 Motion Detection

Step 1

Select "Setup > Event > Video Detection > Motion Detection' and the system will display the interface of "Motion Detection" which is shown in Figure 6-64.

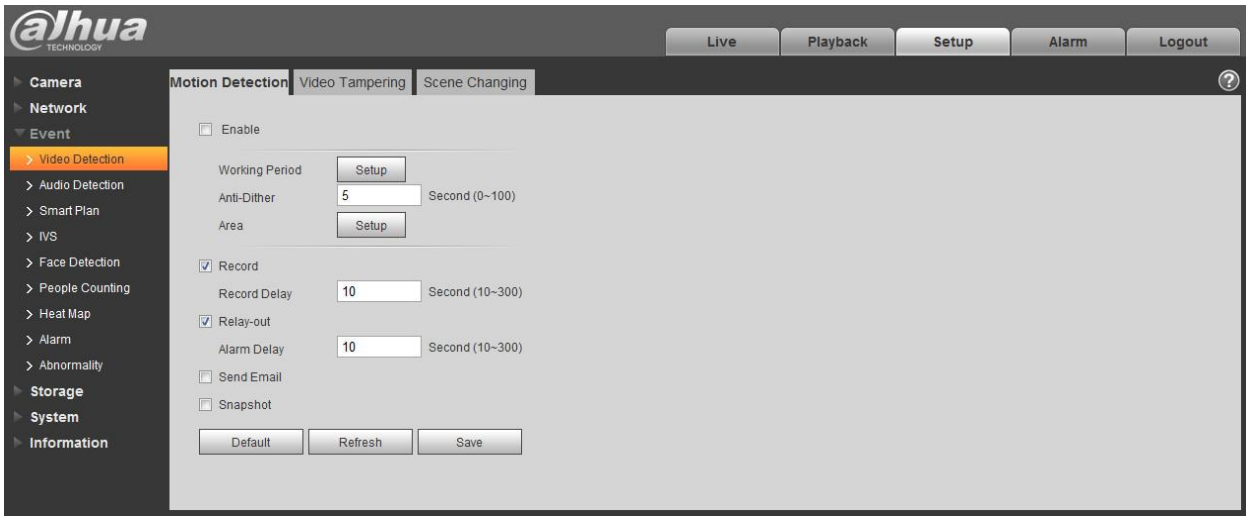


Figure 6-64

Step 2

Select “Enable” to enable motion detection function.

Step 3

Set motion detection area.

1. Click “Setup” and the system will pop out the interface of “Setting Area”, which is shown in Figure 6-65

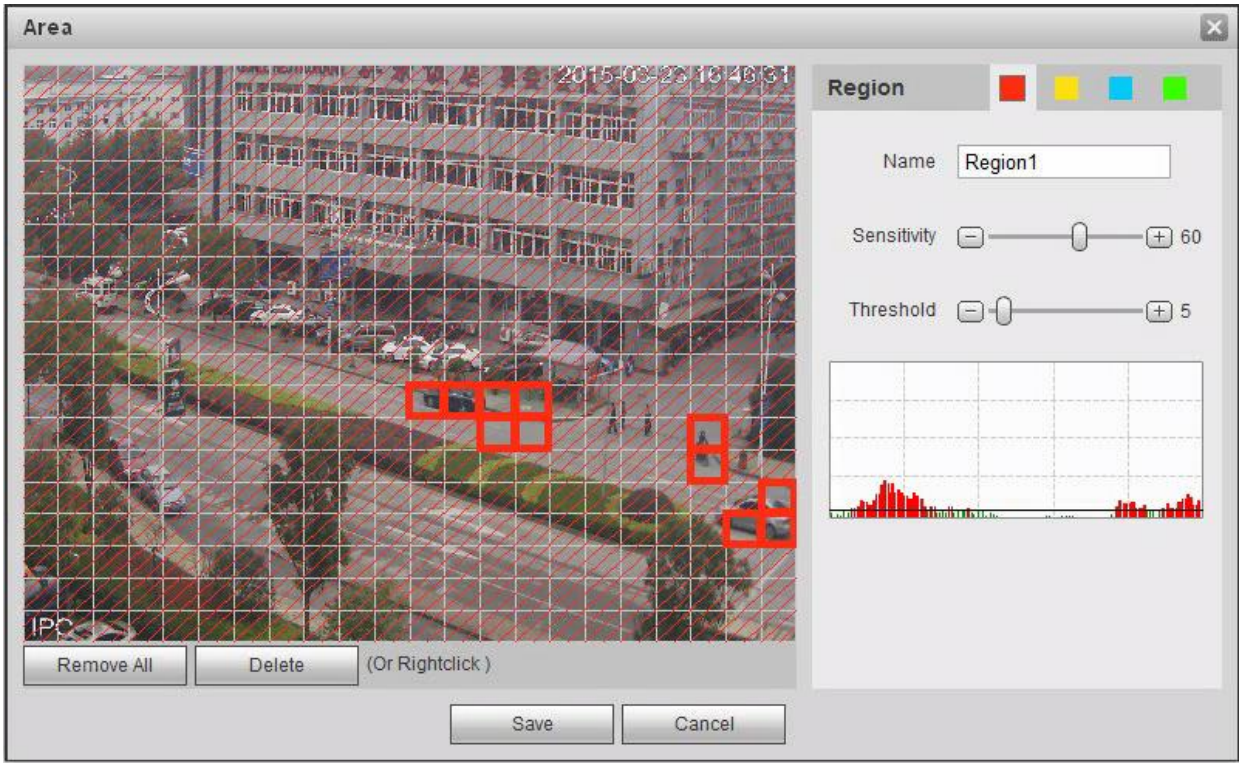


Figure 6-65

2. Set area name, it is to set valid area of motion detection according to the actual situation, and it can set the value of sensitivity and threshold respectively.
   The bigger the sensitivity is, the easier it is to generate motion detection, the smaller the threshold is, the easier it is to generate motion detection; the entire video image is the valid area of motion detection by default.

Note:

- Different colors represent different areas; each area can set different detection area.
- The red line in the Oscillogram means triggering motion detection; green line means not triggering motion detection.

3. Click “Save” to complete area setting.

Step 4

It is to set other parameters of motion detection, please refer to the following sheet for more details.

Parameter	Description
Working Period	**Note:** It is to set the alarm period, it can enable alarm event only during the period range which has been set. 1. Click “Setup” and the system will pop out the interface of “Working Period”. 2. It is to set working period according to the following methods: ● Press the left mouse button and drag it on the setup interface to set. ● Click " ● There are six periods to be set every day, select the check box in front of the period, and then the period is valid. ● Select week number (it selects Sunday by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days). 3. Click “Save” to complete the setup of working period.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Area	1. Click “Setup” and the system will pop out the interface of “Set Area”. 2. Set the area name, it is to set the valid area of motion detection according to the actual situation, and it can set its sensitivity and threshold respectively. The higher the sensitivity is, the easier it is to trigger motion detect, the smaller the area threshold is, the easier it is to generate motion detect, the whole video image is the valid area of the motion detect by default. **Note:** Different colors represent different areas; each area can set different detection areas. The red line in the Oscillogram means triggering motion detect, the green line means not triggering motion detect. 3. Click “Save” to complete area setup.
Record	Check it and so when alarm occurs, system will auto record. You shall set record period in Storage>Schedule and select auto record in record control interface.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends. User can set email address in Network>SMTP.
Audio linkage	Check it and the system will play alarm audio file when alarm occurs. User can set the recorded or uploaded audio file in “camera setting ＞ audio ＞ alarm audio”.
Flash linkage	Check it and the flash will be on when alarm occurs, and the flash will be off until the end of alarm after corresponding delay.

Parameter	Description
PTZ	● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. ● The event type includes: preset, tour and pattern.
Snapshot	You need to check the box here so that system can backup motion detection snapshot file. You shall set snapshot period in Storage>Schedule.

Step 5

Click “Save” to complete the setting of motion detection.

6.3.1.2 Video Tampering

Step 1

Select “Setup > Event > Video Detection > Video Tampering” and the system will display the interface of “Video Tampering” which is shown in Figure 6-66.

Figure 6-66

Step 2

Set the parameter of video tampering; please refer to the following sheet for more details.

Parameter	Description
Enable video tampering	You need to check the box to enable video mask detection alarm.
Enable defocus detection	You need to check the box to enable defocus detection alarm.

Parameter	Description
Working Period	**Note:** It is to set the alarm period, it can enable alarm event only during the period range which has been set. 1. Click “Setup” and the system will pop out the interface of “Working Period”. 2. It is to set working period according to the following methods: ● You can input time numerical value or press the left mouse button to drag on the setup interface to set. ● There are six periods to be set every day, select the check box in front of the period, and then the period is valid. ● Select week number (it selects Sunday by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days). 3. Click “Save” to complete the setup of working period.
Record	Check it and so when alarm occurs, system will auto record. You shall set record period in Storage>Schedule and select auto record in record control interface.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends. User can set email address in Network>SMTP.
Audio linkage	Check it and the system will play alarm audio file when alarm occurs. User can set the recorded or uploaded audio file in “camera setting ＞ audio ＞ alarm audio”.
Flash linkage	Check it and the flash will be on when alarm occurs, and the flash will be off until the end of alarm after corresponding delay.
PTZ	● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. ● The event type includes: preset, tour and pattern.
Snapshot	You need to check the box here so that system can backup motion detection snapshot file. You shall set snapshot period in Storage>Schedule.

Step 3

Click “Save” to complete the setup of video tampering.

6.3.1.3 Scene Changing

Step 1

Select “Setup > Event > Video Detection > Scene Changing” and the system will display the interface of “Scene Changing” which is shown in Figure 6-67.

Figure 6-67

Step 2

Check “Enable” to enable the function of scene changing.

Step 3

It is to set the parameters of scene changing, please refer to the following sheet for more details.

Parameter	Description
Working Period	**Note:** It is to set the alarm period, it can enable alarm event only during the period range which has been set. 1. Click “Setup” and the system will pop out the interface of “Working Period”. 2. It is to set working period according to the following methods: ● You can input time numerical value or press the left mouse button to drag on the setup interface to set. ● There are six periods to be set every day, select the check box in front of the period, and then the period is valid. ● Select week number (it selects Sunday by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days). 3. Click “Save” to complete the setup of working period.
Record	Check it and so when alarm occurs, system will auto record. You shall set record period in Storage>Schedule and select auto record in record control interface.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.

Parameter	Description
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends. User can set email address in Network>SMTP.
PTZ	● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. ● The event type includes: preset, tour and pattern.
Snapshot	You need to check the box here so that system can backup motion detection snapshot file. You shall set snapshot period in Storage>Schedule.

Step 4

Click “Save” to complete the setup of scene changing.

6.3.2 Audio Detection

Step 1

Select “Setup > Event > Audio Detection” and the system will display the interface of “Audio Detection” which is shown in Figure 6-68.

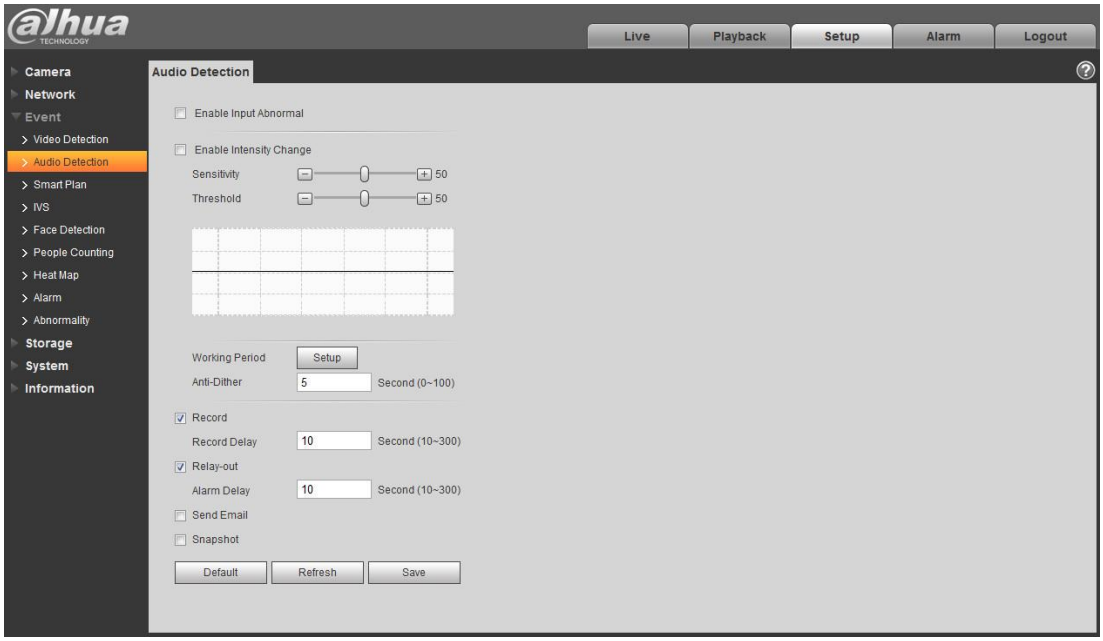


Figure 6-68

Step 2

It is to set the parameters of audio detect, please refer to the following sheet for more details.

Parameter	Description
Enable input abnormal	Select “Enable Input Abnormal” and it will trigger alarm when it detects audio input abnormity.
Enable intensity change	Select “Enable Intensity Change” and it will trigger alarm when it detects that audio intensity change exceeds the threshold.
Sensitivity	It can be judged as audio abnormity when the input volume change exceeds continuous environment volume; users need to adjust according to the actual environment test.
Threshold	It is to set the filtered environment volume intensity, if the environmental noise is too big, then the value needs to be set higher, users can adjust according to the actual environment test.
Working Period	**Note:** It is to set the alarm period, it can enable alarm event only during the period range which has been set. 1. Click “Setup” and the system will pop out the interface of “Working Period”. 2. It is to set working period according to the following methods: ● You can input time numerical value or press the left mouse button to drag on the setup interface to set. ● There are six periods to be set every day, select the check box in front of the period, and then the period is valid. ● Select week number (it selects Sunday by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days). 3. Click “Save” to complete the setup of working period.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Record	Check it and so when alarm occurs, system will auto record. You shall set record period in Storage>Schedule and select auto record in record control interface.
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends. User can set email address in Network>SMTP.
PTZ	● Here you can set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. ● The event type includes: preset, tour and pattern.
Snapshot	You need to check the box here so that system can backup motion detection snapshot file. You shall set snapshot period in Storage>Schedule.

Step 3
Click “Save” to complete the setup of audio detection.

6.3.3 Smart Plan

Smart plan is the master switch for intelligent analysis such as “Face Detection”, “Heat Map”, “IVS”, “People Counting” and so on, the corresponding intelligent functions can be valid after smart plan is enabled.

Step 1
Select “Setup > Event > Smart Plan”. The system will display the interface of “Smart Plan”, which is shown in Figure 6-69.

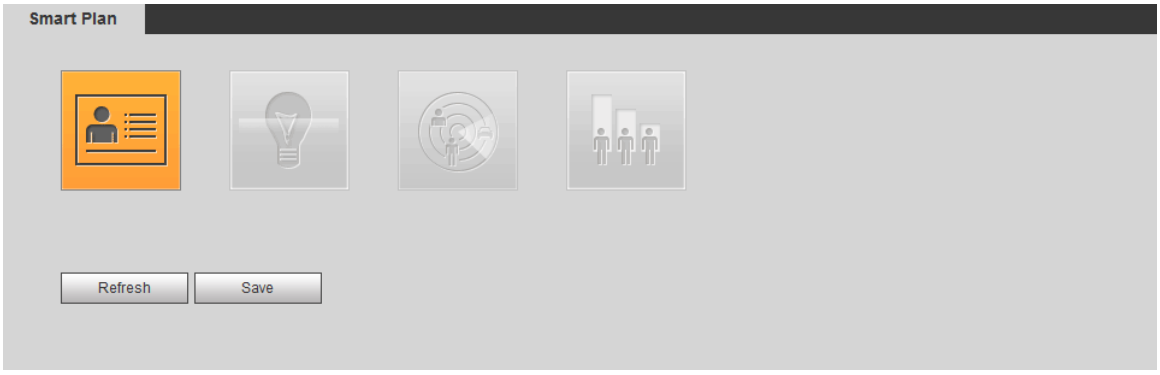


Figure 6-69

Step 2
Click “Save” to complete the config of smart plan.

6.3.4 Intelligence Behavior Analytics

The basic requirements of scene selection.

- The total proportion of the target shall not exceed 10% of the image.
- The target size in the image can’t be less than 10 pixel ×10 pixel, the size of abandoned target can’t be less than 15 pixel × 15 pixel (CIF image); The height and width of the target can’t exceed 1/3 of the image; it is recommended that the target height is about 10% of the image height.
- The difference of brightness value between target and background can’t be less than 10 gray levels.
- Make sure the target appears at least over 2 seconds continuously in the field; the movement distance has to be bigger than the width of the target itself and makes sure it is no less than 15 pixels (CIF image).
- Try to lower the complexity of the monitoring scene analysis if it is possible; it is not advised to use IVS functions in the environment where the targets are dense and light change is very frequent.

- Try to keep away from the areas such as glass, ground reflected light, water surface, branch, shadow, mosquito disturbance and etc. try to keep away from the backlight scene to avoid direct light.

6.3.4.1 **IVS**

6.3.4.1.1 Tripwire

It will trigger alarm when the target crosses the warning line according to the movement direction which has been set.

It needs some time from when the target appears to when the target is confirmed, so it has to leave some space on both sides of the warning line when setting the warning line, please do not set the warning line near the obstructions.

Application scene: it can be applied to the scene with sparse target and there is barely any blocks between the targets, such as the unmanned perimeter protection.

Step 1

Select “Setup > Event > IVS > IVS” and the system will display the interface of “IVS”.

Step 2

Click “ ” to set rule name and select the rule type as “Tripwire”, it is shown in Figure 6-70.

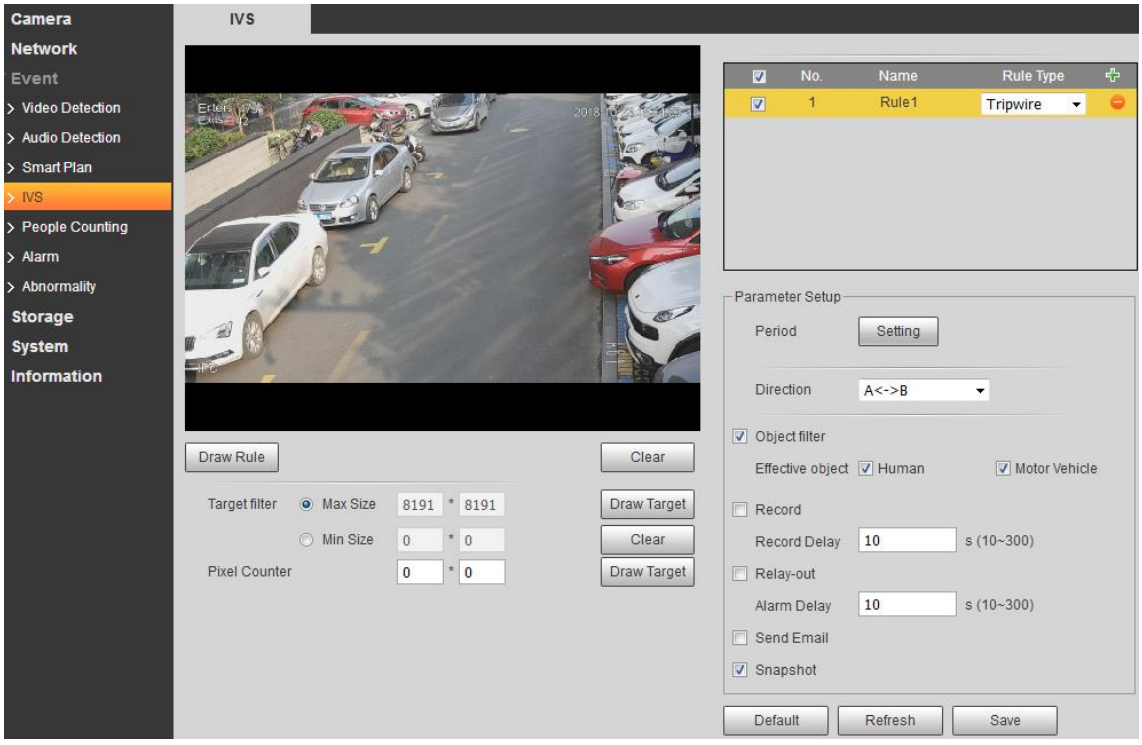


Figure 6-70

Step 3

Click “Draw Rule” to draw tripwire in the monitoring scene, click the right mouse button to complete tripwire setting.

Step 4

Click “Draw Target” to draw the size model of filtered target in the video image.

Step 5

Click the **Draw Target** behind **Pixel Counter**, then press and hold the left mouse button to draw a rectangular, and then the size of the rectangular would display in the counter.

Step 6

It is to set the parameters of tripwire, please refer to the following sheet for more details.

Parameter	Description
Working Period	**Note:** It is to set the alarm period, it can enable alarm event only during the period range which has been set. 1. Click “Setup” and the system will pop out the interface of “Working Period”. 2. It is to set working period according to the following methods: ● You can input time numerical value or press the left mouse button to drag on the setup interface to set. ● There are six periods to be set every day, select the check box in front of the period, and then the period is valid. ● Select week number (it selects Sunday by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days). 3. Click “Save” to complete the setup of working period.
Direction	It is to set the direction of tripwire, you can select A->B、B->A、A<->B.
Object filter	Select the Object filter check box to enable the function, and then select the effective object. ● Select **Human**, and then the alarm will be triggered if any target that fits for the human trigger rule in the system is detected. ● Select **Motor Vehicle**, and then the alarm will be triggered if any target that fits for the motor vehicle trigger rule in the system is detected. ● Select no one, and then the alarm will be triggered if any moving object such as human, vehicle, cat, or dog is detected.
Record	Check it and so when alarm occurs, system will auto record.
Record Delay	System can delay the record for specified time after alarm ended.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends. User can set email address in Network>SMTP.

Parameter	Description
Snapshot	Select “Snapshot” and the system will auto trigger alarm and snapshot when alarm occurs.

Step 7

Click “Save” to complete the setup of tripwire.

6.3.4.2 **Intrusion**

Intrusion includes cross and appears.

- Cross means that it will trigger alarm when the target enters or exits the area.
- Appears means that it will trigger alarm when the target appears in the area.
- As for the report interval of the IVS function in the area, the system will trigger an alarm if it detects same event happened during the interval; the alarm counter will become zero if there is no same event happened in the interval.

It needs to leave some space for target movement for the area periphery if it is to detect enter & exit event, which is similar to the warning line.

Application scene; it can be applied to the scene where the target is sparse and there is barely any obstruction between the targets, such as the unmanned perimeter protection.

Step 1

Select “Setup > Event > IVS > IVS” and the system will display the interface of “IVS”.

Step 2

Click “ ” to set rule name, select the rule type as “Intrusion” which is shown in Figure 6-71.

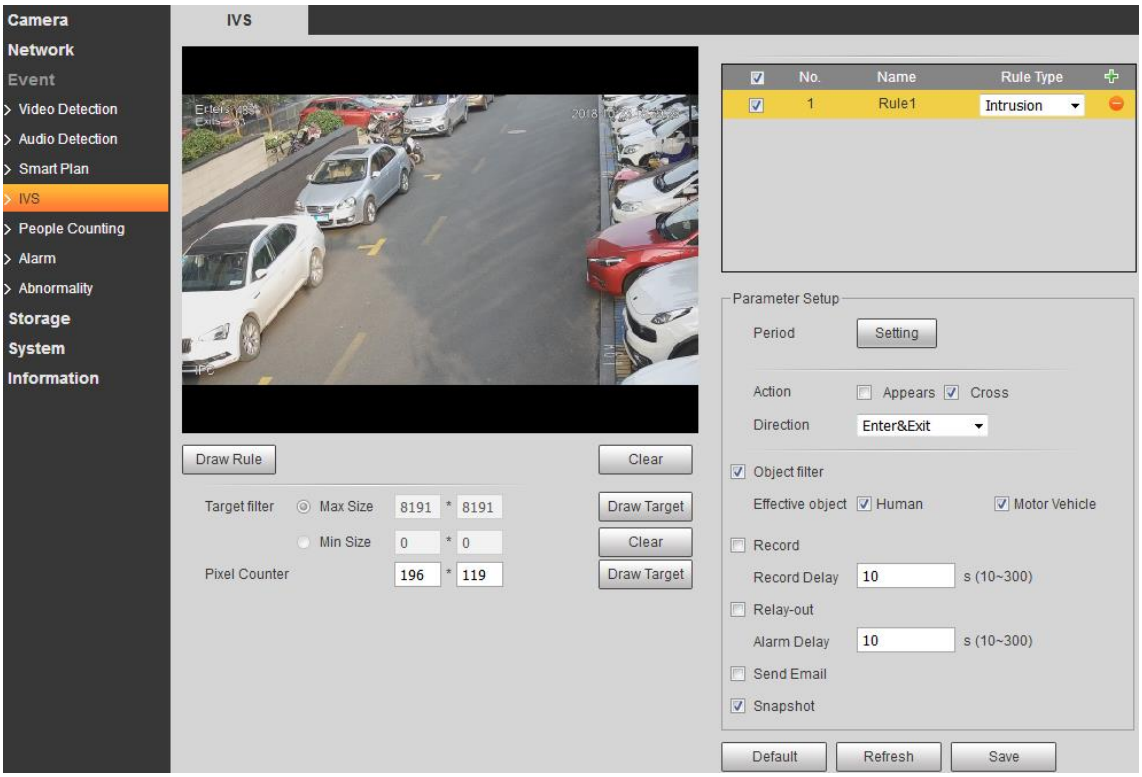


Figure 6-71

Step 3

Click “Draw Rule” to draw an area in the monitoring image.

Step 4

Click “Draw Target” to draw the size model of filtered target in the video image.

Step 5

Click the **Draw Target** behind **Pixel Counter**, then press and hold the left mouse button to draw a rectangular, and then the size of the rectangular would display in the counter.

Step 6

It is to set the parameters of intrusion, please refer the following sheet for more details.

Parameter	Description
Working Period	**Note:** It is to set the alarm period, it can enable alarm event only during the period range which has been set. 1. Click “Setup” and the system will pop out the interface of “Working Period”. 2. It is to set working period according to the following methods: ● You can input time numerical value or press the left mouse button to drag on the setup interface to set. ● There are six periods to be set every day, select the check box in front of the period, and then the period is valid. ● Select week number (it selects Sunday by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days). 3. Click “Save” to complete the setup of working period.
Action	It is to set the action of intrusion, you can select appears and cross.
Direction	It is to set the direction of intrusion, you can select enter, exit and enter&exit.
Object filter	Select the Object filter check box to enable the function, and then select the effective object. ● Select **Human**, and then the alarm will be triggered if any target that fits for the human trigger rule in the system is detected. ● Select **Motor Vehicle**, and then the alarm will be triggered if any target that fits for the motor vehicle trigger rule in the system is detected. ● Select no one, and then the alarm will be triggered if any moving object such as human, vehicle, cat, or dog is detected.
Record	Check it and so when alarm occurs, system will auto record.
Record Delay	System can delay the record for specified time after alarm ended.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends. User can set email address in Network>SMTP.
Snapshot	Select “Snapshot” and the system will auto trigger alarm and snapshot when alarm occurs.

Step 7

Click “Save” to complete the setup of intrusion.

6.3.4.3 **Abandoned Object**

Abandoned object means the system will trigger alarm if the abandoned object in the monitoring scene exceeds the time which has been set by the users.

Abandoned object and missing object can be confusing in a situation where both foreground and background are complicated.

It also triggers alarm as abandoned object if there is pedestrian or vehicle staying still for too long. In order to filter this kind of alarm, generally the abandoned object is smaller than people and vehicle; therefore it can filter the people and vehicle via setting size. Besides, it can avoid the false alarm caused by short stay of people via extending alarm time properly.

Application scene: It can be applied to the scene where the target is sparse and there is no obvious and frequent light change. False alarm will be increased in the scene with high target density and frequent blocking; false alarm will be increased in the scene where there are more people staying. As for the detection area, try to make it simple, the function is not suitable for the area which is too complicated.

Step 1

Select “Setup > Event > IVS > IVS” and the system will display the interface of “IVS”.

Step 2

Click “ ” to set rule name, select the rule type as “Abandoned Object” which is shown in Figure 6-72.

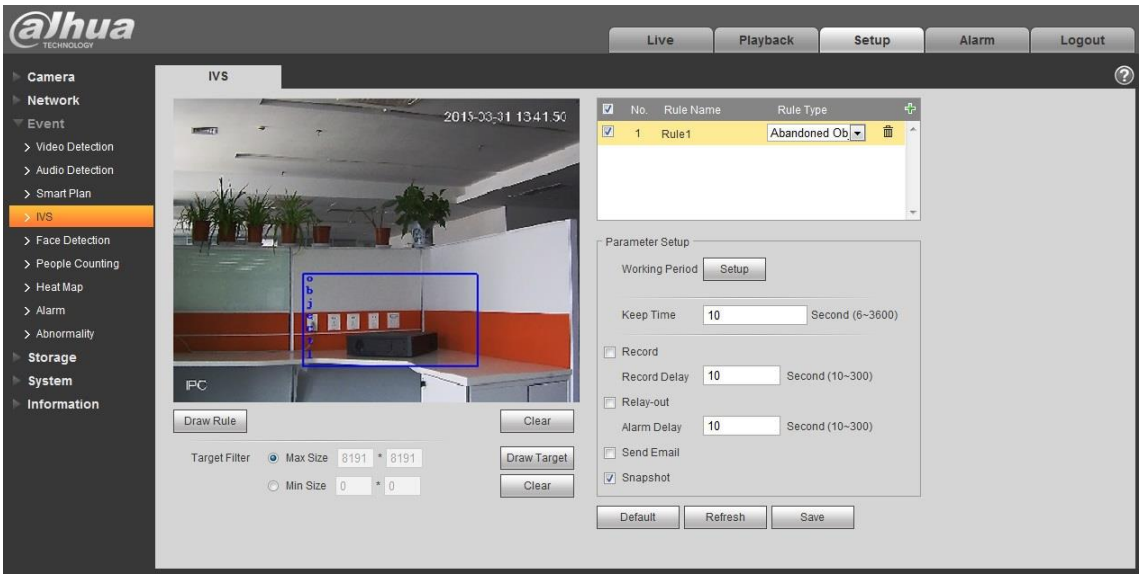


Figure 6-72

Step 3

Click “Draw Rule” to draw an area in the monitoring area.

Step 4

Click “Draw Target” to draw the size model of filtered target in the video image.

Step 5

It is to set the parameter of abandoned object, please refer to the following sheet for more details.

Parameter	Description
Working Period	**Note:** It is to set the alarm period, it can enable alarm event only during the period range which has been set. 1. Click “Setup” and the system will pop out the interface of “Working Period”. 2. It is to set working period according to the following methods: ● You can input time numerical value or press the left mouse button to drag on the setup interface to set. ● There are six periods to be set every day, select the check box in front of the period, and then the period is valid. ● Select week number (it selects Sunday by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days). 3. Click “Save” to complete the setup of working period.
Keep time	It is to set the shortest time from when the object is abandoned to when it triggers alarm.
Record	Check it and so when alarm occurs, system will auto record.
Record Delay	System can delay the record for specified time after alarm ended.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends. User can set email address in Network>SMTP.
Snapshot	Select “Snapshot” and the system will auto trigger alarm and snapshot when alarm occurs.

Step 5

Click “Save” to complete the setup of abandoned object.

6.3.4.4 **Missing Object**

Missing object means the system will trigger alarm if it exceeds certain amount of time after the target is taken away from the original scene.

The system can make statistics of the still areas in the foreground area and distinguish if it is missing object or abandoned object according to the similarity between foreground and background, it will trigger alarm when it exceeds the time which is set by users.

Because the system distinguishes abandoned object from missing object according to the similarity of foreground and background, it may cause error between abandoned object and missing object in a situation where both foreground and background are complicated.

Application scene: it can be applied to the scene where the target is sparse and there is no obvious and frequent light change. False alarm will be increased in the scene where the target density is high and

there is frequent obstruction; the false alarm will be increased in the scene where there are more people staying. As for the detection area, try to make it simple, the function is not suitable for the area which is too complicated.

Step 1

Select “Setup > Event > IVS > IVS” and the system will display the interface of “IVS”.

Step 2

Click “ ” to set rule name and select rule type as “Missing Object”, which is shown in Figure 6-73.

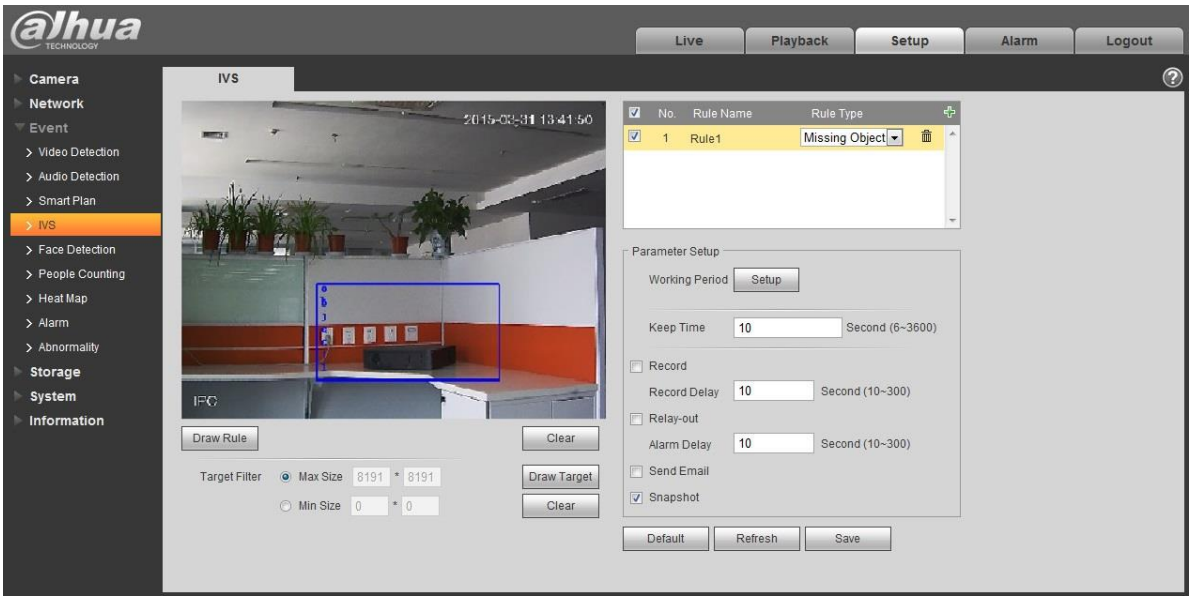


Figure 6-73

Step 3

Click “Draw Rule” to draw an area in the monitoring scene.

Step 4

Click “Draw Target” to draw the size model of filtered target in the video image.

Step 5

It is to set the parameters of missing object, please refer to the following sheet for more details.

Parameter	Description
Working Period	**Note:** It is to set the alarm period, it can enable alarm event only during the period range which has been set. 1. Click “Setup” and the system will pop out the interface of “Working Period”. 2. It is to set working period according to the following methods: ● You can input time numerical value or press the left mouse button to drag on the setup interface to set. ● There are six periods to be set every day, select the check box in front of the period, and then the period is valid. ● Select week number (it selects Sunday by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days). 3. Click “Save” to complete the setup of working period.
Keep time	It is to set the shortest time from when the object is missing to when it triggers alarm.
Record	Check it and so when alarm occurs, system will auto record.
Record Delay	System can delay the record for specified time after alarm ended.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends. User can set email address in Network>SMTP.
Snapshot	Select “Snapshot” and the system will auto trigger alarm and snapshot when alarm occurs.

Step 5

Click “Save” to complete the setup of missing object.

6.3.5 Face Detection

Step 1

Select “Setup > Event > Face Detection” and the system will display the interface of “Face Detection”, which is shown in Figure 6-74.

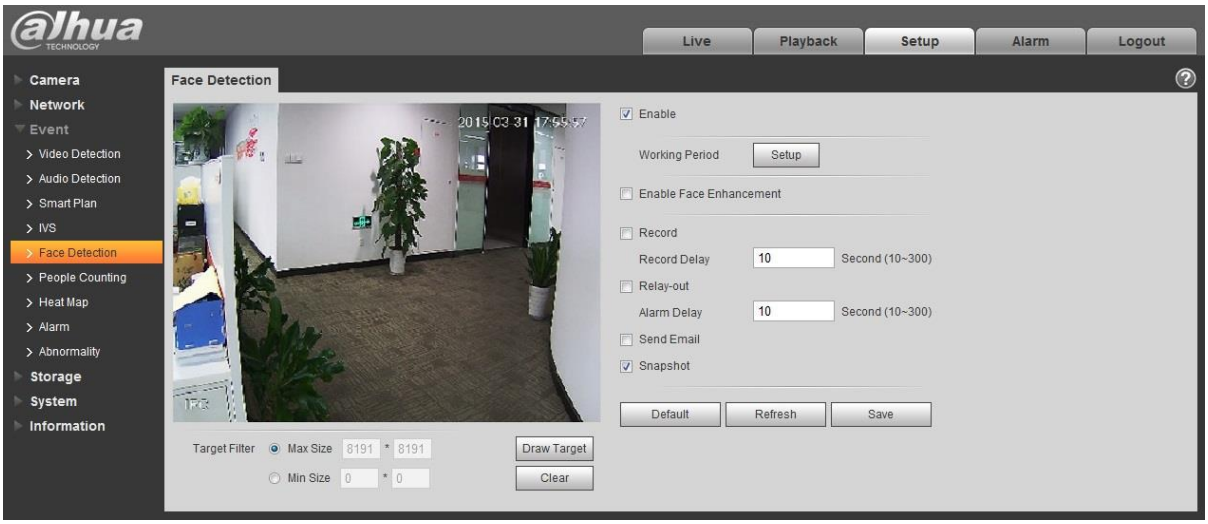


Figure 6-74

Step 2

Select “Enable” to enable face detection function.

Step 3

Click “Draw Target” to draw the size model of target filter in the video image.

Step 4

It is to set the parameters of face detection, please refer to the following sheet for more details.

Parameter	Description
Period	Configure working period, and the linked activity will be executed only within this period. 1. Click “Setting”, and the period interface is displayed. 2. Configure working period according to the following methods: ● Enter time numerical value or press the left mouse button to drag on the setup interface to set. ● Click the “Setting” of corresponding week, select the check box in front of the period on the bottom of the interface, and enter time value, there are six periods to be set every day. 3. Click “Save” to complete the setting.
Regional Number Statistics Alarm	Select the check box to enable this function, and then define the “Inside Number” and “Type.” There are two options in the “Type” list. ● Select “≥Threshold”, and then the alarm will be triggered if the number of the people.in the area is greater than or equal to the defined number. ● Select “≤Threshold”, and then the alarm will be triggered if the number of the people.in the area is lower than or equal to the defined number.
Stranding Alarm	Select the check box to enable this function, and then when people stay in this area for longer than the defined time period in “Average Strand Time”, the alarm will be triggered.

Parameter	Description
Record	Select “Record”, and the system records video when alarm is triggered. **Note:** To enable the system to record video in this condition, you need to make sure: ● The motion detection record is enabled, see detailed operation in "6.4.1.1 Record Schedule." ● The auto-record is properly configured, see detailed operation in "6.4.3 Record ."
Record delay	The record keeps running for the defined time after alarm is ended.
Relay out	Select “Relay-out”, and when alarm is triggered, the system interacts with the linked alarm devices.
Alarm delay	The Alarm linkage keeps running for the defined time after alarm is ended.
Send Email	Select “Send Email”, and when alarm is triggered, the system sends email to the specified mailbox. For the configuration of Email, see "6.2.6 SMTP (e-mail)."
Snapshot	Select “Snapshot”, and the system takes snapshot when alarm is triggered. **Note:** ● Make sure the motion detection snapshot is enabled, see detailed configuration in "6.4.1.1 Record Schedule." ● For viewing and configuring the snapshot storage path, see "6.1.2.5 Path."
Record	Select “Record”, and the system records video when alarm is triggered. **Note:** To enable the system to record video in this condition, you need to make sure: ● The motion detection record is enabled, see detailed operation in "6.4.1.1 Record Schedule." ● The auto-record is properly configured, see detailed operation in "6.4.3 Record ."

Parameter	Description
Working Period	**Note:** It is to set the alarm period, it can enable alarm event only during the period range which has been set. 1. Click “Setup” and the system will pop out the interface of “Working Period”. 2. It is to set working period according to the following methods: ● You can input time numerical value or press the left mouse button to drag on the setup interface to set. ● There are six periods to be set every day, select the check box in front of the period, and then the period is valid. ● Select week number (it selects Sunday by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days). 3. Click “Save” to complete the setup of working period.
Enable Face Enhancement	Select “Enable Face Enhancement” and it will guarantee that the face is clear by priority when the stream is set very low.
Record	Check it and so when alarm occurs, system will auto record.
Record Delay	System can delay the record for specified time after alarm ended.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm Delay	System can delay the alarm output for specified time after alarm ended.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends. User can set email address in Network>SMTP.
Snapshot	Select “Snapshot” and the system will auto trigger alarm and snapshot when alarm occurs.

Step 5

Click “Save” to complete the setup of face detection.

6.3.6 Face Recognition

Detect the face and make comparison with the information which has been configured in the face database.

Precondition

You have configured face recognition smart plan. See "6.3.3 Smart Plan."

6.3.6.1 **Face Detection**

When human face is detected in the image, the alarm is triggered and the linked activity is executed.

Step 1

Select “Setting > Event > Face Recognition > Face Detection” and the system will display the interface of “Face Detection”, which is shown in Figure 6-75.

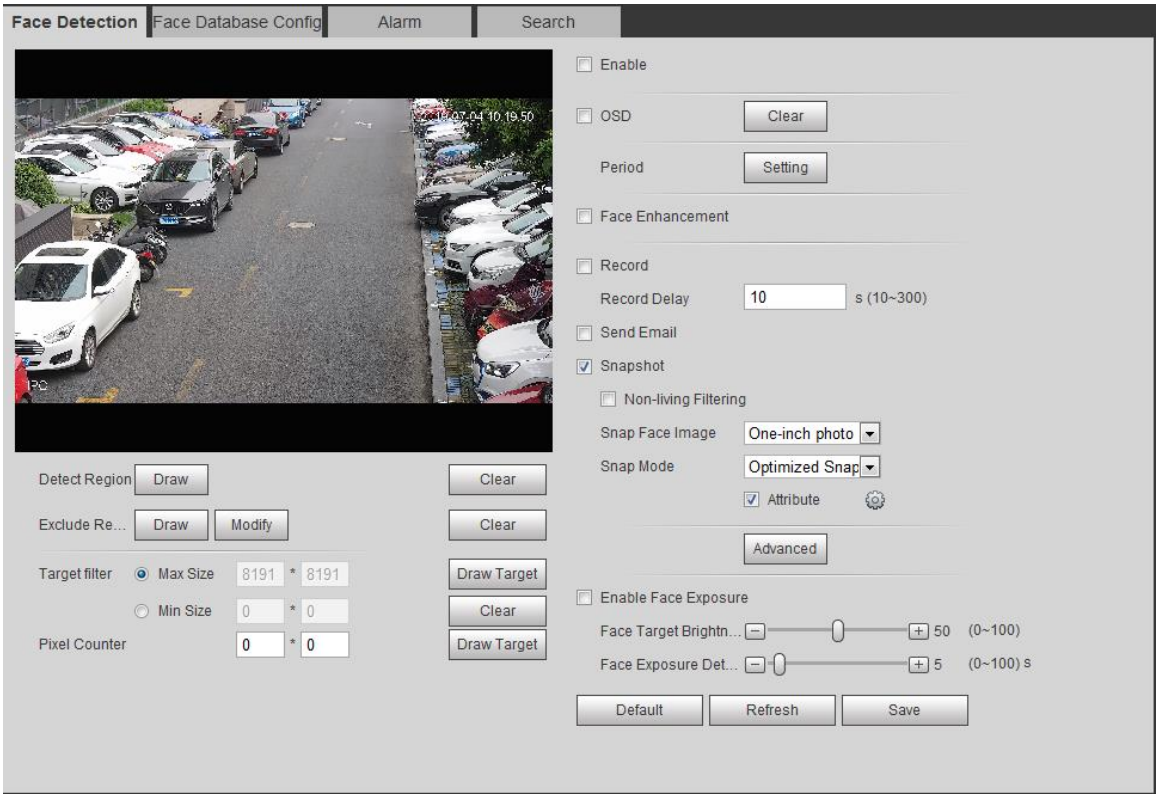


Figure 6-75

Step 2

Select “Enable” to enable the function of face detection.

Step 3

(Optional) Click “Draw Target” corresponding to “Detect Region” to draw the detection region in the monitoring image.

Step 4

(Optional) Click “Draw Target” corresponding to “Exclude Region” to draw the exclude region in “Detect Region”.

Step 5

(Optional) Set the max, size and min. size, and click “Draw Target”, and then draw the filter target model in the monitoring image according to the set size.

Step 6

Set the parameters of face detection. Please refer to the following table for more details.

Parameter	Description
OSD	Select the check box, the live view interface shows the number of face detection and face recognition. Click “Clear”, it counts from zero.

Parameter	Description
Period	Configure working period, and the linked activity will be executed only within this period. 1. Click “Setting”, and the period interface is displayed. 2. Configure working period according to the following methods: ● Enter time numerical value or press the left mouse button to drag on the setup interface to set. ● Click the **“**Setting” of corresponding week, select the check box in front of the period at the bottom of the interface, and enter time value, there are six periods to be set every day. 3. Click “Save” to complete the setting.
Face Enhancement	Select “Enable Face Enhancement” and it will guarantee that the face is clear by priority when the stream is set very low.
Record	Select “Record”, and the system records video when alarm is triggered. **Note:** To enable the system to record video in this condition, you need to make sure: • The motion detection record is enabled. See detailed operation in "6.4.1.1 Record Schedule." • The auto-record is properly configured. See detailed operation in "6.4.3 Record ."
Record Delay	System can delay the record for specified time after alarm ended.
Send Email	If you enabled this function, System can send out email to alert you when alarm occurs and ends. User can set email address in Network>SMTP.
Snapshot	Select “Snapshot”, and the system takes snapshot when alarm is triggered. **Note:** • Make sure the motion detection snapshot is enabled, see detailed configuration in "6.4.1.1 Record Schedule." • For viewing and configuring the snapshot storage path, see "6.1.2.5 Path."
Non-living filter	Click the check box, the system will do the recognition of living object and nor living object when detecting face, and filter the non-living object.
Snap Face Image	It is to set the range of cutting face image, including human face, one-inch picture, half body and full body.
Snap Mode	Select the snap mode: ● Optimized Snap: Snap the clearest image in the set time after the device detects the face. ● Recognition Priority: After comparing with the faces in face library, the device snaps the image that has the highest similarity with the face in face library. This mode is recommended to apply to access control. **Note** You can set “Duration Optimal” in “Advance.”
Attribute	Select the check box and click to set the attribute display during face detection.

Parameter	Description
Advance	● Snap Angle Filter: Set the snap angle that needs to be filtered during face detection. ● Snapshot Sensitivity: Set the snapshot sensitivity during face detection. The bigger is the value, the easier the detection. ● Duration Optimal: Set the duration that the device snaps the clearest image after detecting face.
Enable Face Exposure	Select the check box to make human face much clearer through adjusting iris, shutter and so on.
Face Target Brightness	Set the brightness of face target, it is 50 by default.
Face Exposure Detection Interval	Set the face exposure detection interval, it is to prevent image flickering caused by continuous exposure adjustment, it is 5 s by default.

Step 7

Click “Save” to complete config.

6.3.6.2 **Face Database Config**

6.3.6.2.1 Adding Face Database

After the face database is successfully configured, it can realize comparison between the detected face and the info in the face database.

Step 1

Select “Setting > Event > Face Recognition > Face Database Config” and the system will display the interface of “Face Database Config”, which is shown in Figure 6-76.

Figure 6-76

Step 2

Click “Add Face Database” and the system will display the dialog box of “Add Face Database”, which is shown in Figure 6-77.

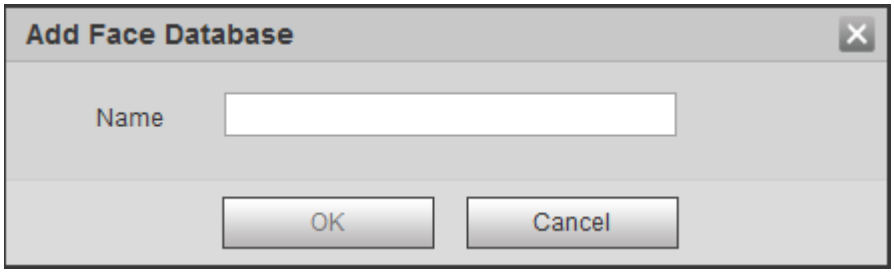


Figure 6-77

Step 3

Set the name of face database, click “OK”， and the system will display the interface which is shown in Figure 6-78.

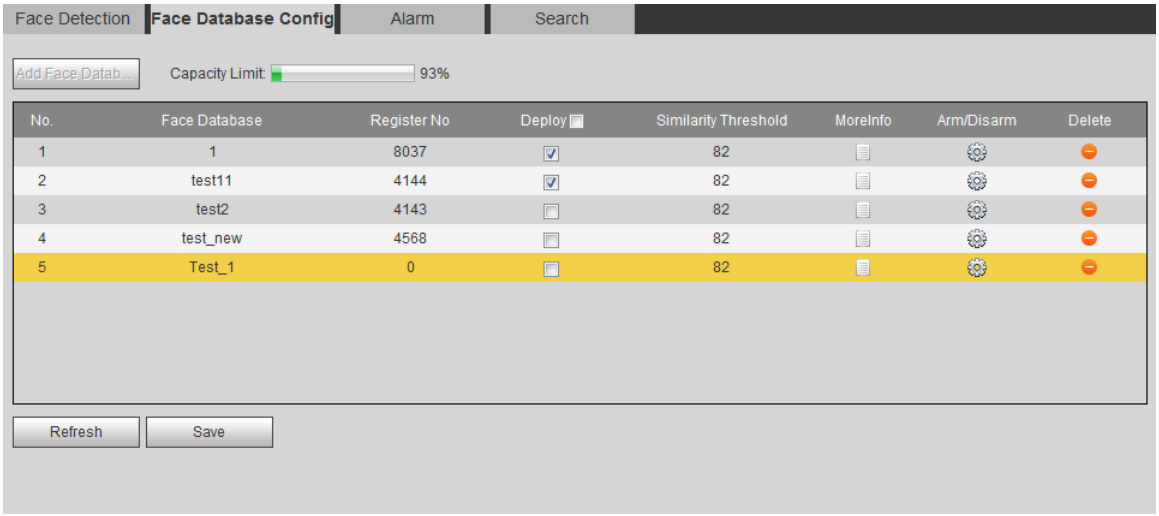


Figure 6-78

Step 4

Set the parameters of face database. See the following table for more details.

Parameter	Description
Deploy	Select “Deploy” check box and the deployment of face database becomes valid. The system will compare the captured face to the deloyed face in face database.
Similarity Threshold	The comparison succeeds when the matching degree between detected face and features in the face database reaches the similarity threshold which has been set, it will display comparison result on the preview interface after comparison becomes successful.

Parameter	Description
More Info	Click in the “MoreInfo” column to manage face database. It includes search, registration, modify and so on.
Arm/Disarm	It is to set the alarm period, it can enable alarm event only within the time range which has been set, please refer to step 3 working period in 6.3.8 Heat Map.
Delete	It is to delete the selected face database.

6.3.6.2.2 Adding Picture

You can add pictures to the existing face database

The requirements for the face picture:

- The size is 50K–150K, resolution is 1080p, and the format is JPEG or PNG.
- The face occupies 30%–60% of the picture, and the resolution of the eyes is not less than 100 pixels.
- The face picture should be the original picture of front face without glasses, and it should include clear details of face features such as eyebrow and mouth. The face cannot be shielded by fringe.

6.3.6.2.2.1 Adding Single Picture

Step 1

Select “Setting > Event > Face Recognition > Face Database Config” and the system will display the interface of “Face Database Config”.

Step 2

Click behind the face datanase to be configured, and the system will display the interface of more info shown in Figure 6-79.

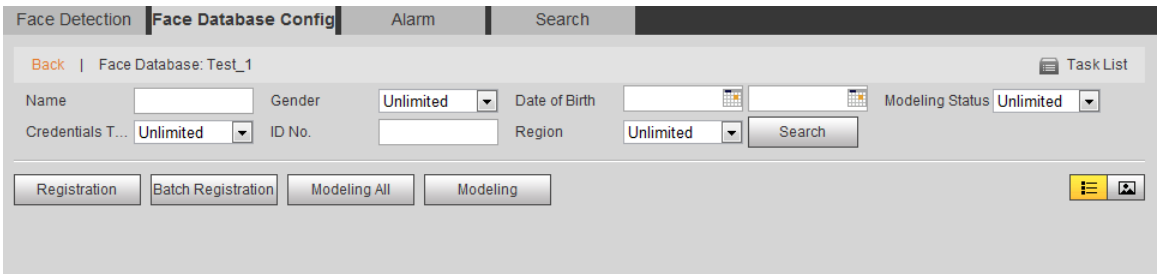


Figure 6-79

Step 3

Click “Registration”, and the system will display the interface of “Registration” shown in Figure 6-80.

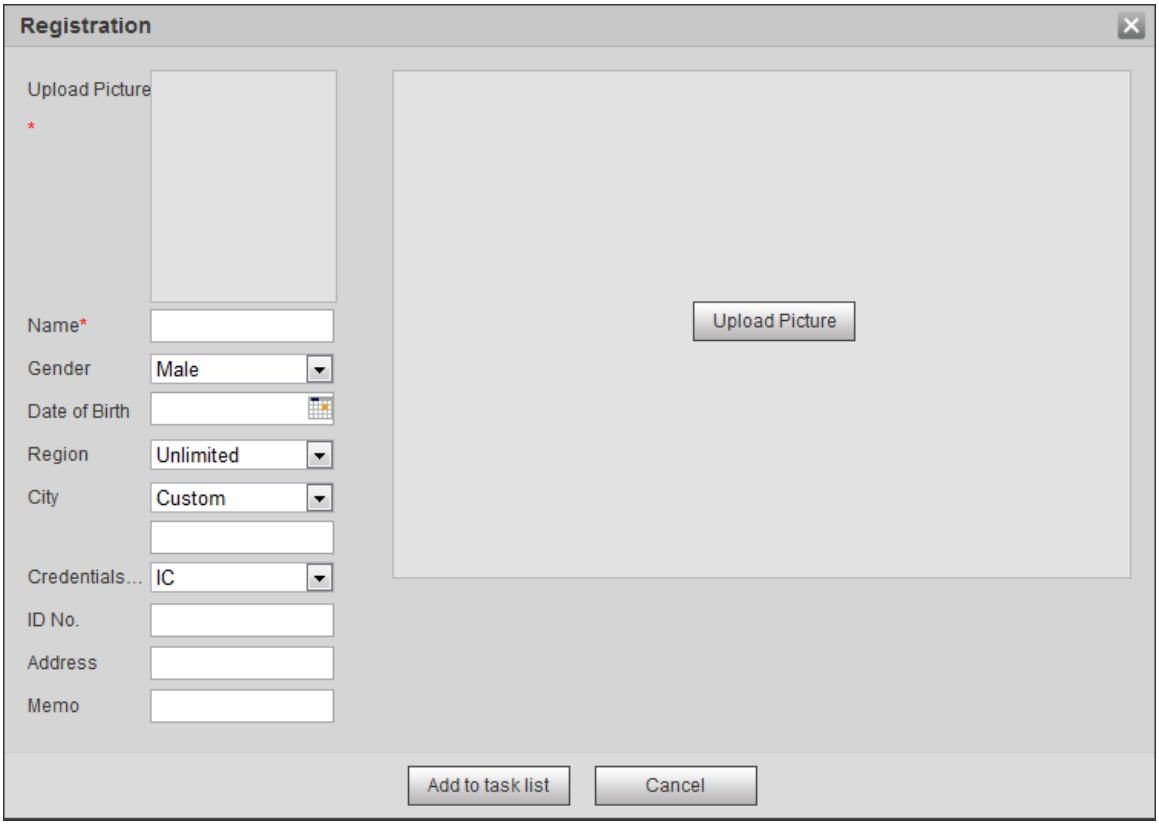


Figure 6-80

Step 4

Click “Upload Picture”, select the picture to be loaded, and the click “Open”.

The system will display the interface which is shown in Figure 6-81.

Note

The device supports selecting face area manually, after the picture is uploaded, you can select face location and then click “OK” to save face picture. Please select target face if there are several faces in the picture, click “Ok” to save the picture of target face.

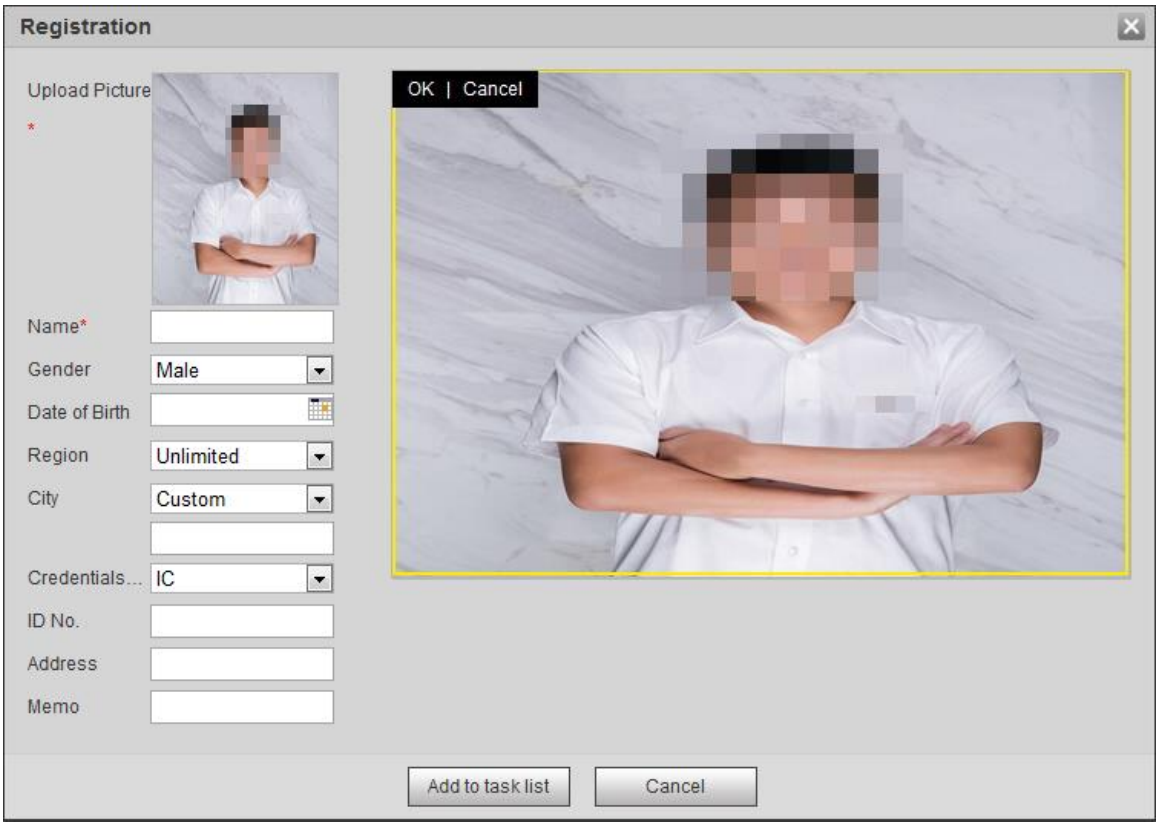


Figure 6-81

Step 5

Set the relevant info according to the actual needs.

Step 4

Click “Add to task list”.

Step 7

Click Task List1 . The system will display the interface which is shown in Figure 6-82.

Click “OK” to complete registration.

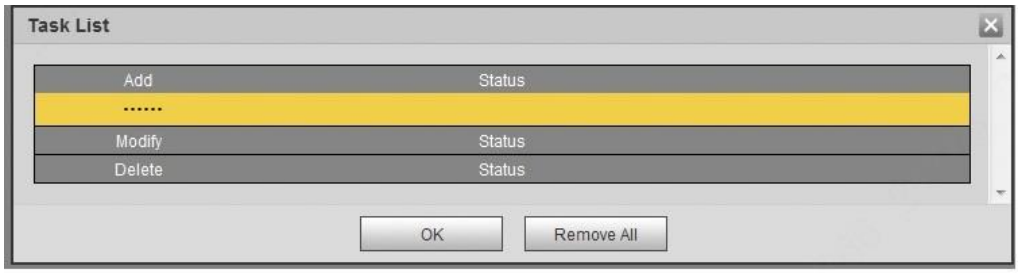


Figure 6-82

Note

Click “Remove All” to remove all the current tasks.

6.3.6.2.2.2 Batch Registration

Step 1

Select “Setting > Event > Face Recognition > Face Database Config” and the system will display the interface of “Face Database Config”.

Step 2

Click behind the face datanase to be configured, and the system will display the interface of more info shown in Figure 6-83

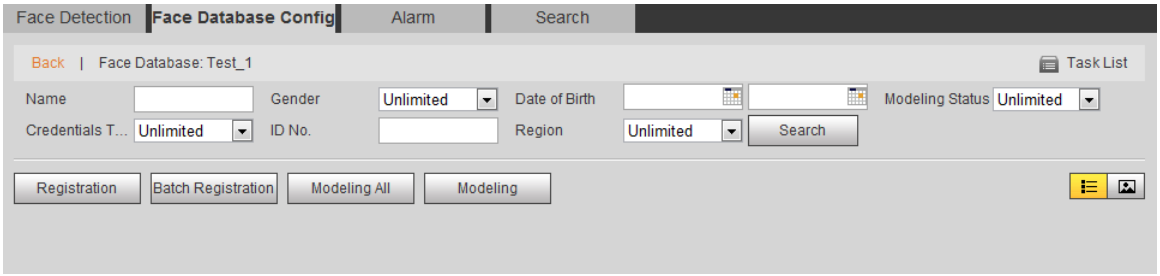


Figure 6-84

Step 3

Click “Batch Registration”, and the system will display the interface of “Task List” shown in Figure 6-85.

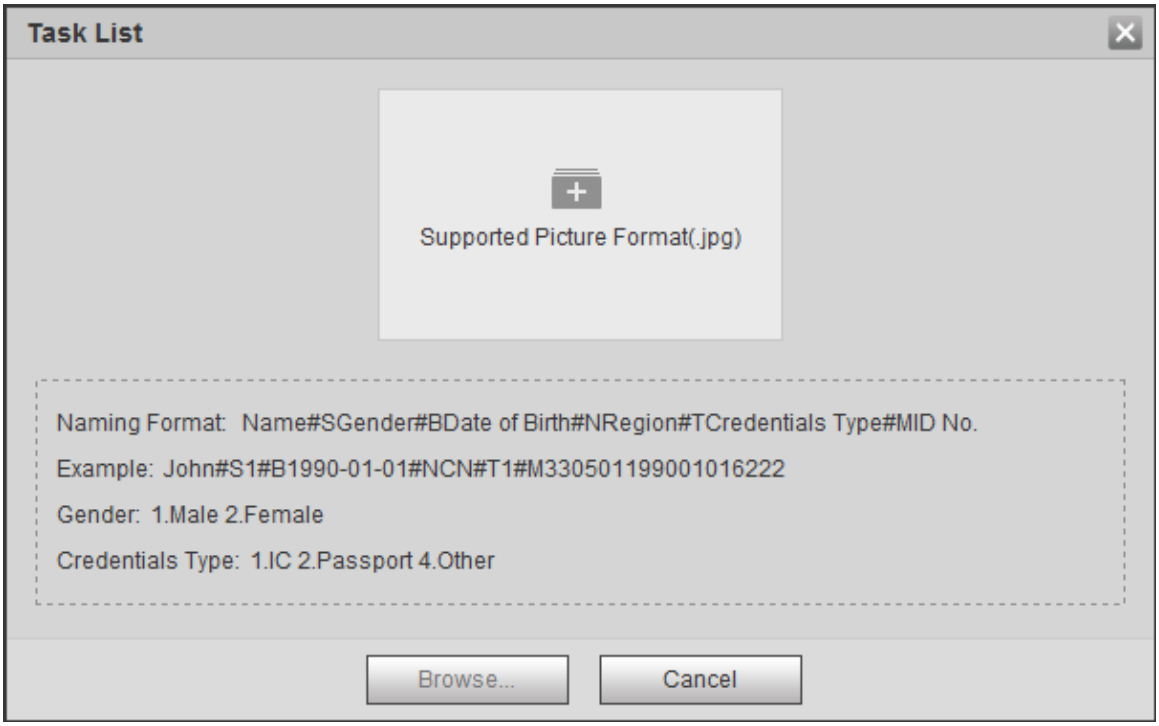


Figure 6-85

Step 3

Click to select the folder where the uploaded picture exists. The system will display the interface which is shown in Figure 6-86.

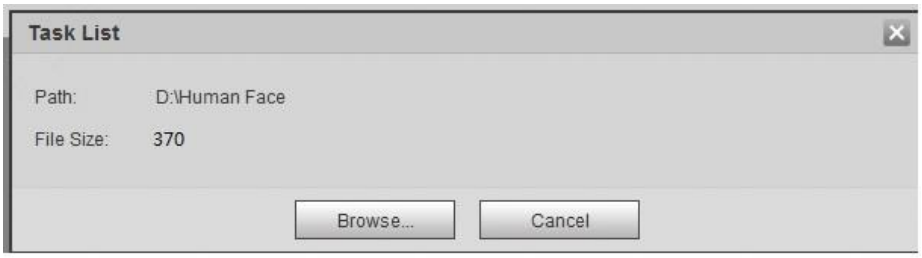


Figure 6-86

Step 4

Click “Browse” and the system will prompt “Registering faces in batch”.

Step 5

Click “Check Details” after batch registration is completed, to view registration results.

The system will display the interface which is shown in Figure 6-87.

Figure 6-87

6.3.6.2.3 Managing Pictures

Add pictures to the face database, and manage them to guarantee the relevant information is correct.

6.3.6.2.3.1 Info Modify

Step 1

Click “More Info” to enter the face details interface. Set conditions according to the actual needs, click “Search”.

The searching result interface is displayed.

Step 2

On the searching result interface, click , and the system will display the interface which is shown in Figure 6-88.

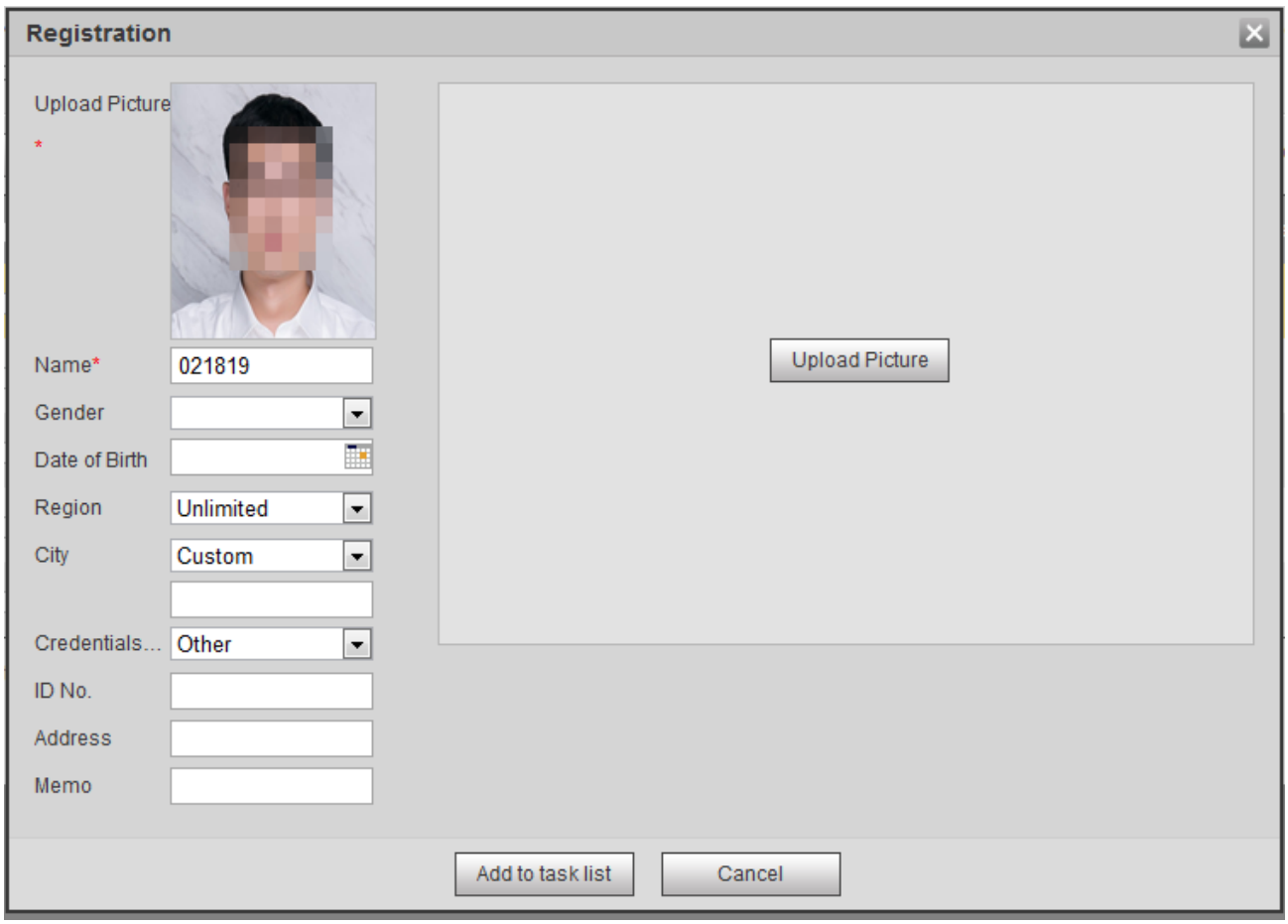


Figure 6-88

Step 3

Set the relevant info according to the actual situation, and click “Add to task list”.

Step 4

Modify info according to actual needs.

Step 5

Click “Add to task list”.

Step 6

Click Task List1 and then click “OK”.

6.3.6.2.3.2 Deleting Face Picture

Click “Search” to enter the face database, and delete the existing face picture.

- Deleting single picture: Select the row of the picture or person to be deleted, click or .

- Batch delect: Select the check box on the right upper corner of the picture or in the row of the picture or person to be deleted. After completing selection, click “Add to the delete list”, then click Task List1 , and then click “OK”.
- Delete all:
  - ◇ When viewing the picture in list format, select the check box in the row of serial number. Click “Add to the delete list”, then click Task List1 , and then click “OK”.
  - ◇ When viewing the picture in picture format, select “All” to select all pictures, click “Add to the delete list”, then click Task List1 , and then click “OK”.

Note

Click to view pictures in list format; click to view pictures in picture format.

6.3.6.2.4 Modeling

Extract picture information, import it to face database, and create the model to achieve intelligent detection such as face recognition.

Note

- More pictures to be modeled, more time will be needed. Please wait patiently.
- During modeling, some intelligent functions (such as face recognition) are disabled. They will be enabled after completing modeling.

Step 1

Select “Setting > Event > Face Recognition > Face Database Config” and the system will display the interface of “Face Database Config”.

Step 2

Click behind the face datanase to be configured, and the system will display the interface of more info shown in Figure 6-89.

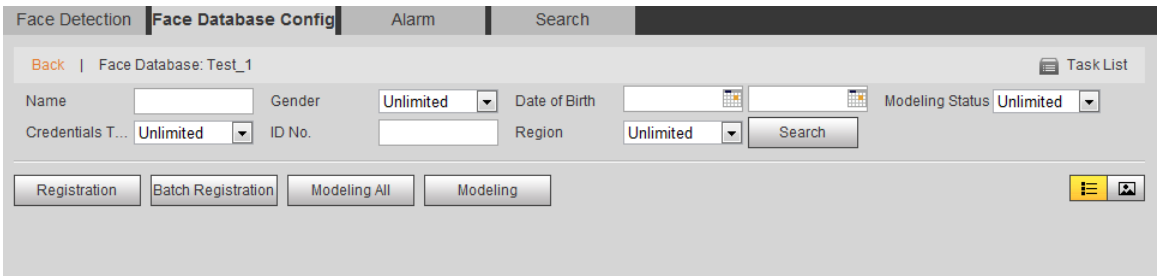


Figure 6-89

Step 3

Select the picture to be modeled according to the according to the actual situation.

- Modeling All

Click “Modeling All” to model all pictures in the database.

- Modeling

When there are many pictures in the database, set conditions, and click “Search”. Select the pictures to be modeled, and click “Modeling”.

6.3.6.2.5 Alarm

Step 1

Select “Setting > Event > Face Recognition > Alarm” and the system will display the interface of “Face Database Config”, which is shown in Figure 6-90.

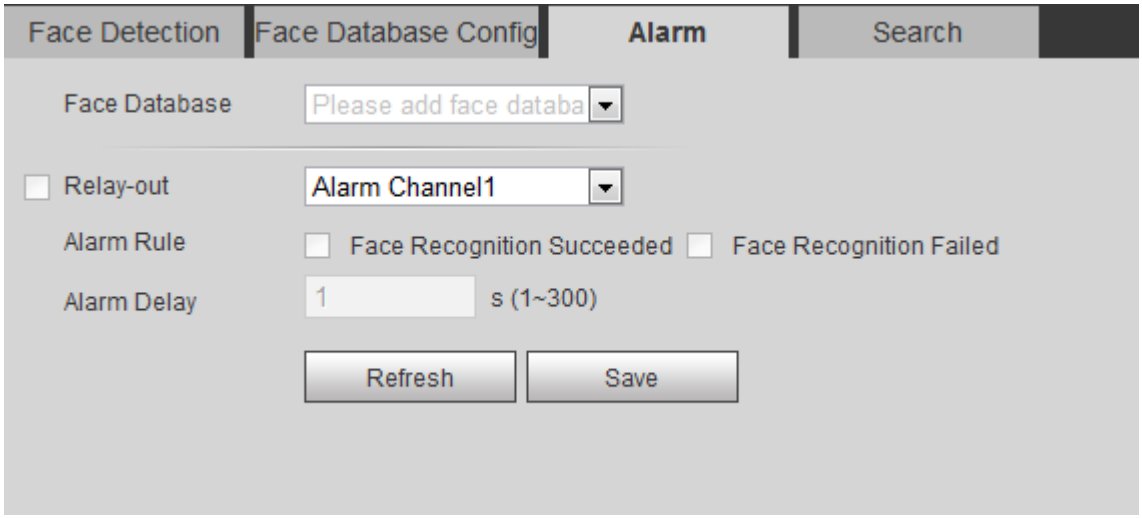


Figure 6-90

Step 2

Select face database and alarm rule.

- Face recognition succeeded: When the detected face succeeds to match the face in face database, the system outputs alarm.
- Face recognition failed: When the detected face fails to match the face in face database, the system outputs alarm.
- Step 3
- Click “OK ” to save the configuration.

6.3.6.2.6 Search

Step 1

Select “Setting > Event > Face Recognition > Search” and the system will display the interface of “Face Database Config”, which is shown in Figure 6-91.

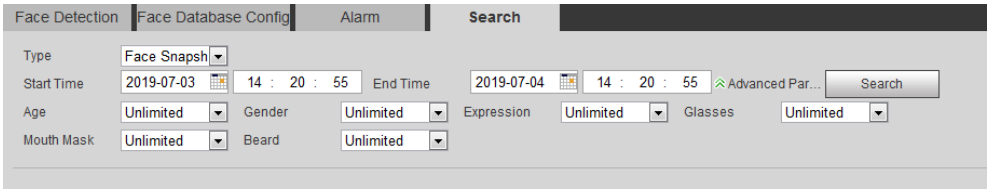


Figure 6-91

Note

Click Advanced Par... to display the advanced parameters.

Step 2

Set the conditions according to actual needs, click “Search”. The system will display the search results.

6.3.7 People Counting

The system counts people number and strand time in the detection area. When the counted people number exceeds the defined number or the counted strand time exceeds the defined time, the alarm is triggered and the linked activity is executed.

Precondition

You have configured people counting smart plan. See "6.3.3 Smart Plan."

6.3.7.1 **People Counting**

Step 1

Select “Setup > Event > People Counting > People Counting”. The “People Counting” interface is displayed. See Figure 6-92.

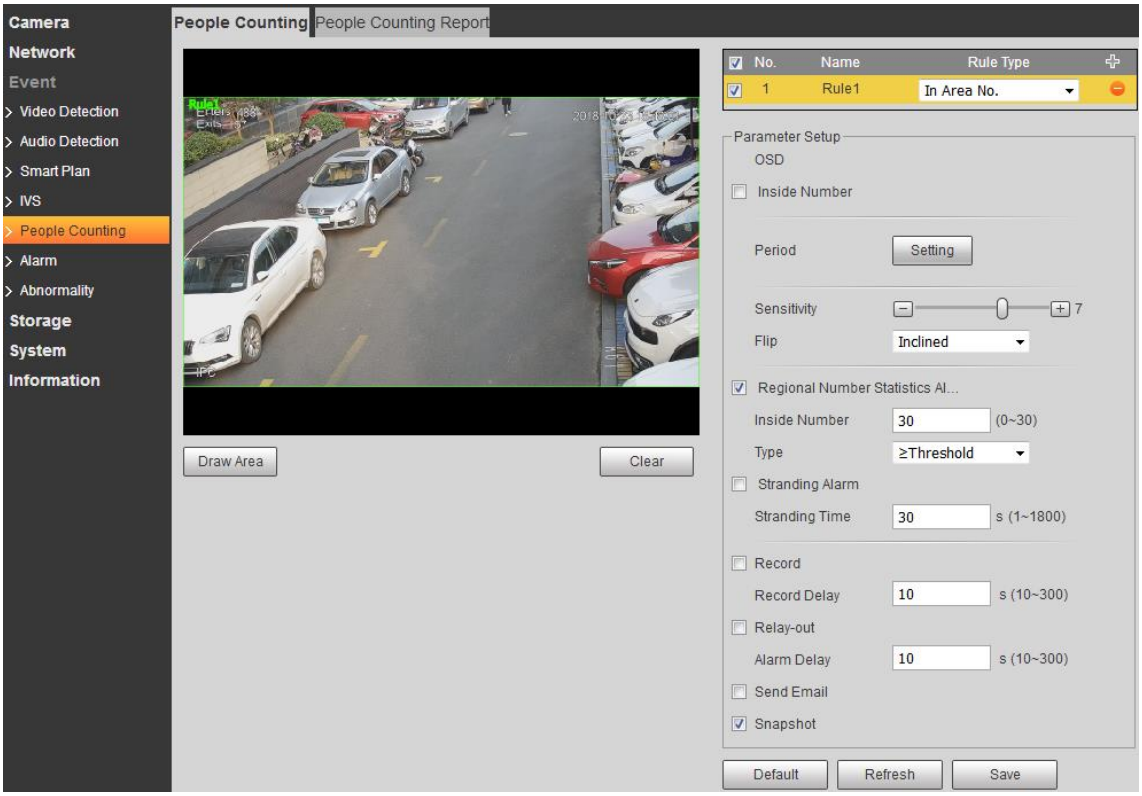


Figure 6-92

Step 2

Click “ ” to add people counting rules and set the name.

Step 3

Select the rule type.

- “People counting”: The system counts people flow in the detection area. When the enter number, leave number or stranded number exceeds the defined number; the alarm is triggered and the linked activity is executed.
- “In Area No.”: The system counts people number and strand time in the detection area. When the counted people number exceeds the defined number or the counted strand time exceeds the defined time, the alarm is triggered and the linked activity is executed.

Step 4

Click “Draw Rule” to draw an area in the monitoring image, and right-click to complete the drawing.

Step 5

Configure the parameters of people counting. See the following sheet for more details.

Parameter	Description
OSD	Select the “Enter No.” or “Leave No.” check box to display the number of the people that enter or leave this area.

Parameter	Description
Period	Configure working period, and the linked activity will be executed only within this period. 1. Click “Setting”, and the period interface is displayed. 2. Configure working period according to the following methods: ● Enter time numerical value or press the left mouse button to drag on the setup interface to set. ● Click the **“**Setting” of corresponding week, select the check box in front of the period on the bottom of the interface, and enter time value, there are six periods to be set every day. 3. Click “Save” to complete the setting.
Sensitivity	Configure the alarm sensitivity, and the bigger the sensitivity value is, the easier the alarm will be triggered.
Flip	Select from the list to rotate the image, and you can select “Inclined” or “Vertical.”
Flowrate Alarm	Set the enter number, leave number, stranded number; it will trigger alarm when it exceeds the limited number.
Regional Number Statistics Alarm	Select the check box to enable this function, and then define the “Inside Number” and “Type.” There are two options in the “Type” list. ● Select “≥Threshold”, and then the alarm will be triggered if the number of the people.in the area is greater than or equal to the defined number. ● Select “≤Threshold”, and then the alarm will be triggered if the number of the people.in the area is lower than or equal to the defined number.
Stranding Alarm	Select the check box to enable this function, and then when people stay in this area for longer than the defined time period in “Average Strand Time”, the alarm will be triggered.
Record	Select “Record”, and the system records video when alarm is triggered. **Note:** To enable the system to record video in this condition, you need to make sure: ● The motion detection record is enabled. See detailed operation in "6.4.1.1 Record Schedule." ● The auto-record is properly configured. See detailed operation in "6.4.3 Record ."
Record delay	The record keeps running for the defined time after alarm is ended.
Relay out	Select “Relay-out”, and when alarm is triggered, the system interacts with the linked alarm devices.
Alarm delay	The Alarm linkage keeps running for the defined time after alarm is ended.
Send Email	Select “Send Email”, and when alarm is triggered, the system sends email to the specified mailbox. For the configuration of Email, see "6.2.6 SMTP (e-mail)."

Parameter	Description
Snapshot	Select “Snapshot”, and the system takes snapshot when alarm is triggered. **Note:** ● Make sure the motion detection snapshot is enabled, see detailed configuration in "6.4.1.1 Record Schedule." ● For viewing and configuring the snapshot storage path, see "6.1.2.5 Path."

Step 6

Click “Save” to complete the setup of people counting.

6.3.7.2 **Queuing**

Note:

This function is available on some select model.

Step 1

Select “Setup > Event > People Counting > Queuing”. The “Queuing” interface is displayed. See Figure 6-67.

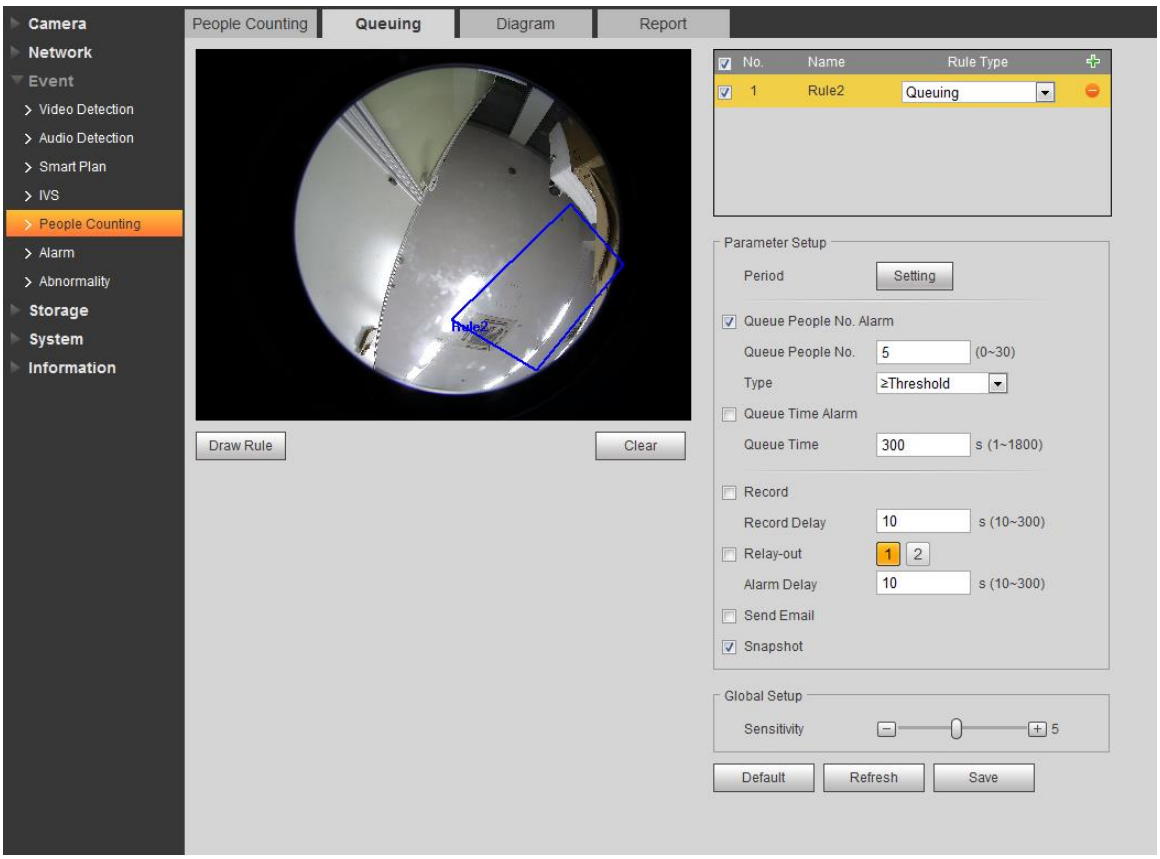


Figure 6-93

Step 2

Click “ ” to add “Queuing” rules and set the name.

Note:

You can add 4 rules at most.

Step 3

Click “Draw Rule” to draw an area in the monitoring image, and right-click to complete the drawing.

Step 4

Configure the parameters of “Queuing”. See the following sheet for more details.

Parameter	Description
Period	Configure working period, and the linked activity will be executed only within this period. 1. Click “Setting”, and the period interface is displayed. 2. Configure working period according to the following methods: ● Enter time numerical value or press the left mouse button to drag on the setup interface to set. ● Click the **“**Setting” of corresponding week, select the check box in front of the period on the bottom of the interface, and enter time value, there are six periods to be set every day. 3. Click “Save” to complete the setting.
Queuing People No. Alarm	Select the check box to enable this function, and then define the “Queuing People Number” and “Type.” There are two options in the “Type” list. ● Select “≥Threshold”, and then the alarm will be triggered if the number of the people.in the area is greater than or equal to the defined number. ● Select “≤Threshold”, and then the alarm will be triggered if the number of the people.in the area is lower than or equal to the defined number.
Queue Time Alarm	Select the check box to enable this function, then when people stay in this area for longer than the defined time period in “Queue Time”, the alarm will be triggered. **Note:** After the configuration is completed, each person’s queuing time displays in the image.
Record	Select “Record”, and the system records video when alarm is triggered. **Note:** To enable the system to record video in this condition, you need to make sure: ● The motion detection record is enabled. See detailed operation in "6.4.1.1 Record Schedule." ● The auto-record is properly configured. See detailed operation in "6.4.3 Record ."
Record delay	The record keeps running for the defined time after alarm is ended.
Relay out	Select “Relay-out”, and when alarm is triggered, the system interacts with the linked alarm devices.
Alarm delay	The Alarm linkage keeps running for the defined time after alarm is ended.
Send Email	Select “Send Email”, and when alarm is triggered, the system sends email to the specified mailbox. For the configuration of Email, see "6.2.6 SMTP (e-mail)."

Parameter	Description
Snapshot	Select “Snapshot”, and the system takes snapshot when alarm is triggered. **Note:** ● Make sure the motion detection snapshot is enabled, see detailed configuration in "6.4.1.1 Record Schedule." ● For viewing and configuring the snapshot storage path, see " 6.1.2.5 Path."
Sensitivity	Configure the alarm sensitivity. The bigger the sensitivity value is, the easier the alarm will be triggered

Step 5

Click “Save” to complete the setup of people counting.

6.3.7.3 **Diagram**

You can search and export the heat map and tracking map according the set searching criteria.

Select “Setup > Event > People Counting > Diagram”. The “Diagram” interface is displayed. See Figure 6-94.

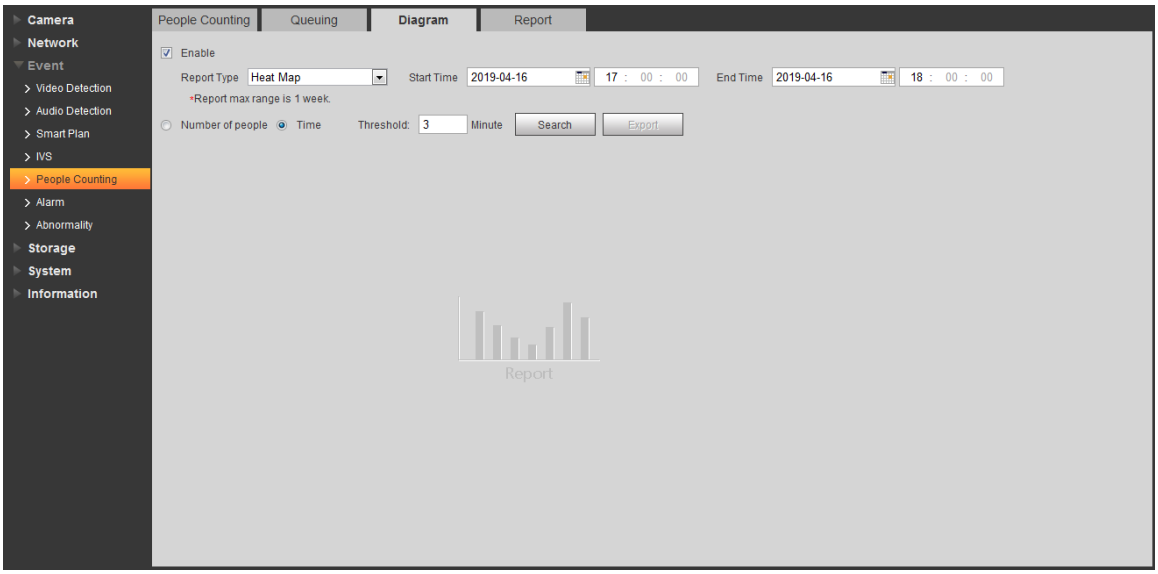


Figure 6-94

Step 2

Select “Enable” check box to enable it. And then you can search the diagram during the set period.

Step 3

Set the searching criteria. For details, see the following table.

Parameter	Description
Report Type	Select the report type from the following two types: ● Heat Map: Density statistics of moving object, the color range is from blue to red, blue means the min heat value and red means the max heat value. ● Track Map: Tendency statistics of moving object.
Start Time	The start time of the report.
End Time	The end time of the report.
Number of People	Select “Number of People”, the system searches the diagram according to the number of people in the area.
Time	Select “Time”, the system searches the diagram according to the average strand time/queuing time in the area.
Threshold	When the area where the number of people or average strand time/queuing time exceeds the defined threshold, it shows red in the image.

Step 4

Click “Search”. The statistic diagram is displayed. See Figure 6-95.

Note:

With the right ruler, you can read the diagram clearly.

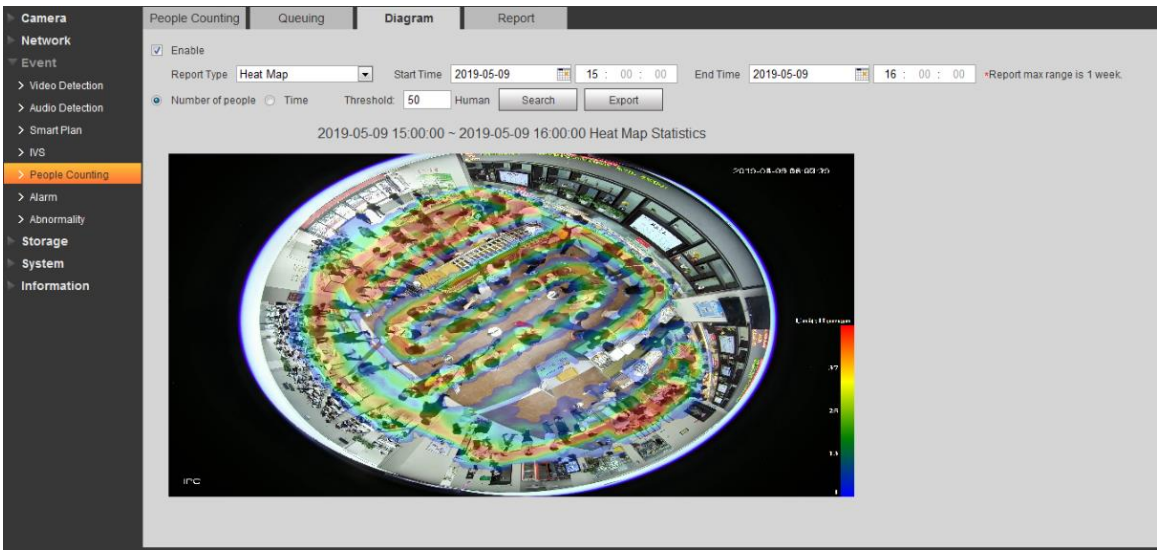


Figure 6-95

Step 5 (Optional)

Click “Export” and select the save path to export the searched diagram.

6.3.7.4 **Report**

You can generate a form of report according to the set searching criteria.

Step 1

Select “Setting > Event > People Counting > Report”. The “Report” interface is displayed. See Figure 6-96.

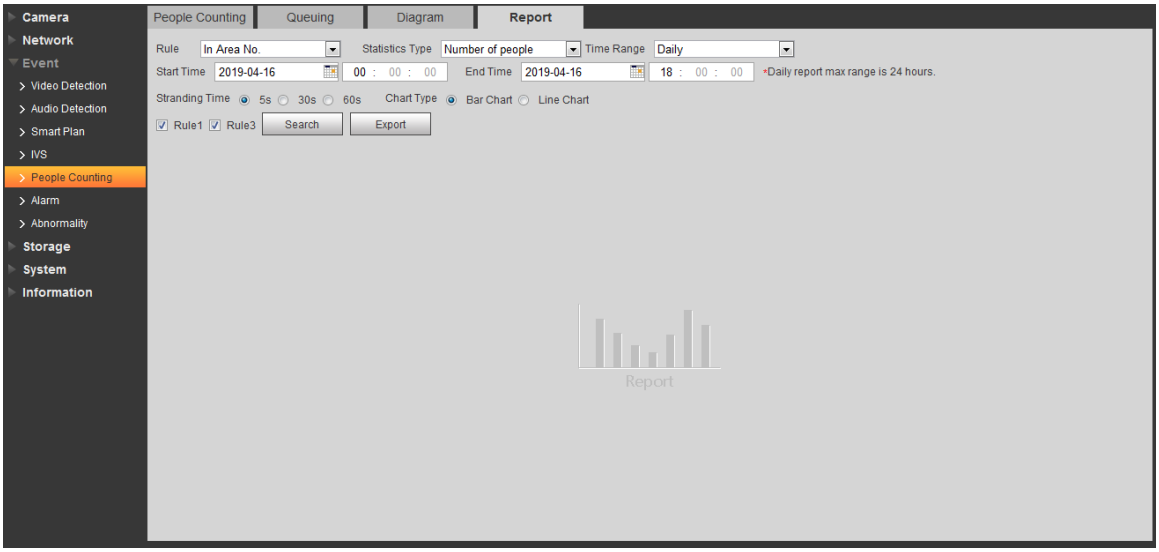


Figure 6-96

Step 2

Set the searching criteria. For details, see the following table.

Parameter	Description
Rule	Select the rule from the following two rules: “In Area No.” and “Queuing”.
Statistics Type	Select the statistics type from the following two types: “Number of people” and “Average stranding time”. **Note:** Queuing rule supports “Number of people” type only.
Report Type/Time Range	Select people counting period. ● When selecting “People Counting”, you can view daily report, monthly report and annual report. ● When selecting “In Area No.”, you can view day report and month report.
Start Time	The start time of the report.
End Time	The end time of the report.
Stranding Time	Select the report with the stranding time you need. When the stranding time is longer than the set time, it shows red on the report; when the stranding time is shorter than the set time, it shows blue on the report.
Queue Time	Select the report with the queue time you need. When the queue time is longer than the set time, it shows red on the report; when the queue time is shorter than the set time, it shows blue on the report.

Parameter	Description
Chart Type	Select the chart type from “Bar Chart” report or “Line Chart” report.
Rule 1, Rule 2…	Select the check box to search the report of the corresponding rule.

Step 3

Click “Search”. The report is displayed. See Figure 6-97.

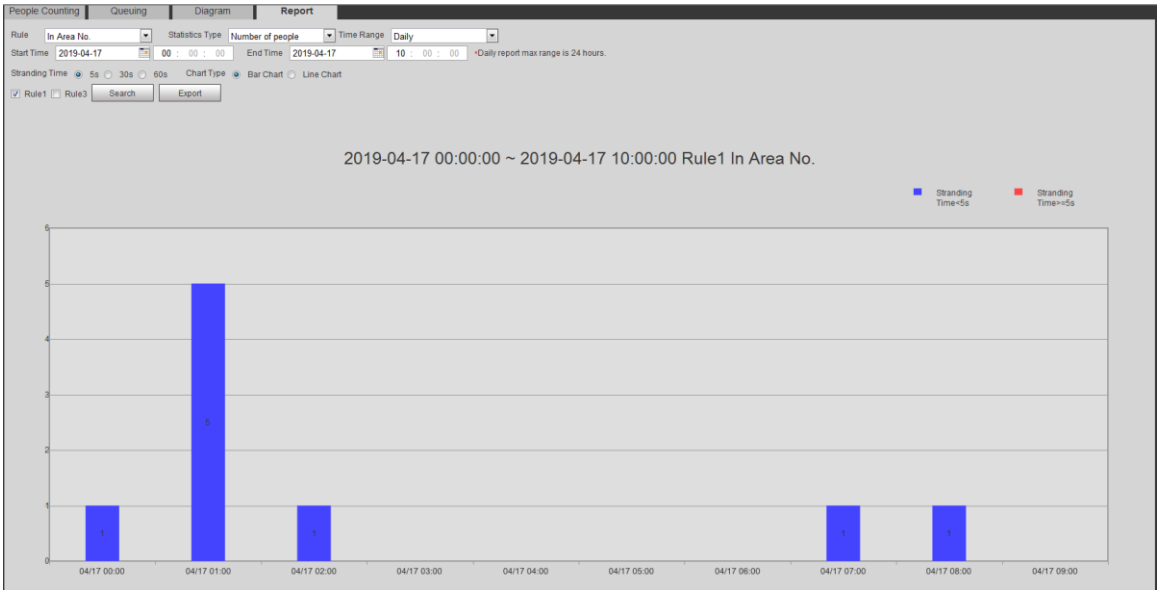


Figure 6-97

Step 4 (Optional)

Click “Export” and select the save path to export the report.

6.3.8 Heat Map

6.3.8.1 Heat Map

It is the density statistics of moving object that can generate report, the color range is from blue to red, blue means the min heat value and red means the max heat value.

Mirroring, view angle change and heat map original data will be cleared.

Step 1

Select “Setup > Event > Heat Map > Heat Map” and the system will display the interface of “Heat Map”, which is shown in Figure 6-98.

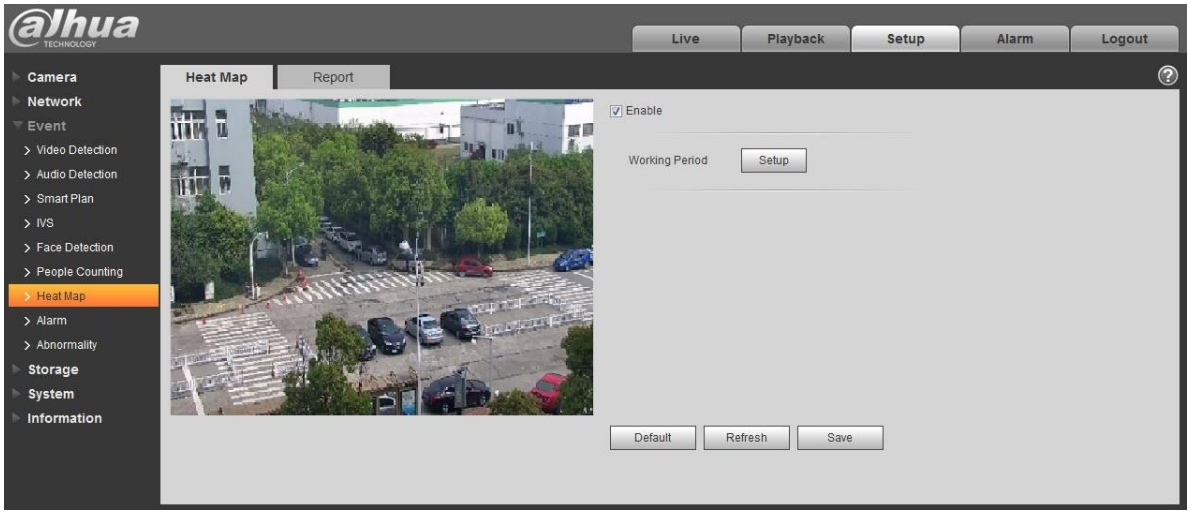


Figure 6-98

Step 2

Select “Enable” to enable heat map function.

Step 3

It is to set the working period.

1. Click “Setup” and the system will display the interface of “Working Period”, which is shown in Figure 6-99.

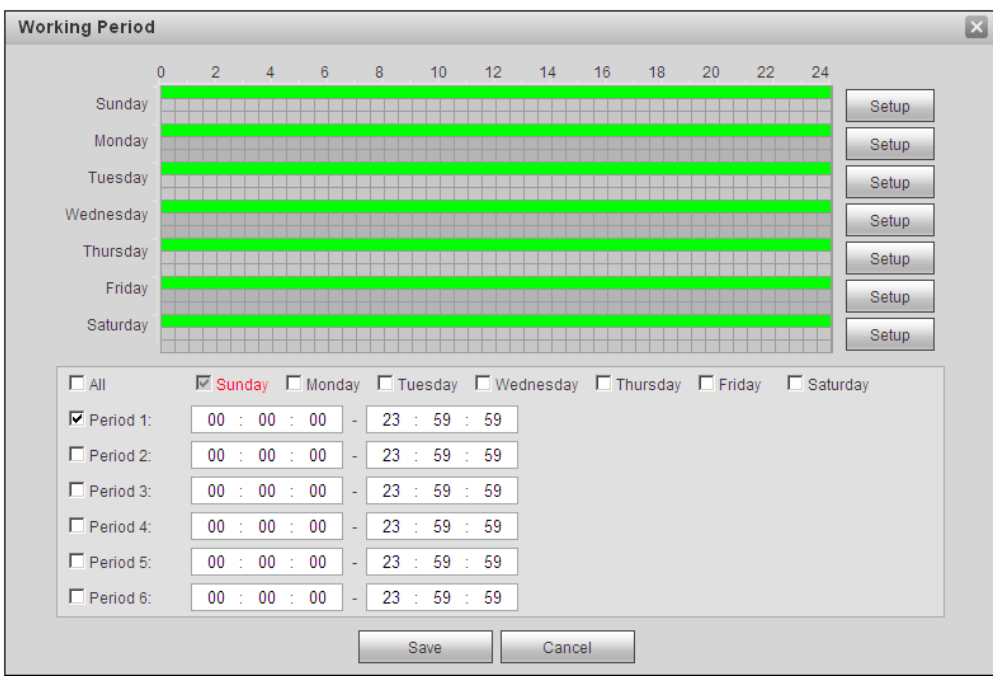


Figure 6-99

2. It is to set working period according to the following methods:

- You can input time numerical value or press the left mouse button to drag on the setup interface to set.
- There are six periods to be set every day, select the check box in front of the period, and then the period is valid.
- Select week number (it selects Sunday by default, if it selects the whole week, then it means the setup can be applied to the whole week, you can also select the check box in front of the week number to implement independent setting for some days).

3. Click “Save” to complete the setup of working period.

Step 4

Click “Save” to complete the setup of heat map.

6.3.8.2 **Report**

It is to generate the form of report according to the heat map data.

Step 1

Select “Setup > Event > Heat Map > Report” and the system will display the interface of “Report”, which is shown in Figure 6-100.

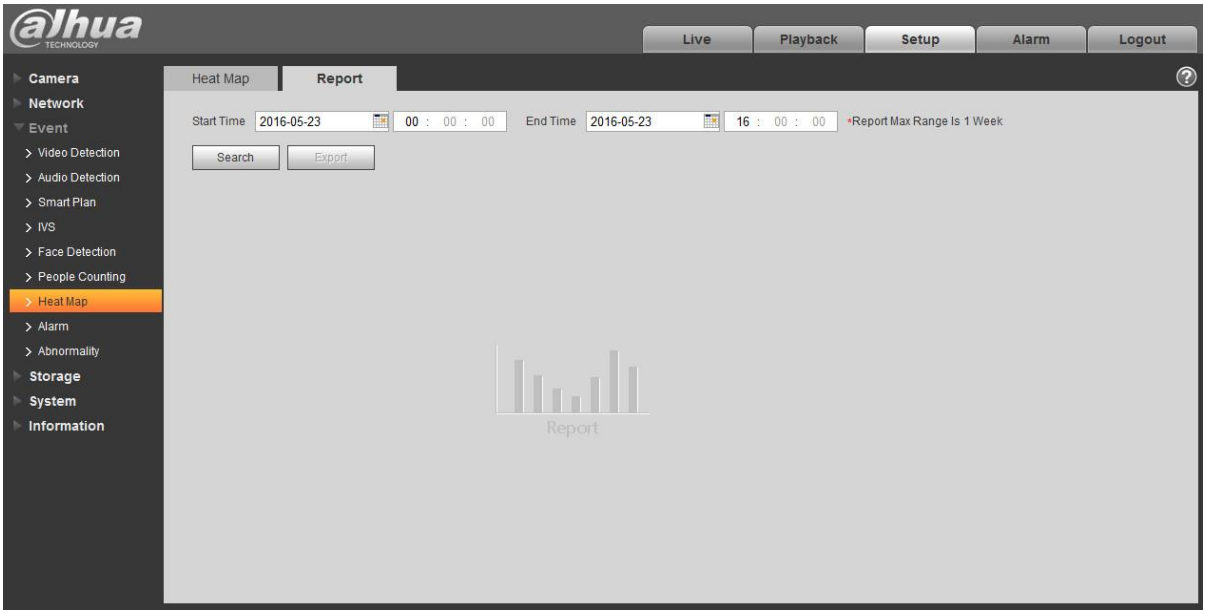


Figure 6-100

Step 2

It is to set begin time and end time.

Step 3

Click “Search” to complete report statistics, click “Export” to export the statistics report.

6.3.9 Video Structuralization

Make sure to enable video structuralization in “Smart Plan” before using the function.

6.3.9.1 **Scene Set**

Video structuralization includes personnel detection, face detection, vehicle detection and non-motor vehicle detection.

Step 1 Select “Setup > Event > Video Structuralization > Scene Set.”

The “Scene Set” interface is displayed. See Figure 6-101.

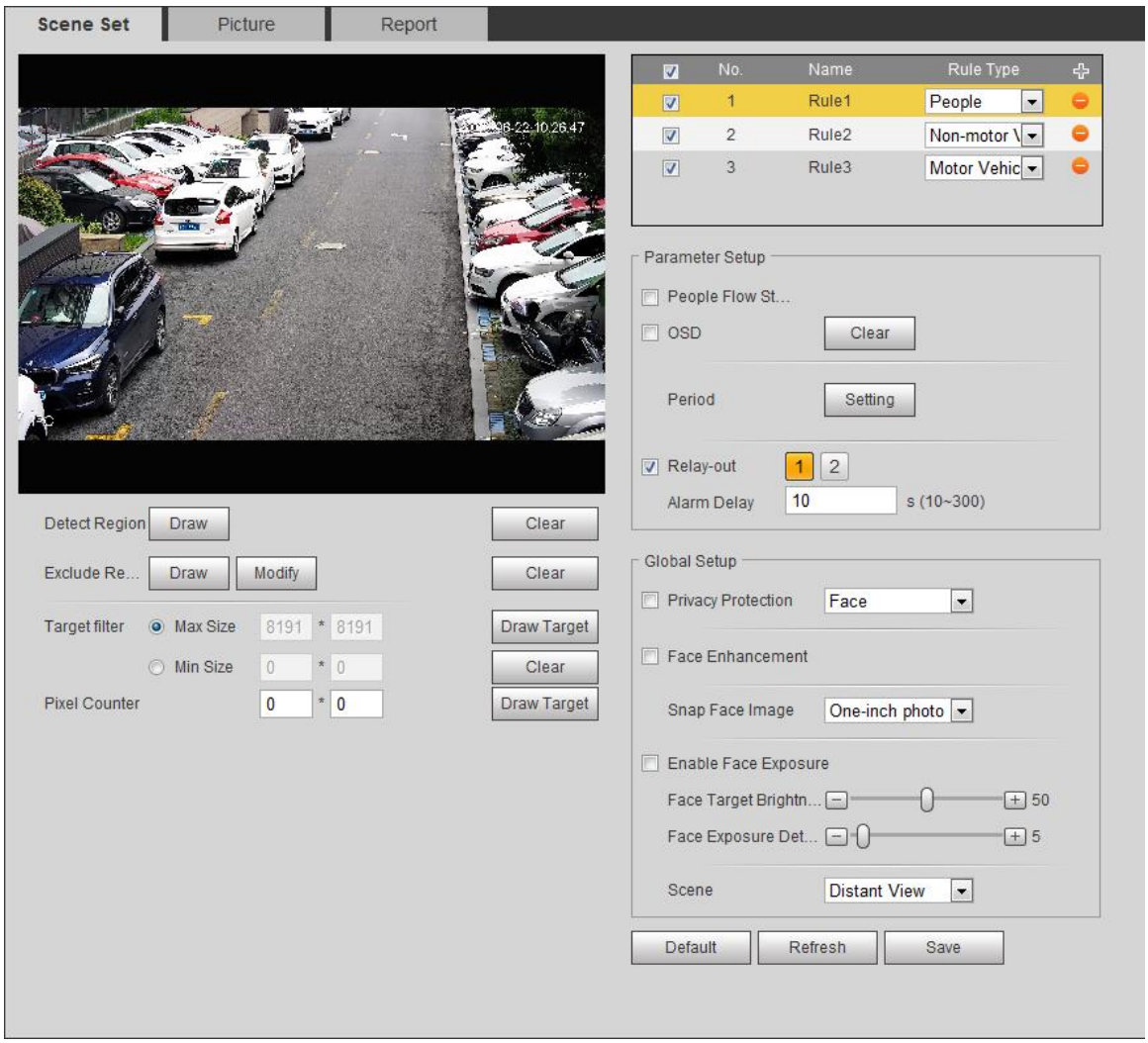


Figure 6-101

Step 2 Click , select the Rule Type.

Step 3 Click “Draw” to draw the detect region and exclude region.

- Detect region: The region need to be detected.
- Exclude region: The region does not need to be detected.

Step 4 Click “Draw Target” behind “Target filter”, you can set the max size and min size of the target in the image.

Step 5 Configure the parameters. For details, see the following two tables.

Parameter	Description
People Flow Statistics	Select the check box to detect the number of people in the detect region.
Traffic Flow Statistics	Select the check box to detect the number of vehicle in the detect region.
Non-motor Vehicle Detection	Select the check box to detect the number of non-motor vehicle in the detect region.
OSD	Select the check box, the preview interface shows the number of motor vehicle, non-motor vehicle and people. Click “Clear”, it counts from zero.
Period	Configure working period, and the linked activity will be executed only within this period. 1. Click “Setting”, and the period interface is displayed. 2. Configure working period according to the following methods: ● Enter time numerical value or press the left mouse button to drag on the setup interface to set. ● Click the “Setting” of corresponding week, select the check box in front of the period on the bottom of the interface, and enter time value, there are six periods to be set every day. 3. Click “Save” to complete the setting.
Snap Mode	Select the snap mode: **Optimized Snap** and **Tripwire**.
Capture Complete Vehicle	Select the check box to capture the complete picture of vehicle. The save path of the captured pictures is the same with the captured video. For details, see “6.1.2.5 Path.”
Relay-out	Select “Relay-out”, and when alarm is triggered, the system interacts with the linked alarm devices.
Alarm Delay	The Alarm linkage keeps running for the defined time after alarm is ended.
Pixel Counter	Click “Draw Target” behind “Pixel Counter”, press and hold the left mouse button to draw a rectangular, and then the size of the rectangular would display in the counter.
Privacy Protection	Select the check box and then select “Face” or “Human body” from the drop-down list to blur faces or human bodies in the image.
Face Enhance	Select the check box to guarantee that the face is clear by priority when the stream is set very low.
Snap Face Image	Set the range of the face picture, including “Face” and “One-inch photo”.
Enable Face Exposure	Select the check box to make the face clearer by adjusting iris and shutter and so on.

Parameter	Description
Face Target Brightness	Set the face target brightness, and it is 50 by default.
Face Exposure Detection Interval	Set the face exposure detection interval to avoid the image flashing caused by frequent exposure, and it is 5 s by default.
Scene	Set the scene of camera, including “Distant View” and “Close View.”

Step 6 Click “Save” to complete the configuration.

6.3.9.2 **Picture**

It is to set the information and location of the snapshotting.

Step 1 Select “Setup > Event > Video Structuralization > Picture.”

The “Picture” interface is displayed. See Figure 6-102.

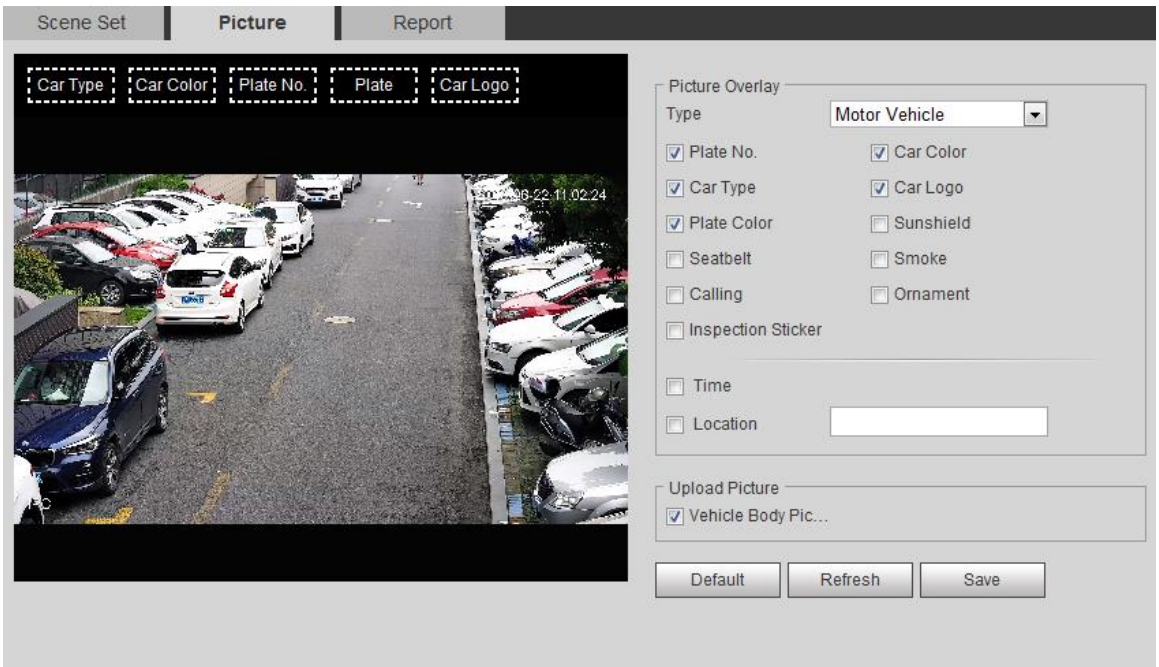


Figure 6-102

Step 2 Select the type and then set the information and location of the image, including plate No., time, car color, car type and car logo and so on.

Step 3 Click “Save” to complete the configuration.

6.3.9.3 **Report**

Step 1 Select “Setup > Event > Video Structuralization >Report.”

The “Report” interface is displayed.

Step 2 Set the parameters, including Report Type, Start Time and End Time and so on.

Step 3 Click “Search”. The report is displayed. See Figure 6-103.

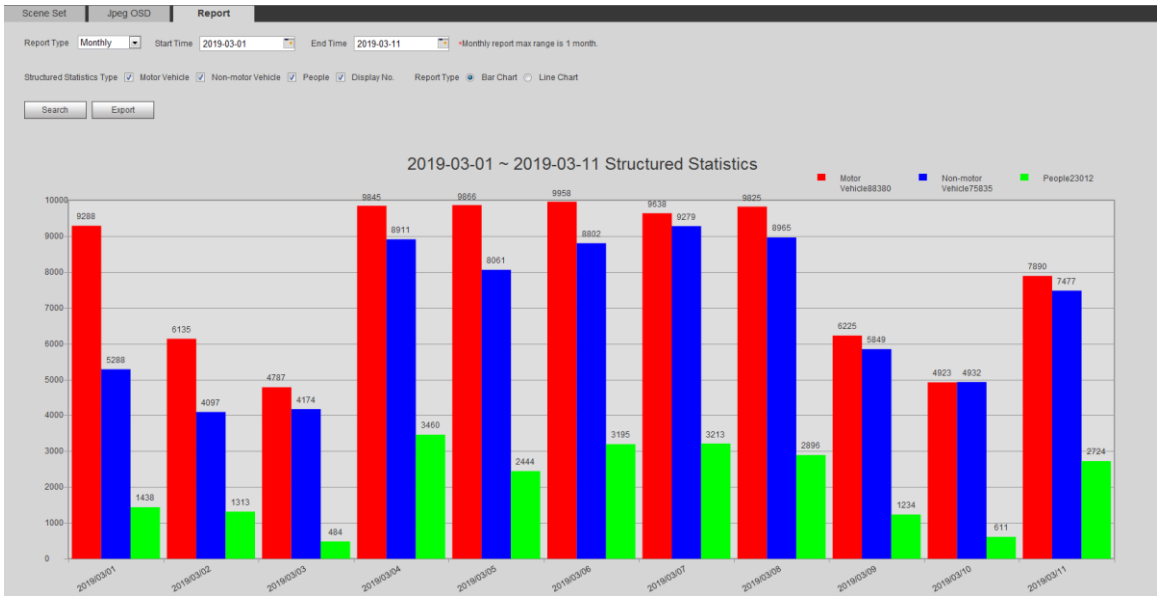


Figure 6-103

Step 4 Click “Export” to export the report.

6.3.10 ANPR

6.3.10.1 **Scene Set**

Step 1 Select “Setup > Event > ANPR > Scene Set.”

The “Scene Set” interface is displayed. See Figure 6-104.

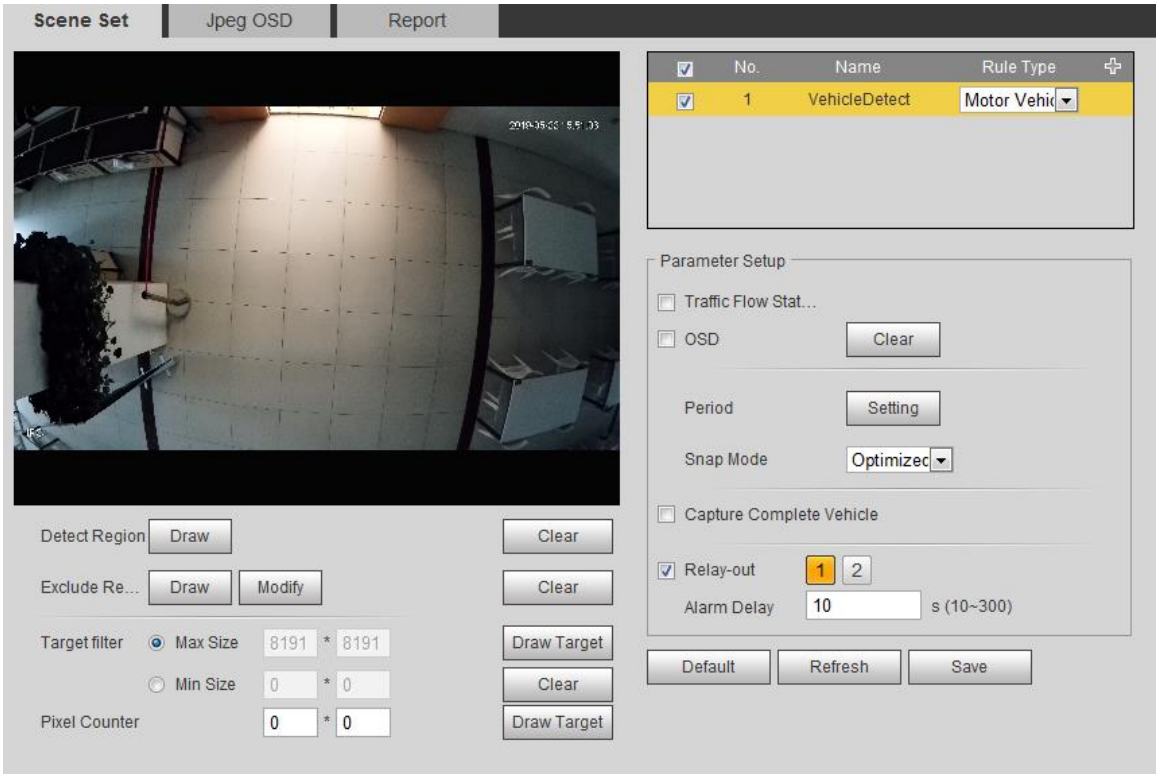


Figure 6-104

Step 2 Click “Draw” to draw the detect region and exclude region.

- Detect region: The region need to be detected.
- Exclude region: The region does not need to be detected.

Step 3 Click “Draw Target” behind “Target filter”, you can set the max size and min size of the target in the image.

Step 4 Configure the parameters. For details, see the following two tables.

Parameter	Description
Traffic Flow Statistics	Select the check box to detect the number of vehicle in the detect region.
OSD	Select the check box, the preview interface shows the number of motor vehicle, non-motor vehicle and people. Click “Clear”, it counts from zero.

Parameter	Description
Period	Configure working period, and the linked activity will be executed only within this period. 1. Click “Setting”, and the period interface is displayed. 2. Configure working period according to the following methods: ● Enter time numerical value or press the left mouse button to drag on the setup interface to set. ● Click the “Setting” of corresponding week, select the check box in front of the period on the bottom of the interface, and enter time value, there are six periods to be set every day. 3. Click “Save” to complete the setting.
Snap Mode	Select the snap mode: **Optimized Snap** and **Tripwire**.
Capture Complete Vehicle	Select the check box to capture the complete picture of vehicle. The save path of the captured pictures is the same with the captured video. For details, see “6.1.2.5 Path.”
Relay-out	Select “Relay-out”, and when alarm is triggered, the system interacts with the linked alarm devices.
Alarm Delay	The Alarm linkage keeps running for the defined time after alarm is ended.
Pixel Counter	Click “Draw Target” behind “Pixel Counter”, press and hold the left mouse button to draw a rectangular, and then the size of the rectangular would display in the counter.

Step 5 Click “Save” to complete the configuration.

6.3.10.2 **Jpeg OSD**

It is to set the information and location of the snapshotting.

Step 1 Select “Setup > Event > ANPR >Jpeg OSD.”

The “Jpeg OSD” interface is displayed. See Figure 6-105.

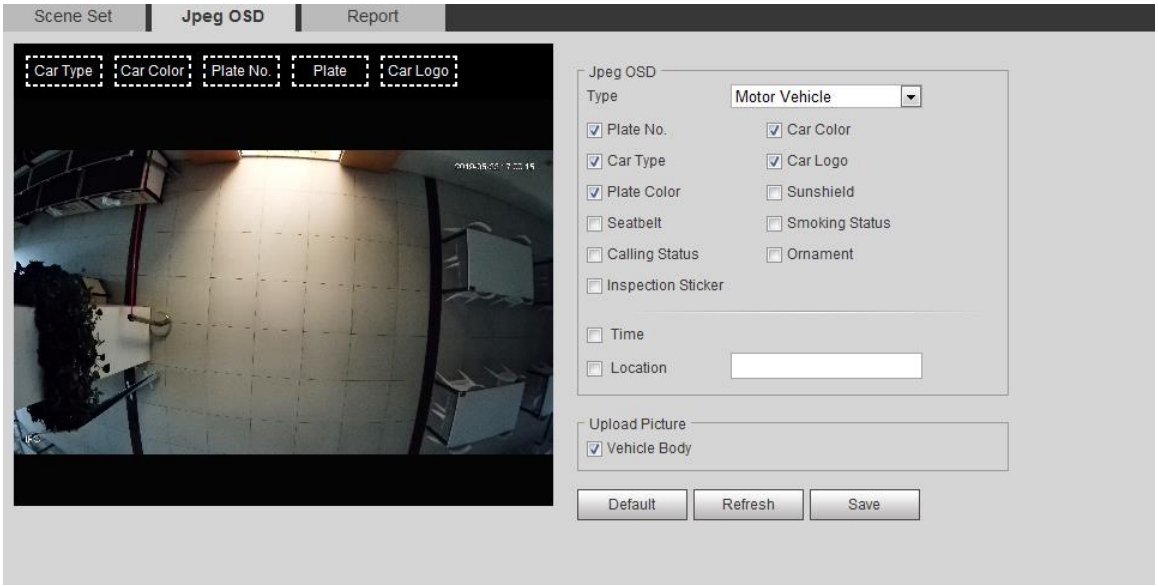


Figure 6-105

Step 2 Select the type and then set the information and location of the image, including plate No., time, car color, car type and car logo and so on.

Step 3 Click “Save” to complete the configuration.

6.3.10.3 **Report**

Step 1 Select “Setup > Event > ANPR >Report.”

The “Report” interface is displayed.

Step 2 Set the parameters, including Report Type, Start Time and End Time and so on.

Step 3 Click “Search”. The report is displayed. See Figure 6-106.

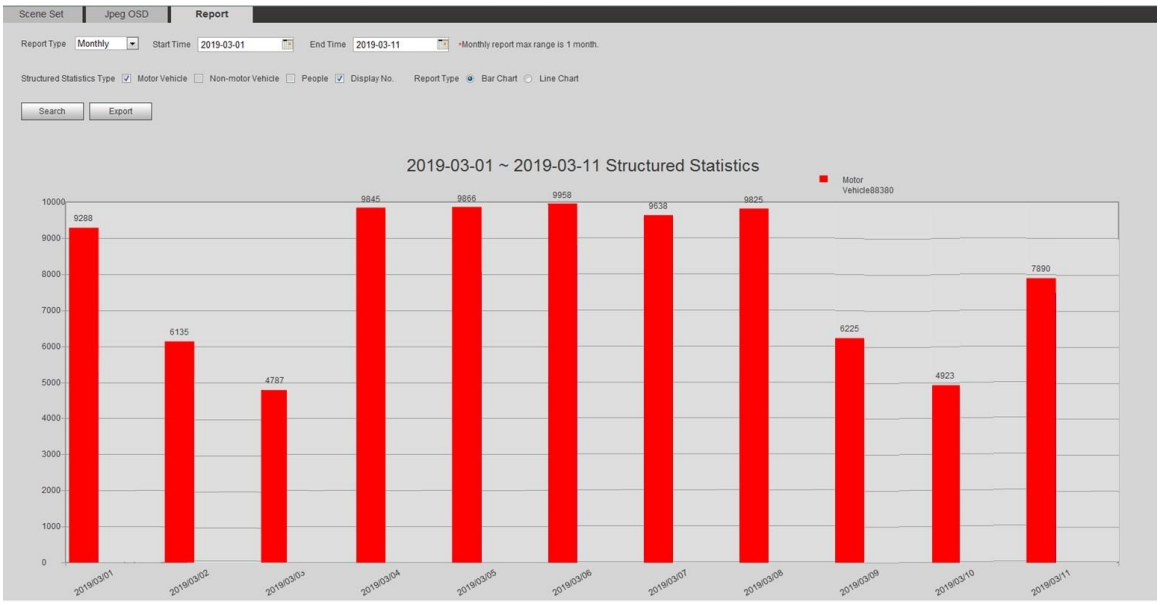


Figure 6-106

Step 4 Click “Export” to export the report.

6.3.11 Alarm

Please note some series products do not support this function.

5.3.2.1 PIR alarm

The alarm activation interface PIR alarm is shown as in Figure 6-107.

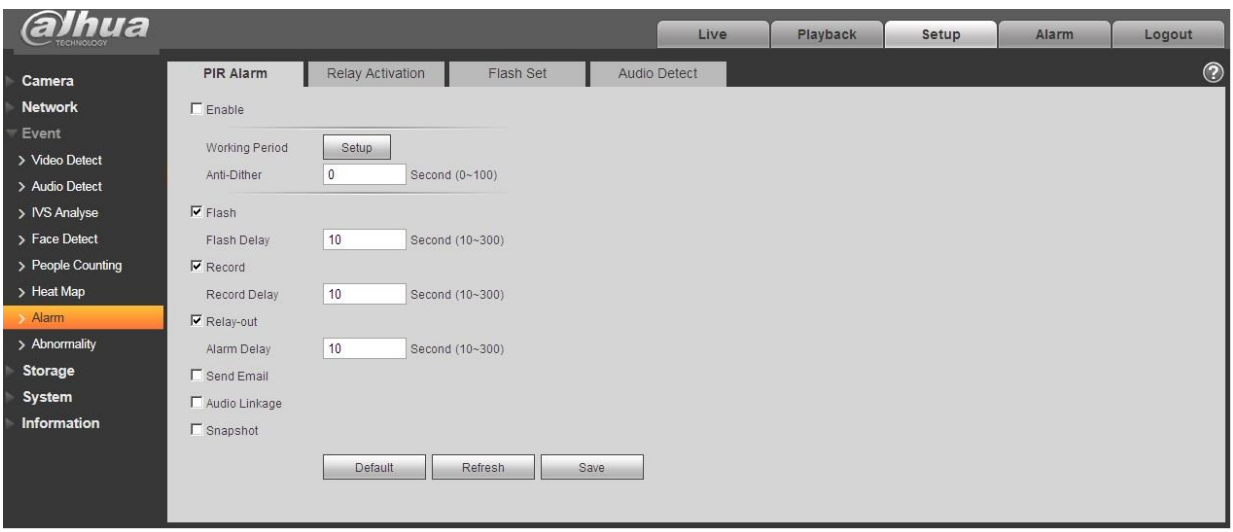


Figure 6-107

Please refer to the following sheet for detailed information.

Parameter	Description
Enable	After enabled, relay activation will work. Check it and enable the PIR alarm.
Working period	● This function becomes activated in the specified periods. ● There are six periods in one day. Please draw a circle to enable corresponding period. ● Select date. If you do not select, current setup applies to today only. You can select all week column to apply to the whole week. ● Click OK button, system goes back to motion detection interface; please click save button to exit. Note: User can set via dragging mouse while not releasing left mouse.
Anti-dither	System only memorizes one event during the anti-dither period. The value ranges from 0s to 100s.
Flash	After enabling, the system will automatically turn on the flash when alarm occurs.
Flash Delay	• The flash will be off with a period of time delay when the alarm linkage is over. • Time is calculated by unit of second and ranges from 10s~300s.
Record	System auto activates motion detection channel to record once alarm occurs (working with motion detection function).
Record Delay	System can delay the record for specified time after alarm ended. The value ranges from 10s to 300s.
Relay out	Enable alarm activation function. You need to select alarm output port so that system can activate corresponding alarm device when alarm occurs.
Alarm delay	System can delay the alarm output for specified time after alarm ended. The value ranges from 10s to 300s.
Send Email	After this function is enabled, system can send out email to alert you when alarm occurs and ends.
Audio Linkage	Check it and the system will play alarm audio file when alarm occurs. Users can set recorded audio file in “Camera Setting ＞ Audio ＞Alarm Audio”.
Snapshot	After you enabled snapshot, the system will automatically snapshot if alarm occurs.

6.3.11.1 Alarm Linkage

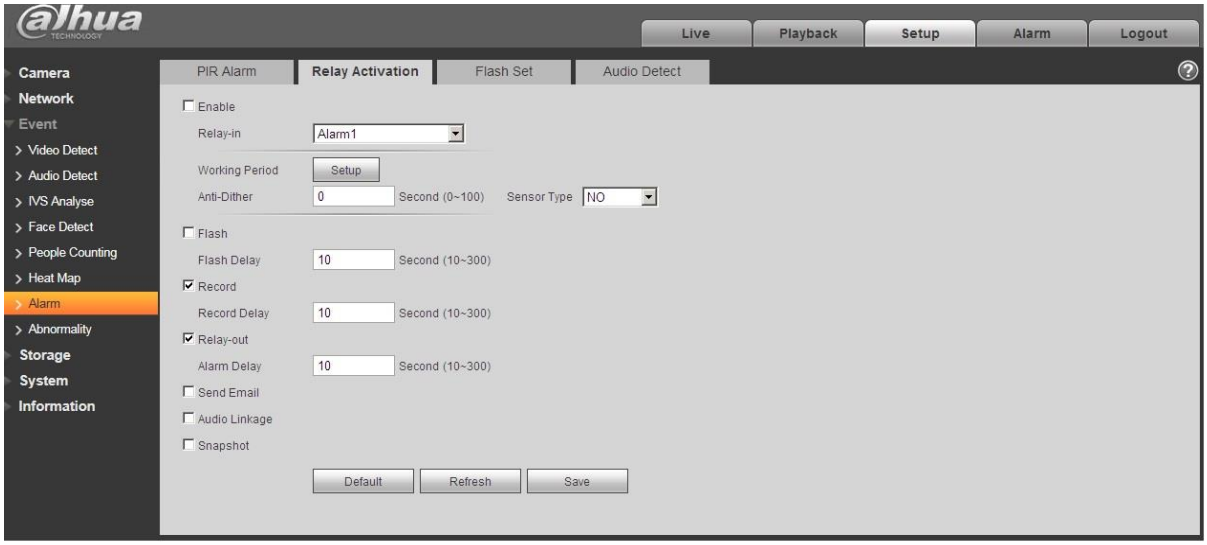


Figure 6-108

Parameter	Description
Enable	Check it and enable the alarm linkage.
Relay-in	The default alarm 1，some products can choose alarm 2.
Sensor Type	Two types of sensor which are normally open (NO) and normally closed (NC), switch from normally open to normally closed, open the alarm. Switch from normally closed to normally open, shut the alarm.
PTZ	Check it and set PTZ movement when alarm occurs. Such as go to preset x when there is an alarm. The event type includes: preset, tour and pattern and so on.

6.3.11.2 Flash Set

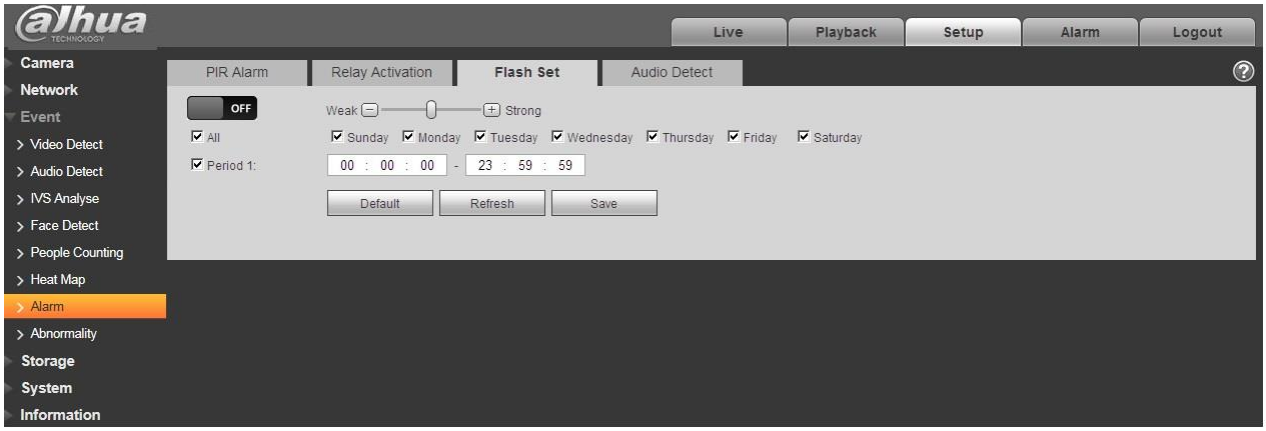


Figure 6-109

Parameter	Description
ON/OFF	ON means flash is on; OFF means flash is off.
Weak-strong bar	Via dragging this bar to adjust flash brightness.
All	Check and it means the day flash works.
Period	Period that flash is on.

6.3.11.3 Audio detection

Note: Audio detection won't work when "Talk" is enabled on the preview interface.

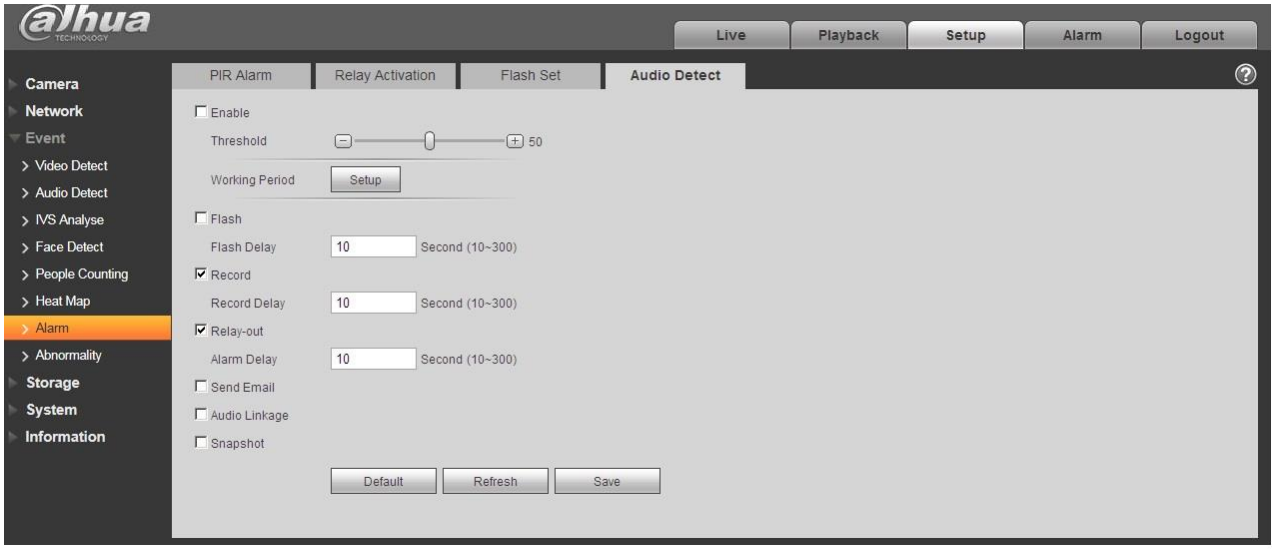


Figure 6-110

parameter	Description
Enable	Check it and enable audio detection.
Threshold	It will trigger alarm and set up a series of linkage when volume exceeds the set threshold.

6.3.12 Abnormity

Abnormity includes No SD Card, Capacity Warning, SD Card Error, Disconnection, IP Conflict and Unauthorized Access.

Note:

Only device with SD card function has these three statuses: No SD card, capacity warning, and SD card error. Device without SD card function does not have the above three statuses. See Figure 6-111 to Figure 6-113.

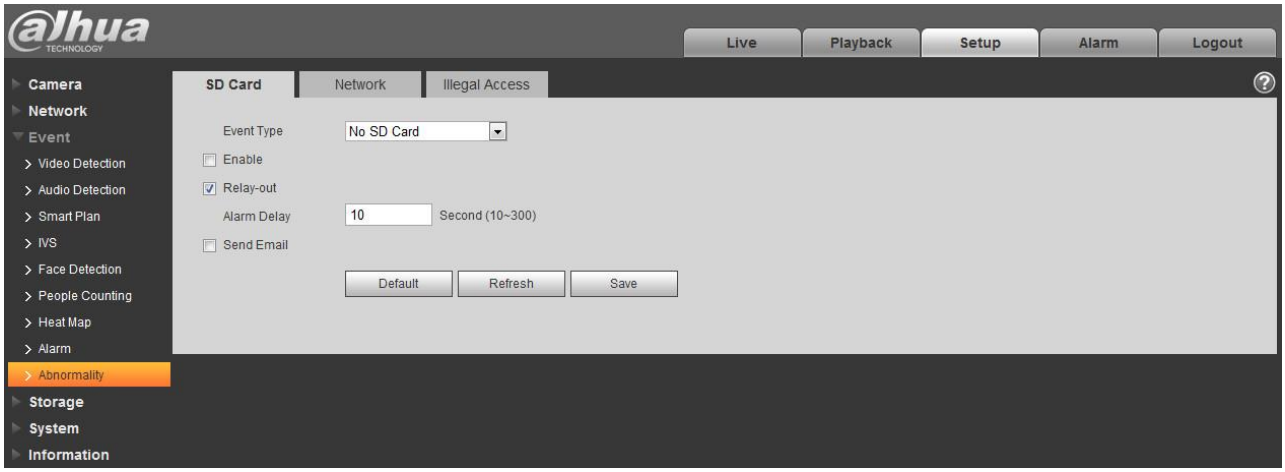


Figure 6-111

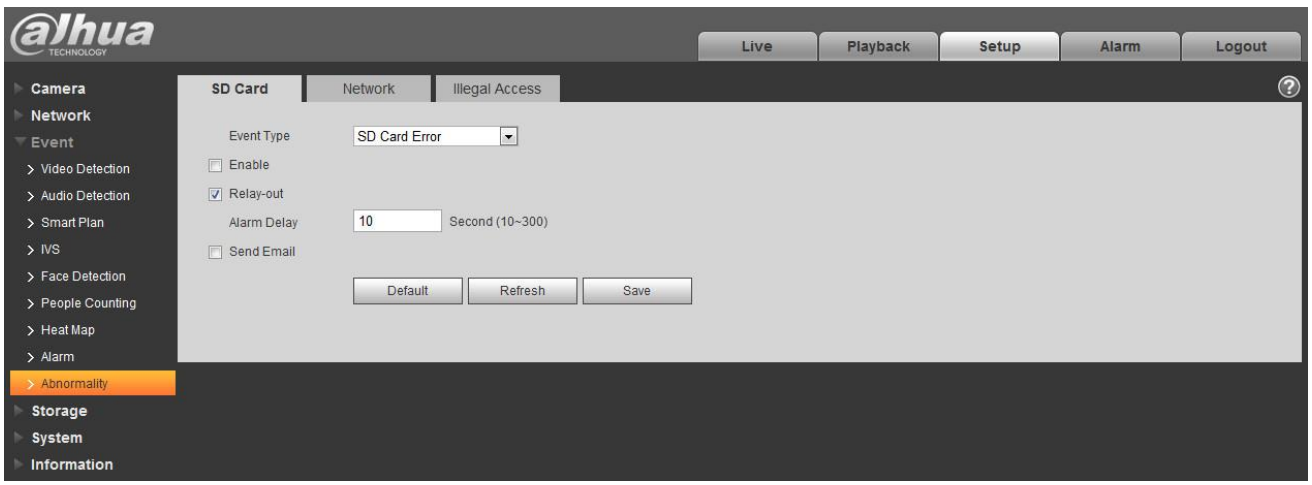


Figure 6-112

Figure 6-113

Please refer to the following sheet for detailed information.

Parameter	Description
Enable	Check to alarm when SD card is abnormal.
Relay-out	Check to enable relay-out alarm.
Relay out delay	The alarm output can delay for the specified time after alarm stops. The value ranges from 10s to 300s. Note: No SD card, capacity warning, SD card error, relay-out delay all start from alarm occurs.
Send email	After you enabled this function, the system can send out email to alarm the specified user. This function is invalid when network is offline or IP conflict occurs.
SD Card Capacity Limit	User can set SD card capacity that is left free. When SD card space left is smaller than this limit, alarm occurs.

When device is offline or IP conflicts, the abnormal alarm is similar with case of SD card error.

Figure 6-114

When login password keep been wrong for a few times, unauthorized access alarm occurs. This operation is similar to SD card error. Allow login error times as when it exceeds this limit, user account will be locked.

Figure 6-115

6.4 Storage Management

6.4.1 Schedule

Before schedule setup, user must set record mode is auto or manual.

Note:

If record mode in record control is off, then device will not take snapshot according to schedule.

6.4.1.1 Record Schedule

Record schedule steps:

Step 1. Click on Record Schedule, see Figure 6-116.

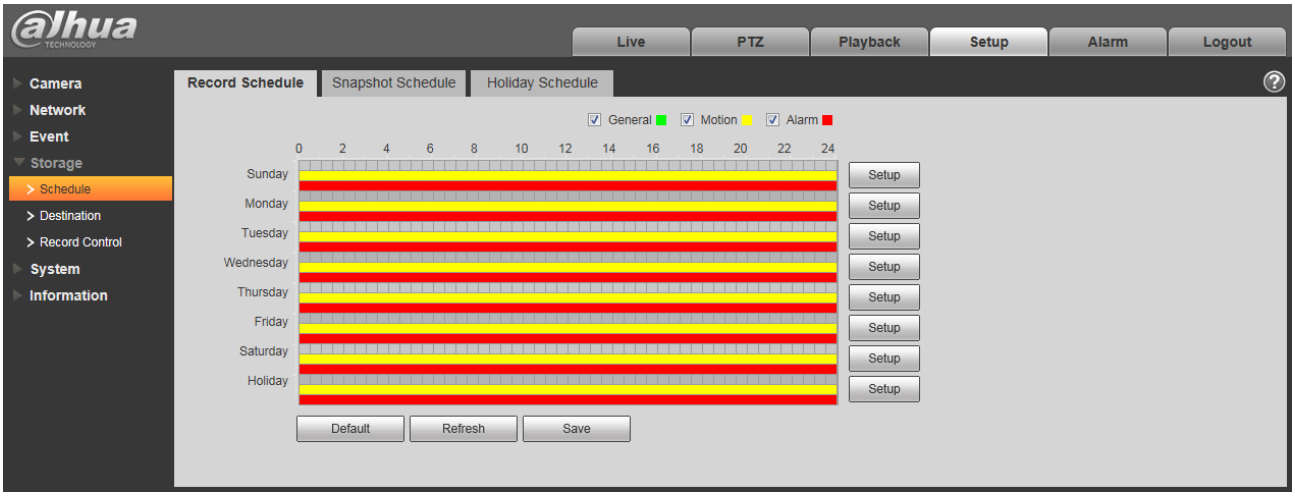


Figure 6-116

Step 2. From Monday to Sunday select record time, click on setup on the right, see Figure 6-117.

- Set period according to actual need. There are six periods available each day.
- By checking or unchecking, you can add or delete three types of record schedule: General, Motion, and Alarm.

Note:

Period setup can be done by dragging in record schedule interface while not releasing left mouse.

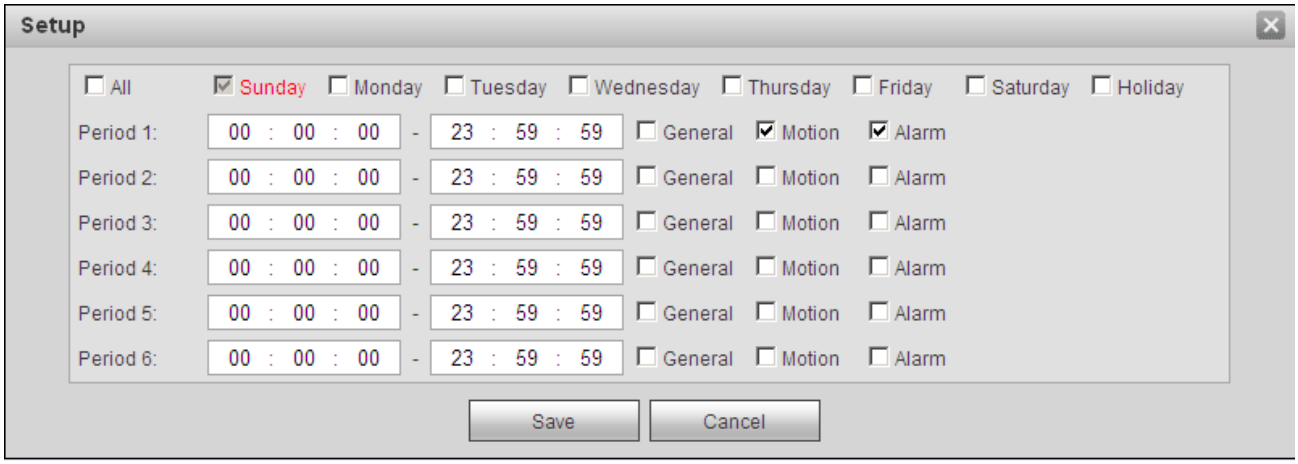


Figure 6-117

Step 3. Click on OK, return to record schedule interface. See Figure 6-118.

- Green color stands for the general record/snapshot.
- Yellow color stands for the motion detect record/snapshot.
- Red color stands for the alarm record/snapshot.

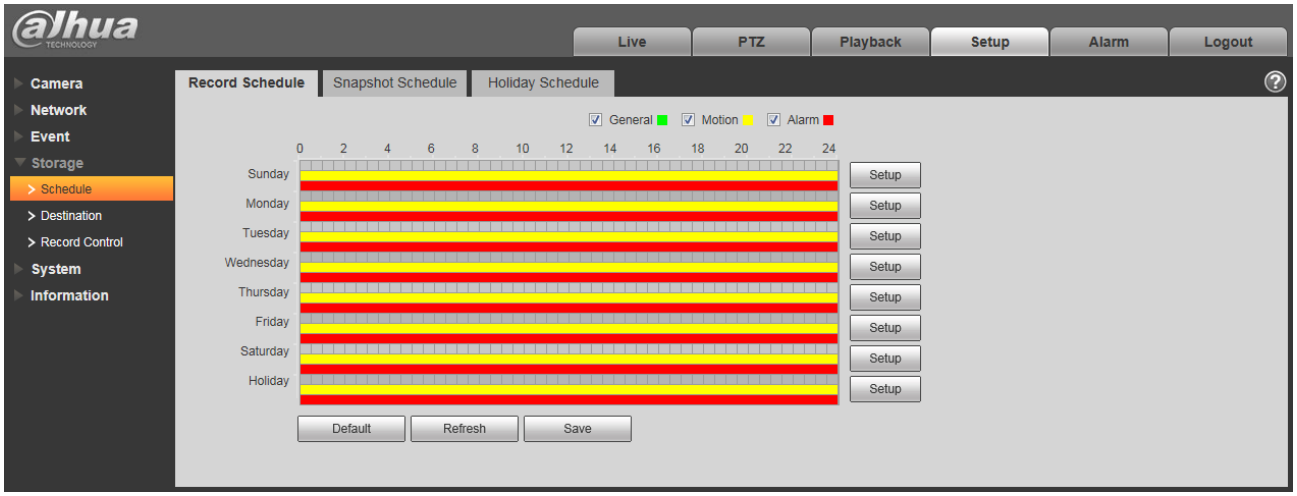


Figure 6-118

Step 4. In record schedule interface, click on OK. System prompts it is successfully saved.

6.4.1.2 Snapshot Schedule

Snapshot setup as:

Step 1. Click on Snapshot Schedule tab, see Figure 6-119.

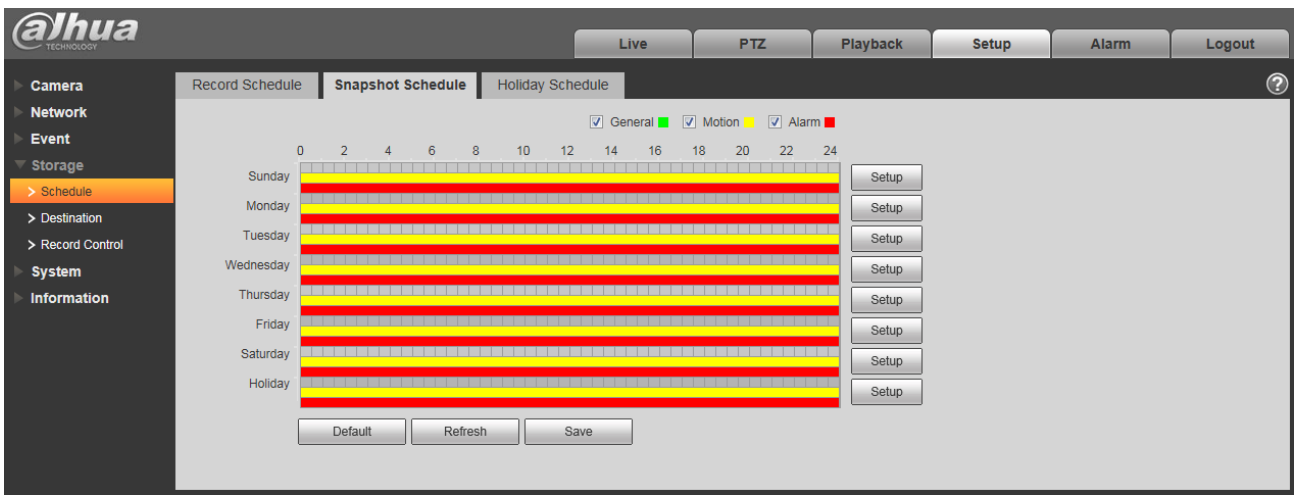


Figure 6-119

Step 2. From Monday to Sunday select snapshot time, click on setup on the right. See Figure 6-120.

- Set snapshot period according to actual need. There are six periods available each day.

- By checking or unchecking, user can add or delete three types of snapshot schedule: General, Motion and Alarm.

Note: Period setup can be done by dragging in snapshot schedule interface while not releasing left mouse.

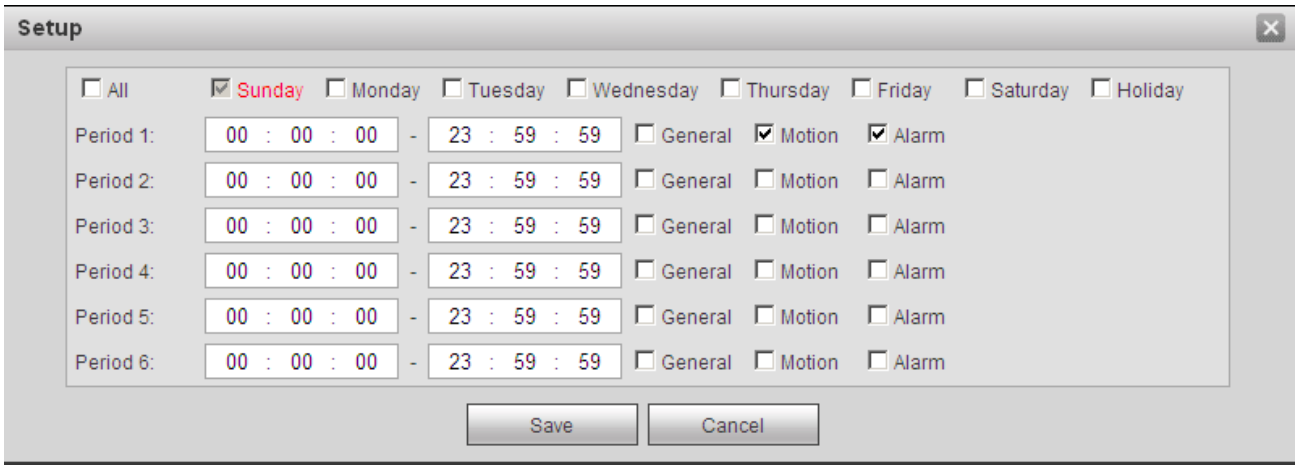


Figure 6-120

Step 3. Click on OK, return to snapshot schedule interface. See Figure 6-121.

- Green color stands for the general record/snapshot.
- Yellow color stands for the motion detect record/snapshot.
- Red color stands for the alarm record/snapshot.

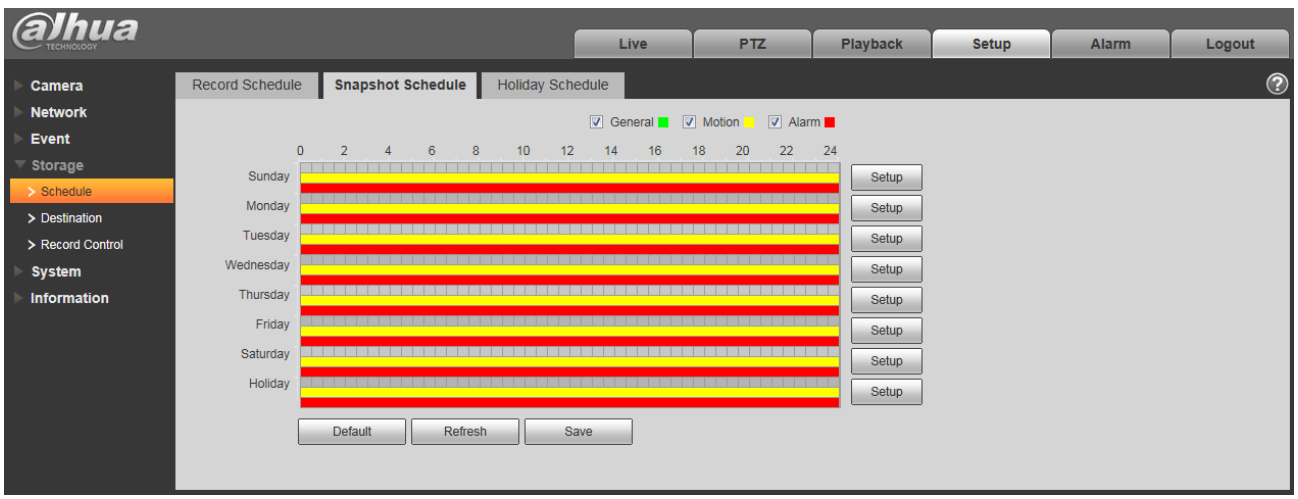


Figure 6-121

Step 5. In snapshot interface, click on OK. System prompts it is successfully saved.

6.4.1.3 Holiday Schedule

Holiday schedule can set specific date as holiday.

Step 1. Click on Holiday Schedule tab, see Figure 6-122.

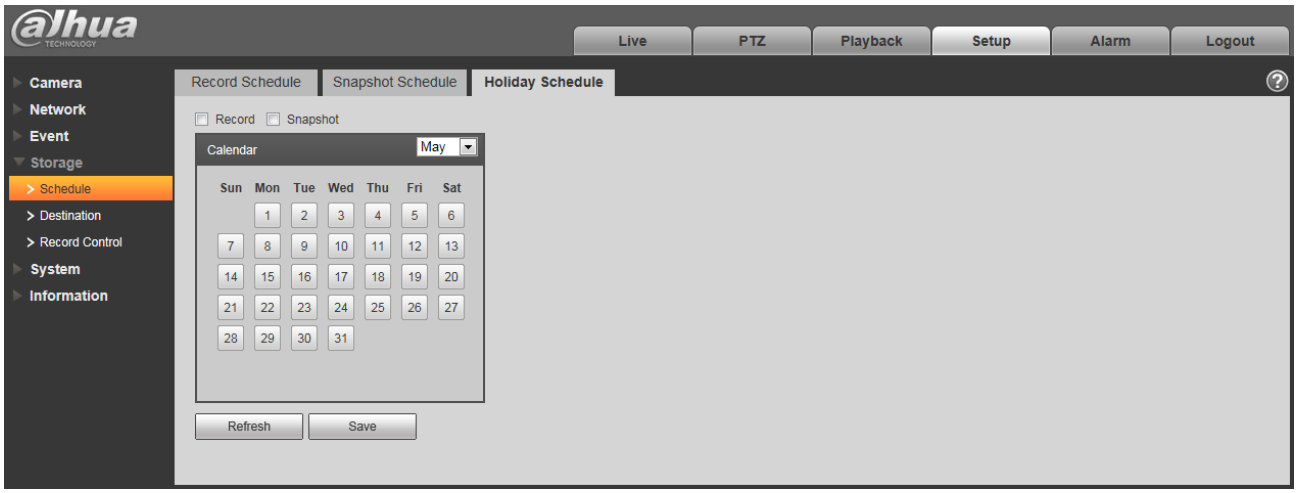


Figure 6-122

Step 2. Select date to set as holiday. The selected date will be highlighted in yellow.

Step 3. Check Record/Snapshot, click on Save. System prompts it is successfully saved.

Step 4. Check Record Schedule/Snapshot Schedule interface, click on setup next to Holiday, and refer to setup of Monday to Sunday.

Step 5. Complete setup of holiday, then it records/snapshots according to date in holiday schedule.

6.4.2 Destination

6.4.2.1 Path

The destination interface is shown as in Figure 6-123.

Path can config record and snapshot storage path. There are three options: Local, FTP and NAS. You can only select one mode. System can save according to the event types. It is corresponding to the three modes (general/motion/alarm) in the Schedule interface. Please check the box to enable the save functions.

Note: Only device supports SD card has local.

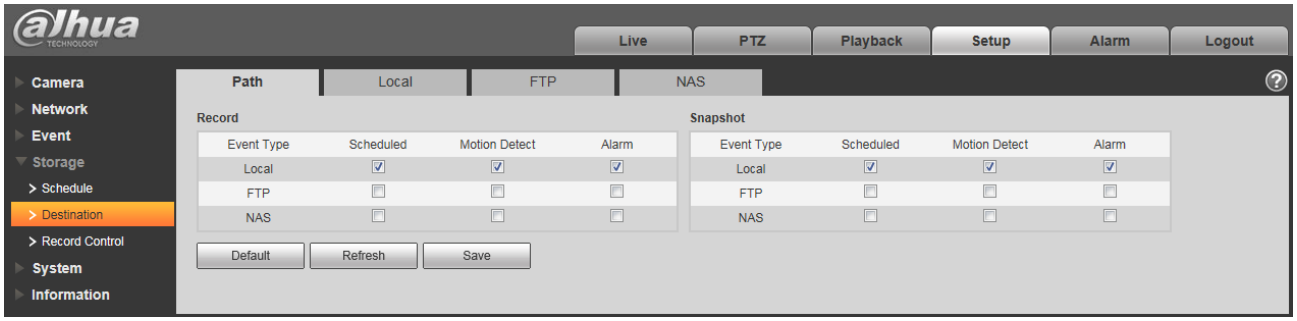


Figure 6-123

Please refer to the following sheet for detailed information.

Parameter	Description
Event Type	It includes: scheduled, motion detect and alarm.
Local	It saved in the SD card.
FTP	It saved in the FTP server.
NAS	It saved in NAS disk.

6.4.2.2 Local

The local interface is shown as in Figure 6-124.

Here you can view local Micro SD card or NAS disk information. You can also operate the read-only, write-only, hot swap and format operation.

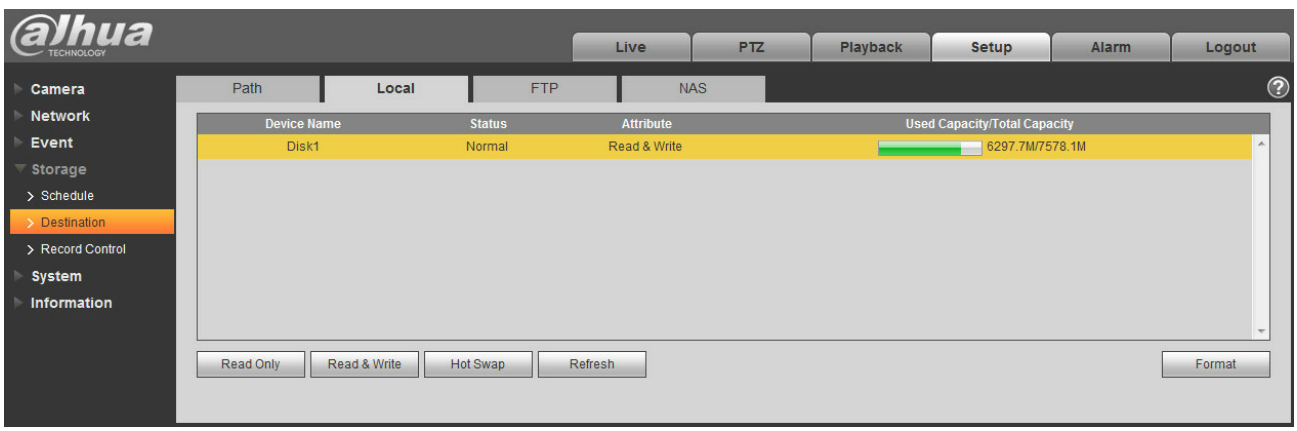


Figure 6-124

6.4.2.3 FTP

The FTP interface is shown as in Figure 6-125.

You need to check the box to enable the FTP function. When network disconnect occurred or there is malfunction. Emergency storage can save the record/snapshot picture to the local SD card. Click the test button to check if the FTP server can be connected for test.

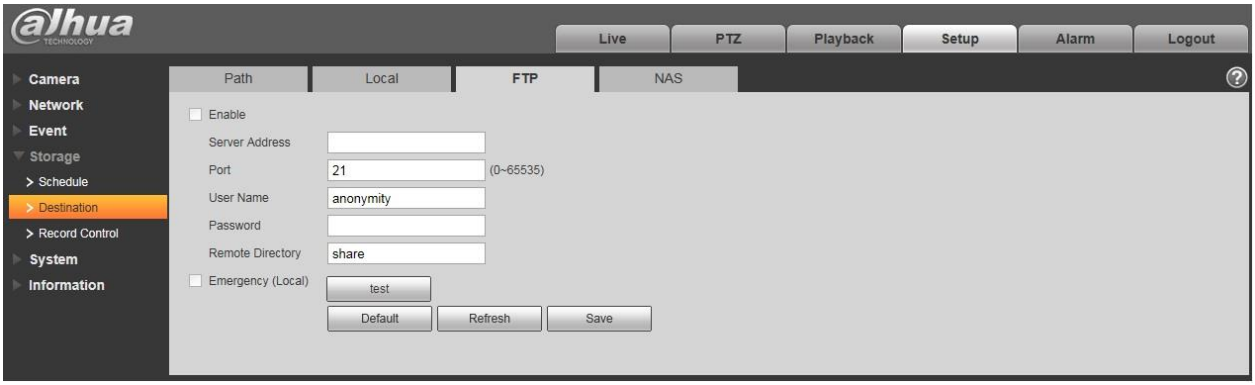


Figure 6-125

6.4.2.4 NAS

You need to check the box to enable the NAS function. Select NAS storage, fill in NAS server address and corresponding store path, then you can store video file or pictorial information in the NAS server. See Figure 6-126.

Figure 6-126

Parameter	Description
Server Address	Set IP address of NAS server.
Remote Directory	Set storage directory, videos and pictures can be stored in to corresponding server directory.

6.4.3 Record Control

The record control interface is shown as in Figure 6-127.

Figure 6-127

Please refer to the following sheet for detailed information.

Parameter	Description
Pack Duration	Here you can select file size within 1min~120min. Default setup is 8 minutes.
Pre-record	Please input pre-record value here. For example, system can record the four seconds video in the buffer. The record begins from the fifth second. Note: Configure pre-record time, when alarm or motion detection occurs, if there is no record, system will record the preceding n seconds record.
Disk Full	There are two options: stop recording or overwrite the previous files when HDD is full. ● Stop: Current working HDD is overwriting or current HDD is full, it will stop record. ● Overwrite: Current working HDD is full; it will overwrite the previous file.
Record mode	There are three modes: Auto/manual/close.
Record stream	There are two options: main stream and sub stream.

6.5 System

6.5.1 General

The General interface is shown as in Figure 6-128.

Figure 6-128

Please refer to the following sheet for detailed information.

Parameter	Description
Device Name	It is to set device name. Note: Different devices have different names.
Video Standard	This is to display video standard such as PAL.
Language	You can select the language from the dropdown list.
TV Out	You can open or close the function, it can only be supported by the devices with TV Out. ● Intelligent function will be disabled when TV Out is opened. ● It will auto close TV Out when intelligent function is enabled. ● Some devices support SDI and HDCVI.

The Date & Time interface is shown as in Figure 6-129.

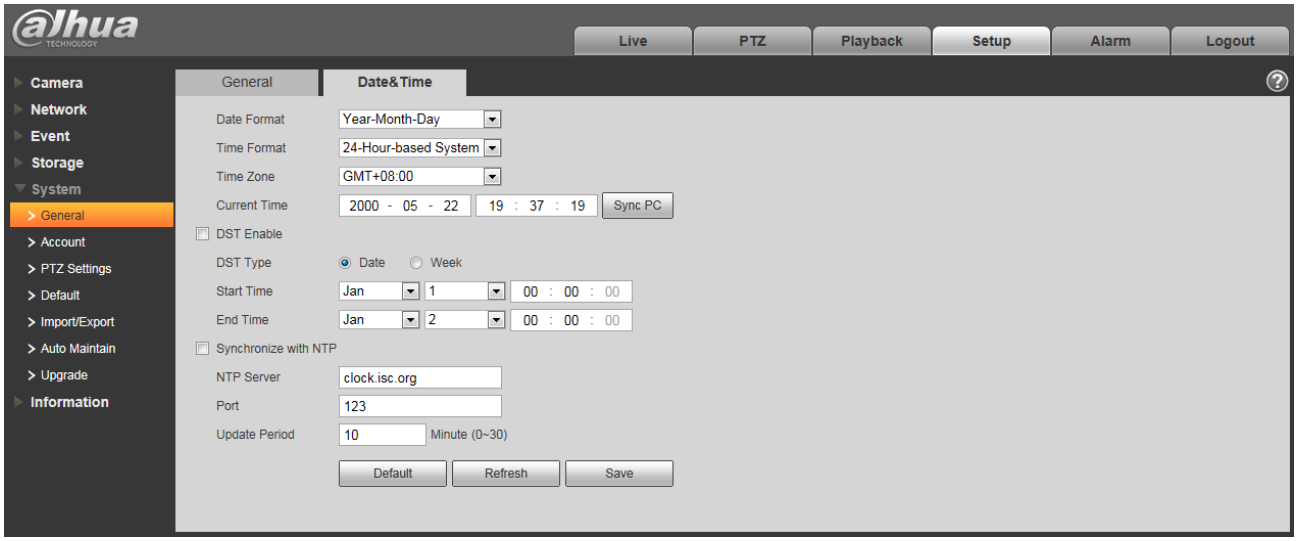


Figure 6-129

Please refer to the following sheet for detailed information.

Parameter	Description
Date format	Here you can select date format from the dropdown list.
Time Format	There are two options: 24-H and 12-H.
Time zone	The time zone of the device.
Current Time	It is to set system time. It becomes valid after you set.
Sync PC	You can click this button to save the system time as your PC current time.
DST Enable	Here you can set both begin and end time of daylight saving time. You can set according to the date format or the week format.
Synchronize with NTP	You can check the box to enable NTP function.
NTP server	You can set the time server address.
Port	It is to set the time server port.
Update period	It is to set the sync periods between the device and the time server.

6.5.2 Account

- For user name and user group, the max length is 31 characters, which can be made up of digit, letter, underline, hyphen, dot and @.
- Password can be 0~32 characters in number and letter only. User can modify other user's password.
- User and group can be manually added to 18 and 8 respectively.
- User management adopts group/user modes. The user name and the group name shall be unique. One user shall be included in only one group.
- Currently logged in user cannot change his/her own right.

6.5.2.1 Username

In this interface you can enable anonymity login, add/remove user and modify user name. See Figure 6-130.

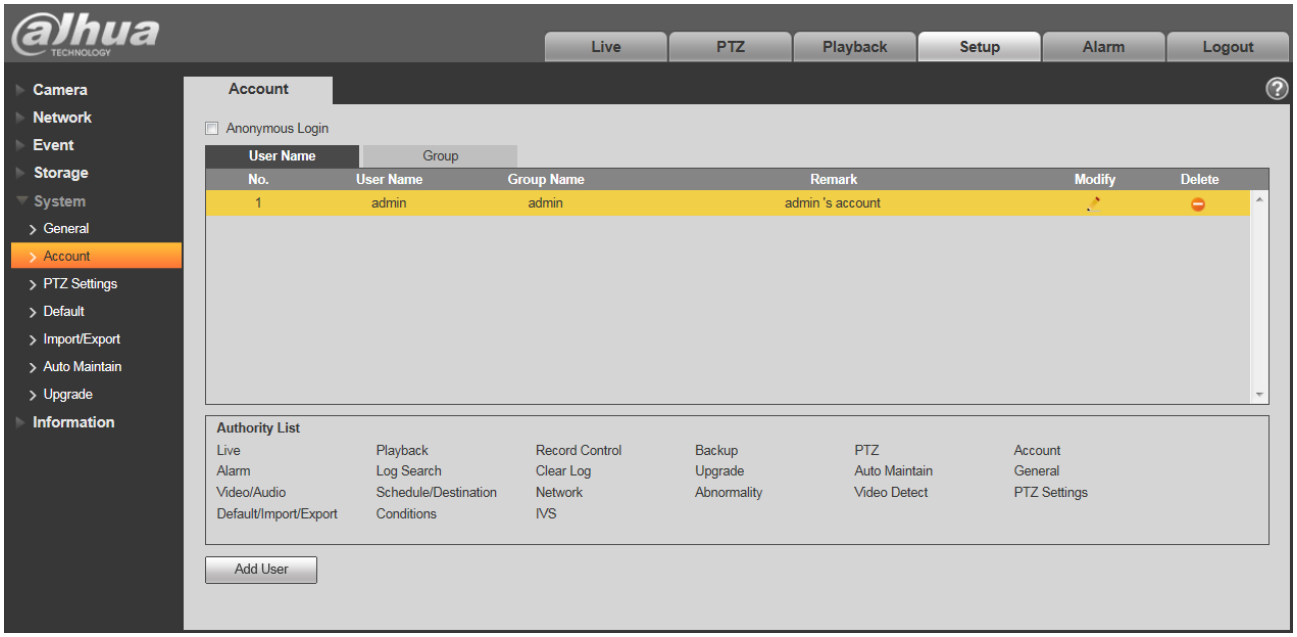


Figure 6-130

Enable anonymity login: Enable anonymity login, and input IP. No username or password is required, you can log in by anonymity (with limited rights). You can click logout to end your session.

Add user: It is to add a name to group and set the user rights. See Figure 5-86.

Hidden user "default" is for system interior use only and cannot be deleted. When there is no login user, hidden user "default" automatically login. You can set some rights such as monitor for this user so that you can view some channel view without login.

Here you can input the user name and password and then select one group for current user.

Please note the user rights shall not exceed the group right setup.

For convenient setup, please make sure the general user has the lower rights setup than the admin.

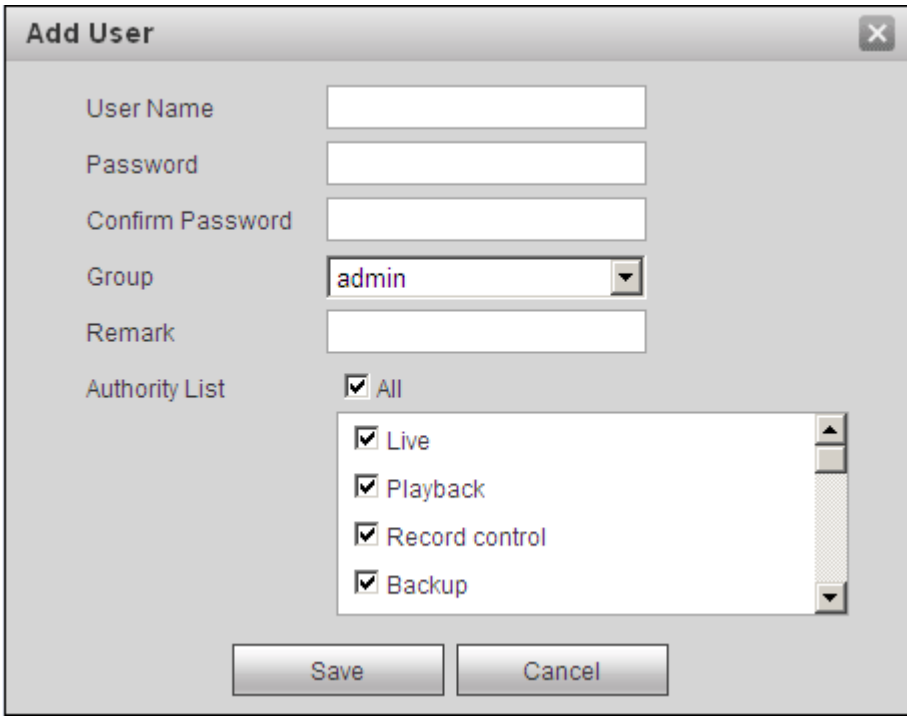


Figure 6-131

Modify user

It is to modify the user property, belonging group, password and rights. See Figure 6-132.

Modify password

It is to modify the user password. You need to input the old password and then input the new password twice to confirm the new setup. Please click the OK button to save.

Please note, the password ranges from 0-digit to 32-digit. It shall include the number and letter only. For the user who has the account rights, he can modify the password of other users.

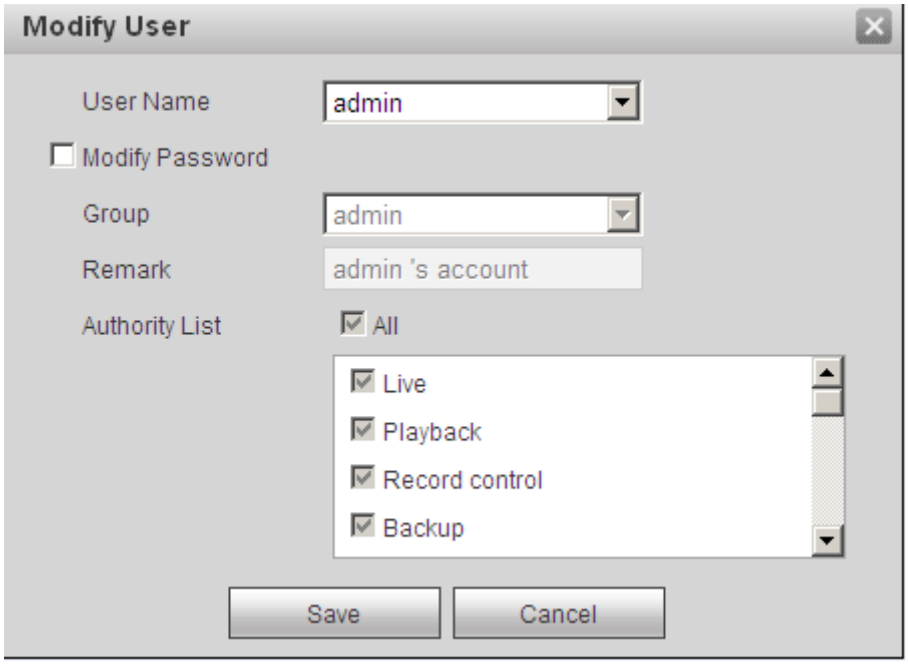


Figure 6-132

6.5.2.2 Group

The group management interface can add/remove group, modify group password and etc. The interface is shown as in Figure 6-133.

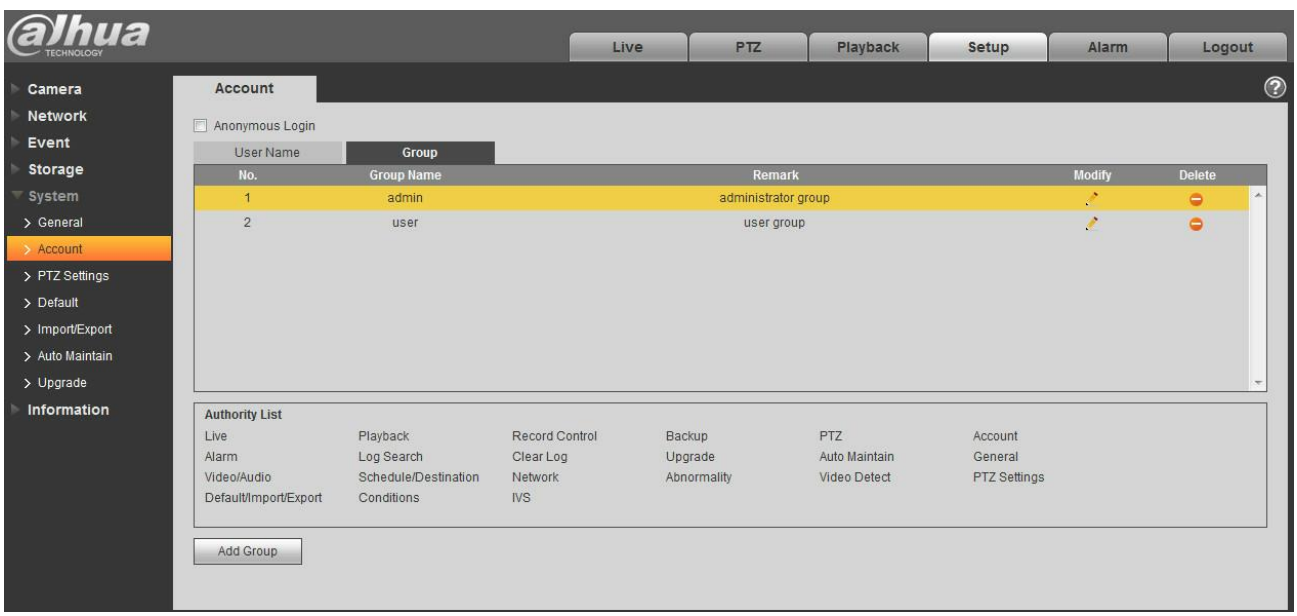


Figure 6-133

Add group: It is to add group and set its corresponding rights. See Figure 6-134.

Please input the group name and then check the box to select the corresponding rights. It includes: preview, playback, record control, PTZ control and etc.

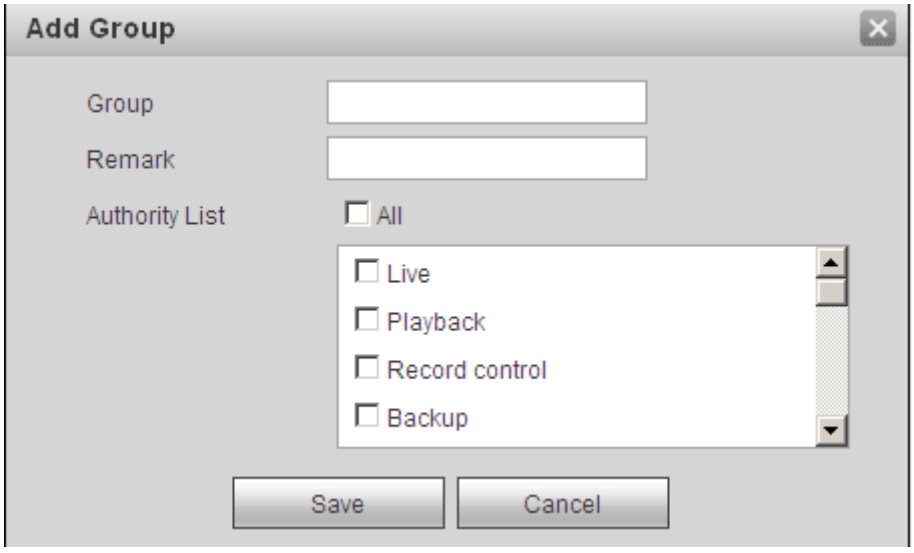


Figure 6-134

Modify group

Click the modify group button, you can see an interface is shown as in Figure 6-135. Here you can modify group information such as remarks and rights.

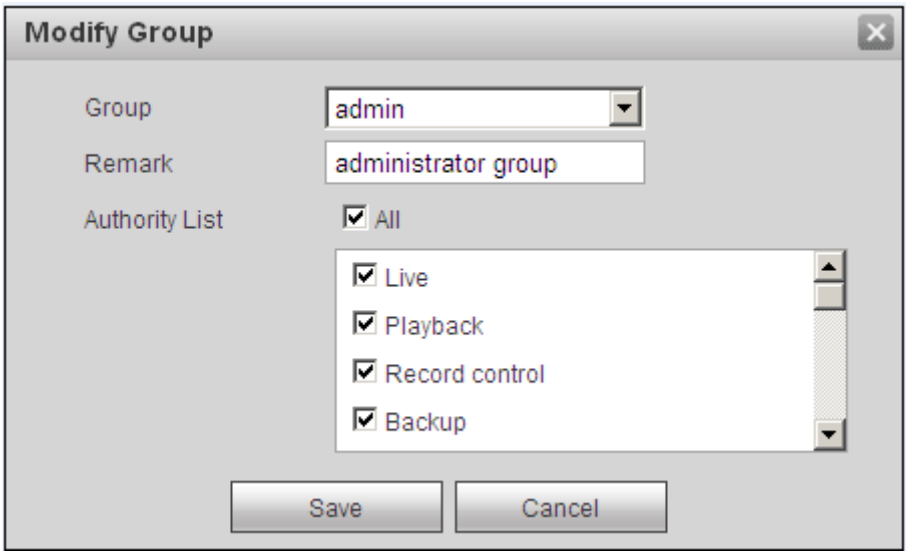


Figure 6-135

6.5.3 PTZ

Please note only some series products support this function.

The PTZ settings interface is shown as in Figure 6-136.

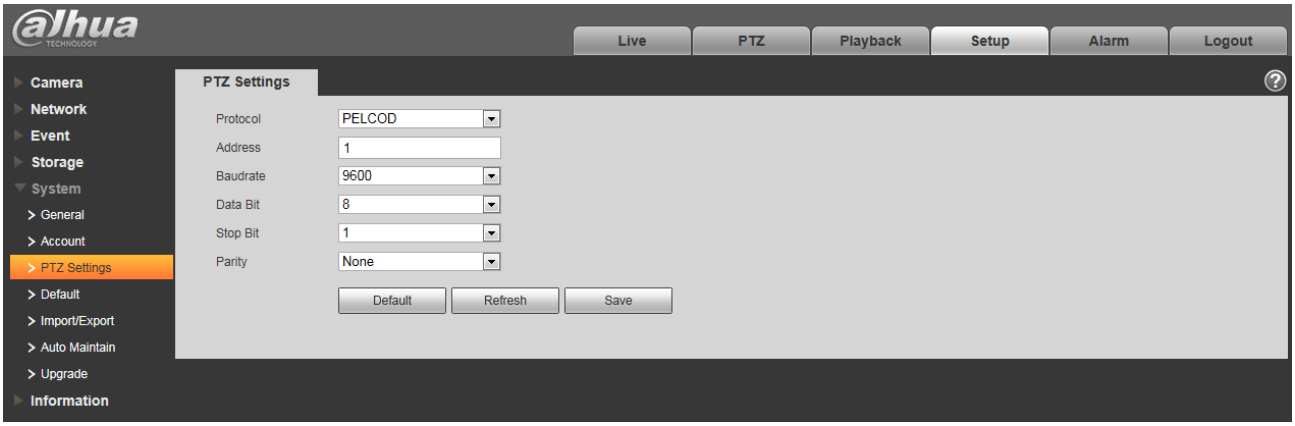


Figure 6-136

Please refer to the following sheet for detailed information.

Parameter	Description
Protocol	Select the corresponding dome protocol.
Address	Set corresponding dome address. Default value is 1. Please note your setup here shall comply with your dome address; otherwise you cannot control the speed dome.
Baud Rate	Select the dome baud rate. Default setup is 9600.
Data Bit	Default setup is 8.
Stop bit	Default setup is 1.
Parity	Default setup is none.

6.5.4 Default

The default setup interface is shown as in Figure 6-137.

Please note system cannot restore some information such as network IP address, account and so on.

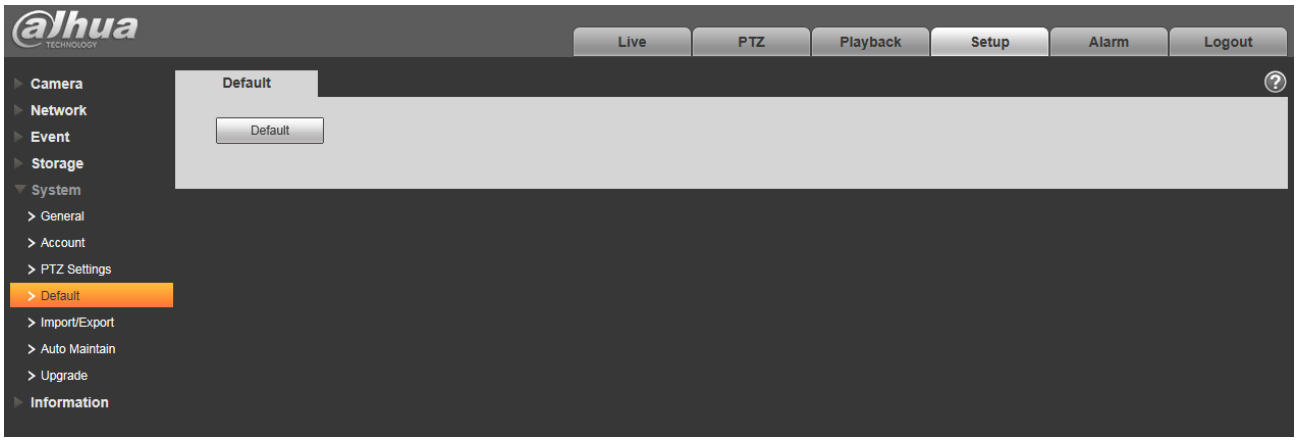


Figure 6-137

6.5.5 Import/Export

The interface is shown as in Figure 6-138.

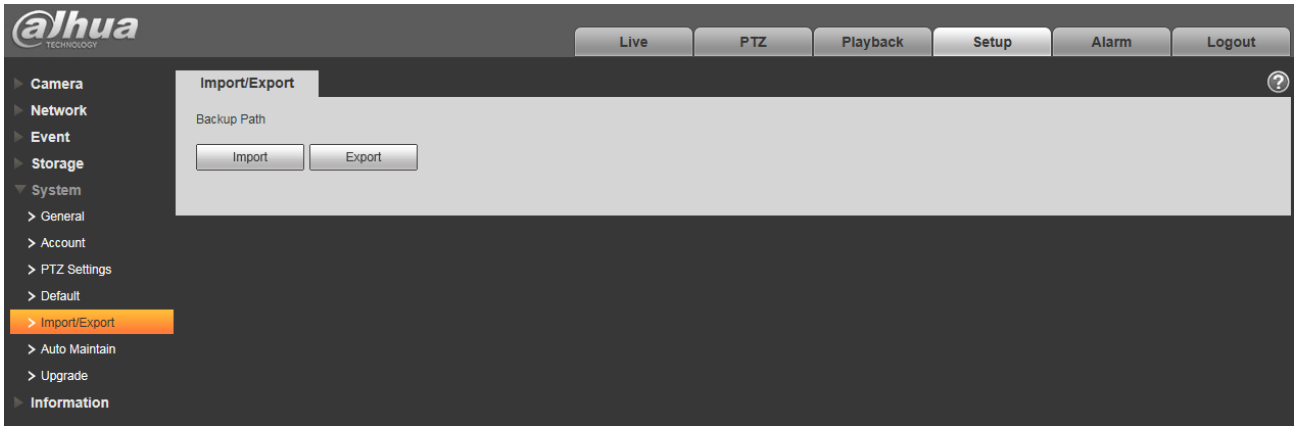


Figure 6-138

Please refer to the following sheet for detailed information.

Parameter	Description
Import	It is to import the local setup files to the system.
Export	It is to export the corresponding system setup to your local PC.

5.5.6 Remote control

Note:

It is supported by some devices.

Figure 6-139

Parameter	Description
Learn	Bind remote control or wireless alarm with equipment.
Clear	Unbind remote control with equipment.
Arm/Disarm	Start arm after the time you choose, disarm comes into effect immediately. Note: With disarm status, all the following alarms won't trigger: motion detect alarm, masking alarm, local alarm, PIR alarm, wireless alarm.

6.5.6 Auto Maintenance

The auto maintenance interface is shown as in Figure 6-140.

Here you can select auto reboot and auto delete old files interval from the dropdown list.

If you want to use the auto delete old files function, you need to set the file period.

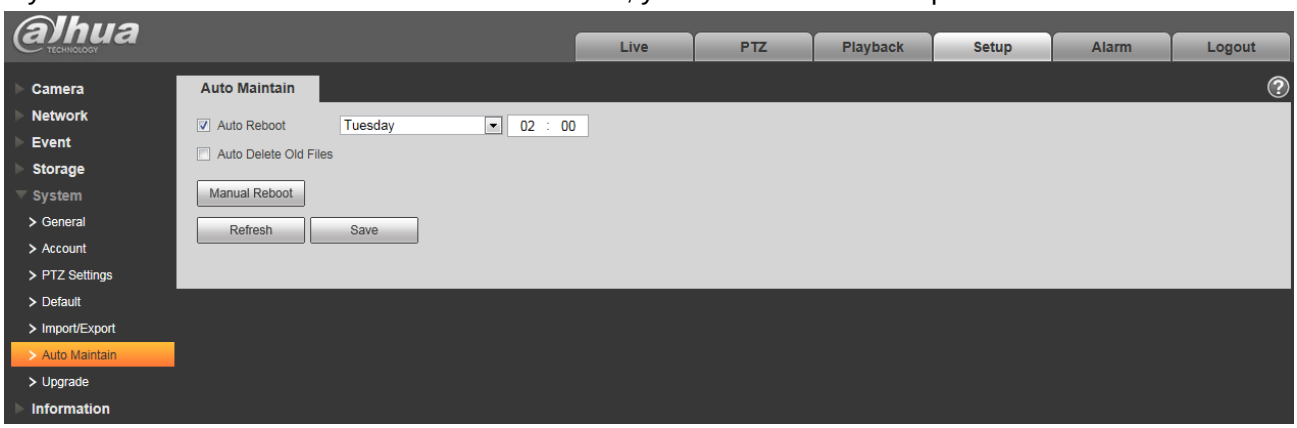


Figure 6-140

Parameter	Description
Auto Reboot	Check it and set auto reboot time.
Auto Delete Old Files	Check it and set period within 1~31 days.

6.5.7 Upgrade

The upgrade interface is shown as in Figure 6-141.

Please select the upgrade file (file extension is ".bin") and then click the update button to begin firmware update.

Important

Improper upgrade program may result in device malfunction!

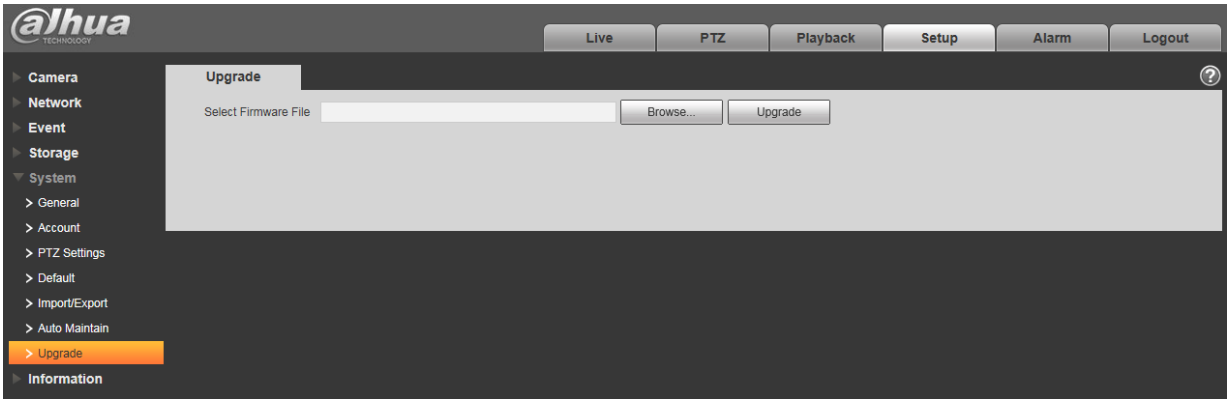


Figure 6-141

6.6 Information

6.6.1 Version

The version interface is shown as in Figure 6-142.

Here you can view system hardware features, software version, release date and etc. Please note the following information is for reference only.

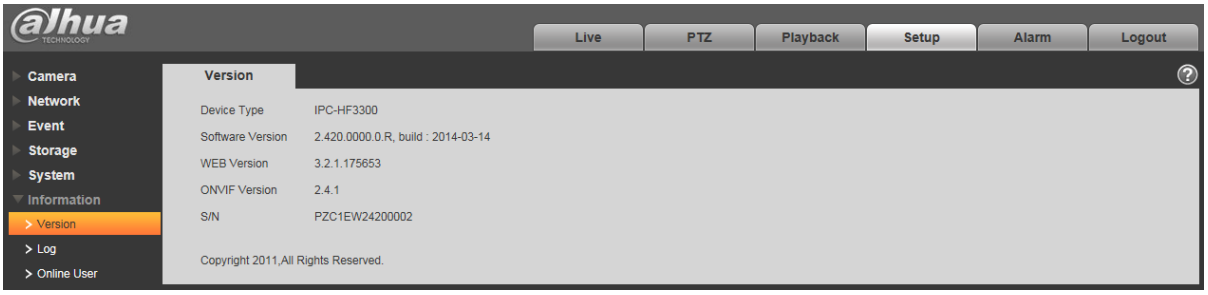


Figure 6-142

6.6.2 Log

Here you can view system log. See Figure 6-143.

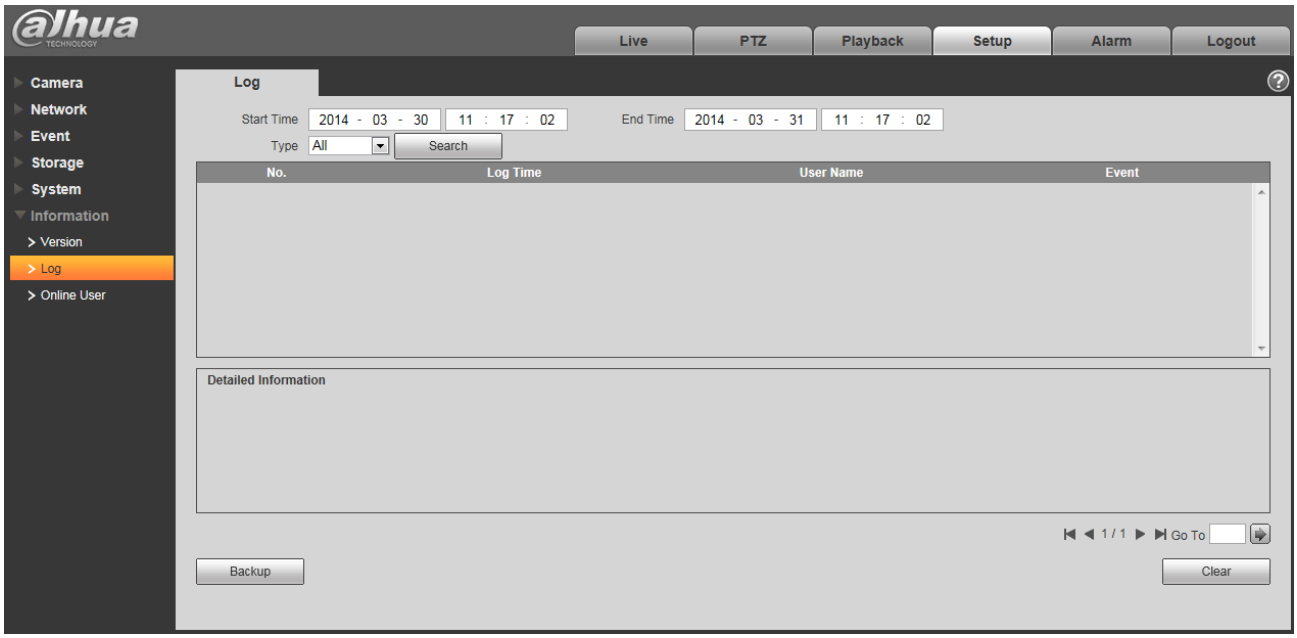


Figure 6-143

Please refer to the following sheet for log parameter information.

Parameter	Description
Start time	Set the start time of the requested log. (The earliest time is 2000/1/1)
End time	Set the end time of the requested log. (The latest time is 2037/12/31)
Type	Log type.
Search	You can select log type from the drop down list and then click search button to view the list. You can click the stop button to terminate current search operation.
Log information	You can select one item to view the detailed information.
Clear	You can click this button to delete all displayed log files. Please note system does not support clear by type.
Backup	You can click this button to backup log files to current PC.

6.6.3 Online User

The online user interface is shown as in Figure 6-144.

Here you can view current online user, group name, IP address and login time.

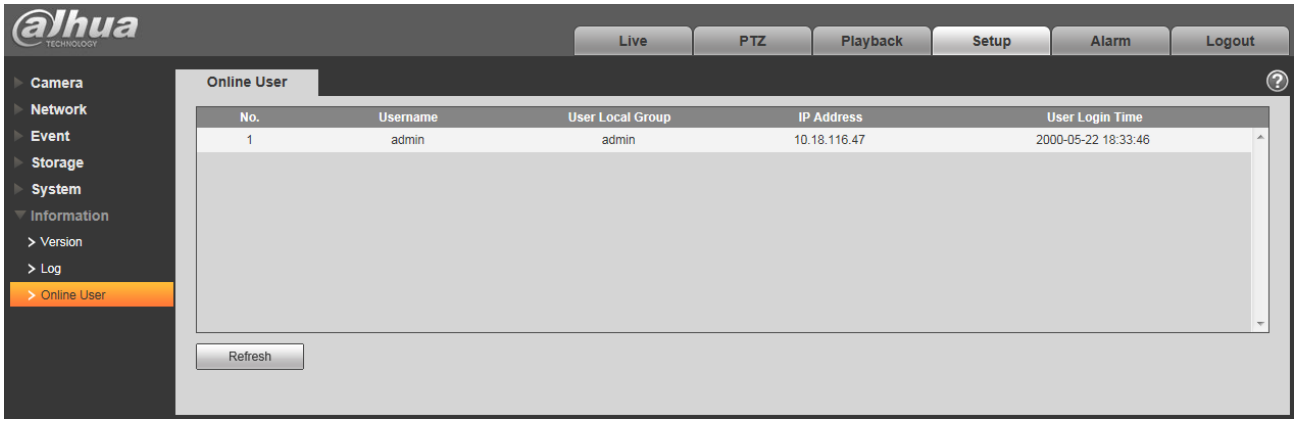

Live
PTZ
Playback
Setup
Alarm
Logout
Camera
Network
Event
Storage
System
Information
Version
Log
Online User
Online User
No.
Username
User Local Group
IP Address
User Login Time
1
admin
admin
10.18.116.47
2000-05-22 18:33:46
Refresh

Figure 6-144

7 Alarm

Please note some series product does not support this function.

Click alarm function, you can see an interface is shown as in Figure 7-1.

Here you can set device alarm type and alarm sound setup.

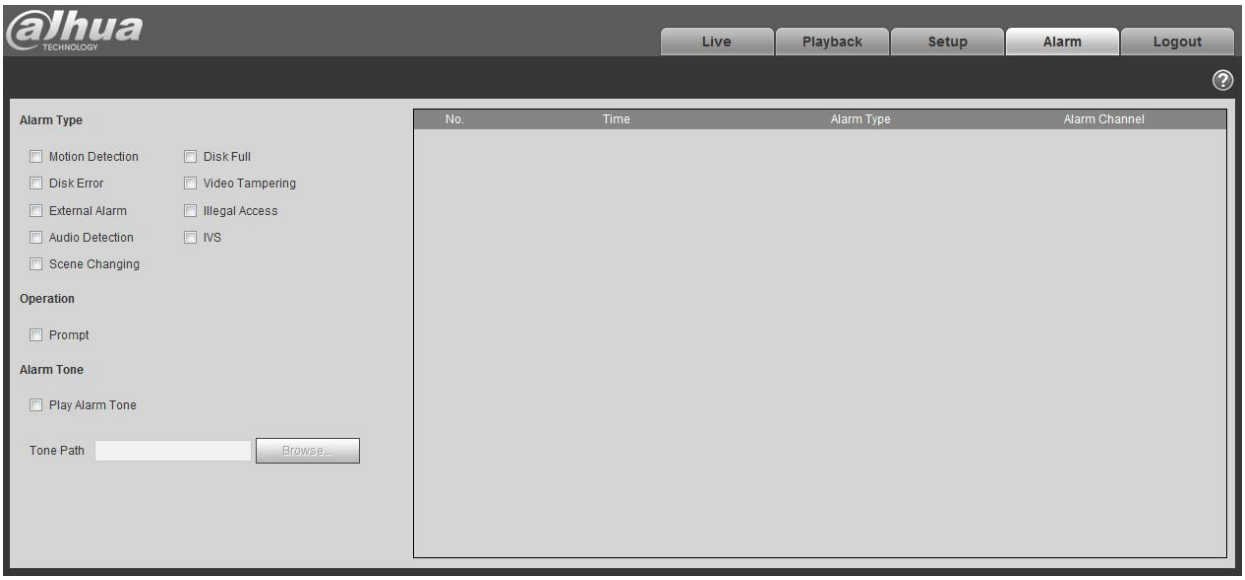


Figure 7-1

Please refer to the following sheet for detailed information.

Type	Parameter	Description
Alarm type	Motion detection	System alarms when motion detection alarm occurs,
	Disk full	System alarms when disk is full.
	Disk Error	System records alarm info when disk error happens.
	Video Tampering	System alarms when video is tampering.
	External alarm	Alarm input device sends out alarm.
	Illegal Access	System alarms when there is illegal access.
	Audio Detection	System alarms when there is audio detect.
	IVS	System alarms when IVS event is triggered.
	Scene Changing	System will record alarm info when triggering scene changing.

Type	Parameter	Description
Operation	Prompt	When alarm is triggered, there will be s inmain menu of alarm interface and system automatically records alarm info. The icon disappears when user click on alarm menu bar. Note: If alarm interface is displayed, when alarm is triggered, there will be no image prompt, but alarm record will be in list on the right.
Alarm Tone	Play Alarm Tone	Click it and select the path of audio file to be played in the tone path, when the subscribed alarm event triggers, it will play the selected audio file to prompt that there is alarm event which has been triggered.
	Tone Path	You can customize the storage path of the alarm tone.

8 Log out

Click log out button, system goes back to log in interface. See Figure 8-1.

Figure 8-1

Note

- This manual is for reference only. Slight difference may be found in user interface.
- All the designs and software here are subject to change without prior written notice.
- All trademarks and registered trademarks mentioned are the properties of their respective owners.
- If there is any uncertainty or controversy, please refer to the final explanation of us.
- Please visit our website for more information.

Zhejiang Dahua Vision Technology Co., Ltd
Address：No.1199 Bin'an Road, Binjiang District, Hangzhou, PRC.
Postcode: 310053
Tel: +86-571-87688883
Fax: +86-571-87688815
Email:overseas@dahuatech.com
Website: www.dahuasecurity.com