



User Guide

GU-CI-Series

EN

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Introduction

Thank you for purchasing a Grundig product. Before installing or connecting the product, please read first the following documents which you can find in printed form in the product package:

- Legal Disclaimer
- Safety Instructions
- Installation Manual and/or Quick Guide for the respective product model

Further information about the product like Data Sheets, CE Documents, etc. can also be found on our Web page www.grundig-security.com.

This User Guide is a manual for IP Cameras. Please see in the table of **Model Overview** the applicable models. Please read this User Guide carefully and retain it for future use.

Model Overview

This User Guide is for the following products:

GU-CI-AC5617E
GU-CI-AC5617T
GU-CI-AC5617V
GU-CI-AC5637E
GU-CI-AC5637T
GU-CI-AC5637V
GU-CI-AC8616E
GU-CI-AC8616T
GU-CI-AC8616V

1. Overview

1.1 Range of Application

The network cameras with powerful image processing capacity may be applied at various public places such as mall, supermarket, school, factory and workshop, as well as in environments requiring HD video image such as bank and traffic control system, as shown below:



Figure 1.1

1.2 Product Description

An IP camera is a digital online surveillance camera embedded with Web server and capable of independent operation, giving user access to real-time monitoring through web browser or client software from any place across the world.

IP camera is based on the latest digital solution, an integrated media processing platform for audio/video acquisition, compression and network transmission on a single board. It is in compliance with H.264/ H265 High Profile encoding standards. Any remote user can have access to real-time monitoring by entering the IP address or domain name of the IP camera in web browser. This network camera solution is applicable to residential or business environments as well as a wide range of situations requiring remote network video monitoring and transmission. The IP camera products are easy to install and operate.

The IP cameras can be managed by several users with different authorization levels.

IP cameras allows motion detection, and sends e-mail and snapshot taken in case of emergency and store the image or video snapshot in SD card for retrieval.

1.3 Operation Environment

Operating system: Windows 7/Windows 8/Windows 2008 (32/64-bit),

Windows 2003/Windows XP/Windows 2000 (32-bit)

CPU: Intel Core Duo II dual-core processor or higher

Memory: 1G or more Video memory: 256M or more

Display: 1024 × 768 or higher resolution

IE: IE 10 or higher version

2. Device Connection

IP camera can be connected in two ways:

1. Connection to PC

Connect IP camera to PC via straight-through network cable, with power input connected to a DC 12V adaptor, and set the IP addresses of the PC and IP camera in one network segment. The IP camera will communicate with PC within one minute after being powered on if the network operates normally.

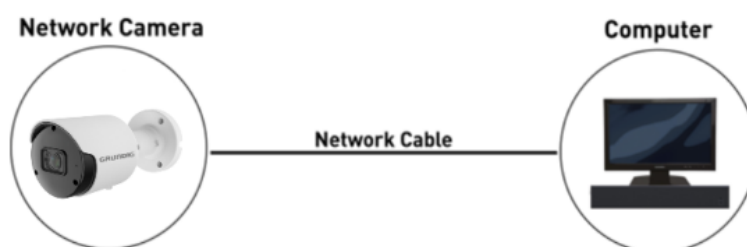


Figure 2.1 direct connection

2. Connection to router/switch

This is more commonly used in connecting the IP camera to Internet, where the camera and PC are connected to LAN ports of a router/switch, with gateway of the camera set to the IP address of the router.

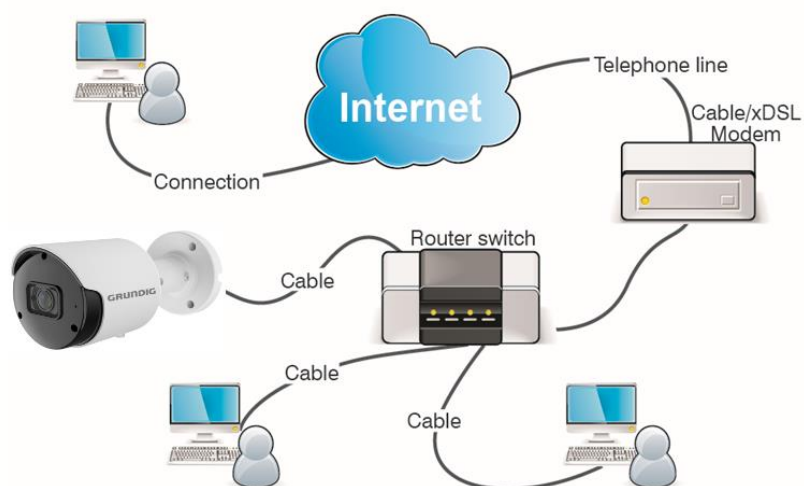


Figure 2.2 Connection with router/switch

3. Setting IP address via Grundig IP-Finder

Devices that communicate with each other on the Internet must follow the constraints of the network protocol. For example, the PC and camera are in the same local area network, and the setting IP of the IP-camera must be in the same network segment as the IP of the PC in order to communicate normally. Take the camera in factory mode as an example:

Step 1: Obtain the basic setting information of the current network. Open Network on the PC (Win10) → Open Network and Internet Settings → Network Sharing Center → Ethernet → Details to view the setting information of the current network.

Note: If the current network supports DHCP to assign IP, this step can be ignored.

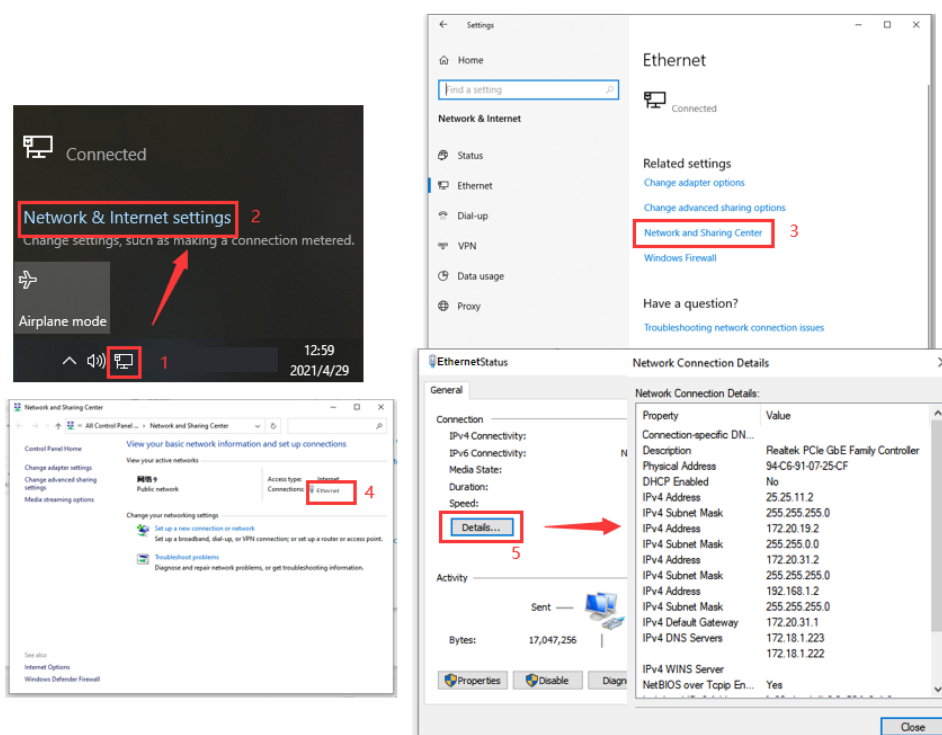


Figure 3.1 Network settings

Step 2: Run the IP-Finder Tool and click Search to get the IPC information as shown in Figure 3.2. The camera can be located according to the P2P or Mac address.

ID	Brand	Model	Firmware	Status	DHCP	IP	Mask	Gateway	HTTP Port	SDK Port
<input type="checkbox"/> 6	Grundig	GU-CI-AC5617T	SRV31.35.8.2.3_221209	Inactive	Off	192.168.3.2		192.168.3.1	0	0
<input type="checkbox"/> 5	Grundig	GU-CI-AC5637T	SRV31.35.8.2.3_221209	Inactive	Off	192.168.3.3		192.168.3.1	0	0
<input type="checkbox"/> 2	Grundig	GU-CI-AC8616T	SRV26.34.8.2.3_221209	Inactive	Off	192.168.3.4		192.168.3.1	0	0
<input type="checkbox"/> 9	Grundig	GU-CI-AC8616E	SRV26.34.8.2.3_221226	Inactive	Off	192.168.3.101		192.168.3.1	0	0
<input type="checkbox"/> 10	Grundig	GU-CI-AC5637E	SRV31.35.8.2.3_221226	Inactive	Off	192.168.3.106		192.168.3.1	0	0
<input type="checkbox"/> 8	Grundig	GU-CI-AC5637V	SRV31.35.8.2.3_221209	Inactive	Off	192.168.3.107		192.168.3.1	0	0
<input type="checkbox"/> 11	Grundig	GD-CI-AC5617E	V1.0.0build 220225	Active	Off	192.168.3.123	255.255.255.0	192.168.3.1	80	8000
<input type="checkbox"/> 4	Grundig	GU-CI-AC8616V	SRV26.34.8.2.3_221209	Inactive	Off	192.168.3.148		192.168.3.1	0	0
<input type="checkbox"/> 7	Grundig	GU-CI-AC5617V	SRV31.35.8.2.3_221209	Inactive	Off	192.168.3.149		192.168.3.1	0	0
<input type="checkbox"/> 3	Grundig	GU-CI-AC5617E	SRV31.35.8.2.3_221209	Inactive	Off	192.168.3.160		192.168.3.1	0	0
<input type="checkbox"/> 1	Grundig	GD-TI-BP1603V	V1.0.0build 220823	Active	On	192.168.3.188	255.255.255.0	192.168.3.1	80	8000

Figure 3.2 Config tool

Note: The default IP of the camera is 192.168.1.100, the default account is **admin**, and the default password is **admin**.

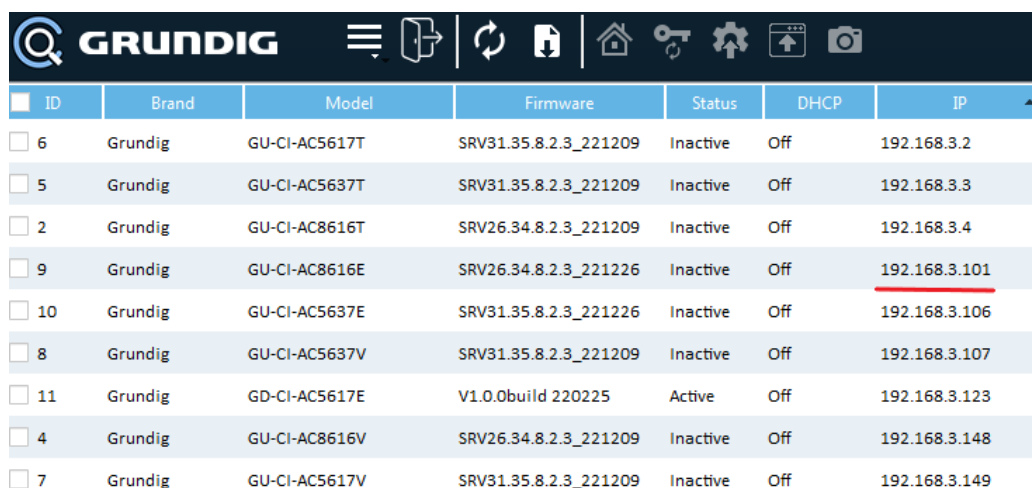
Step 3: As shown in Figure 3.2, select the corresponding device, enter the account and password, edit the corresponding network information, and click **Modify** to save the information.

Note: If the current network supports DHCP to distribute network, change Network Mode to **DHCP** to obtain IP.

4. IE Log in

4.1 Access to IPC web port

Use the Grundig IP-Finder to search the camera of the current network. Doubleclick on the searched IP and log in to the camera with browser as shown in Figure 4.1.



ID	Brand	Model	Firmware	Status	DHCP	IP
<input type="checkbox"/> 6	Grundig	GU-CI-AC5617T	SRV31.35.8.2.3_221209	Inactive	Off	192.168.3.2
<input type="checkbox"/> 5	Grundig	GU-CI-AC5637T	SRV31.35.8.2.3_221209	Inactive	Off	192.168.3.3
<input type="checkbox"/> 2	Grundig	GU-CI-AC8616T	SRV26.34.8.2.3_221209	Inactive	Off	192.168.3.4
<input type="checkbox"/> 9	Grundig	GU-CI-AC8616E	SRV26.34.8.2.3_221226	Inactive	Off	<u>192.168.3.101</u>
<input type="checkbox"/> 10	Grundig	GU-CI-AC5637E	SRV31.35.8.2.3_221226	Inactive	Off	192.168.3.106
<input type="checkbox"/> 8	Grundig	GU-CI-AC5637V	SRV31.35.8.2.3_221209	Inactive	Off	192.168.3.107
<input type="checkbox"/> 11	Grundig	GD-CI-AC5617E	V1.0.0build 220225	Active	Off	192.168.3.123
<input type="checkbox"/> 4	Grundig	GU-CI-AC8616V	SRV26.34.8.2.3_221209	Inactive	Off	192.168.3.148
<input type="checkbox"/> 7	Grundig	GU-CI-AC5617V	SRV31.35.8.2.3_221209	Inactive	Off	192.168.3.149

Figure 4.1 Config tool search

You can also directly open the browser and enter HTTP://ip:web port. Take device as an example, the IP of the current device to be accessed, 172.20.62.26, the web port is 80, and the combined URL is http://172.20.62.26:80.

Note: In actual use scenario, the http access method will default to port 80.

4.2 Initial login

In the first time accessing the web of the camera, the program will remind you to set a more complicated password as the default password of the device is too simple. The interface as

shown in Figure 4.2 will be popped up. Click  to check password requirements:

The password should be 8-15 characters, including letters, numbers or special characters.

1. 8~9 characters: The combination should consist of at least 3 uppercase letters, lowercase letters, numbers or special characters.

2. 10~15 characters: The combination should consist of at least 2 uppercase letters, lowercase

letters, numbers or special characters.

3. It is forbidden to repeat and continuous characters exceeding 4 digits.

4. It is forbidden for the continuous keys of the keyboard pattern to exceed 4 digits.

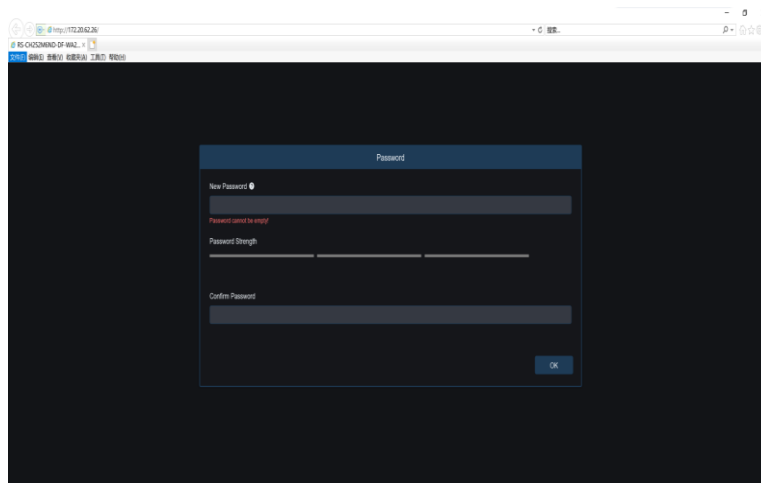


Figure 4.2 Login

Set a new password, click OK to save, the interface as shown in Figure 4.3 will pop up. You can check to choose the corresponding password retrieval method, or cancel the setting directly without checking, and the password retrieval function will not be enabled.

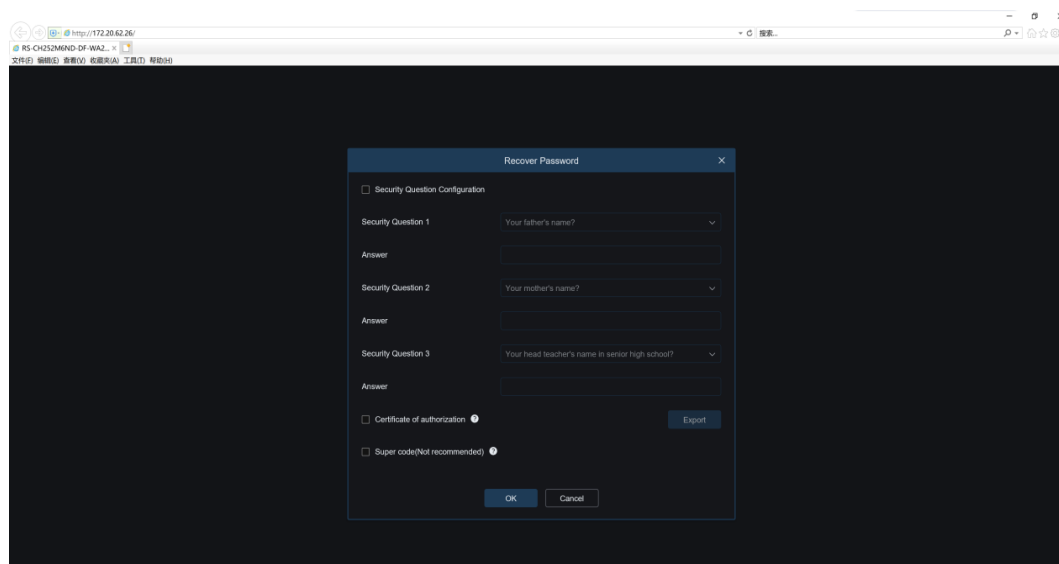


Figure 4.3 Password retrieval

① Security Question Configuration: to modify the main user's password by question verification. After enabling, you need to select 3 of the 15 frequently used questions and set the answer required to retrieve the password. The maximum length of the answer is 64 characters.

② Certificate of authorization: to modify the main user's password by key. After it is enabled,

you need to click Export to download the key file namely certificate.txt.

③ Super code (Not recommended): Use the super verification code to modify the main user's password. A super verification code can be calculated by current camera's Mac address and the camera system time to modify the main user's password. However, the camera's Mac is broadcast on the network, and the camera system time can be obtained directly when logging in to the Web and using Super code to modify the master user password. There are certain security risks, so it is not recommended for users to turn it on.

Note: When enabling the password retrieval function, please keep the verification information properly.

4.3 General login

To access the camera web interface, the login interface will be entered as shown in Figure 4.4. Enter the corresponding account password, then click login, you can access the camera's operating interface. At the same time, you can select the desired language when log in.

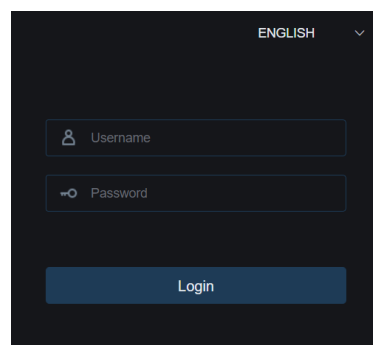


Figure 4.4 Login

4.4 Retrieve password

When you forget the login information, you can click **Recover Password** on the login interface to enter the password retrieval interface. According to the first login settings, it supports three modes: security question verification, key file, and super password.

4.4.1 Security Question Verification

Reset the main user password through the security question and open the password retrieval interface. As shown in Figure 4.5, the default interface is to retrieve the password through the problem verification. Fill in the corresponding answer in the security question, you can directly modify the password of the current main user.

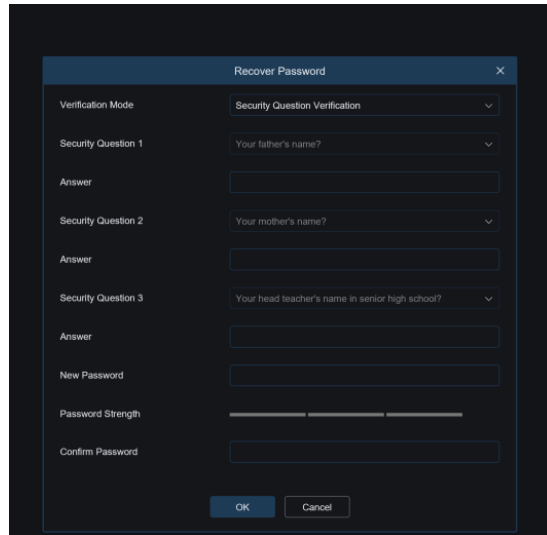


Figure 4.5 Security questions

4.4.2 Key File

When set up the password authentication questions in initial login, you can turn on the key search and modify password function and prompt to download the key file certificate.txt. Open the password retrieval interface, switch to the Certificate of authorization mode, and the interface is converted as shown in Figure 4.6. Click Import to select the key file certificate.txt. After the Import is successful, enter the new password to modify the main user's password.

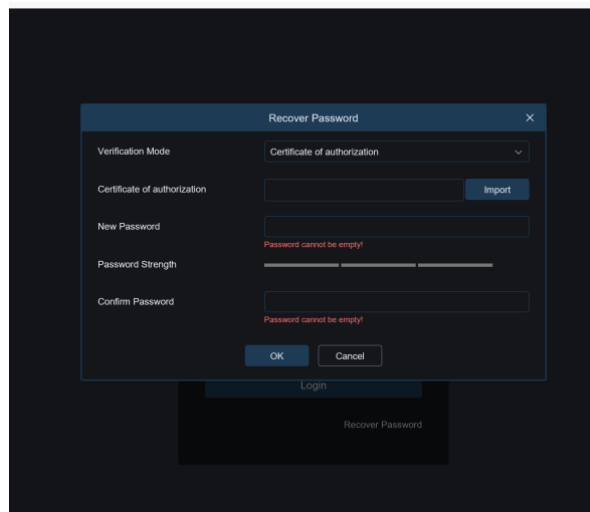


Figure 4.6 Key file

4.4.3 Super Password

The super password is a very insecure way to retrieve the password. According to the Mac of the camera and the time prompted by the super verification code, the verification code can be

calculated based on certain rules. By filling in the verification code, the main user's password can be modified.

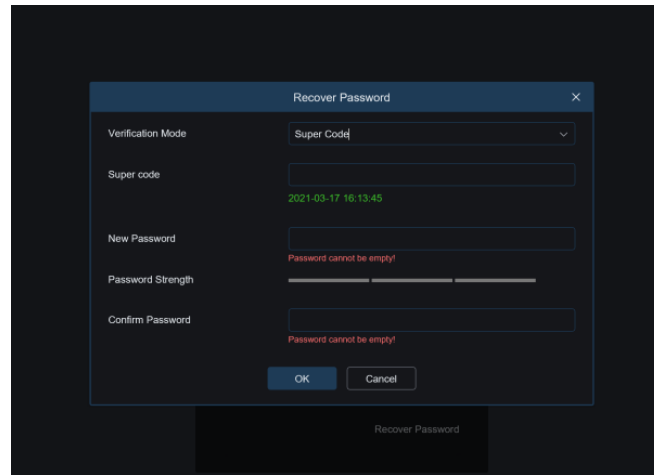


Figure 4.7 Super password

4.5 Password Expired

Using the same password for a long time poses a great security risk. For this reason, the program will record the system time of the last password modification. If the system time of current login is 90 days later than the system time of the last password modification, the user will be reminded to change the password.

When user decides to change the password, the interface jumps to Figure 4.8. According to the interface prompts, user can set a new password by verification with old password.

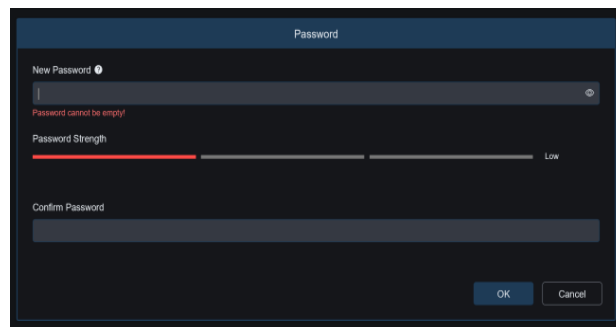


Figure 4.8 Password

5. Plug-in Installation

Use IE browser to log in, you need to install the plug-in to preview the image normally. When the prompt in Figure 5.1 appears, please download and install the plug-in according to the prompt.

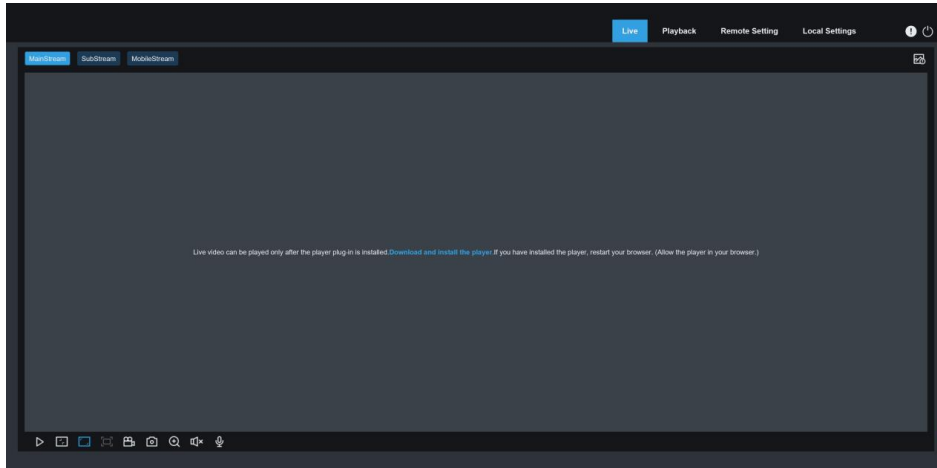


Figure 5.1 Plug-in

Note: Programs without plug-ins are supported. When using Safari 12 and above, Chrome57 and above, Firefox 52 and above, Edge 41 and other browsers for web access, the plug-in installation steps can be ignored.

6. Preview

6.1 Live

After the login is successful, the web terminal enters the login preview interface, which is shown in the following figure.

Note: The functions of different products are different, please refer to the actual situation.

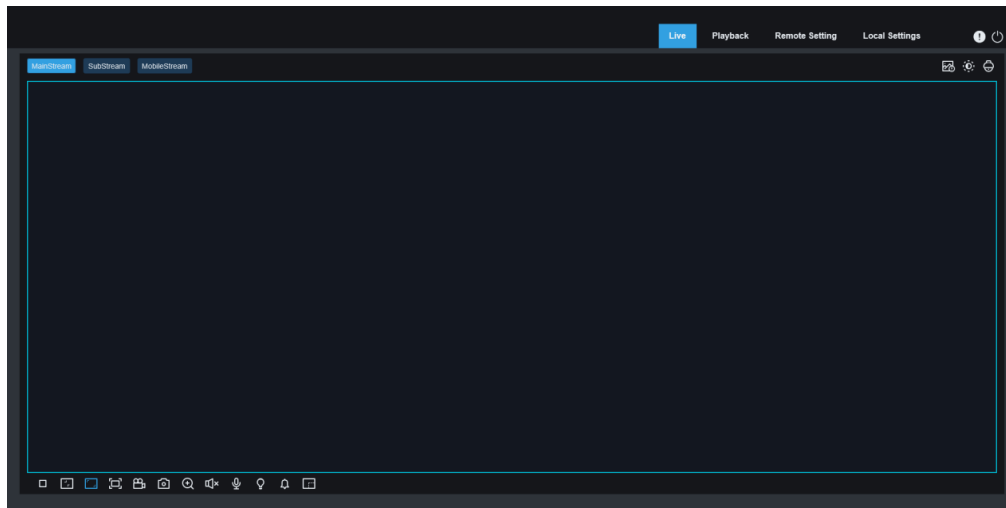


Figure 6.1

Code stream switching menu: the upper left corner can switch the image quality of the current preview interface.

Main stream: The image is clearer, but the stream bandwidth is large, which requires higher performance on the PC-side interface

Sub stream: Bandwidth and requirements for the PC are moderate, but the image will be worse than the main stream.

Mobile stream: The bandwidth and requirements for the PC are the lowest, but the image is also the worst.

Main menu switching bar: Switch the function interface of the web. The web terminal has 4 menus: Live, Playback, Remote Setting, and Local Settings.

Info: Display the currently logged-in user, web version and plug-in version.

AI alarm: Open the alarm push bar on the right, and push the corresponding picture when performing functions such as face alarm, human and vehicle detection.

Color: Adjust the current image settings, such as image saturation, sharpness, etc.

PTZ Setting: Open the pan/tilt operation setting and re-adjust the focus of camera.

Exit: Exit the current login

Recording alarm status: Prompt the alarm and recording status of camera, please refer to section 6.2 for details

Stop/Play: Open and close the current stream preview

Original Proportions: Display the current preview image in original proportions

Stretch: Display the current preview image in a way that fills the display area

Full Screen: Display the current preview screen in full screen, you can double-click the screen to turn on/off the function, and press Esc to exit the full screen when enabling the function

Record: Manually record the stream of current preview

Capture: Manually capture the picture of the current stream

Digital Zoom: Electronically zoom in on certain area of the display screen

Audio: turn on/off, adjust the sound in current preview

Voice Intercom: Talk to the camera

Warning Light: Manually turn on/off the white light

Siren: Manually turn on/off the white light

Pixel Counter: Select the area by frame to check the pixel size of the area in the code stream.

Bullet box information: when some alarms are triggered, the lower right corner will prompt the current alarm

6.2 Recording Status

The recording status is a simple reminder from the web to the current alarm of the camera, which can show whether the recording is normal. There can be multiple alarms at the same time. For specific instructions, please refer to the following introduction:

No icon: The SD card of camera is normal, but no video is being recorded.

R : The camera is performing general recording.

Note: When the camera performs alarm recording, the mark will disappear, but general recording will continue.

H : The SD card is in an abnormal state, please check the SD card.

M : The camera is in motion alarm, but motion alarm recording is not enabled.

M : The camera is in motion alarm, and motion alarm recording is performing.

I : The camera is in IO alarm, but IO alarm recording is not enabled.

I : The camera is in IO alarm, and IO alarm recording is performing.

PIR : The camera is in PIR alarm, but PIR alarm recording is not enabled.

PIR : The camera is in PIR alarm, and PIR alarm recording is performing.

S : The camera is in smart alarm, but the smart alarm recording is not performed.

Note: Intelligent alarms include Face alarm, Human & Vehicle alarm, etc.

S : The camera is in smart alarm and smart alarm recording is performing.

7. Playback

The camera not only needs to allow us to see the real-time image, but also needs to save the image information so that it can be retrieved and viewed when needed.

7.1 General Playback

The playback function is mainly composed of General video search and AI search functions. The following figure shows the video search.



Figure 7.1

Search Mode: Switch the current search mode. As shown in the figure above, the default is General search, and the search information is ordinary video files. You can switch to AI search.

Search date: Set the date to search for the video, click search, it will prompt the date of the video file.

Search Type: Display the search type supported by the camera. You can search and view part of the video according to your demand.

Search: Search and display the videos in the SD card according to the search settings.



Pause/Play: Pause/Play playback stream



Stop: Close the playback stream



Forward by One Frame: Play one frame of image every time you click



Record: Manually record the current preview stream



Capture: Manually capture the picture of the current stream



Download: Download the currently searched video



speed: Playing speed. Support speed adjustment like 1/8, 1/4, 1/2, 1, X2, X4, X8



Audio: Turn on/off, adjust the sound of playback stream

Playback progress bar: The time bar below shows the current playback progress bar in different colors according to the search results.



Digital Zoom: Electronically zoom in on certain area of the display stream



Original Proportions: Display the current preview image in original proportions



Stretch: Display the current preview image in a way that fills the display area



Full Screen: Display the current preview image in full screen, you can double-click the screen to turn on/off the function, and press Esc to exit the full screen when enabling the function

Playback progress bar zoom in/out: the progress bar defaults to display the progress of 24 hours. By this function, you can more accurately jump to the corresponding playback position. This function also works through the mouse wheel.

7.2 Playback Searched by Face

The camera performs the face detection function, stores the acquired face information to the TF card, and saves the image-related information at the same time. When searching, you can quickly retrieve the face capture according to your demand. The video can also be located based on the capture. The face search playback interface is shown in the figure below.

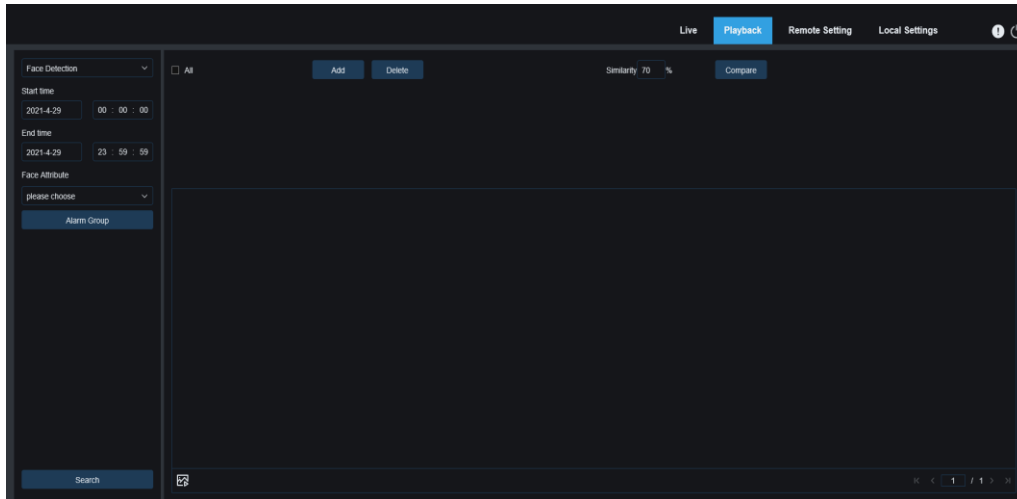


Figure 7.2

Search Mode: Switch the search mode. Current search mode is AI-Face Detection

Start time: Set the start time of search

End time: Set the end time of search

Face Attribute: The face attribute is not clicked by default. When enabled, it will only search for the face snapshot pictures when the facial attribute detection is started. The current firmware supports five types of facial attribute detection: Gender, Age Group, Mask, Glasses, and Expression.

Alarm Group: When capturing face picture, the camera matches the picture to the corresponding combination according to the settings of the face database. With this setting, you can search for pictures of the desired group.

Search: Search face data according to settings.

Add: Add pictures to the picture display area for the Compare function. You can add local pictures and captured pictures.

Delete: Delete the currently added picture.

Similarity: Set the minimum similarity of the feature values matching faces when using Compare function.

Compare: According to the set search time, the group of captured images, and the selected face, face capture search performs by making comparison with reference image.

Added Image Display Area: Display the pictures that have been added and can be used for Compare search.

Search Result Display Area: On the right side, the searched face captures will be displayed

according to Search and Compare functions. You can double-click the picture to see the playback for a short period before and after the detection.

7.3 Playback Searched by Human & Vehicle

Similar to the face capture function, the camera can distinguish between people or cars, and record them, so as to search for the required records. The interface is shown in the figure below.

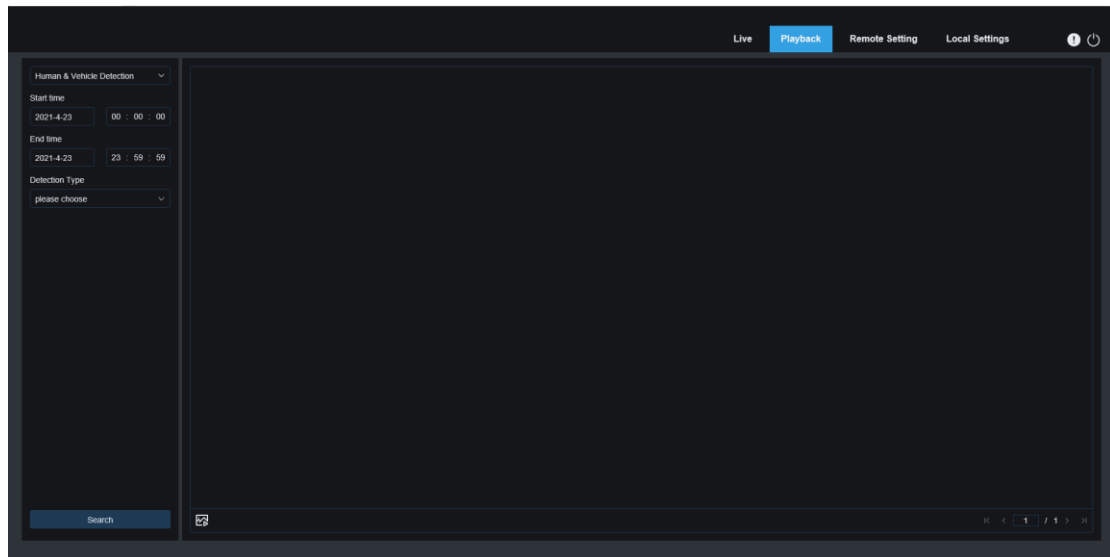


Figure 7.3

Search Mode: Switch the search mode. The current search mode is AI-Human & Vehicle Detection

Start time: Set the start time of search.

End time: Set the end time of search.

Detection Type: Set the captures of human or car to be searched, and you can also search both at the same time.

Search: Search for human & vehicle captures according to the search element settings.

Search Results Display Area: Display the search results. Double-click the picture to enter the playback for a short period of time before and after the detection.

Search results Flip: You can flip the search results in the lower right corner.

7.4 PID & LCD

With the development of technology, AI-PID&LCD is added human & vehicle detection function,

can alarm the target of human & vehicle only. Besides, the picture or video is recorded, which is easy to search and view. The interface is shown in the figure below.

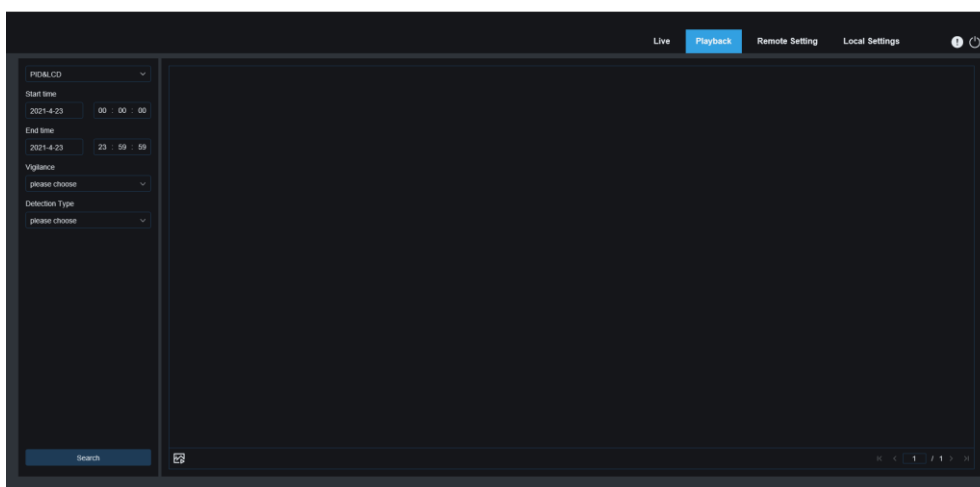


Figure 7.4

Search Mode: Switch the search mode. The current search mode is AI-PID&LCD.

Start time: Set the start time of search.

End time: Set the end time of search.

Vigilance: Set the capture mode of triggering the alarm to PID or LCD, and it can also be set at the same time.

Detection Type: Set the captures of human or car to be searched, and you can also search both at the same time.

Search: Search for human & car captures according to the search element settings.

Search Results Display Area: Display the search results. Double-click the picture to enter the playback for a short period of time before and after the detection.

Search results Flip: You can flip the search results in the lower right corner.

7.5 Repeat Customer Detection

When using the face recognition function, the camera not only can alarm in time, but also can dig out in-depth data to meet customer's demand. For example, with the repeat customer function, you can find out whether customers stay in specific area to see products. You can also monitor an area to see if there are suspicious targets often appearing in the area. The repeat customer function interface is shown in the figure below.

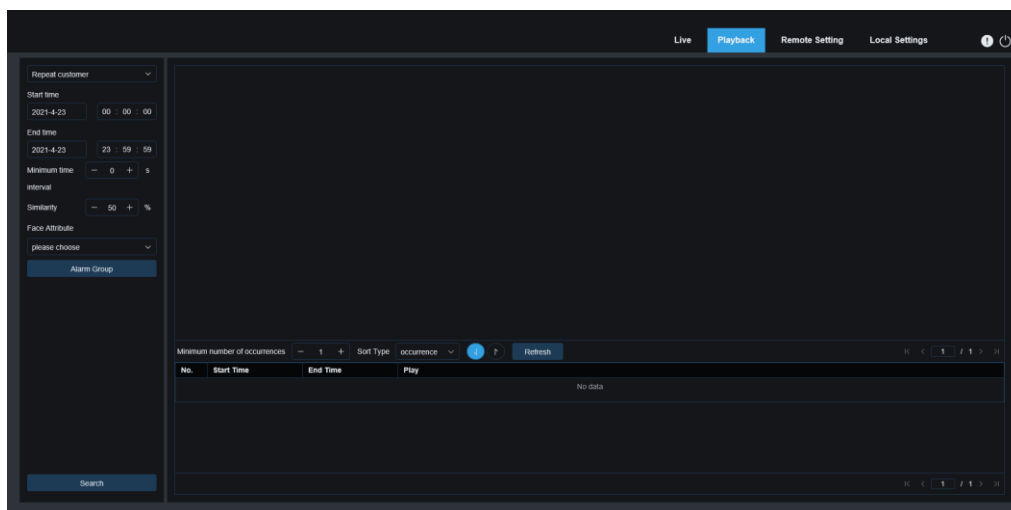


Figure 7.5

Search Mode: Switch the search mode. The current search mode is AI-Repeat customer.

Start time: Set the start time of search.

End time: Set the end time of search.

Minimum time interval: Set the minimum interval between two captures of the same target to increase search accuracy.

Similarity: The minimum similarity setting between other pictures and the reference picture when matching repeat customers.

Note: This setting only takes effect when grouping is not checked.

Face Attribute: Filter and search pictures based on facial feature values.

Note: When this option is not set, all pictures can be searched. When this option is set, only the captures with face attribute turned on are searched.

Alarm Group: Identify repeat customers based on database grouping.

Note: When the group limit is not set, all pictures are searched, and the Similarity takes effect. Stranger information will be ignored when setting group restrictions.

Search: Search for face capture information.

Search result display area: Display the search results in a stacked manner. Double-click the displayed picture information to list the stacked pictures in the lower area in detail, and click the corresponding picture again to jump to the corresponding quick playback.

Minimum number of occurrences: Filter the search results according to the number of occurrences. You need to click Refresh to display.

Sort Type: Sort the search results by time or the number of captures. Ascending and descending

order is available. You need to click Refresh to refresh.

Refresh: Refresh the IE sort according to Minimum number of occurrences and Sort Type.

Search Result Secondary Display Area: According to the information selected in the search result display area, the capture of the selected target is displayed in the form of an event list. Click Play button to switch to the corresponding quick playback.

7.6 Face Attendance

In addition to the above repeat customer function, there is also a face attendance function. Face Attendance (FA) function is to retrieve different groups (excluding stranger groups) saved in the SD card that match the human face at a specified time, and generate attendance results based on the captured records. The interface is shown in below figure.

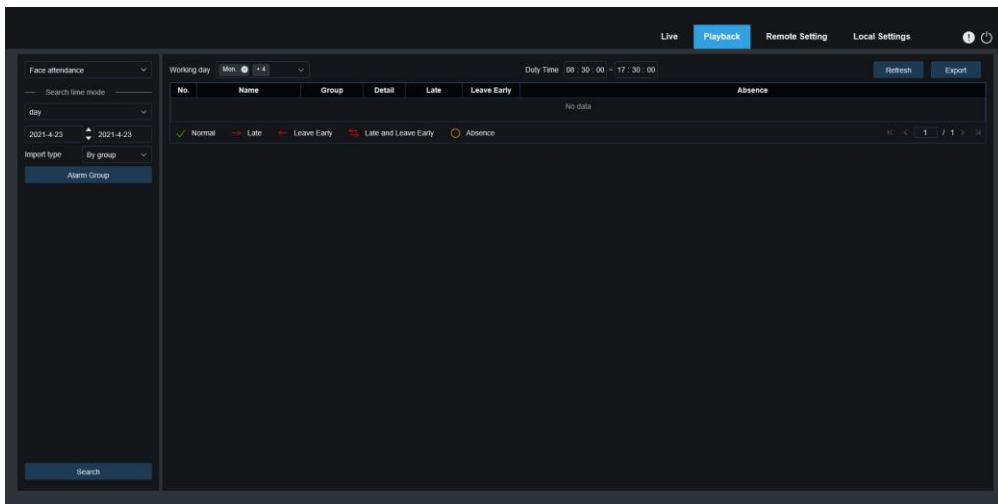


Figure 7.6

Search Mode: Switch the search mode. The current search mode is AI-Face Attendance

Attendance Type: There are day, week, month, customize and today. After selecting a type, the system will automatically change the start date and end date. Select day, it will automatically synchronize the end date and start date. Select week, it will automatically change the start date and end date to the Monday and Sunday of the week where the selected date is located. Select month, the start date and end date will be automatically changed to the first and last day of the month where the selected date is located. Select customize to customize the search date. Select today to automatically change the start date and end date to the current day.

Start Date: Set the start time of search.

End Date: Set the end time of search.

Import type: Select the import type. There are by group and by face. The former is to take all persons in the existing group as the detection object and search for matching results. The latter is to select people in a certain group to search for matching results.

Alarm Group: When selecting by group, search for face attendance results based on database grouping.

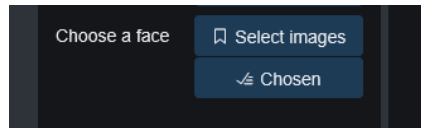


Figure 7.7

When by Face is selected, the interface will be replaced with the menu shown above.

Select images: Click to select the face to be detected. The window shown below will pop up.

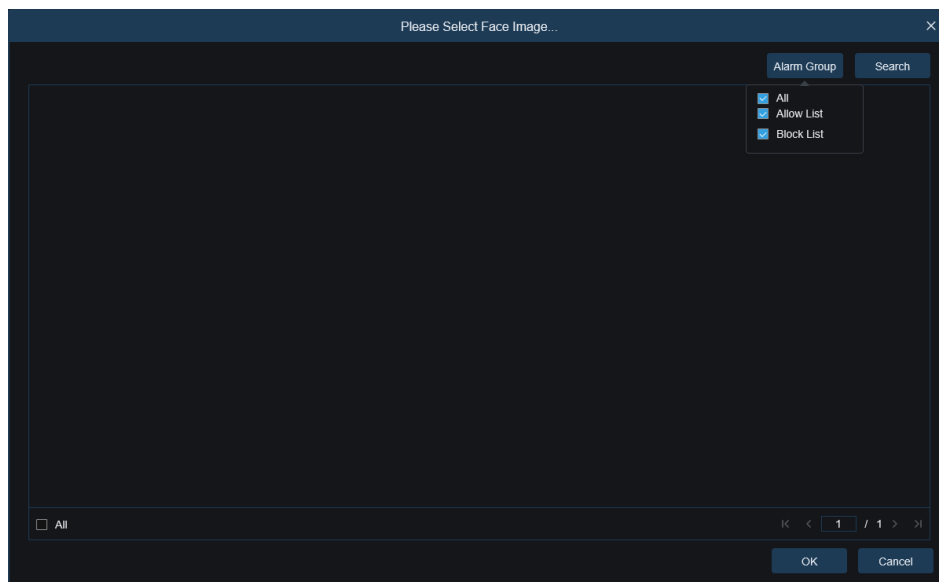


Figure 7.8

Click Alarm Group to select a group, and then click Search, all faces in the group will be searched out. Select the face you want to perform face attendance detection, then click OK to add the face to the Chosen queue. Window can be closed by Cancel.

Chosen: The selected face queue. After clicking, a window shown in below will pop up.

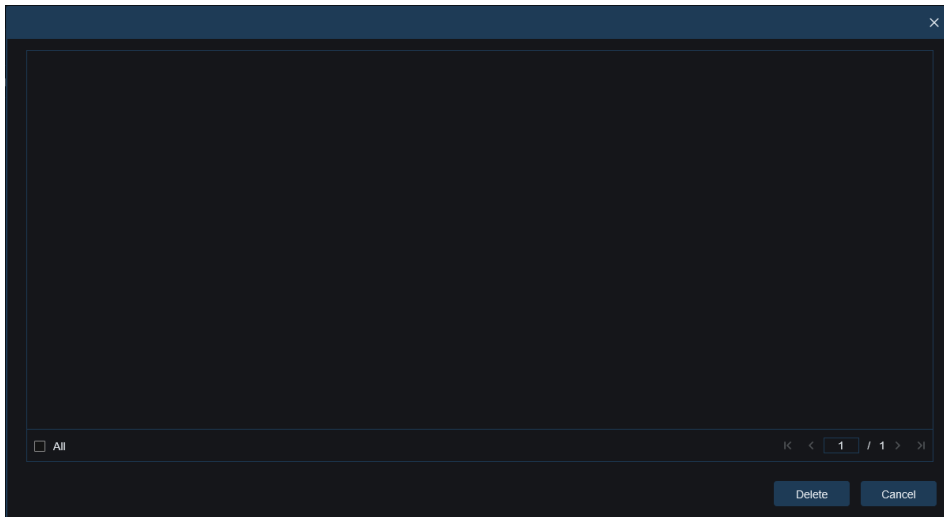


Figure 7.9

Click Delete to remove the selected face from the queue, or click All to select all faces. Click Cancel to close the window.

Search: Search face attendance information

Search Result Display Area: Display the search results in the form of a table on the upper right side. As shown below.

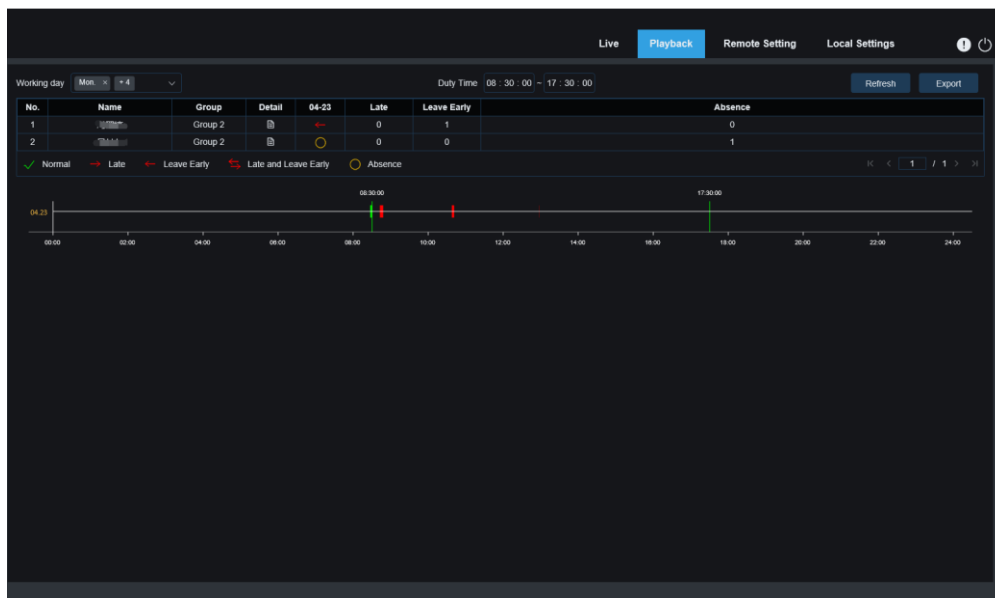


Figure 7.10

Working Day: Click to set the working day.

Duty Time: Set attendance time.

Refresh: After changing attendance parameters, click to refresh the search results.

Export: Click to export the results to the computer.

Attendance results: “←” means leaving early, “→” means late, “←”“→” means both leave early and late, “v” means normal attendance. “o” means absence. The green line indicates the start and end time of attendance.

Search Result Secondary Display Area: Click on a person, and detailed time information will be displayed at the bottom right. The due time that matches this person will be marked with a red bar. Click the red bar to jump to the corresponding quick playback.

Click Detail icon to view detailed information. Click the playback icon to enter the corresponding quick playback.

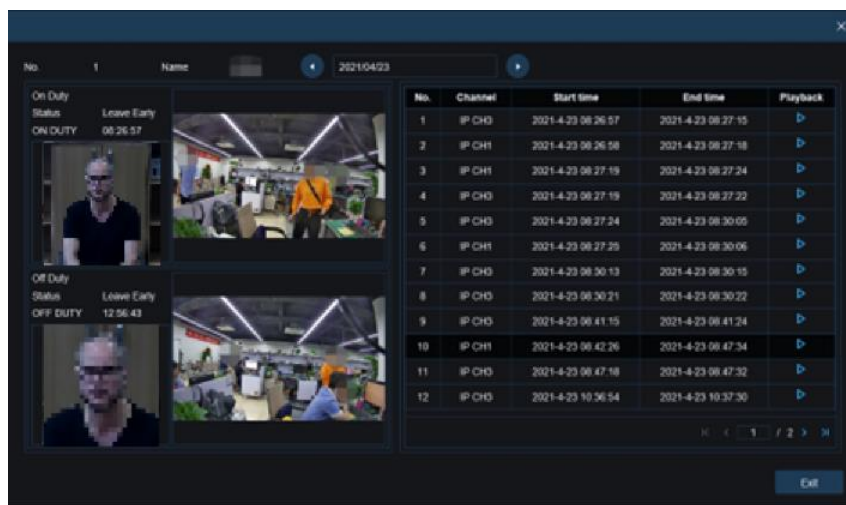


Figure 7.11

Click the arrow in the lower right corner to flip the results.

8、 Remote Setting

8.1 Live

The Live is to set the location where the channel name, device time, CC and other intelligent function statistics data and the image are superimposed. The interface is shown in the figure below.

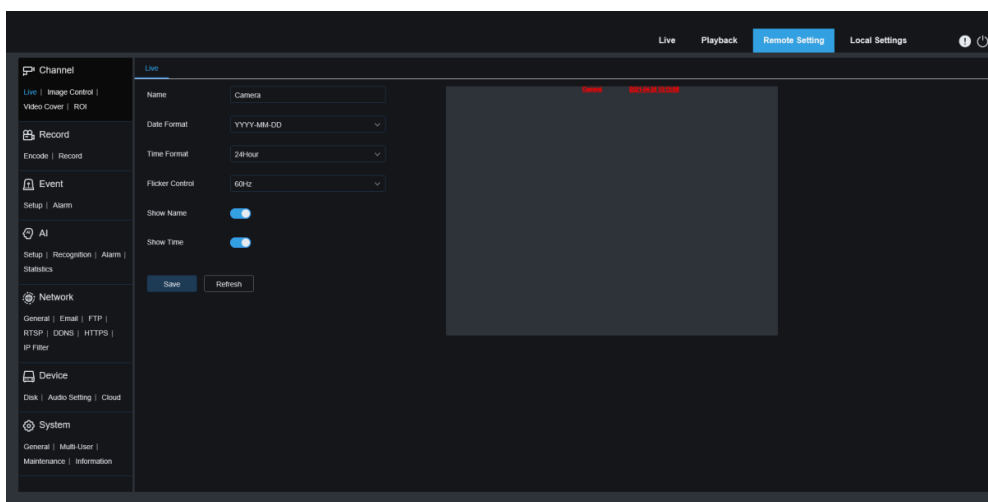


Figure 8.1

Name: Set the channel name that camera shown on the OSD.

Date Format: Set OSD date format displaying. There are three types: MM/DD/YYYY, YYYY-MM-DD, and DD/MM/YYYY.

Time Format: Set OSD time format. There are 12 hours and 24 hours optional.

Flicker Control: Set the refresh rate of the image. There are two options of 60Hz and 50Hz, corresponding to N standard and P standard.

Show Name: Set whether to display the channel name in the image.

Show Time: Set whether to show the channel time in the image.

Channel Name Display Position: Set by dragging the channel name on the image.

Time Display Position: Set by dragging the channel time on the image.

Alarm Statistics Display Position: Set by dragging the position of the channel alarm statistics on the image. This setting will only be displayed when the function is enabled.

Save: Save current modification

Refresh: Re-obtain the current interface parameters.

8.2 Image Control

Image control is to directly control and modify graphics parameters, such as color to black mode, wide dynamic, backlight supplement, etc. The interface is shown as below.

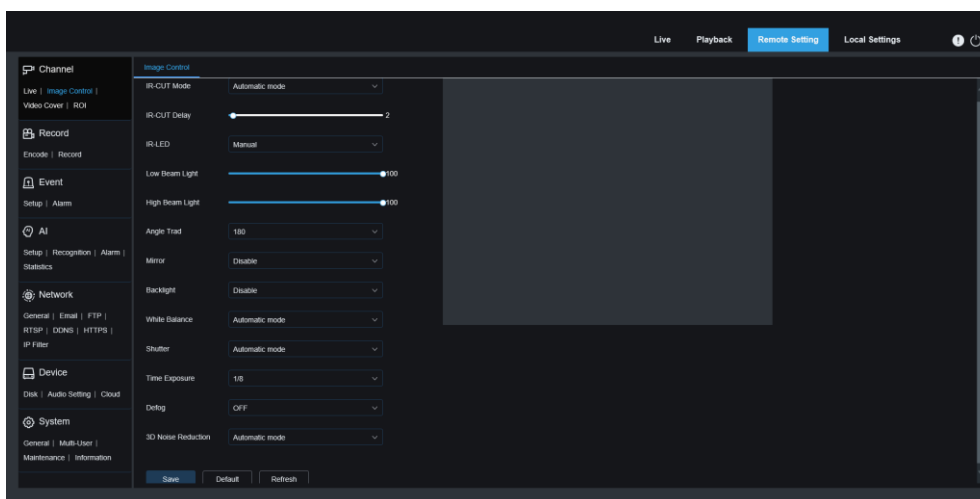


Figure 8.2

IR-CUT Mode: Set the day/night switching mode of the camera, a total of 5 modes.

Automatic mode: Automatically control switching mode. Color switching to black white is controlled by image, black white switching to color is controlled by photosensitive.

Color Mode: Mandatory color mode, do not switch to black white mode.

Black White Mode: Mandatory black white mode, do not switch to color mode.

Image Mode: Similar to the automatic mode, the color-to-black and the black-to-color modes are controlled through the image (supported by some models)

Schedule: Switch between black white and color through the schedule setting. To enable this function, you need to set the start and end time of night vision.

IR-CUT Delay: Automatic mode and Image Mode switch between day and night, the duration of IR-CUT needs to be determined. For example, when switching the night vision, the night vision switch will only be performed when the camera is in the dark for the set time.

IR-LED: Set the fill light effect of the camera's IR LED during night vision, there are 2 modes.

Smart-IR: Intelligently control the intensity of the IR LED's fill light, and dynamically control the IR LED's fill light according to the focal length and whether the picture is over-exploded.

Manual: Manual mode, fill light with the set brightness of the IR LED.

Angle Trad: Image rotation setting. The camera is inverted from the preset in some scenarios. For example, it is designed to be used upside down, but in practice it is used horizontally. The image can be adjusted by this value.

Mirror: Set the mirror mode to adjust the picture effect, there are 4 modes.

Disable: Turn off the mirror mode.

Vertical: Mirror mode in vertical direction, which makes the images of the screen interactive up and down.

Horizontal: Mirror mode in horizontal direction, which makes images of the screen are interactive left and right.

All: Turn on Vertical and Horizontal at the same time, the effect is similar to 180° rotation, but the realization principle is different.

Backlight: Set the performance of the firmware in backlight, there are 4 modes:

WDR: Wide dynamic mode, according to the set value to make the overall picture in a balanced state, bright and dark areas can be seen clearly.

HLC: Highlight Compensation. Make the objects in the highlighted area clearer in the image. (Supported by some models)

Back Light: Make objects clearer in dark places.

Disable: Turn off Back Light.

White Balance: Use three primary colors of red, green, and blue to generate white after mixing, which is an indicator of color adjustment. There are 2 modes.

Automatic mode: Use the default parameters of the firmware to adjust the white light.

Manual: The user actively sets the red, green, and blue gains to synthesize white light.

Shutter: Set the shutter exposure time, there are 2 modes.

Automatic mode: According to the set Time Exposure value, the firmware automatically selects an appropriate exposure time.

Manual: Directly use the time set in Time Exposure.

Time Exposure: Set the camera's exposure time, used in conjunction with Shutter. When the exposure time is long, the image will be overexposed, and when the exposure time is short, the picture will be dark.

Defog: Foggy weather will cause the image to be bad. The defog function can offset this shortage. There are three settings:

OFF: Disable defog function

Automatic mode: The camera automatically defog.

Manual: Defog according to the manually set value.

3D Noise Reduction: Reduces the noise in the image and makes it clearer. There are 3 modes:

Automatic mode: The camera automatically selects the noise reduction according to the algorithm.

OFF: Disable noise reduction.

Manual: Reduce noise manually.

Save: Save parameters.

Default: Restore parameters to the default.

Refresh: Re-obtain parameters.

8.3 Video Cover

In actual use, some areas are not suitable for monitoring and recording. Those areas can be hidden in the video through this function. The interface is shown in the figure below.

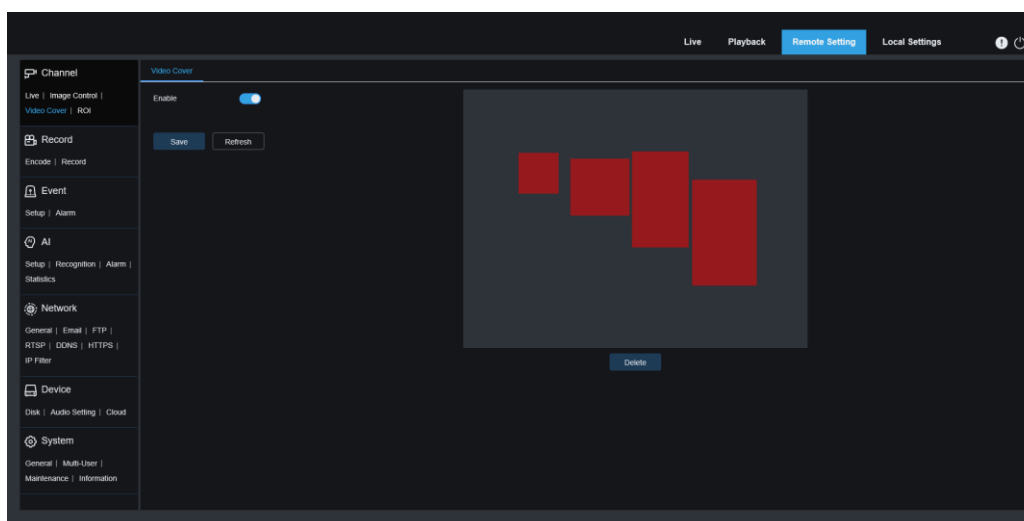


Figure 8.3

Enable: Switch to turn on the function.

Cover Area: Set the area that needs to be covered on the monitoring screen. When setting, the covering block is red, and the corresponding area of the screen is black when it is enabled. 4 covering blocks can be set.

Delete: Remove the selected covering block.

8.4 ROI

ROI allows that you can select an area as an important or sensitive area from the video. This area

can be set to a different frame rate and resolution with the non-selected area.

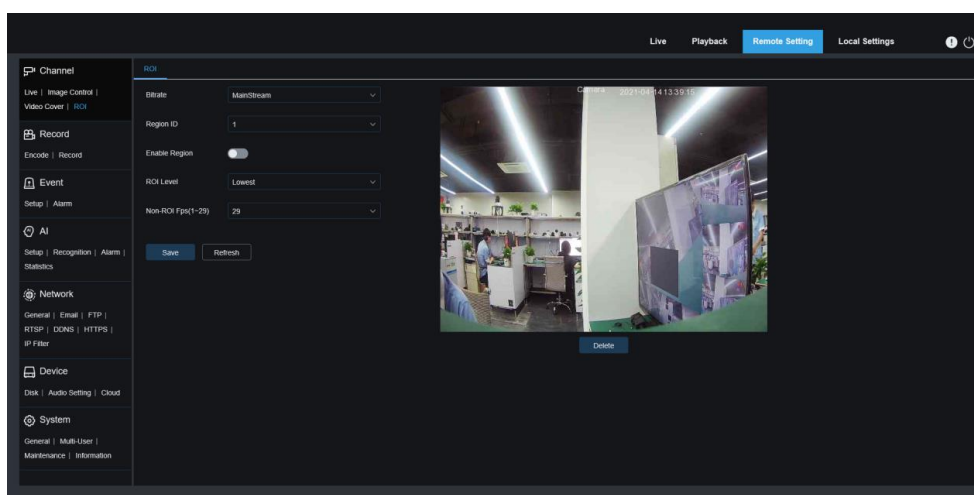


Figure 8.4

Bitrate: Select the bitrate to be set.

Region ID: Select the region ID, up to eight regions can be set.

Enable Region: Turn on.

ROI Level: Set the image quality in the area. The higher the quality is, the higher the resolution and frame rate are.

Non-ROI Fps: Set the frame rate outside the region.

8.5 Record

This menu allows you to configure the preview and recording parameters.

8.5.1 Encode

This menu allows you to configure the image quality of recorded video or network transmission. Generally, the main stream is the quality of the recorded video that will be saved in the HDD; the sub stream is the preview video quality through remote access (such as Web client and CMS). The mobile stream which can be disabled defines the preview quality of the mobile device through remote access.

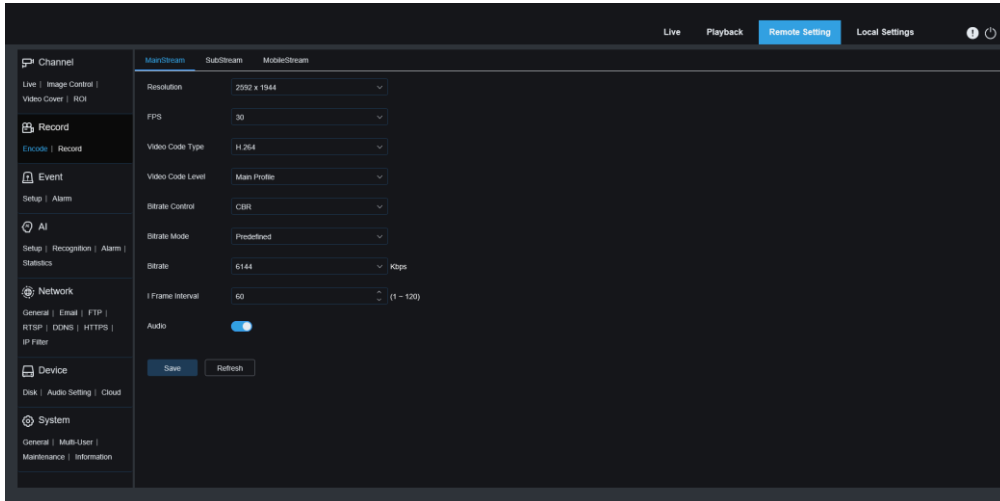


Figure 8.5

Resolution: The resolution of the recorded image.

FPS: The number of frames recorded by IPC.

Video Code Type: Decoding type, there are H264, H265, H264+, H265+ and MJPEG (MJPEG mode only exists in sub-stream mode)

Video Code Level: Video quality level, including Bestline, Main Profile and High Profile (for H265, only Main Profile is available).

Bitrate Control: Select the bitrate level. For simple scenes, such as gray walls, a constant bit rate (CBR) is suitable. For more complex scenes, such as busy streets, variable bit rate (VBR) is more suitable.

Bitrate Mode: If you want to set the bitrate yourself, please select the "Custom" mode. If you want to select a preset bitrate, select "Preset Mode".

Bitrate: The data transmission speed that IPC uses to record. Video with higher bitrate will have better quality.

I Frame Interval: Set the I frame interval, only IPC can be set.

Audio: If you want to record audio and video at the same time, and connect a microphone to the IPC or use a camera with audio capabilities, please select this option.

8.5.2 Record

8.5.2.1 Recording Parameters

Recording parameters can be set by this menu.

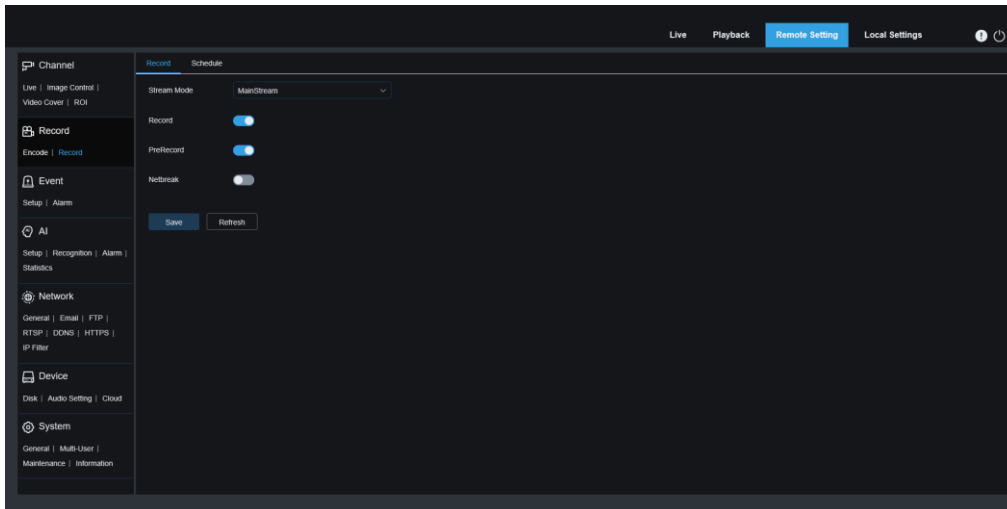


Figure 8.6

Stream Mode: The video stream to be saved in the SD card in recording mode. The default is the main stream.

Record: Check to enable recording.

PreRecord: If this option is enabled, the IPC will start recording a few seconds before the alarm event occurs. If your camera's main recording type is based on motion detection or I/O alarm, it is recommended to use this option.

Netbreak: Recording when the network is disconnected

8.5.2.2 Recording Schedule

This menu allows you to specify when the IPC will record video, which can be set in the recording schedule. Only during the selected time period will the recording be performed. Drag the cursor to mark the area.

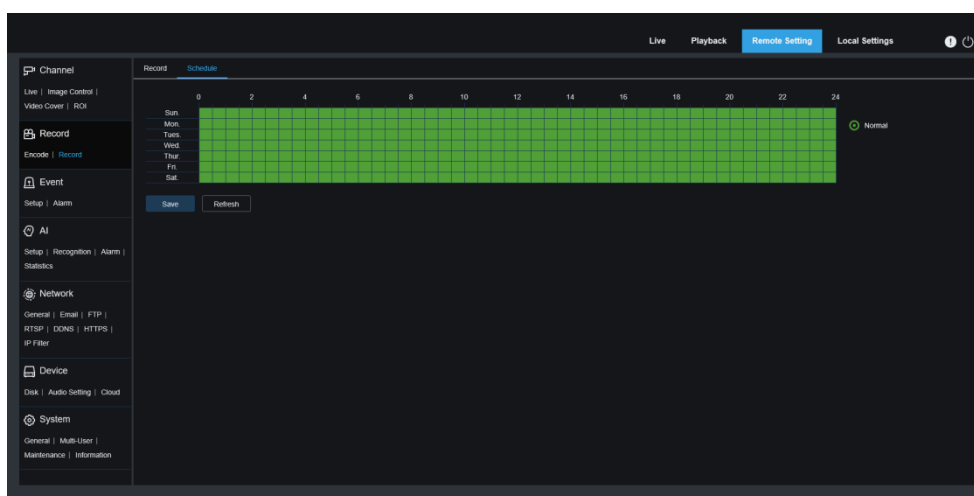


Figure 8.7

8.6 Event

8.6.1 Setup

8.6.1.1 Motion Detection

This menu allows you to configure motion detection parameters. When motion is detected, a series of alarms are triggered, such as sending an email alert with additional images from the camera (if this option is enabled), pushing notifications via mobile APP.

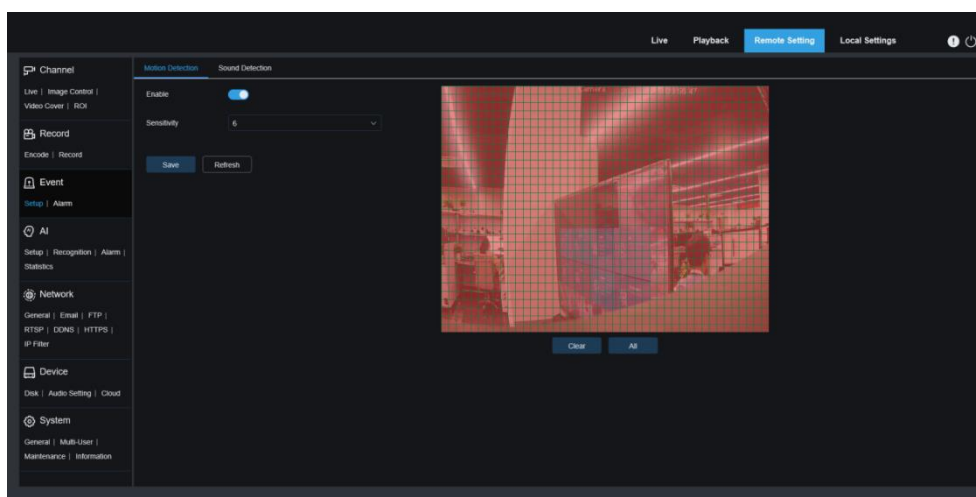


Figure 8.8

Drag the left mouse button to delimit the detection area in the right window. Only movement in the area will trigger an alarm.

Enable: Enable or disable motion detection.

Sensitivity: Set the sensitivity of motion detection. There is more large value, there is more sensitive.

8.6.1.2 Sound Detection

When the camera detects a change in the connected audio and meets the requirements of the alarm detection setting, an alarm will be triggered.

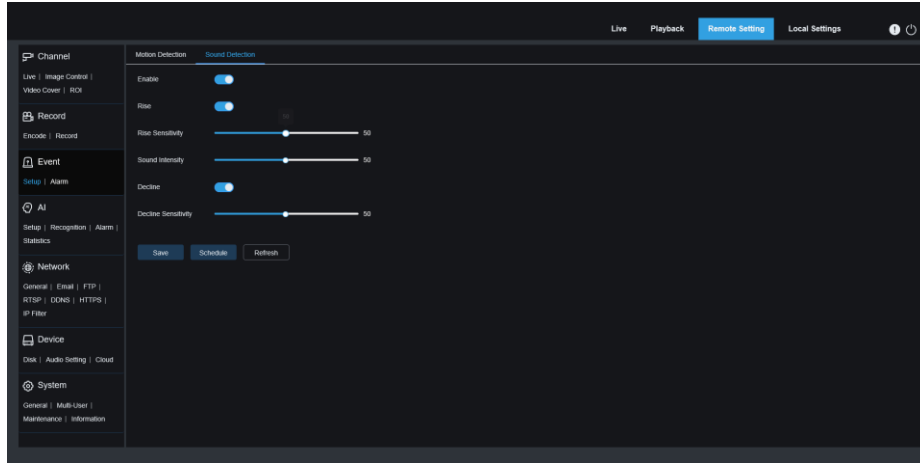


Figure 8.9

Enable: Turn on/off sound detection.

Rise: The alarm will be triggered only when the volume rises steeply.

Rise Sensitivity: Fine-tuning sound rise sensitive detection, and the sensitivity can be set to 1-100. The larger the value the lower the sound detection threshold.

Sound Intensity: Coarse-tuning sound rise sensitive detection, and the sensitivity can be set to 1-100. The larger the value, the higher sound detection threshold. Hard to trigger alarm.

Decline: Turn on the sound drop detection, when the sound suddenly increases and decreases in a short period of time, trigger the sharp drop alarm.

Decline Sensitivity: The decline sensitive can be set to 1-100, and the higher the value is, the higher the sensitivity. Easier to trigger alarm.

Schedule: Set the time schedule of sound detection. It is fully enabled by default. The user can customize the time period of touch sound alarm.

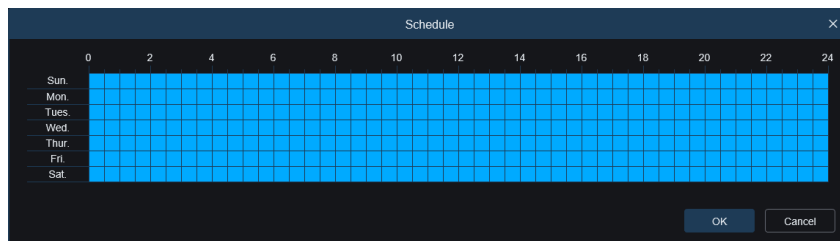


Figure 8.10

8.6.2 Alarm

This menu can set the actions to be executed when various alarms are triggered.

8.6.2.1 Motion Detection

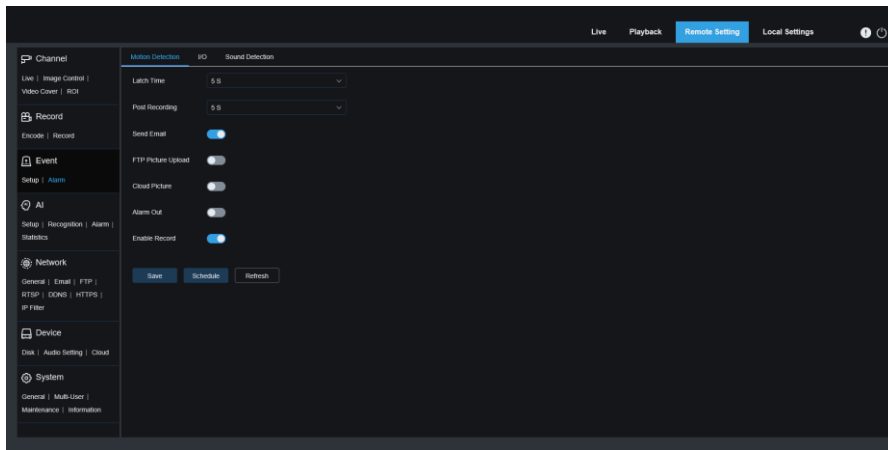


Figure 8.11

Latch Time: Set the external alarm triggering time when motion is detected.

Post Recording: Set the duration of the device's recording after the event occurs. There are 5s, 10 s, 20s, and 30s optional. The default recording time is 5s. The max is 30s.

Send Email: Set the camera to send email to your mailbox when it detects motion.

FTP Picture Upload: Upload the alarm picture to the FTP server after the alarm is triggered.

Cloud Picture: Upload the alarm picture to the cloud server after the alarm is triggered.

Alarm Out: Optional function. If your camera supports to connect an external alarm device, you can enable this function to activate the external alarm device.

Enable Record: When checked, this type of recording will be enabled when an alarm is triggered.

Schedule: Set the scheduled time of each alarm action. A series of alarm actions will be executed within the scheduled time.

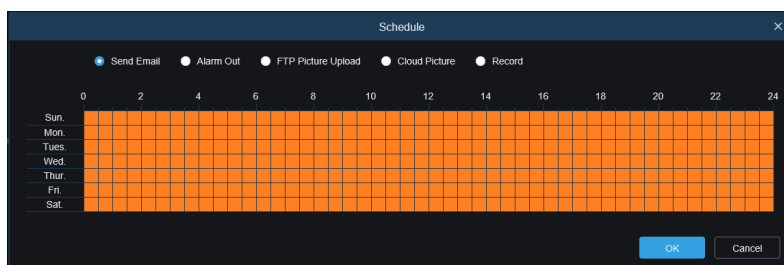


Figure 8.12

8.6.2.2 I/O Alarm

This is an optional function. This function can be enabled only if the camera supports I/O sensors and meanwhile is connected an external I/O alarm device.

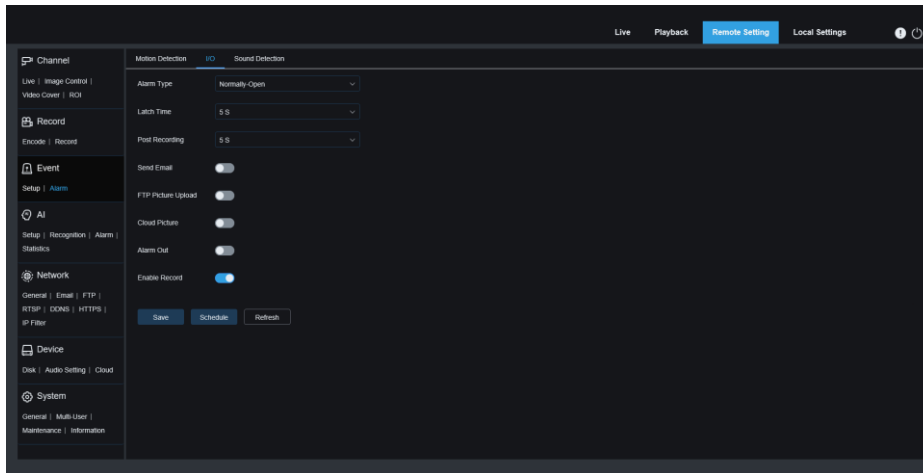


Figure 8.13

Alarm Type: Three types are optional: Normally open, Normally close and Off. Select a type that matches your sensor type, or select "Off" to turn off the sensor trigger function.

Latch Time: The time that the camera IO alarm continues to alarm after the alarm ends.

Post Recording: Set the duration of the device's recording after the event occurs. There are 5s, 10 s, 20s, and 30s optional. The default recording time is 5s. The max is 30s.

Send Email: Set the camera to send email to your mailbox when it detects I/O.

FTP Picture Upload: Upload the alarm picture to the FTP server after the alarm is triggered.

Cloud Picture: Upload the alarm picture to the cloud server after the alarm is triggered.

Alarm Out: Optional function. If your camera supports to connect an external alarm device, you can enable this function to activate the external alarm device.

Enable Record: When checked, this type of recording will be enabled when an alarm is triggered.

Schedule: Set the scheduled time of each alarm action. A series of alarm actions will be executed within the scheduled time.



Figure 8.14

8.6.2.3 Sound Alarm

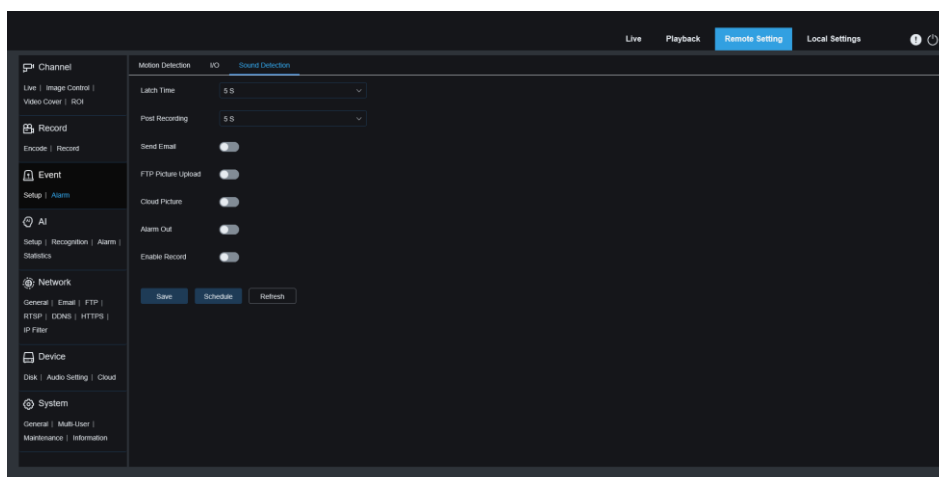


Figure 8.15

Latch Time: Set the external alarm triggering time when motion is detected.

Post Recording: Set the duration of the device's recording after the event occurs. There are 5s, 10 s, 20s, and 30s optional. The default recording time is 5s. The max is 30s.

Send Email: Set the camera to send email to your mailbox when it detects sound.

FTP Picture Upload: Upload the alarm picture to the FTP server after the alarm is triggered.

Cloud Picture: Upload the alarm picture to the cloud server after the alarm is triggered.

Alarm Out: Optional function. If your camera supports to connect an external alarm device, you can enable this function to activate the external alarm device.

Enable Record: When checked, this type of recording will be enabled when an alarm is triggered.

Schedule: Set the scheduled time of each alarm action. A series of alarm actions will be executed within the scheduled time.

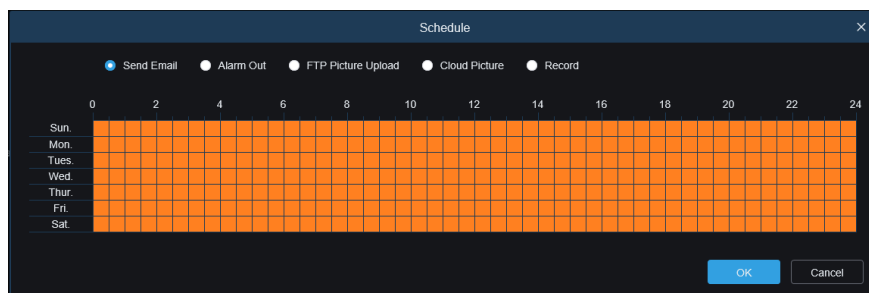


Figure 8.16

8.7 AI

8.7.1 Setup

To use AI smart alarm, you need to enable the corresponding alarm function in the Setup menu first. This function requires the computing power of the camera. Due to the limitation of the camera's performance, HM and other functions can be enabled at the same time, whereas PID\LCD\SOD, FD, PD&VD, CC, CD, and QD cannot be enabled at the same time.

8.7.1.1 FD – Face Detection

By enabling this function, the cameras detect the face target to obtain captures that meet the requirements, then calculate the facial feature data of the captures through the face model algorithm, and compare it with the face database to trigger alarm.

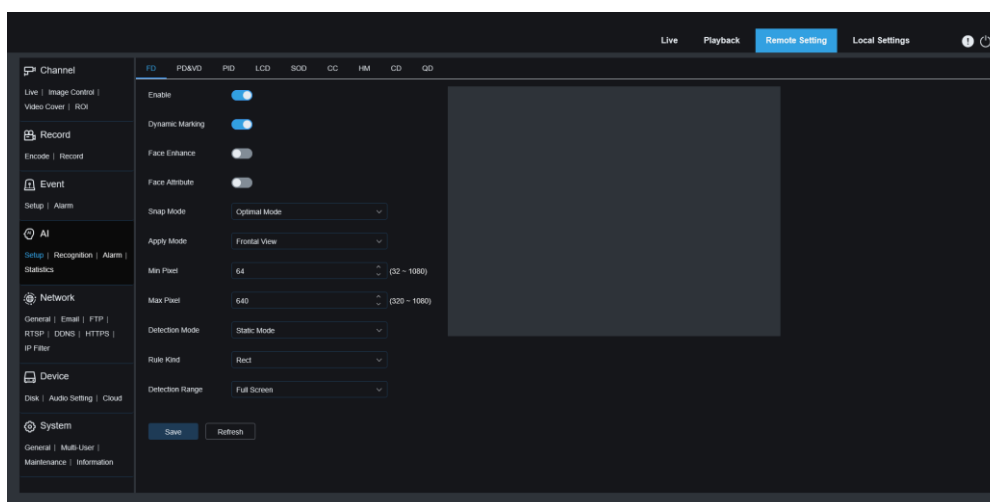


Figure 8.17

- **Enable:** Enable or disable FD--Face Detection.
- **Dynamic Marking:** choose to show or don't show the track
- **Face Enhance:** Turn on the face enhance function to enhance the effect of the face image captured by the moving target, so as to make it clearer. However, enable this function will take up more resources of IPC, making the overall effect of the screen worse.
- **Rule Kind:** There are two rules. Rect & Line. It has its own detection scope and rule type.
 - ① **Rect:**
 - Detection Range:** There are two modes for setting detection area. Full Screen & Customize
 - Full Screen:** The detection area is the camera all cover area.
 - Customize:** Select this mode and a region box will appear on the small window. Click the

red small box next to the digital ID of the region box to drag or stretch the region.

② **Line:**

Rule Type: There are two types, $A \rightarrow B$ and $B \rightarrow A$. Draw a regular line from A to B (or B to A) on the area. When the face moves from A to B (or from B to A), the rule will be triggered to capture the human face.

- **Detection Mode:** There are two types. Motion Mode & Static Mode.

① **Motion Mode:** snap the human and human face in motion.

② **Static Mode:** snap the human and human face in static.

- **Snap Mode:** There are three recognition modes, default mode, real-time mode and interval mode.

- **Optimal:** When person enters the monitoring area, the camera will always capture. After person leaves the monitoring area, the best and clearest of the captured images in this period will be sent to the recorder.

- **Realtime Mode:** One picture will be sent to the device when person enters the monitoring area in IPC, and the second picture will be sent to NVR when a person or vehicle leaves the monitoring area.

- **Interval Mode:** Push pictures to the docking device. You can set the maximum number of times to send and the interval for each picture to be sent.

- **Snap Number:** Number of push pictures for each locked target can be set as 1, 2, 3 and infinite times, that is, push pictures to the recorder once every second, and push once, 2, 3 and infinite times. (Note: this function is available in interval mode)

- **Snap Frequency:** n s/pic (n can set to 1—255), select the best snapshot every N seconds and push it to the docking recorder.

- **Apply Mode:** Frontal View、Multi Angle & Customize.

① **Frontal View:** Only snap frontal view.

② **Multi Angle:** Can capture video from multiple perspectives

③ **Customize:** Custom snap angle:

Roll Range: The roll range of face capture can be set to 0-180.

Pitch Range: The pitch range of face capture can be set to 0-180.

Yaw Range: The YAW range of face capture can be set to 0-180.

Picture Quality: The picture quality of face capture can be set to 0-180.

- **Min Pixel:** The lowest pixel setting of people. When the recognized object is smaller than the pixel, no alarm is generated accordingly. It can be set to 64-1080. Note: the figure recognition function recognizes the whole picture as a 1080p picture.
- **Max Pixel:** The highest pixel setting for people. When the recognized object is larger than the pixel, no alarm will be generated accordingly. It can be set to 32-1080. Note: The image recognition function can recognize the entire image as a 1080p image.

Frontal Default: set the frontal view to load default.

Multi Default: set the multi view to load default.

(Note: Trigger FD, "S" will appear on the channel, a pop-up window will appear in the lower left corner of the page. In addition, PID / LCD and PD & VD / FD are mutually exclusive and cannot be enabled at the same time).

8.7.1.2 PD&VD – Pedestrian & Vehicle Detection

Through this function, camera can recognize pedestrian or vehicle in the image, trigger an alarm, and record the corresponding screenshot.

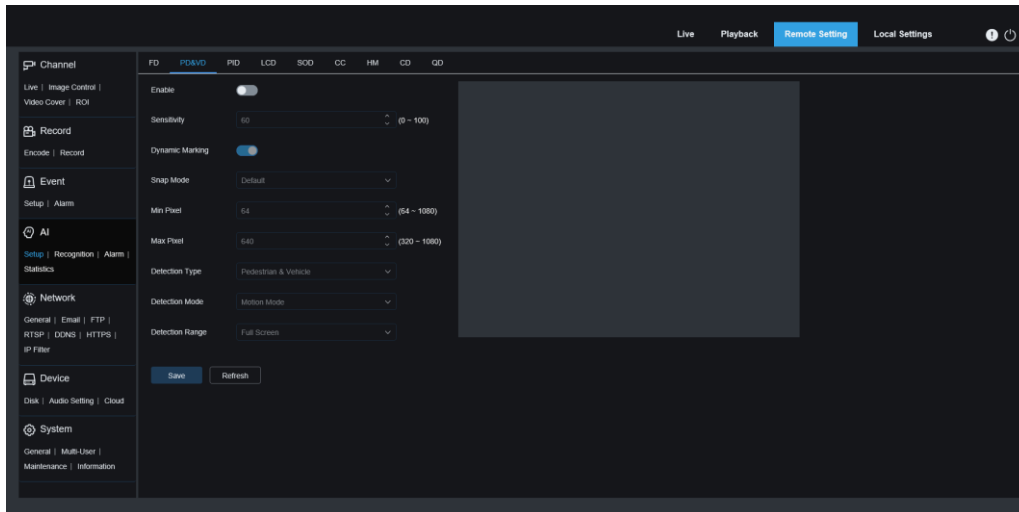


Figure 8.18

- **Enable:** Enable or disable PD&VD detection
- **Sensitive :** PD &VD detection can be set to 0-100. The larger the value is, the more accurate the triggering, and the more like the shape of Pedestrian & Vehicle, the more accurate the triggering. The default sensitive detection is 60.

- **Dynamic Marking:** choose to show or don't show the track
- **Snap Mode:** There are three recognition modes, default mode, real-time mode and interval mode
- **Default:** The default optimal mode. When human or vehicle enter the monitoring area, the camera will always capture. After a human or vehicle leaved the monitoring area, the best and clearest of the captured images in this period will be saved in NVR. Default (IPC can't save picture).
- **Realtime Mode:** One picture will be sent to the device when person or vehicle enters the monitoring area in IPC, and the second picture will be sent to NVR when a person or vehicle leaves the monitoring area.
- **Interval Mode:** Push pictures to the docking device. You can set the maximum number of times to send and the interval for each picture to be sent.
- **Snap Number:** Number of push pictures for each locked target can be set as 1, 2, 3 and infinite times, that is, push pictures to the recorder once every second, and push once, 2, 3 and infinite times. (Note: this function is available in interval mode)
- **Snap Frequency:** n s/pic (n can set to 1—255) , Select the best snapshot every N seconds and push it to the docking recorder.
- **Min Pixel:** The lowest pixel setting of human and vehicle. When the recognized object is smaller than the pixel, no alarm is generated accordingly. It can be set to 64-1080. Note: the figure recognition function recognizes the whole picture as a 1080p picture.
- **Max Pixel:** The highest pixel setting for human and vehicles. When the recognized object is larger than the pixel, no alarm will be generated accordingly. It can be set to 320-1080. Note: The image recognition function can recognize the entire image as a 1080p image.
- **Detection Type:** There are two type of Pedestrian & Vehicle, select the type to detect. Two detection types, pedestrian and vehicle, can be opened at the same time.
- **Detection Mode:** There are two detection modes---- Motion Mode & Static Mode.
- **Motion Mode:** snap the human or vehicle in motion.
- **Static Mode:** snap the human or vehicle in motion or static.
- **Detection Range:** Setting detection area, there are two modes, Full Screen & Customize.
- **Full Screen:** The detection area is the camera all cover area.

- **Customize:** Select this mode and a region box will appear on the small window. Click the red small box next to the digital ID of the region box to drag or stretch the region.

(Noted: Trigger PD&VD, "S" will appear on the channel, identify the pedestrian line in green box, and identify the vehicle line in blue box. A pop-up window will appear in the lower left corner of the page, as shown in picture 4-12. In addition, PID / LCD and PD & VD / FD are mutually exclusive and cannot be enable at the same time).

8.7.1.3 PID – Perimeter Intrusion Detection

When target enters or leaves the alarming zone, the alarm will be triggered through Perimeter Intrusion Detection (PID) function.

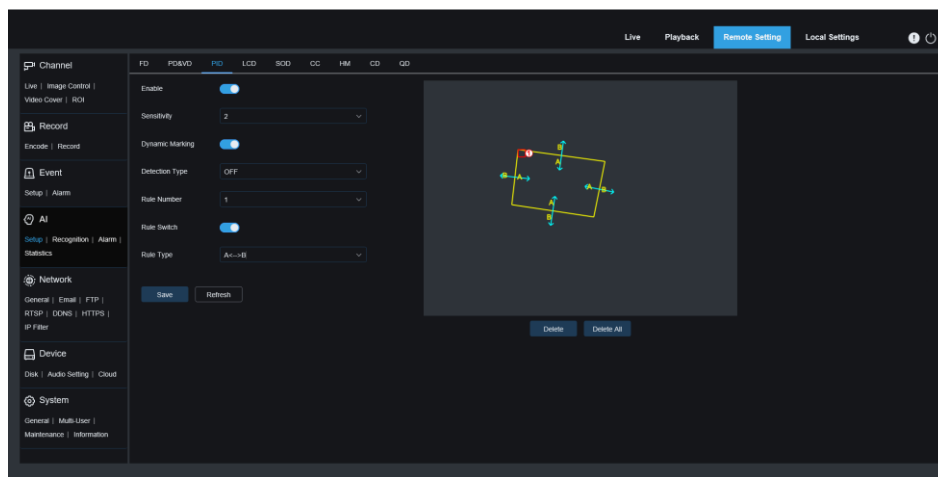


Figure 8.19

- **Enable:** Enable or disable PID detection
- **Sensitive :** Sensitive level, range is 1-4, the default setting is 3. If the detected object sensitivity is higher, the moving object can be detected easily. Meanwhile, the false detection rate is higher. Suggest to use default level.
- **Dynamic Marking:** choose to show or don't show the track.
- **Detection Type:** The detection types include pedestrian and vehicle. When the settings are enabled, the only detect the alarms triggered by human or vehicles, but need to consume more CPU of IPC. If it is not turned on, all objects passing through the line will be detected.
- **Rule Number:** Max set 4 rule number. Draw a rule area on the area map, and click to the next few rules, then you can draw rules on the area map. The rule switch and rule type of each rule are independent, and they need to be opened, closed or set separately.

- **Rule Switch:** The switch of each rule.
- **Rule Type:** Setup to each rule, A->B means can detect A to B direction moving, B->A means can detect B to A direction moving, A ↔ B means can detect two directions moving.
- **PID (Perimeter Intrusion Detection):** click on the area, draw a square area of four points, and then set it as a perimeter intrusion detection rule. You can draw four rule areas, each rule has a corresponding digital ID. Click the red small box next to the digital ID of the rule, and you can drag or stretch the perimeter intrusion detection rule area.

(Note: when PID (Perimeter Intrusion Detection) is triggered, "S" will appear on the channel, and a pop-up window will appear in the lower left corner of the page, as shown in picture 4-9. In addition, PID / LCD and PD & VD / FD are mutually exclusive and cannot be enabled at the same time).

8.7.1.4 LCD – Line Crossing Detection

When detected target cross the preset line, the alarm will be triggered through Line Crossing Detection (LCD).

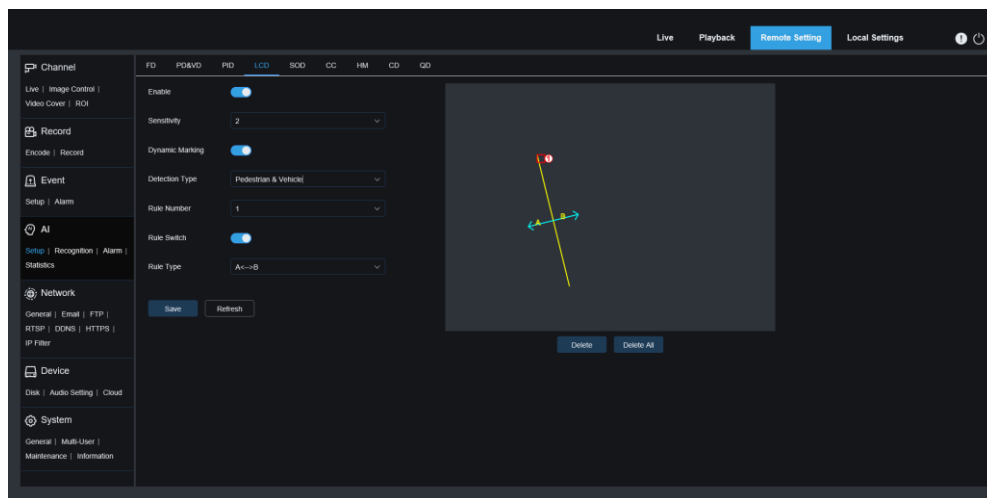


Figure 8.20

- **Enable:** Enable or disable LCD detection
- **Sensitive:** sensitive level, the range is 1-4, default setting is 2. If the detected object sensitivity is higher, the moving object can be detected easily. Meanwhile, the false detection rate is higher. Suggest to use default level.
- **Dynamic Marking:** choose to show or not show the track
- **Detection Type:** The detection types include pedestrian and vehicle. When the settings are

enabled, the only detect the alarms triggered by human or vehicles, but need to consume more CPU of IPC. If it is not turned on, all objects passing through the line will be detected.

- **Rule Number:** Max set 4 rule number. Draw a rule area on the area map, and click to the next few rules, then you can draw rules on the area map. The rule switch and rule type of each rule are independent, and they need to be opened, closed or set separately.
- **Rule Switch:** The switch of each rule
- **Rule Type:** Setup to each rule, A->B means can detect A to B direction moving, B->A means can detect B to A direction moving, A ↔ B means can detect two directions moving.
- **LCD (Line Crossing Detection):** click on the area, draw a square area of four points, and then set it as a perimeter intrusion detection rule. You can draw four rule areas, each rule has a corresponding digital ID. Click the red small box next to the digital ID of the rule, and you can drag or stretch the perimeter intrusion detection rule area.

(Note: when LCD (Line Crossing Detection) is triggered, "S" will appear on the channel, and a pop-up window will appear in the lower left corner of the page, as shown in picture 4-10. In addition, PID / LCD and PD & VD / FD are mutually exclusive and cannot be enable at the same time).

8.7.1.5 SOD - Goods lost & Legacy

By this function, alarms are triggered when legacy or lost items is found in monitoring area.

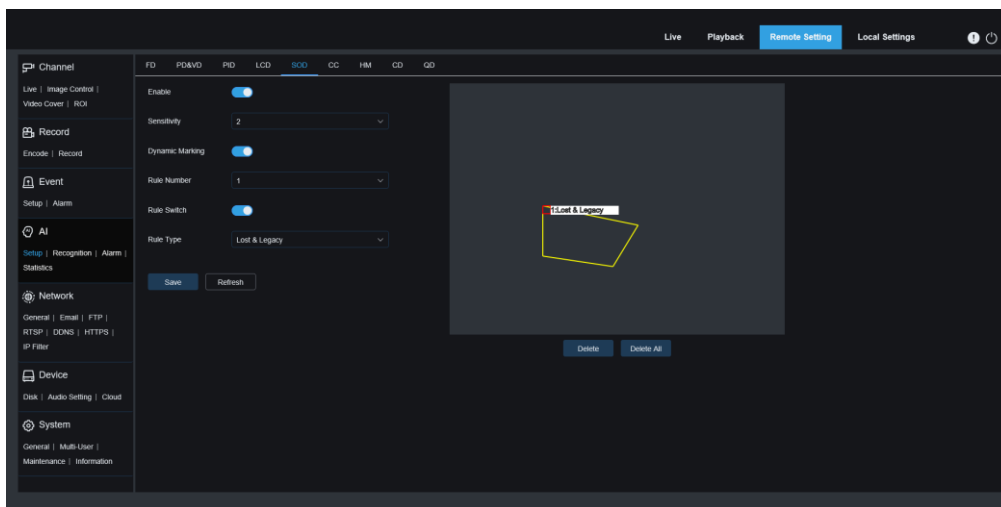


Figure 8.21

- **Enable:** Enable or disable SOD

- **Sensitive:** The sensitivity of triggering SOD can be set as 1-4. The larger the value is, the more sensitive the SOD alarm is. The default sensitivity of SOD is set as 3
- **Dynamic Marking:** choose to show or don't show the track
- **Rule Number:** Max set 4 rule number. Draw a rule area on the area map, and click to the next few rules, then you can draw rules on the area map. The rule switch and rule type of each rule are independent, and they need to be opened, closed or set separately.
- **Rule Switch:** The switch of each rule

Rule Type: Setup to each rule, Lost means can detect something is missing, Legacy means can detect things left there, Lost & Legacy means can detect above two.

8.7.1.6 CC – Cross Counting

Camera can record the specific objects crossing line in monitoring area by Cross Counting (CC) function. Set the crossing line, there are two areas (A and B) on two sides of line. When the rule is A→B. it means object crosses the line from area A to area B. The count in increases by one. When the object enters from area B and cross the line to area A, the count out increases by one. The alarm will only be triggered when the count in minus the count out is greater than or equal to the set Alarm Number count. The interface is as shown in the figure below.

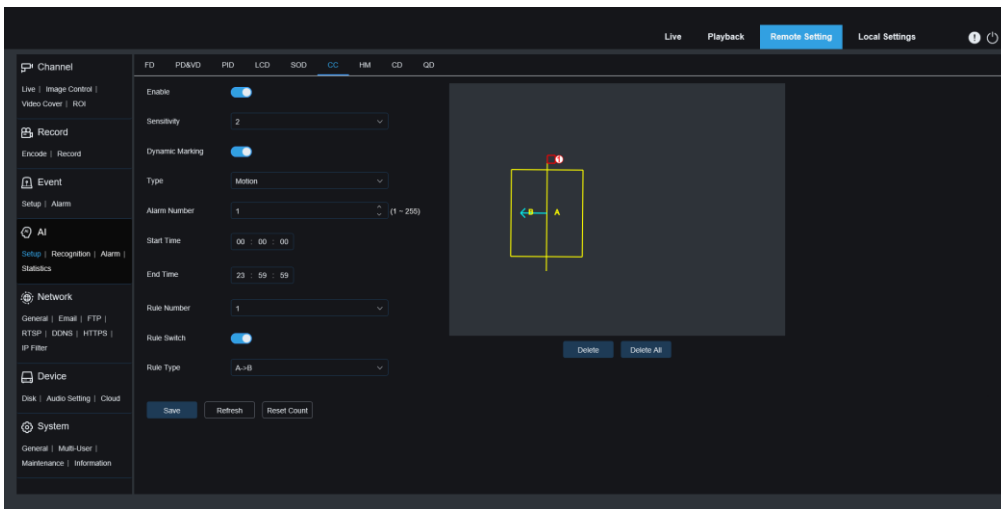


Figure 8.22

- **Enable:** Enable or disable CC
- **Sensitive:** The sensitivity of triggering Cross Counting can be set as 1-4. The larger the value is, the more sensitive CC alarm is. The default sensitivity of perimeter intrusion detection is set as 2.

- **Dynamic Marking:** choose to show or don't show the track
- **Type:** There are three types. Motion, person, Vehicle.
- **Alarm Number:** Count the number of alarms, set the value from 1-255
- **Start Time:** Set alarm start time
- **End Time:** Set alarm end time
- **Rule Number:** Draw a rule area on the area map, the rule switch and rule type of each rule are independent, and they need to be opened, closed or set separately.
- **Rule Switch:** The switch of each rule.

Rule Type: Setup to each rule, A->B means can detect A to B direction moving, B->A means can detect B to A direction moving.

8.7.1.7 HM – Heat Map

The Heat Map (HM) statistics function uses a logic similar to motion to judge whether there is a change in transmission in each area of the monitoring area, and save and upload the change at 10 minutes intervals. Through a large number of statistics, user can view the change in each area in the scene. This function only supports data logging, not alarm.

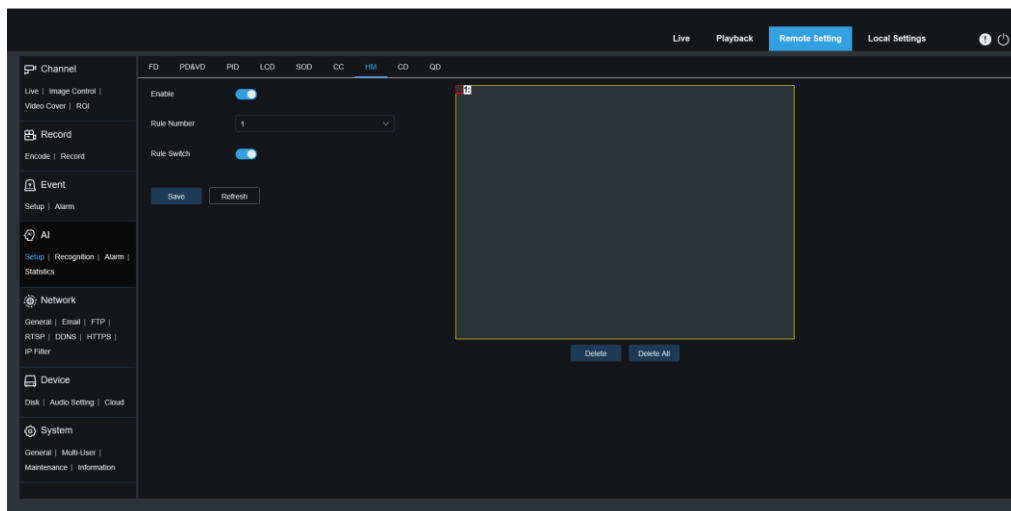


Figure 8.23

- **Enable:** Enable or disable HM
- **Rule Number:** Only one rule is allowed to be turned on. The entire screen has been checked in the default area. If you need to customize the area, check the box in the upper left corner of the screen, and drag the points placed at the four corners of the screen to re-divide the

detection area.

- **Rule Switch:** The switch to rule.

8.7.1.8 CD – Crowd Density Detection

Crowd Density (CD) detection, the way of identifying the human head through the human figure recognition function, recognizes the number of people in the monitoring area. The alarm will be triggered when the number of people exceeds the preset value.

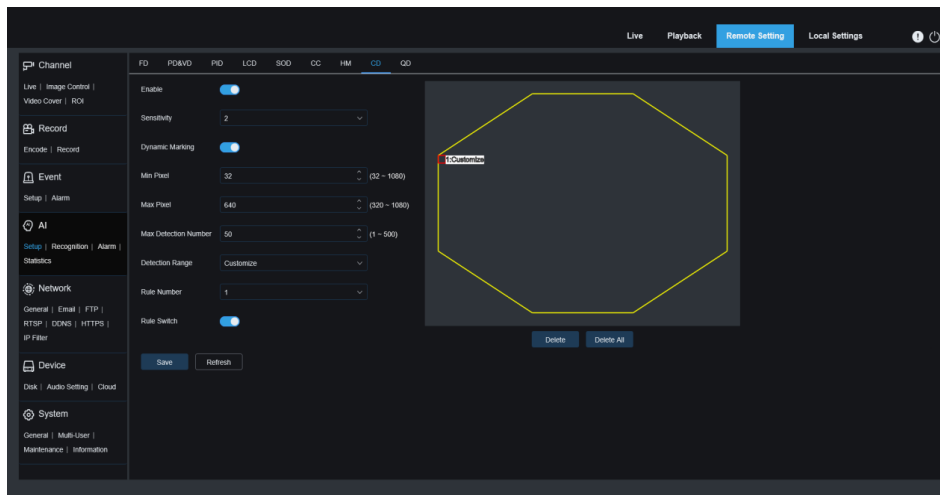


Figure 8.24

- **Enable:** Enable or disable CD
- **Sensitive:** The sensitivity of triggering Crowd Density Detection can be set as 1-4. The larger the value is, the more sensitive CD alarm is. The default sensitivity of perimeter intrusion detection is set as 2
- **Dynamic Marking:** can choose to show or not show the track
- **Min Pixel:** The lowest pixel setting of humans. When the recognized object is smaller than the pixel, no alarm is generated accordingly. It can be set to 32-1080. Note: the figure recognition function recognizes the whole picture as a 1080p picture.
- **Max Pixel:** The highest pixel setting for people. When the recognized object is larger than the pixel, no alarm will be generated accordingly. It can be set to 320-1080. Note: The image recognition function can recognize the entire image as a 1080p image.
- **Max Detection Number:** The number of detections can be set from 1-500
- **Detection Range:** There are two modes for setting detection area. Full Screen & Customize
 - ① **Full Screen:** The detection area is the camera all cover area.

② **Customize:** Select this mode and a region box will appear on the small window. Click the red small box next to the digital ID of the region box to drag or stretch the region.

- **Rule Number:** Only one rule is allowed to be turned on. The entire screen has been checked in the default area. If you need to customize the area, check the box in the upper left corner of the screen, and drag the points placed at the four corners of the screen to re-divide the detection area.

Rule Switch: The switch of the rule.

8.7.1.9 QD – Queue Length Detection

When the queue or the waiting time is too long, an alarm will be triggered by Queuing Detection (QD) function.

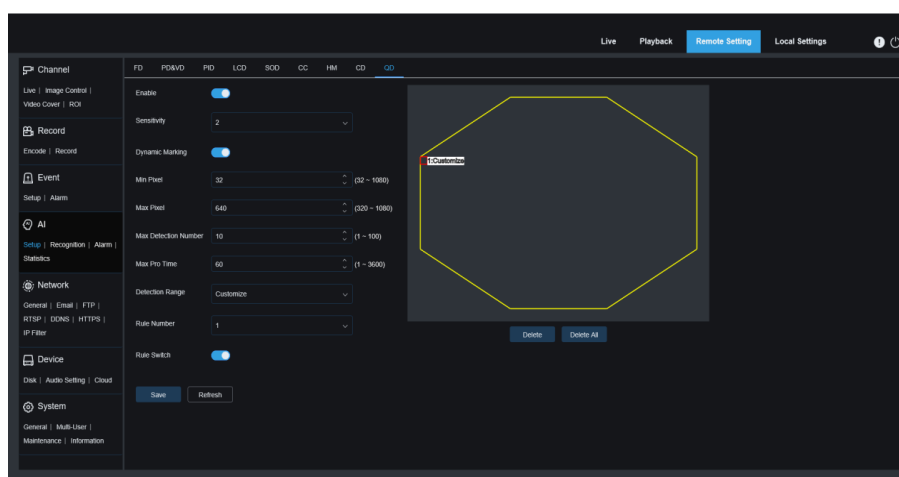


Figure 8.25

- **Enable:** Enable or disable QD
- **Sensitive:** The sensitivity of Queue Length Detection can be set as 1-4. The larger the value is, the more sensitive QD alarm is. The default sensitivity of QD is set as 2
- **Dynamic Marking:** choose to show or don't show the track
- **Min Pixel:** The lowest pixel setting of humans. When the recognized object is smaller than the pixel, no alarm is generated accordingly. It can be set to 32-1080. Note: the figure recognition function recognizes the whole picture as a 1080p picture.
- **Max Pixel:** The highest pixel setting for people. When the recognized object is larger than the pixel, no alarm will be generated accordingly. It can be set to 32-1080. Note: The image

recognition function can recognize the entire image as a 1080p image.

- **Max Detection Number:** the max number of Personnel Detection can be set from 1-100
- **Max Pro Time:** The alarm will be triggered if no one has left the area for more than the set time, can be set to 1-3600
- **Detection Range:** There are two modes for setting detection area. Full Screen & Customize
 - ① **Full Screen:** The detection area is the camera all cover area.
 - ② **Customize:** Select this mode and a region box will appear on the small window. Click the red small box next to the digital ID of the region box to drag or stretch the region.
- **Rule Number:** Only one rule is allowed to be turned on. The entire screen has been checked in the default area. If you need to customize the area, check the box in the upper left corner of the screen, and drag the points placed at the four corners of the screen to re-divide the detection area.

Rule Switch: The switch of rule.

8.7.2 FR - Face Recognition

The face recognition function focuses on identifying the detected object, which requires basic data as a comparison. The firmware establishes a database foundation for face matching through database management functions.

Note: It takes a short period of time to reload the system to modify the database.

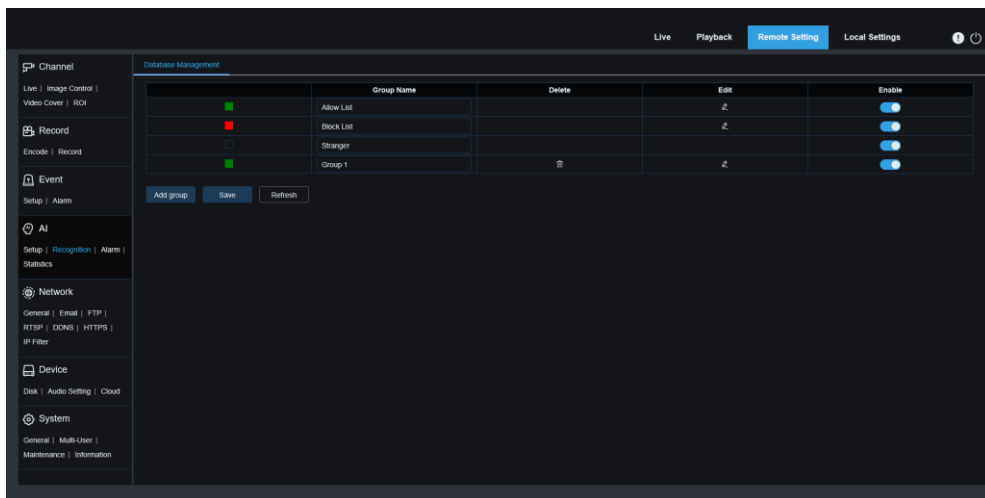


Figure 8.26

Alarm Policy Display: In camera, it only serves as a policy reminder. Green represents the allow

list, red represents the bock list, and colorless represents stranger.

Group Name: Edit and modify the group name, and the specific group name will be prompted when the alarm is pushed.

Delete: Group delete function, the first 3 groups are not allowed to be deleted.

Edit: Open the picture settings for group reference, please refer to following figure for more details.

Enable: Face recognition uses group data for comparison.

Add Group: Add new database group. Max 16 database groups are supported

Click Edit icon to set the data of the corresponding group. The interface is as shown in the figure below.

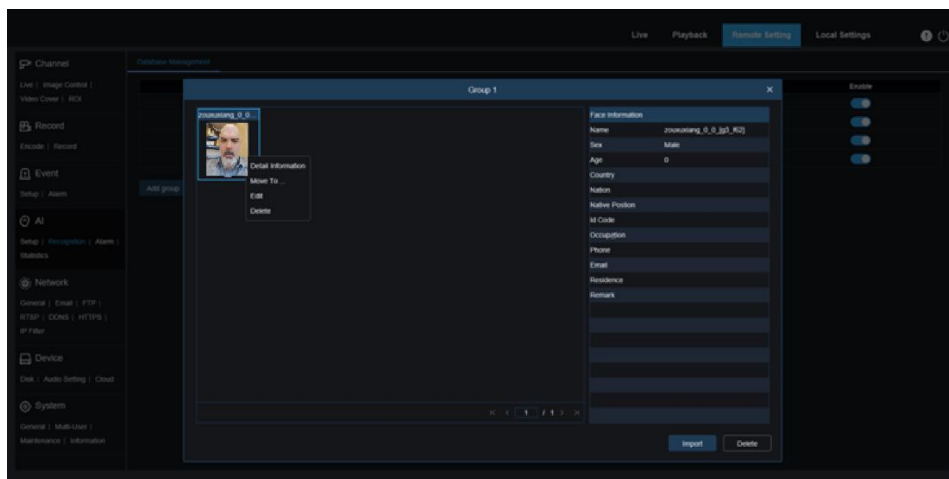


Figure 8.27

Added Picture Display Area: Display the face database pictures of the added group.

Info: Show the information of selected picture.

Detail Information: Right-click Event to view the detailed information of the selected picture.

Move To ...: Right-click Event to move the selected picture to other group.

Edit: Right-click Event to enter the editing interface of selected picture.

Delete: Right-click Event to delete picture.

Import: Add new face data to the current group, you can import local pictures or pictures that have been captured by the camera.

Delete: To delete face data in the database in batches.

8.7.3 Alarm

The alarm can be realized by camera's AI function. It can be divided into 3 categories according to the implementation mode:

The first category includes FD, AD, PD&VD, PID, LCD, SOD, CC, CD, QD. When the camera detects an alarm event, it directly triggers an alarm.

The second category is FR. The camera obtains the alarm picture, recognizes the facial feature value of the picture and compares it with the data in the database, and then trigger the alarm according to the corresponding alarm grouping settings.

The third category is FA. The camera automatically searches for data at a specific time and send an alarm push email.

8.7.3.1 FD, AD, PD&VD, PID, LCD, SOD, CC, CD, QD

When the camera detects an alarm event, it will directly trigger an alarm

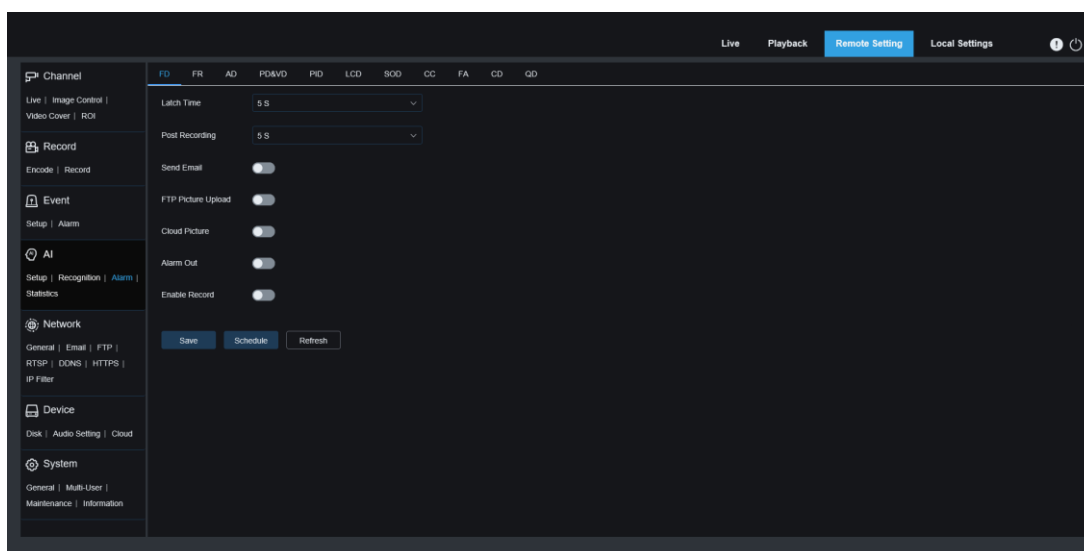


Figure 8.28

Alarm Type: Special option for AD alarm. The camera can alarm by identifying whether the captured object is wearing a mask or not. There are 3 modes.

Close: Disable AD alarm.

NO Mask: Alarm when the target is not wearing a mask.

Wear Mask: Alarm when the target is wearing a mask.

Latch Time: The time that the camera IO alarm continues to alarm after the alarm ends.

Note: The camera needs to support the IO output function, and the working time is controlled by the corresponding schedule.

Post Recording: The duration of recording after the alarm ends.

Note: At the same time, the effective time is controlled by the schedule.

Send Email: Whether the camera sends an email when it alarms.

Note: At the same time, the effective time is controlled by the schedule.

FTP Picture Upload: The camera sends the picture to the associated FTP server when it alarms. When it is triggered continuously, it will be sent in a cycle of 10S until the alarm is end.

Note: At the same time, the effective time is controlled by the schedule. And the FTP server needs to be associated first.

Cloud Picture: The camera sends the picture to the associated cloud storage server when it alarms. When it is triggered continuously, it will be sent in a cycle of 10S until the alarm is end.

Note: At the same time, the effective time is controlled by the schedule, and the cloud storage server needs to be associated first.

Alarm Out Latch Time: Set the switch to enable.

Enable Record Post Recording: Set the switch to enable.

Deterrent: White light associated switch. When an alarm is triggered, the camera will respond to the alarm according to the setting of Remote Setting-Event-Setup-Deterrence. Specifically, it can be divided into white light response and speaker response, which are controlled by the schedule respectively. (Supported by some models with white light function)

Schedule: Set the schedule of Send Email、Alarm Out、FTP Picture Upload、Cloud Picture、Record、Light (Deterrent)、Siren (Deterrent) (Supported by some models with white light function).

8.7.3.2 FR

FR is a face recognition alarm response. The camera is monitoring and tracking the target to capture the face picture. It needs to match the database first, then obtain the related group of the picture, and then directly alarm based on the alarm. When modify parameters, it takes a short period of time to reload.

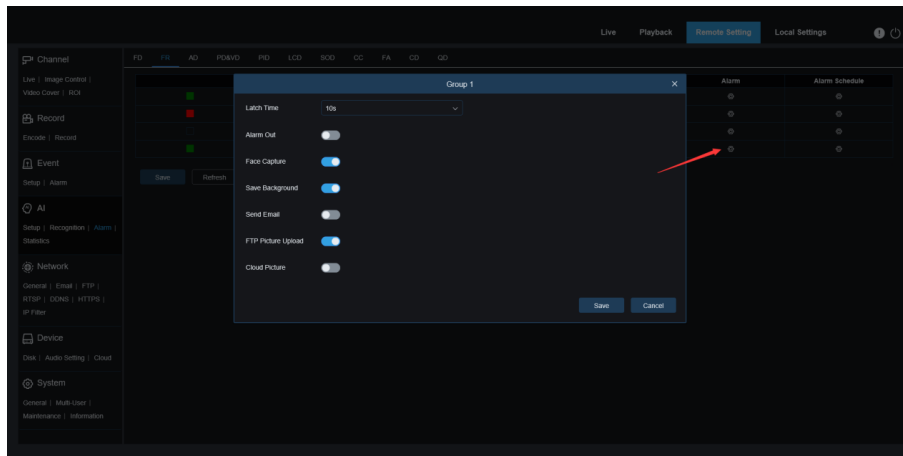


Figure 8.29

Group Name: Edit and modify the group name, and the specific group name will be prompted when the alarm is pushed

Enable: Switch to enable the alarm.

Policy: Alarm policy, the first 3 groups are not allowed to be modified. Other groups can be customized as Allow、Deny.

Similarity: During face matching, if the similarity is greater than the setting, an alarm will be triggered.

Alarm: Switch on the group alarm setting.

Alarm Schedule: Set the effective time of Send Email、Alarm Out、FTP Picture Upload、Cloud Picture in group alarm.

Latch Time: The time that the IO alarm cable continues to alarm when the camera acquires the picture and matching is successful.

Note: The camera needs to support the IO output function, and the working time is controlled by the corresponding schedule.

Alarm Out Latch Time: Set the switch to enable.

Save Picture: Switch to save face snapshot to SD card.

This setting is not controlled by Enable.

Save the Background: The switch to save the face snapshot to the SD card and save the background snapshot at the same time.

This setting is not controlled by Enable.

Send Email: Switch to send emails when group face recognition matches successfully.

This setting is not controlled by Enable.

FTP Picture Upload: The camera sends the picture to the associated FTP server when matching is successful.

Note: At the same time, the effective time is controlled by the schedule, and the FTP server needs to be associated first.

Cloud Picture: The camera sends the picture to the associated cloud storage server when matching is successful.

Note: At the same time, the effective time is controlled by the schedule, and the cloud storage server needs to be associated first.

8.7.3.3 FA - Face Attendance

By Face Attendance (FA) function, camera can retrieve different groups saved in SD card (excluding stranger group) matching the situation of human faces at a specified time. Attendance record can be generated based on the captured records, and can be sent to the associated mailbox.

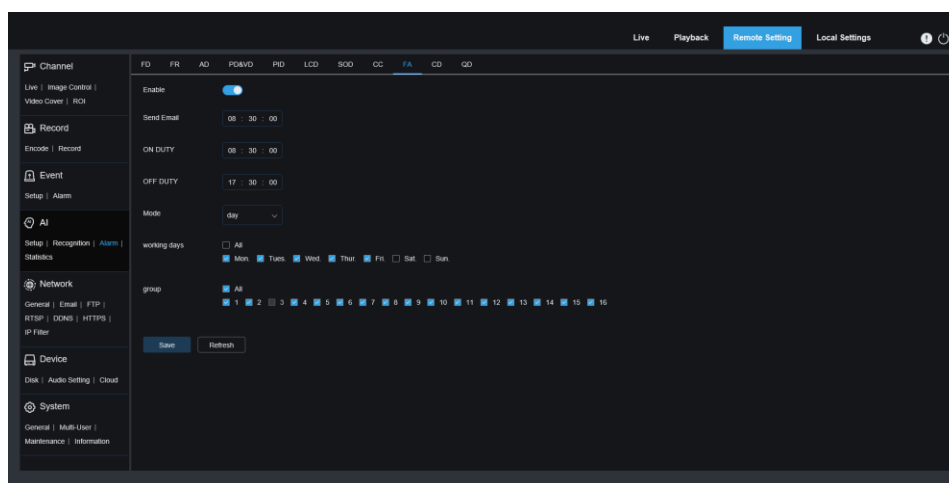


Figure 8.30

Enable: Switch to generate the attendance record automatically by FA

Send Email: Send the time of FA check-in. The firmware retrieves once at a certain interval. When the retrieval time is longer than the set time, the attendance record is automatically generated and sent to email.

Note: No email will be sent if there is no attendance record.

ON DUTY: The reference time of on duty for generating the attendance record.

OFF DUTY: The reference time of off duty for generating the attendance.

Mode: Time for generating and sending attendance record, there are 3 modes.

day: Send the attendance record of the previous day.

Week: If the time is set to Wednesday, the attendance record from last Wednesday to this Tuesday will be sent on Wednesday.

Month: If the time is set to the 15th of each month, the attendance record from the 15th of last month to the 15th of this month will be sent on the set time.

working days: The base number of working days for generating the attendance record.

group: The group is required when generating attendance records.

Note: Stranger group does not support this function, so the group 3 is grayed out by default.

8.7.4 Statistics

This is AI data statistical analysis function.

8.7.4.1 Face Detection

According to the search settings, camera searches the face data stored in the SD card by face detection. The interface of FD data statistics is shown in the following figure.

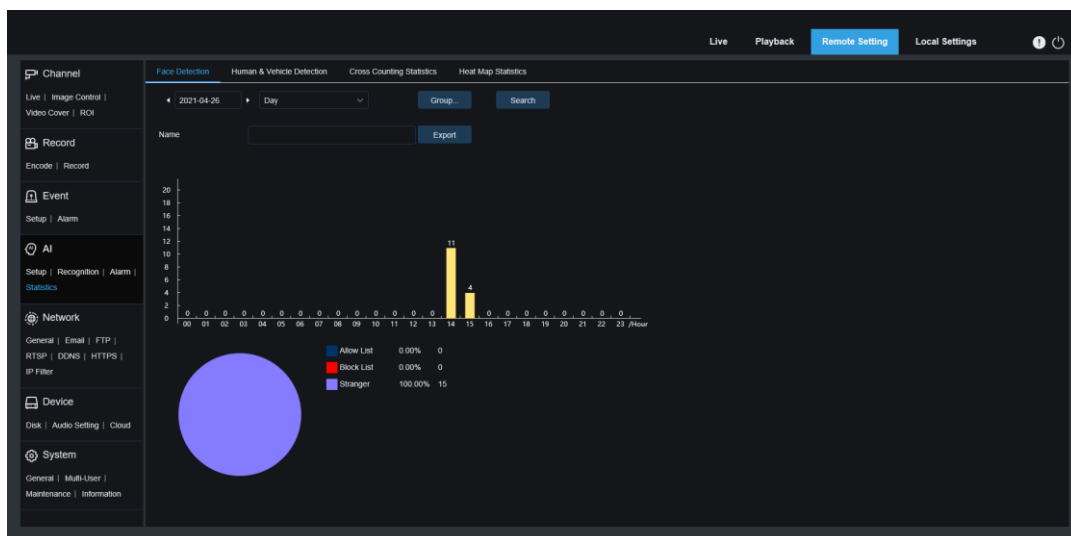


Figure 8.31

Time: The reference time of the search mode.

Search Mode: It supports 5 time modes, such as Day, Week, Month, Quarter and Year **Group:** The group to be retrieved when searching for statistics.

Search: Search the data again according to the search settings.

Export: Need to add the export file name, and export the search data by Excel file.

Display Area: Display the search results in the form of a chart in below.

8.7.4.2 Human & Vehicle Detection

Human & Vehicle data statistics includes PD&VD, PID, LCD alarms. The interface of Human & Vehicle data statistics is shown as below.

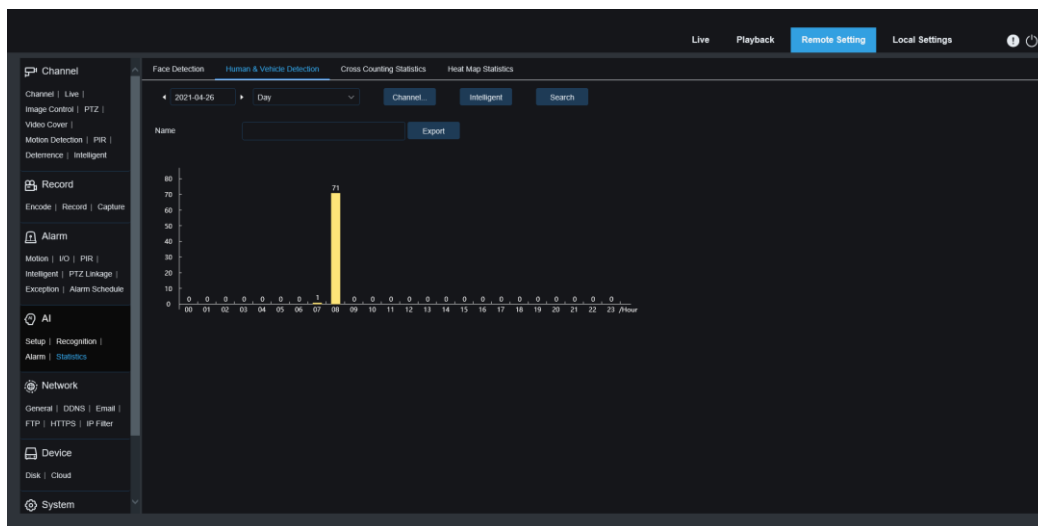


Figure 8.32

Time: The reference time of the search mode.

Search Mode: It supports 5 time ranges, such as Day, Week, Month, Quarter and Year

Intelligent: Search based on the type of mark when capturing the snapshot. There are 6 types of snapshots: PID[Human], PID[Vehicle], LCD[Human], LCD[Vehicle], Human, Vehicle.

Search: Search the data again according to the search settings.

Export: Need to add the export file name, and export the search data by Excel file.

Display Area: Display the search results in the form of a chart in below.

8.7.4.3 Cross Counting Statistics

The interface of Cross Counting Statistics is shown as below.

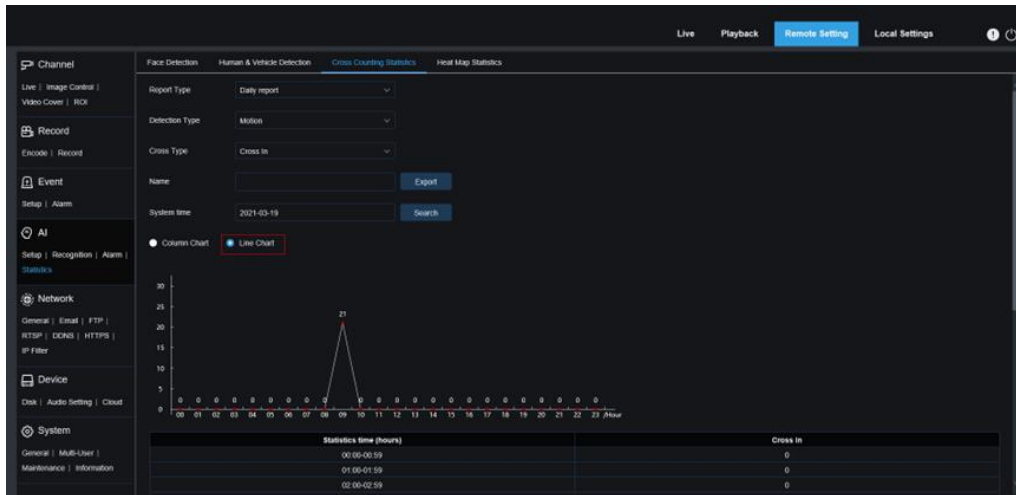


Figure 8.33

Report Type: Data search supports four time ranges: Daily report, Weekly report, Monthly report, and Annual report.

Detection Type: Set the corresponding alarm type. There are three types, For example, if the data is from the alarm triggered by Motion, it cannot be searched by other alarm types like Person or Vehicle.

Cross Type: Search data according to the statistical method of crossing the line. There are two types: Cross In and Cross Out.

Export: Need to add the export file name, and export the search data by Excel file.

System time: The reference time of the selected Report Type.

Mode: Choose to display the data as a bar graph or a line graph.

Display Area: Display the current search results in the form of graphs.

Search: Search the data again according to the search settings.

8.7.4.4 Heat Map Statistics

The heat map function is to record the changes in the monitoring area in a way similar to motion. Heat Map Statistics displays the data recorded in SD in an image format. The interface is shown in the below figure.

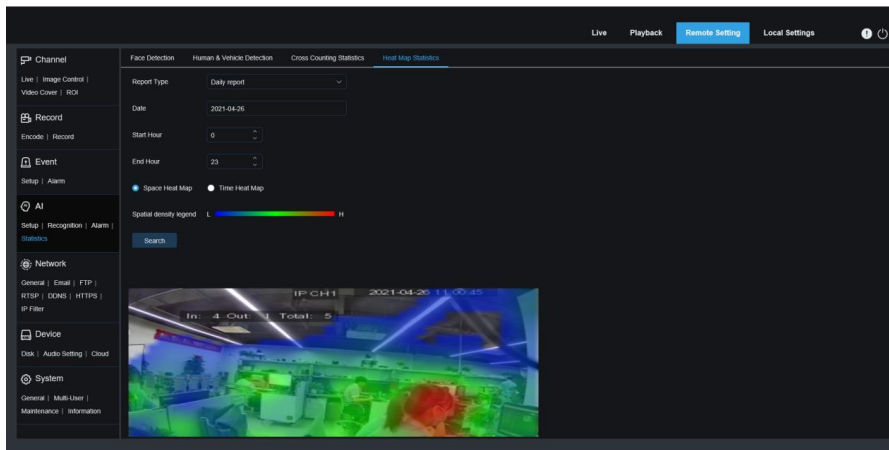


Figure 8.34-1

Report type: including day / week / quarter / year;

Date: select a specific date;

Start hour - end hour: sets the start and end time periods.

Select the "space heat map" button and click "search", and the search results will be displayed in pictures, as shown in figure 4-4-1. The more motion activity in the currently selected area, the darker the color. The color shows blue to red, corresponding to light to dark.

Select the "time heat map" type and click the "search" button, and the statistical table is displayed in a column chart at the bottom, as shown in Figure 8.34-2.

Note:

The time heat map is a statistical of the number of targets in the current range for each frame of data processed. Since the number has been accumulated, NVR will re normalize the data, so there is no actual corresponding value for the data at this time.

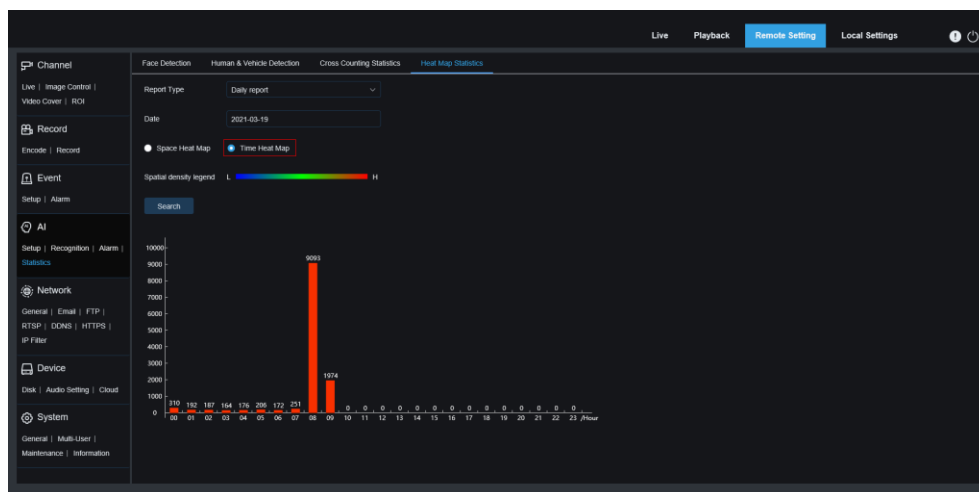


Figure 8.34-2 Time Heat Map menu

8.8 Network

This menu allows you to configure network parameters such as PPPoE, DHCP and SNMP. The most common type is DHCP. In most cases, the network type is DHCP unless you manually set a static IP. If you need to authenticate the user name and password to connect to the network, please choose PPPoE.

8.8.1 General

8.8.1.1 General

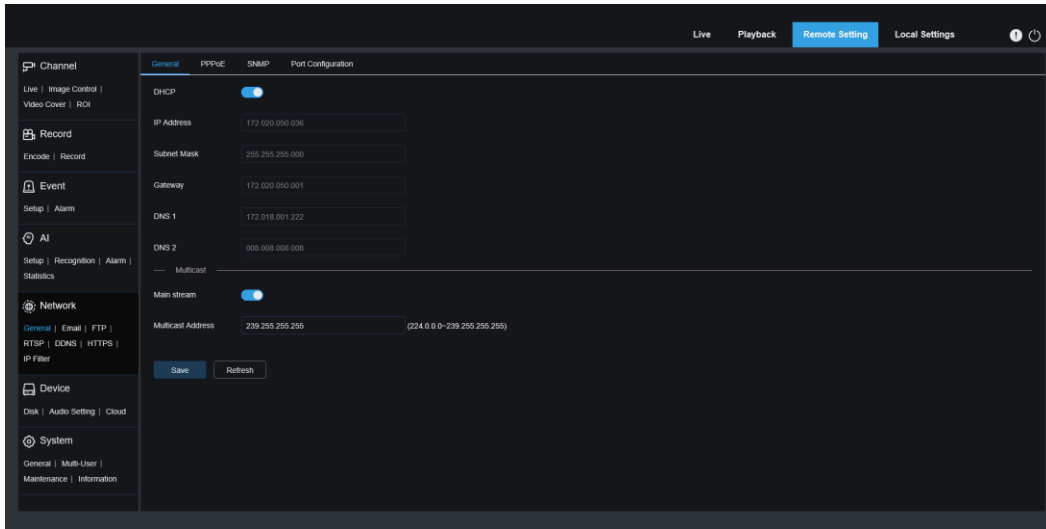


Figure 8.35

If connecting to a router that allows the use of DHCP, check the DHCP box. The router will automatically assign all network parameters to the camera unless you manually set the following parameters for the network:

IP Address: IP address is the identification of IPC in the network. It consists of four groups of numbers between 0 and 255, separated by periods. For example, "192.168.001.100".

Subnet Mask: It is a network parameter that defines the range of IP addresses that can be used in the network. If the IP address is like the street where you live, then the subnet mask is like a community. The subnet address also consists of four sets of numbers, separated by periods. For example "255.255.000.000"

Gateway: This address allows IPC to access the network. The format of the gateway address is the same as the IP address. For example, "192.168.001.001".

DNS1/DNS2: DNS1 is the primary DNS server, and DNS2 is the backup DNS server. It is usually sufficient to enter the DNS1 server address.

Main Stream: After checking, you can use the main stream for multicast.

Multicast Address: Set the multicast address.

8.8.1.2 PPPoE

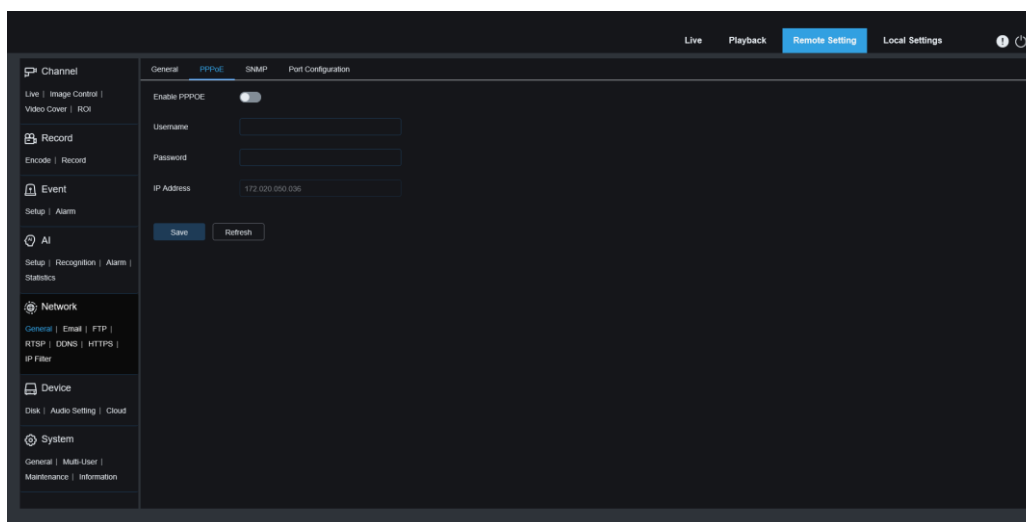


Figure 8.36

This is an advanced protocol that allows IPC to connect more directly to the network through a DSL modem.

Check the "Enable PPPOE" box, and then enter the PPPoE username and password.

Click "Apply" to save, and the system will restart to activate the PPPoE settings.

8.8.1.3 SNMP

Simple Network Management Protocol (SNMP), a standard application layer protocol, is specifically designed to manage network nodes (like servers, workstations, routers, switches, and HUBS, etc.) in an IP network.

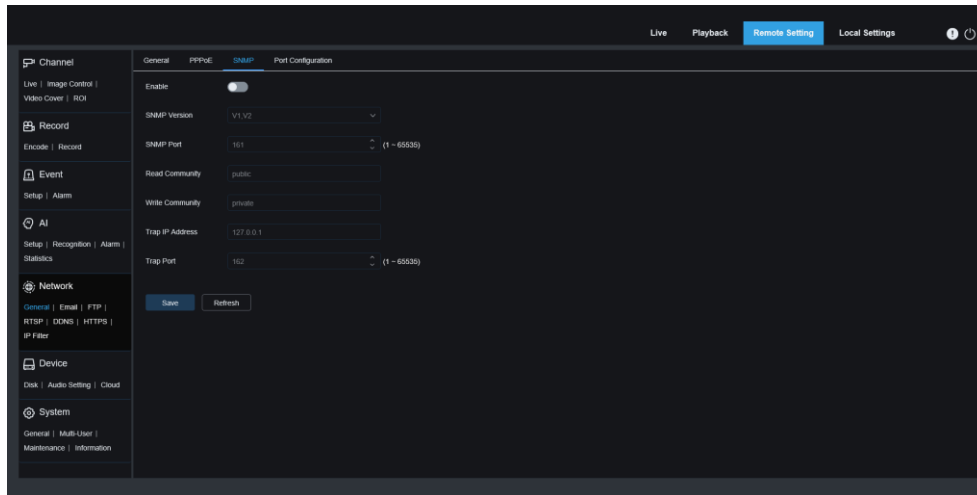


Figure 8.37

Enable: Enable or disable SNMP.

SNMP Version: Set the version of the SNMP server. V1, V2, V1, V2 and V3 are optional.

SNMP Port: Set the port of the SNMP server.

Read Community: Set the Read Community value of the SNMP server.

Write Community: Set the Write Community value of the SNMP server.

Trap IP Address: Set the Trap IP address of the SNMP server.

Trap Port: Set the Trap port of the SNMP server.

8.8.1.4 Port Configuration

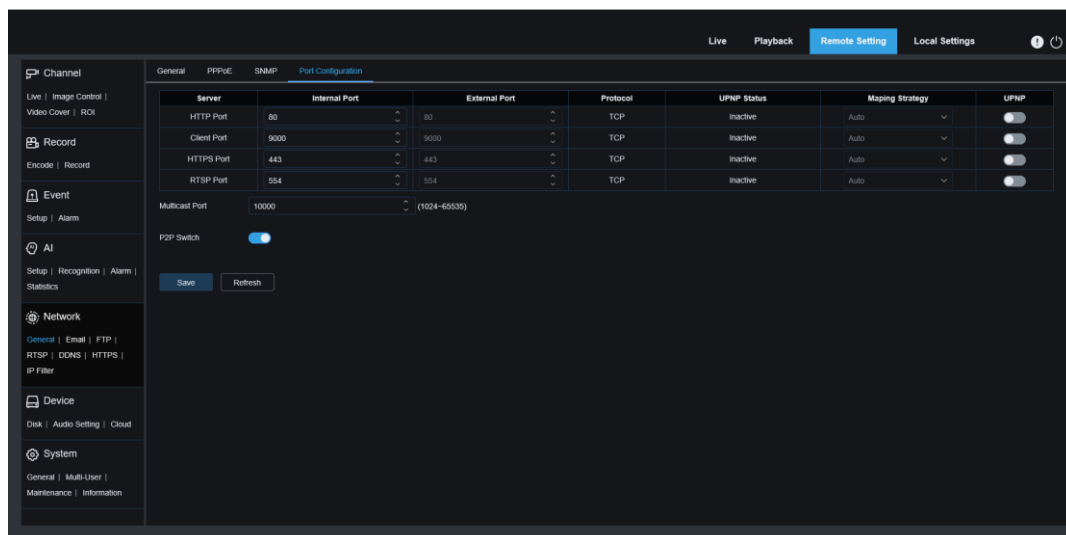


Figure 8.38

Web Port: This is the port you use to log in to the IPC remotely (for example, using a web client). If other application is already using port 80, please change it.

Client Port: This is the port that IPC will use to send information (for example, using a mobile application). If other application already uses the default port 9000, please change it.

RTSP Port: The default value is 554. If other applications have already used the default port 554, please change it.

HTTPS: It is an HTTP channel for security. On the basis of HTTP, the security of the transmission process is guaranteed through transmission encryption and identity authentication.

UPNP: If you want to use Web Client to log in to the device remotely, you need to complete port forwarding on the router. If your router supports UPnP, please enable this option. In this case, you do not need to manually configure port forwarding on the router. If your router does not support UPnP, please manually complete port forwarding on the router.

Multicast port: Multicast port can be set.

P2P Switch: P2P switch, P2P will not take effect after it is turned off.

8.8.2 Mail Settings

This menu allows you to configure email settings. If you want to receive notifications via email when an alarm is triggered or the hard drive is full, please complete these settings.

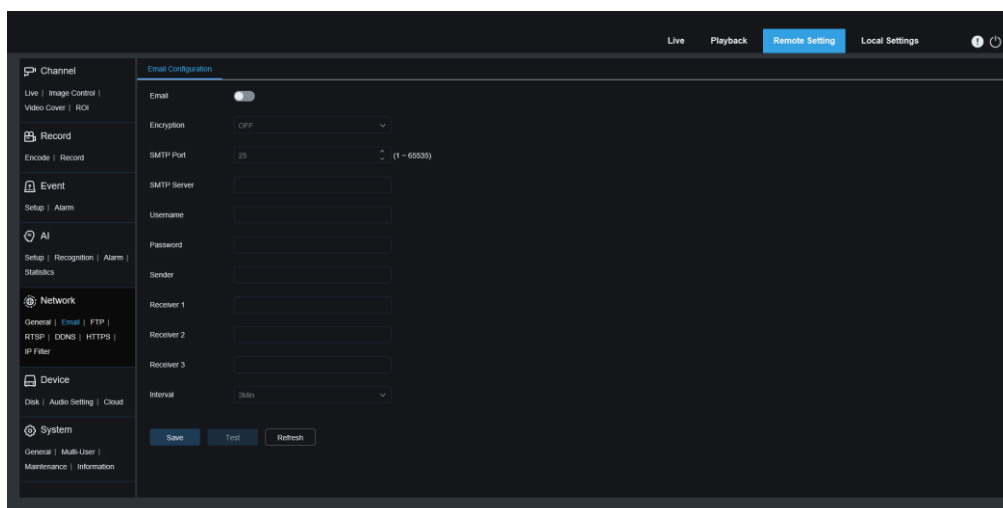


Figure 8.39

Email: Check to enable

Encryption: If your email server requires SSL or TLS authentication, please enable it. If you are not sure, please set to "Auto".

SMTP Port: Enter the SMTP port of the email server.

SMTP Server: Enter the SMTP server address of the e-mail.

User Name: Enter your email address

Password: Enter your email password

Receiver 1~3: Enter the email address you want to receive event notifications from IPC.

Interval: Configure the time interval between IPC notification emails.

To make sure all settings are correct, click "Test Email". An email will be sent to your mailbox. If you receive a test email, it shows the configuration parameters are correct.

8.8.3 FTP Server Settings

Through this menu, you can enable the FTP server to view pictures and videos uploaded from IPC to FTP.

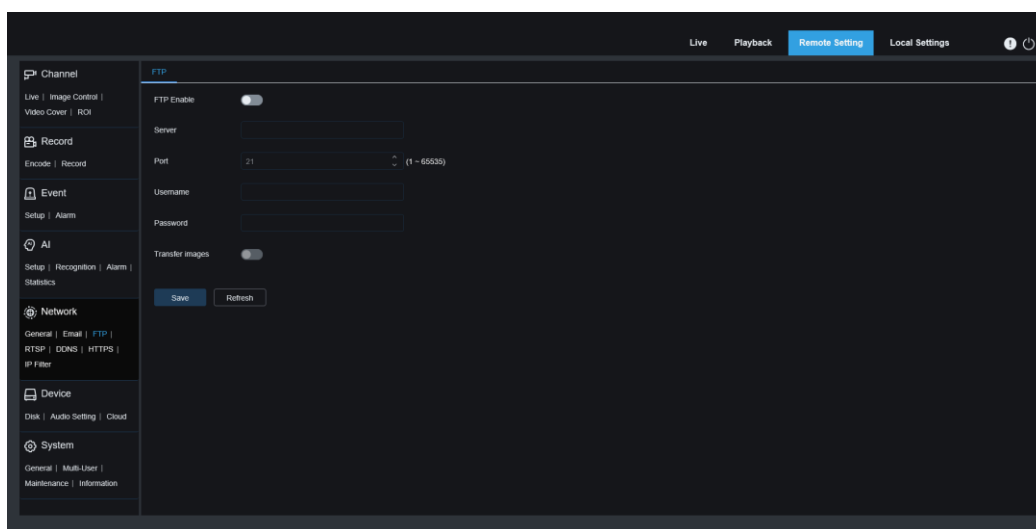


Figure 8.40

FTP Enable: Click to enable FTP function.

Server: Enter the IP address or domain name of your FTP server.

Port: Enter the FTP port.

Name/ Password: Enter the username/password of your FTP server.

Transfer images: After checking, the alarm pictures will be uploaded to the FTP server, otherwise only text warnings will be uploaded.

8.8.4 RTSP Settings

RTSP (Real Time Streaming Protocol), RFC2326, is an application layer protocol in the TCP/IP protocol system. This protocol defines how one-to-many applications can effectively transmit multimedia data through an IP network. It allows you to view real-time images through video player.

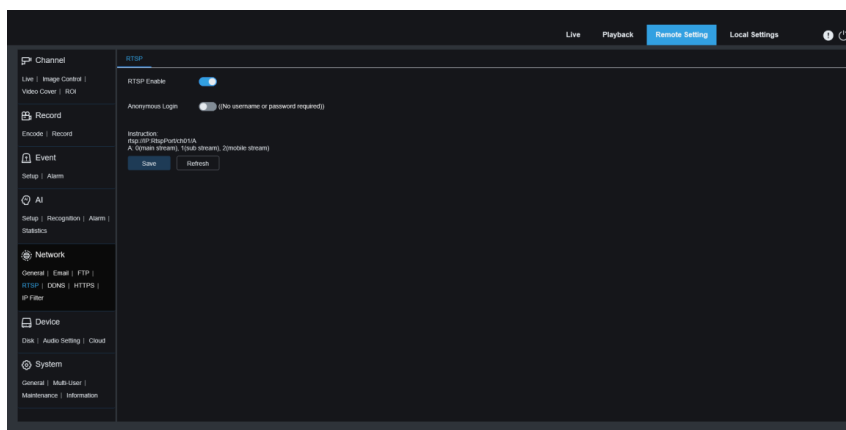


Figure 8.41

RTSP Enable: Turn on/off. This protocol can be used only after it is on.

Anonymous Login: Anonymous login. After it is enabled, the protocol can be used without authentication.

8.8.5 DDNS Settings

This menu allows you to set DDNS. DDNS provides a static address to simplify the remote connection with IPC. To use DDNS, you first need to create an account on the webpage of the DDNS service provider.

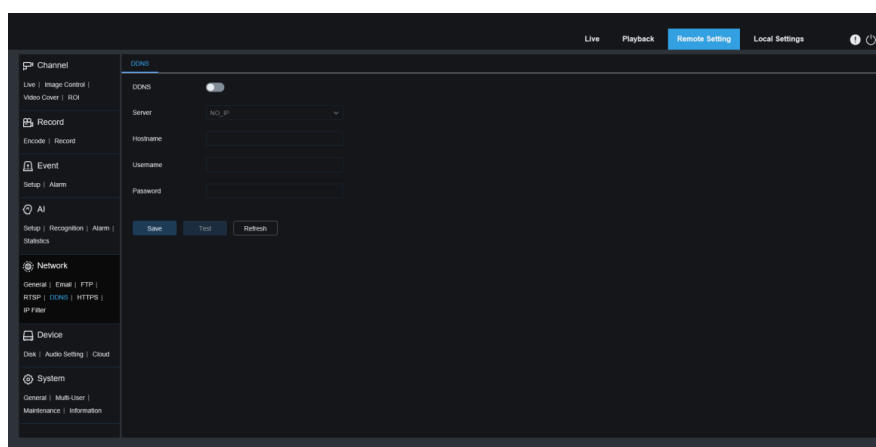


Figure 8.42

DDNS: Check to enable DDNS.

Server: Select the preferred DDNS server (DDNS_3322, DYNDNS, NO_IP, some support CHANGEIP, DNSEXIT).

Hostname: Enter the domain name you created on the webpage of the DDNS service provider. This is the address you type in the URL box when you want to connect to the IPC remotely via a PC.

User/Password: Enter the user name and password of the account you created.

After entering all parameters, click "Test DDNS" to test the DDNS. If the test result is "Network unreachable or DNS error", please check whether the network is normal or whether the DDNS information is correct.

8.8.6 HTTPS Setting

The camera can be connected via HTTPS protocol, which can be set in this menu.

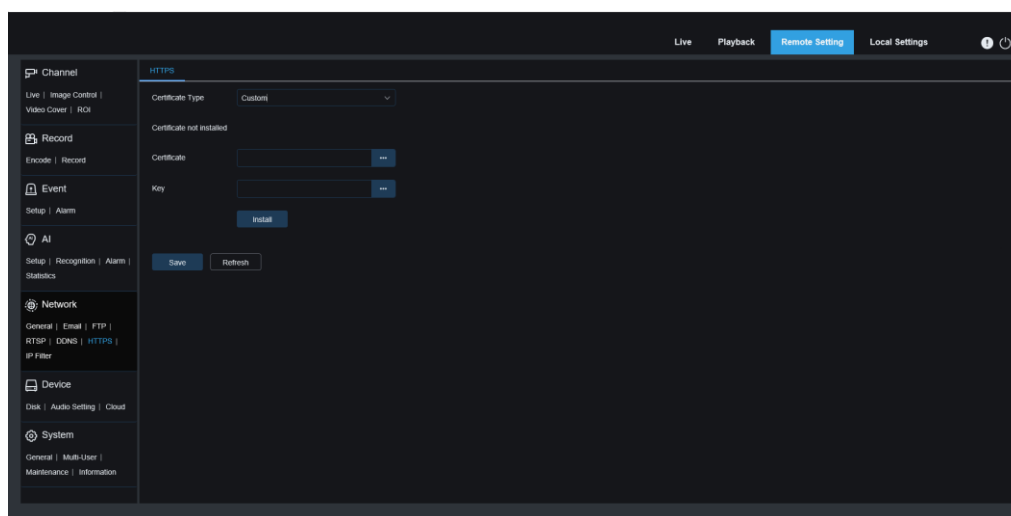


Figure 8.43

Certificate Type: Authentication type. There are two types: default and custom. Custom allows you to use your own certificate to connect to the camera.

Certificate: Under the custom type, a custom certificate must be selected.

Key: Under the custom type, a custom Key file must be selected.

8.8.7 IP Filter

This function can set the allow list and block list of cameras.

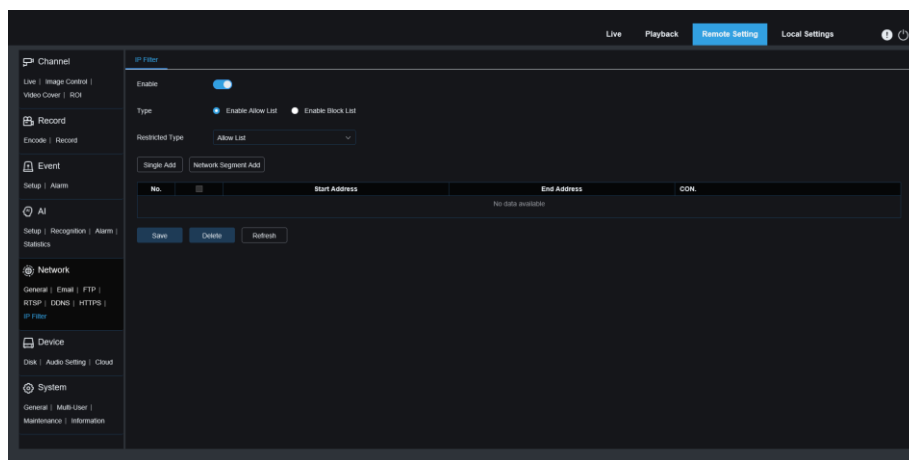


Figure 8.44

Enable: Enable or disable filter function. After enabling, allow list and block list are optional.

Restricted Type: Select the list (allow list and block list) to be set.

Start Address: Enter the start address.

End Address: Enter the end address.

8.9 Camera Management

8.9.1 Disk Management

This menu allows you to check and configure the internal TF card. Formatting is only required for the first access or when replacing a new TF card.

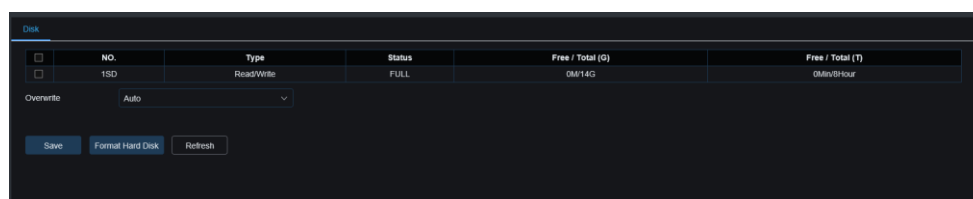


Figure 8.45

Format Hard Disk: Select the TF card to be formatted, and then click Format Hard Disk. To start formatting, you need to enter your username and password, and then click OK

Overwrite: When TF card is full, use this option to overwrite the old records on the TF card. Select Auto, when the TF card is full, the initial data will be automatically overwritten. If you do not

want any old videos to be overwritten, please select OFF. If this function is disabled, please check the TF card status regularly to ensure that the TF card is not full.

8.9.2 Audio Setting

This menu can set the volume of the camera.

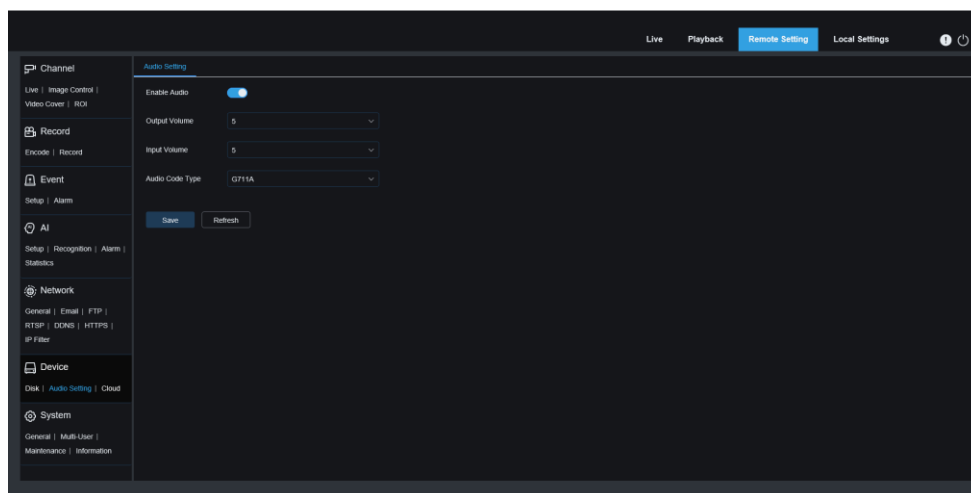


Figure 8.46

Enable Audio: Turn on/off audio.

Output Volume: Set the volume of output audio.

Input Volume: Set the volume of input audio.

Audio Code Type: Set the audio decoding type. G711A and G711U are supported.

8.9.3 Cloud

The camera can upload snapshots or videos to cloud services through Dropbox, which is a free service that allows you to easily store and share pictures.

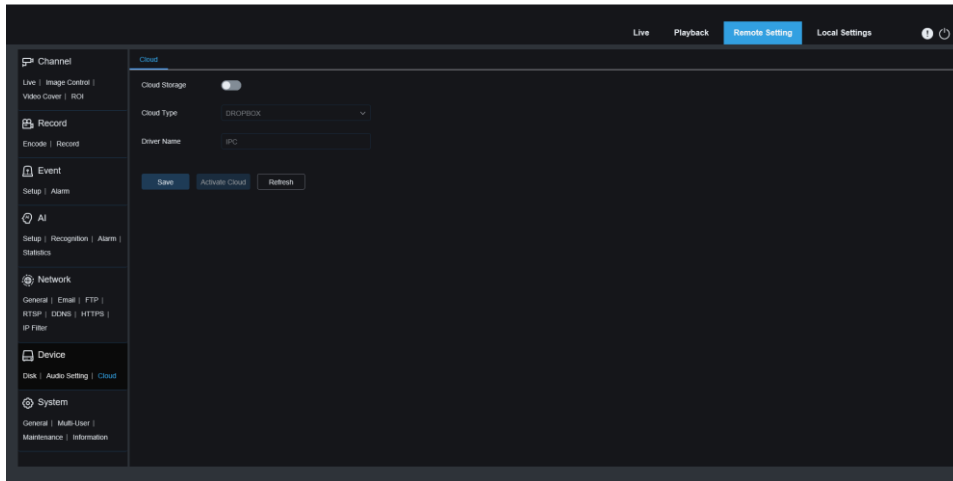


Figure 8.47

Before enabling the cloud storage function, it is recommended to create a Dropbox account with email username and password. After creation, log in to www.dropbox.com, enter the email address and password, and click the login button after agreeing to the terms.

Cloud Storage: Click to enable this function

Cloud Type: Choose cloud storage type, including Dropbox and Google Drive.

Drive Name: Enter the name of the folder created by your IPC in cloud storage

Activate Cloud: Click to activate this function. After a while, the web page will automatically jump to the associated link of Dropbox. Enter the correct username and password to associate.

8.10 System

Is used to change system infos, such as date, time and region, password and permissions, etc.

8.10.1 General

8.10.1.1 Date and time

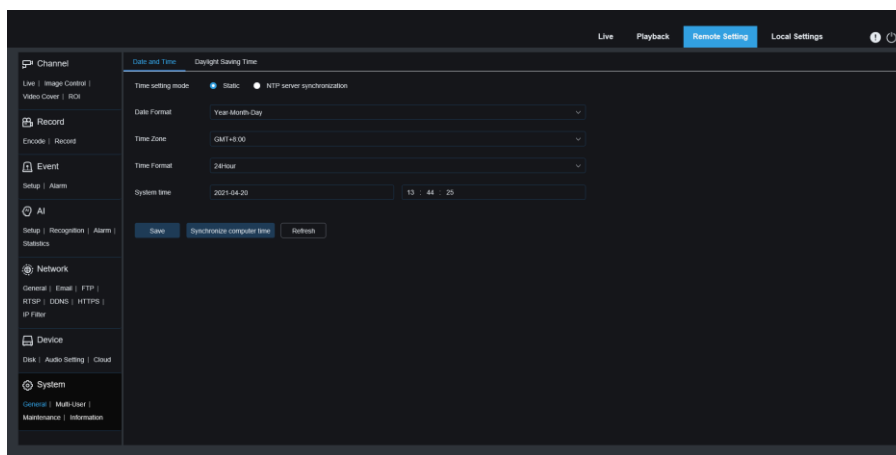


Figure 8.48

Time setting mode: Time mode, there are static and NTP synchronization optional. Static time needs to be set by yourself, while NTP synchronization will perform time calibration via network.

Date Format: Set the date format.

Time Zone: Select the time zone related to your area or city.

Time Format: Select the preferred time format.

System Time: Click the box to change the date and time.

Synchronize computer time: Synchronize the time to the computer time.

If NTP synchronization is selected, the time cannot be set manually at this time.

Sever Address: The automatic time calibration website can be chosen.

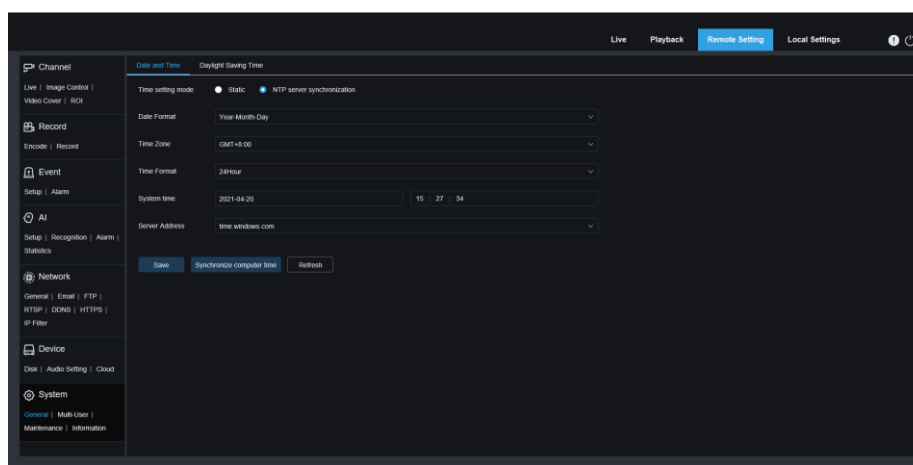


Figure 8.49

8.10.1.2 Daylight Saving Time (DST)

This function allows you to choose to increase DST in a specific time zone or region.

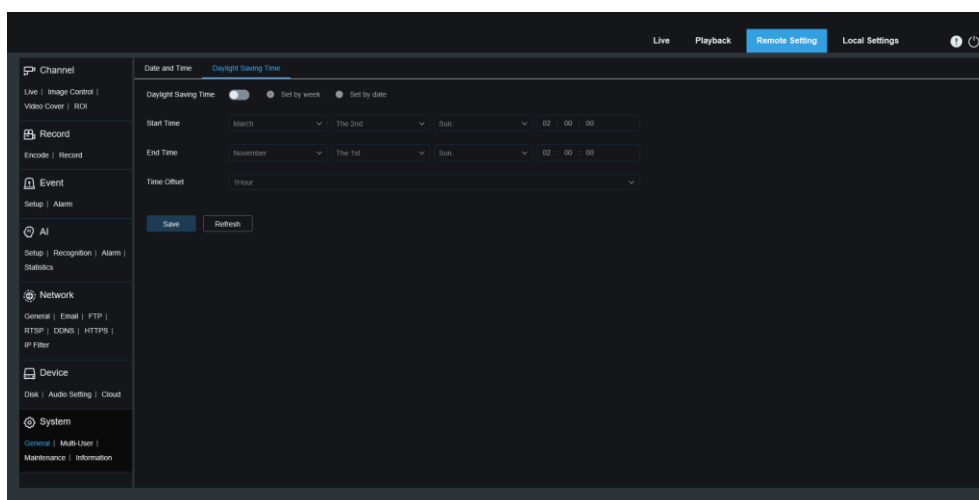


Figure 8.50

Daylight Saving Time: If your time zone uses DST, please enable this option.

Set by week: Select the month, specific week and time for DST to start and end. For example, at 2 AM on the first Sunday of a month.

Set by date: Select the start and end date and time of DST.

Start Time / End Time: Set the start time and end time of DST.

Time Offset: Select the time that DST increases in your time zone. This is the difference between Coordinated Universal Time (UTC) and local time.

8.10.2 Multi-user management

This menu allows you to configure user name, password and user permissions

The system supports the following user types:

ADMIN —System Administrator: The administrator can fully configure the system, and can change the administrator password and user password, and enable/disable password protection.

USER — Ordinary user: The user only has access to preview, search, playback and other functions. You can set up multiple users with different system access permission.

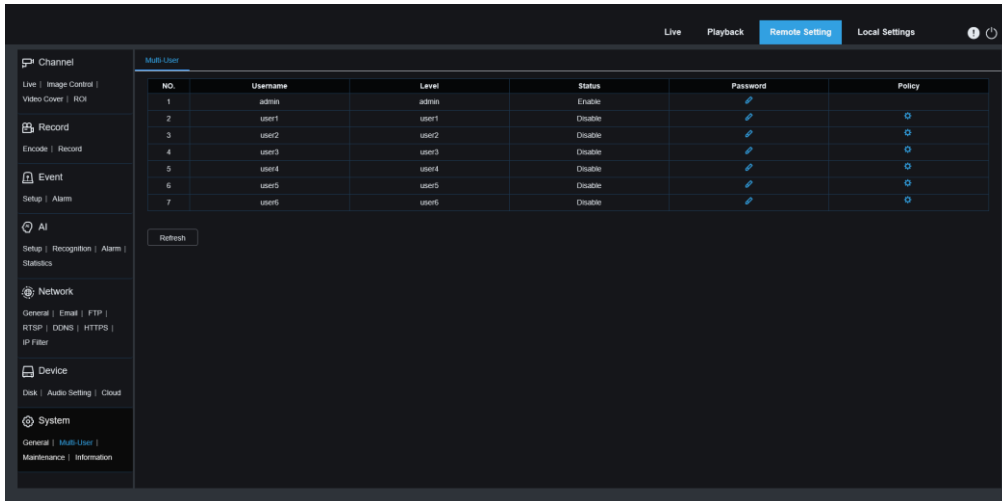


Figure 8.51

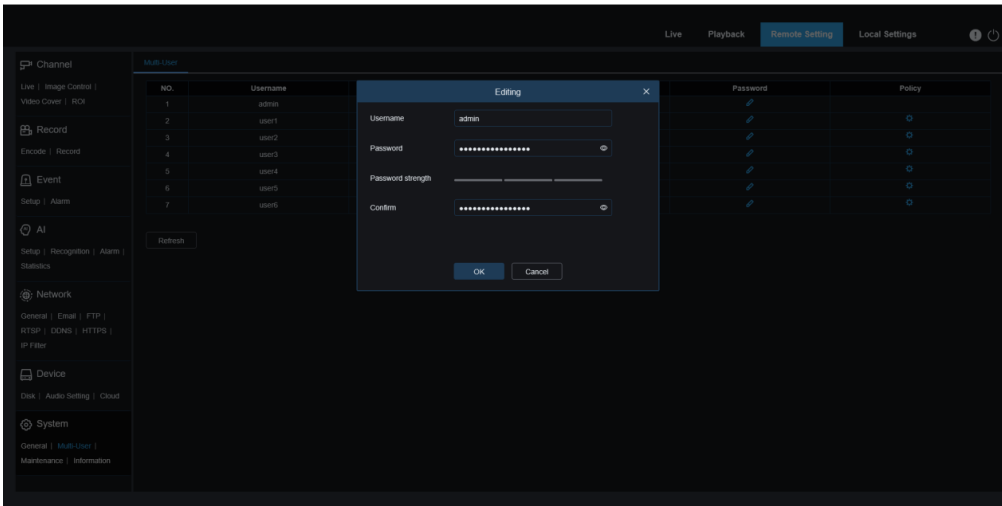


Figure 8.52

To change the administrator's or user's password, click the "Editing" icon. The password must be at least 8 characters and must be composed of numbers, letters and symbols. Enter the new password again to confirm. Save the new password, the system will ask you to enter the old password for authentication.

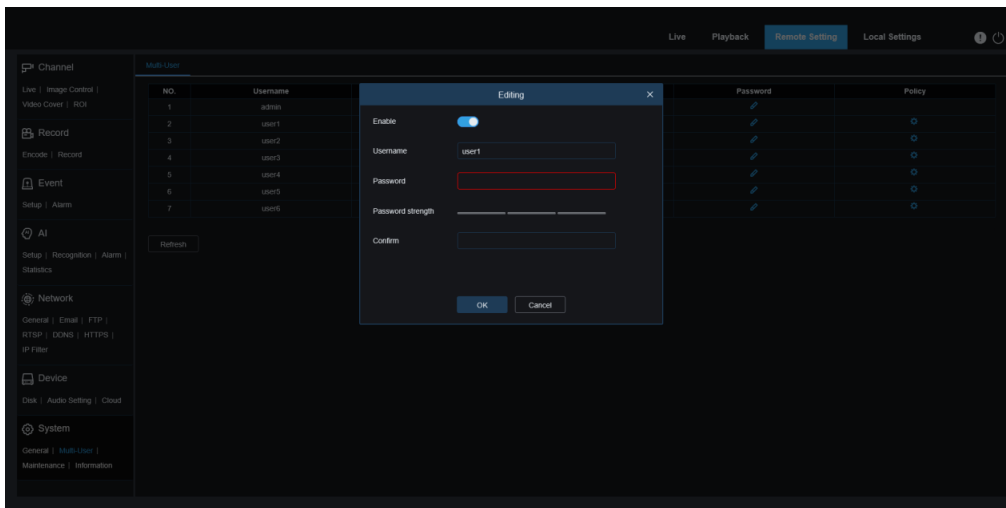


Figure 8.53

1. Select one of the disabled users and click "Editing" icon.
2. Check "Enable" to enable the user.
3. Click "User Name" to edit user name.
4. Click the area next to Password to enter the required password.
5. Click the area next to Confirm to re-enter the password.
6. Click Save. You need to enter the administrator password for authentication.

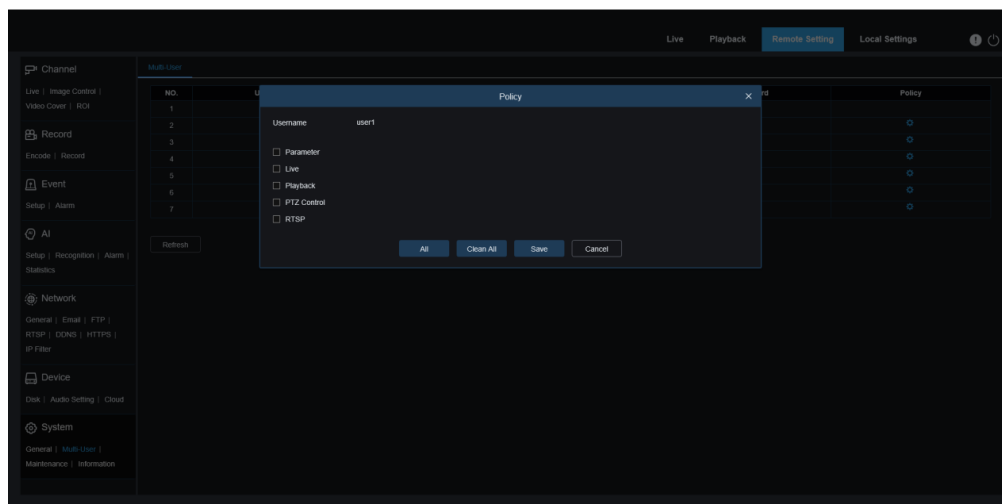


Figure 8.54

Set the user's permission and check the box corresponding to the function. Click All to select all boxes. Click Clear to clear all boxes.

8.10.3 System Maintenance

In this menu, you will be able to search and view system logs, restore factory settings, upgrade the system, export and import system parameters, and configure system's automatic reboot.

8.10.3.1 Log Management

The system log shows important system events such as motion alarms and system warnings. You can easily import the system log backup file to the computer within a set period of time.

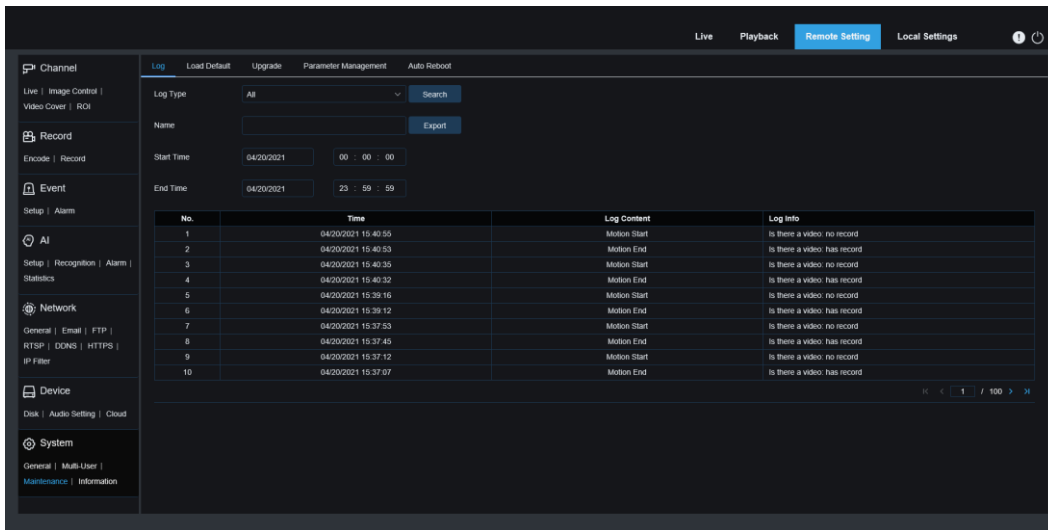


Figure 8.55

Log search and backup:

1. Click the area next to Start Time and select the start date and time from the on-screen calendar
2. Click the area next to End Time and select the end date and time from the on-screen calendar.
3. Select the event type you want to search from the drop-down list next to Log Type, or select All to view the entire system logs for the selected time period. Optional types are: system log, configuration log, alarm log, account log, recording log, storage log, and network log.
4. Select the type of event to search from the drop-down list next to Minor Type (if ALL is selected for Log Type, there will be no such menu), or select All to view the entire system logs for the selected time period. The optional types are:
 - **system:** System settings, reboot, automatic reboot, upgrade, time setting and NTP time adjustment.

·**configuration:** IPC preview control, privacy zone setting, recording mode setting, recording plan setting, main stream setting, network setting, sub-stream setting, mail setting, color setting, motion detection setting, hard disk setting, multi-user setting, NTP settings, image control, mobile stream settings, RTSP settings, IP filter settings, factory reset, audio settings, video occlusion alarm settings, export settings and import settings.

·**alarm:** Motion detection start, motion detection end, IO alarm start, IO alarm end, PID start, PID end, LCD start, LCD end, SOD start, SOD end, PD&VD start, PD&VD end , FD start, FD end, CC start, CC end, CD start, CD end, QD start, QD end, sound alarm start and sound alarm end.

·**account:** Login, logout and switch users.

·**recording:** Search, playback and backup.

·**storage:** Format hard disk, hard disk is full, and hard disk error.

·**network:** Offline, online, network error and network mode change.

1. Click Search to search.

2. Browse the system log from the selected time interval:

7. Switch the pages of system log events by such buttons like .

Enter the export file name in the field next to Name. Click Export to create a backup of system logs.

8.10.3.2 Restore factory settings

Reset camera to factory settings. You can choose to reset all settings at once or reset the specific settings only.

Note: Restoring the default settings will not delete the videos and snapshots saved in the SD card.

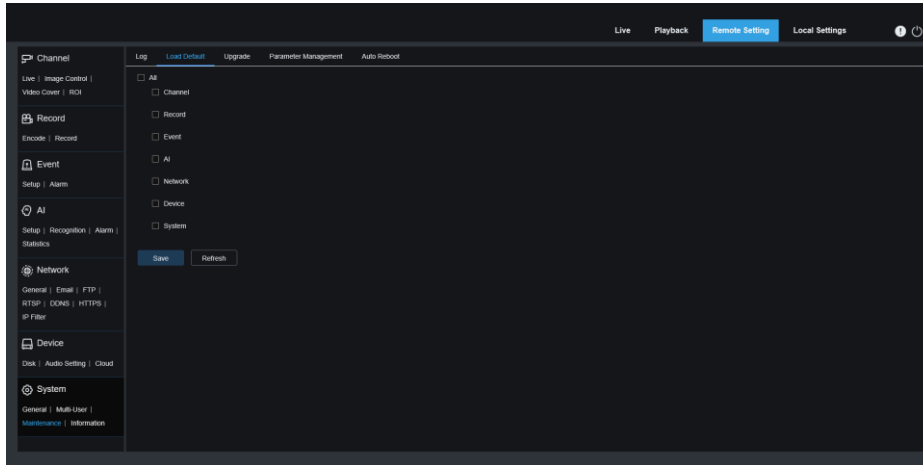


Figure 8.56

Select items to be restored, or click "All" to select all items. Click "Save" to load the default settings.

8.10.3.3 System Upgrade

This menu allows to upgrade camera's firmware.

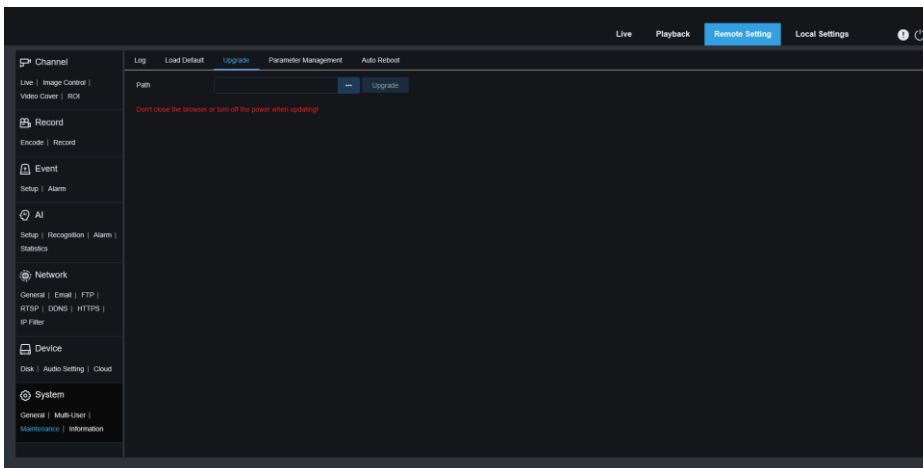


Figure 8.57

1. Put the firmware file (.sw file) on the computer hard disk.
2. Click "..." beside "Path" and select the firmware file in the computer.

Click Upgrade button to start. The upgrade will last about 5-10 minutes, please do not turn off the power of the camera or close IE during this period.

8.10.3.4 Parameter management

You can export the configured main menu parameters to the computer, or import the exported

settings file from the computer to the camera.

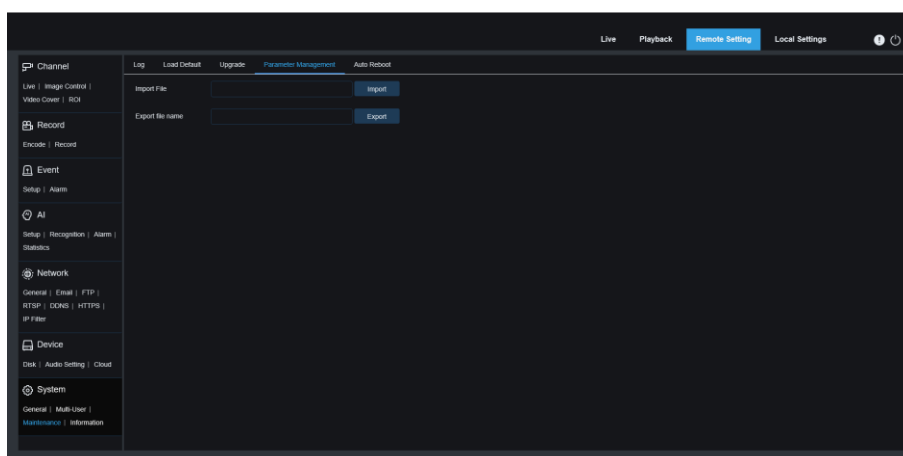


Figure 8.58

Import File: Click the box, and the path window will pop up. After selecting the parameter file, click Import to start importing the parameters.

Export File Name: Click the box to enter the file name of the exported parameters. Click Export to export parameters

8.10.3.5 Automatic Maintenance

This menu allows the system to automatically reboot periodically. It is recommended to keep this function enabled, because it can maintain the operational stability of the camera.

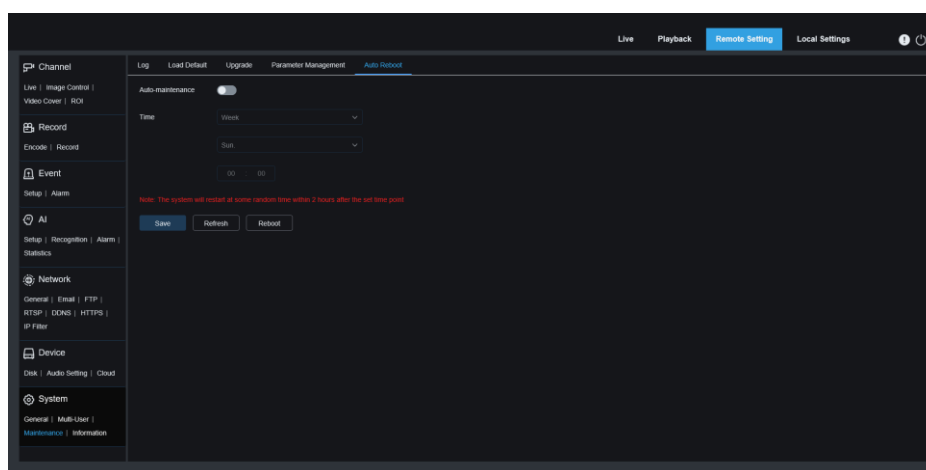


Figure 8.59

Auto Reboot: Click to enable

Time: The IPC can be set to reboot by day, week or month.

8.10.4 System Information

This menu allows you to view system information, such as camera ID, model name, MAC address, firmware version, etc.

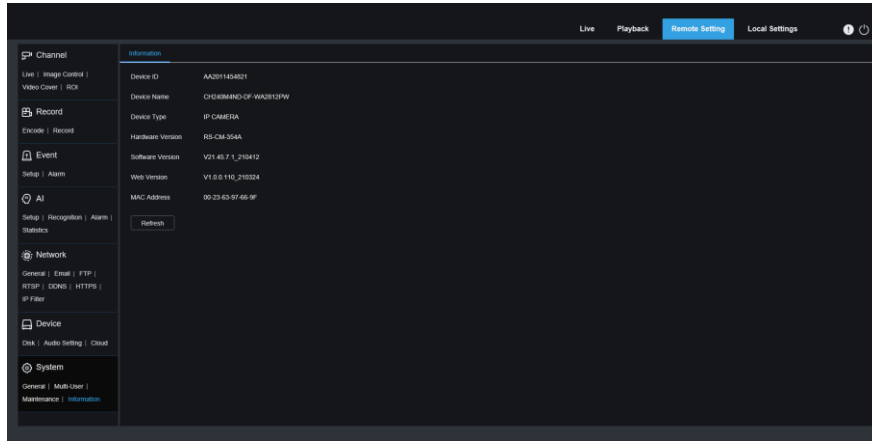


Figure 8.60

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