GRUNDIG

User Guide

GU-CI-Series

www.grundig-security.com

Content

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-AC5617V	GU-CI-AC5617T	GU-CI-AP12616F
GU-CI-AC5637E	GU-CI-AC5637V	GU-CI-AC5637T	GU-CI-AP20527Q
GU-CI-AC8616E	GU-CI-AC8616V	GU-CI-AC8616T	GU-CI-AT32637Q
	GU-CI-AP4634V	GU-CI-AP4634T	GU-CI-AP8616Q
	GU-CI-AC5617W	GU-CI-AP5634T	GU-CI-AP5647P

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 Application

1.2 Operating Environment

System: Windows XP/Windows 7/ Windows 8/ Windows 10/ Windows 11/MacOS 10 or above.

CPU: Intel I3 or above

Memory: 2 GB or above

Video memory: 1 GB or above

Display: 1024×768 or above

Browsers:IE10 and above, Chrome 57 and above, Firefox 52 and above, Edge 41 and above, Safari 12 and above.

2 Device Connection

An IP camera can be connected in two ways:

2.1 Connecting to a PC

Directly connect an IP camera to a PC through a network cable, connect the power input to the DC 12V adapter, and set the IP addresses of the PC and the IP camera on the same network segment. If the network is running properly, the IP camera will communicate with the PC within one minute after turned on.
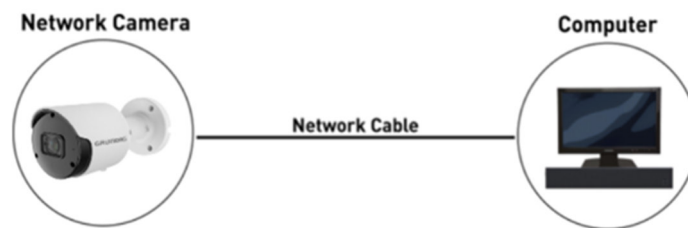
Figure 2.1 Connecting

2.2 Connecting Through a Router/Switch

This connection method is used when an IP camera is connected to the Internet where the IP camera and PC are connected to the LAN ports of a router/switch and the gateway of the camera is set to the IP address of the router.
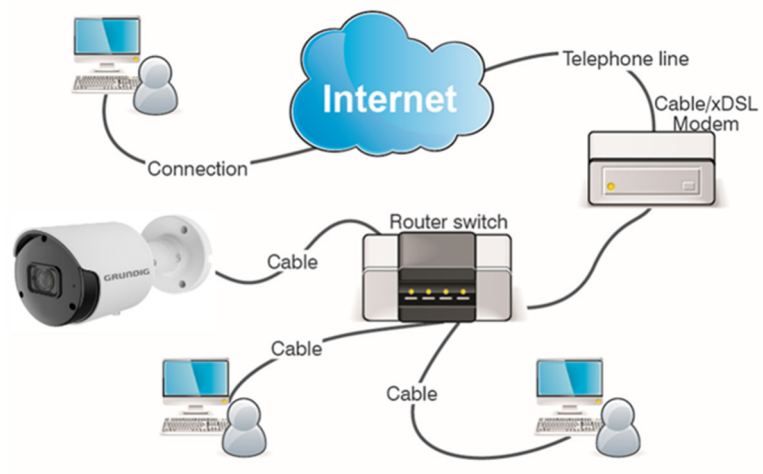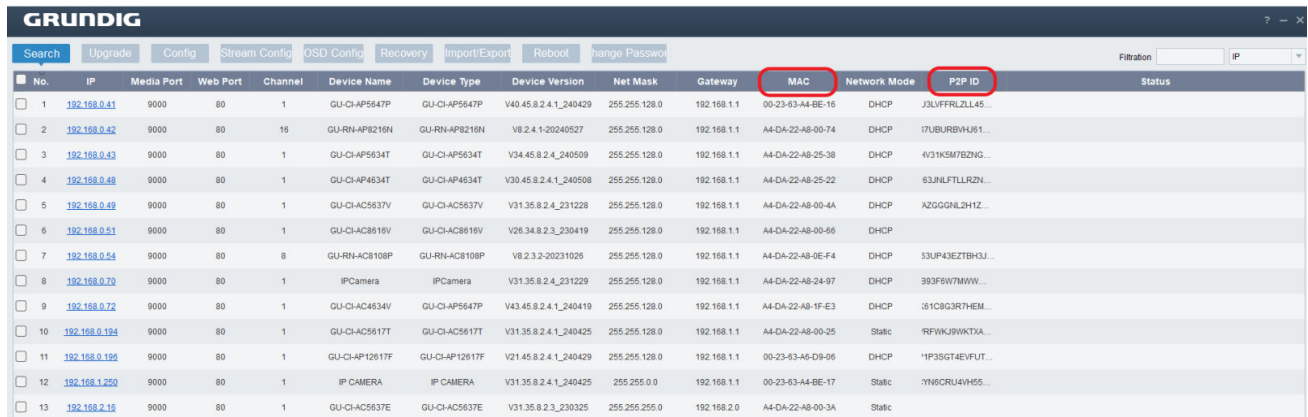
Figure 2.2 Connecting with Router

3 Setting an IP-Address with the GU-SW-IP-FINDER Tool

Step 1. Run Device Config Tool ![icon] ,click Search to get the information of the IPCs in this LAN as shown in the figure below, and locate your desired IPC based the P2P or MAC address of the camera.

Note: The default IP address of the camera is 192.168.0.100, the default username is admin.

Step 2. Select the corresponding device, enter your username and password, edit the corresponding network information, and click Modify to save changes.

Note: Change the Network Mode to DCHP to get the IP address if the current network supports DHCP.

4 Login from Web Client

4.1 Accessing Camera from Web Client

Use Device Config Tool to search the IPCs in the current network. As shown in the following figure, directly click an IP address and use your IE browser to login to the corresponding camera.

As an alternative, you can open your IE browser and type the following information into the address bar: HTTP://ip:web port. As shown in the figure above, the IP address of the device to be accessed is 192.168.0.41, the web port No.is 80, and the combined URL is http://192.168.0.41:80.

Note: In practical applications, the default HTTP access mode is port 80.

4.2 Login for the First Time

Firstly, access the camera from a web client, you need to set a password for the camera in order to complete the activation operation. The web client will display the screen as shown in Figure 4.2.1. Hover over the password entry box to prompt for the password requirement:

The length of the password should be 8~16 characters. It should contain at least two combinations of upper-case letters, lower case letters, numbers and special characters.

Password and username cannot be set the same.

Figure 4.2.1 Password

Set a new password and click OK to save your change. The web client will display the screen as shown in Figure 4.2.2. Users can open the corresponding recover password method by checking the box, or cancel the setting directly without checking the box, and do not enable the recover password function.

Figure 4.2.2 Recover

① Security Question Configuration: To change the user password by question verification, check the Security Question Configuration, select three questions among 15 questions, and set the answers at a maximum length of 64 characters to recover your password.

② Certificate of authorization: To change the user password by using a certificate, check the Certificate of authorization, and click Export to download the certificate.txt file.

③ Super code (Not recommended): This method is to calculate a super code allowing to changing the user password by using the MAC address of the camera and camera time. You are not advised to enable this function as the MAC address of the camera is broadcast over the network, and the system time of the camera can be directly obtained when you login from the web client and use Super code to change the user password.

Note: Keep your verification information properly when the recover password function is enabled.

4.3 General Login

After accessing from the web client, you will be directed to the login screen as shown in Figure 4.3.1. Then, input your username and password, and click Login to access the operation screen. At the same time, you can select your desired language upon login.
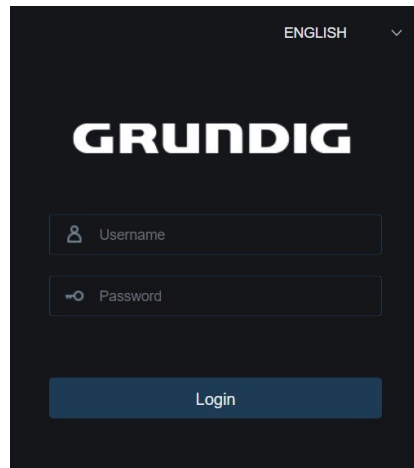
Figure 4.3.1 Login

4.4 Recover Password

When the recover password function is enabled, if you forget the login information, you can click Recover Password to enter the Recover Password screen. You can check security question configuration, certificate of authorization, or super code upon first login to recover your password.

4.4.1 Security Question Configuration

You can change the user password by setting security questions on the Recover Password screen, as shown in Figure 4.4.1. Fill in the answers to security questions. You can directly change the user password.
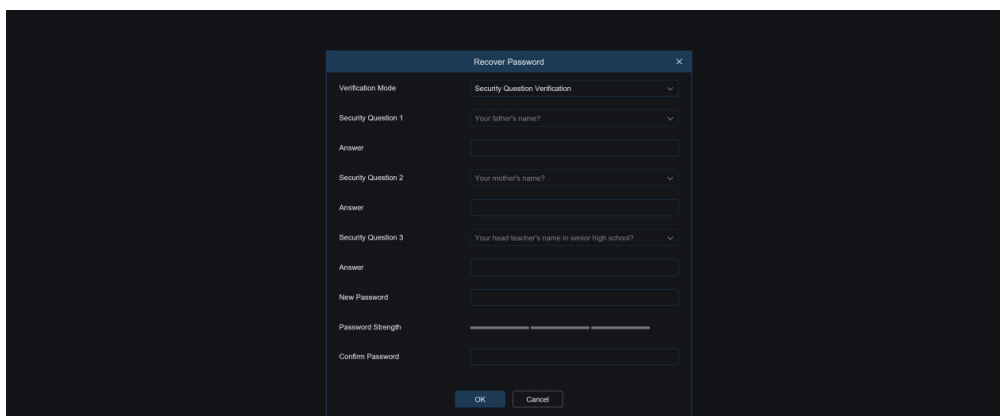
Figure 4.4.1 security Questions

4.4.2 Certificate of Authorization

When you set security questions upon first login, you will be asked to download the certificate.txt when you choose to recover the user password by using Certificate of authorization. On the Recover Password screen, click the

Recover Password and import the certificate.txt file to reset the password, as shown in Figure 4.4.2. Click Import and select the certificate.txt file. Then, enter a new password to change the user password.
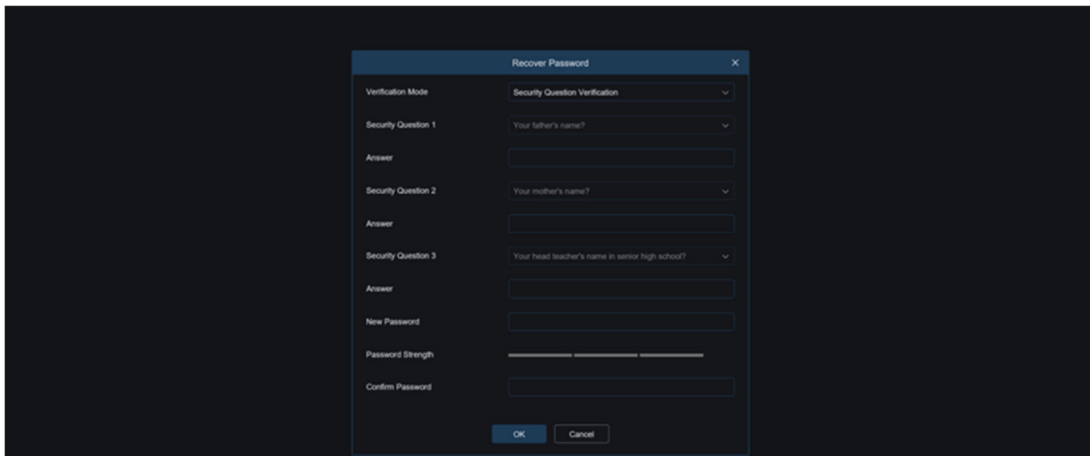
Figure 4.4.2 Recover

4.4.3 Super Code

A super code is an insecure way to recover the password. The super code is calculated based on the MAC address of the camera and the time of the super verification code according to certain rules. Then the user password can be changed by entering the verification code.
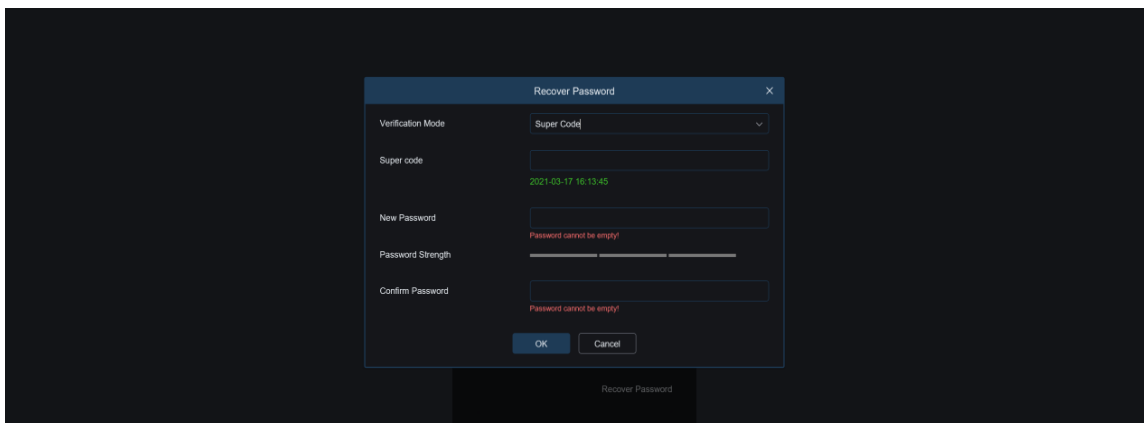
Figure 4.4.3 Super Code

4.5 Password Expire

Security risks may arise if you use the same password for a long period of time. To this end, the program records the time when the password was changed last time. The system will ask you whether to change the password again if the current login time is 90 days later after the last password change time.

When you decide to change the password, the screen as shown in Figure 4.5.1 displays. As instructed on the screen, use your old password for verification and set a new password.
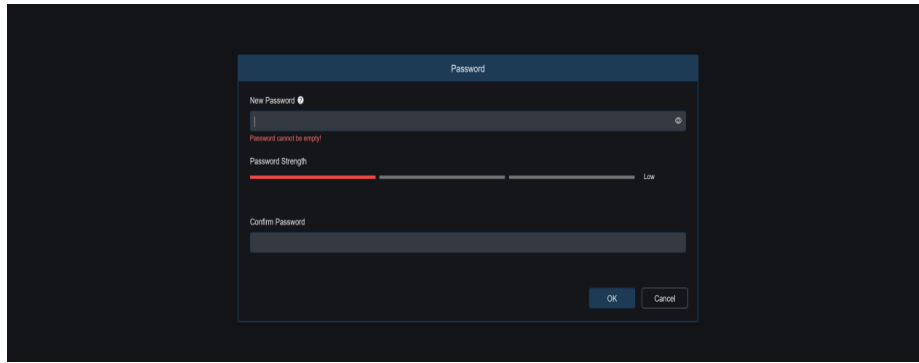
Figure 4.5.1 Password Expire

5 Installing Plug-in

An image can be normally previewed only when the plug-in is installed when you login from your IE browser. Download and install the plug-in as instructed on the screen as shown in Figure 5.1.1.
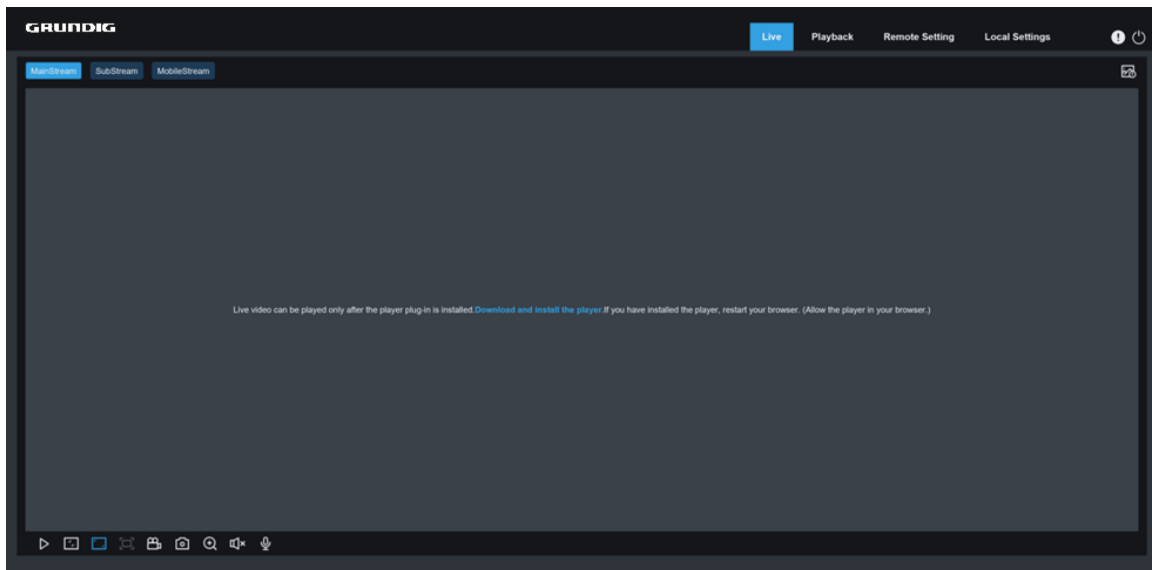
Figure 5.1.1

Note: Skip the plugin installation when you access the web client from Safari 12 and above, Chrome 57 and above, Firefox 52 and above and Edge 41.

6 Live View

6.1 Live View Menu

The web client enters the login live view upon login, as shown in the figure below.

Note: Features may vary depending on product models.
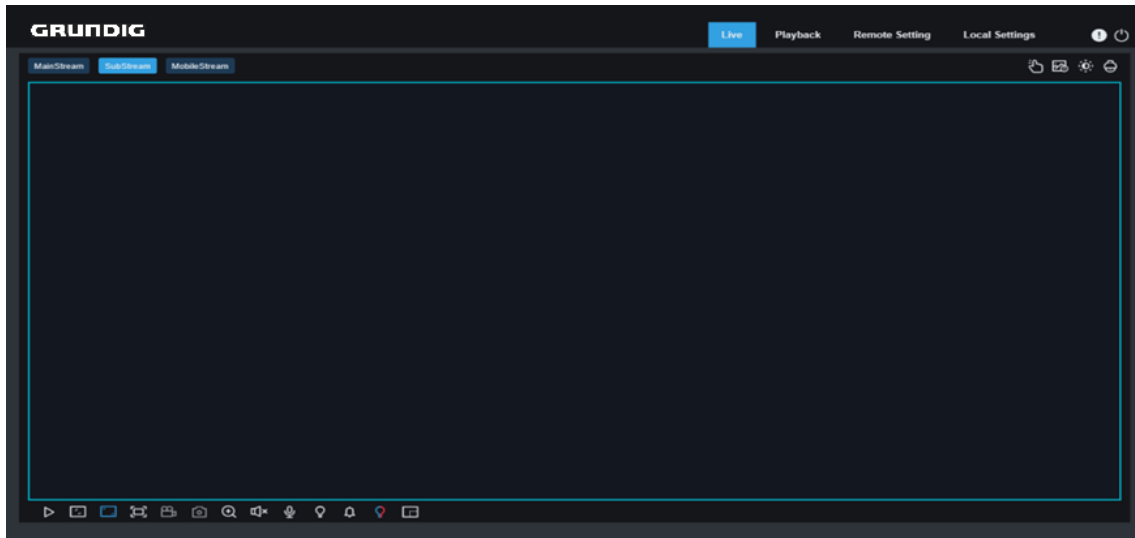
Figure 6.1 Live View

Stream switching menu: Switch the picture quality of the current live view at the upper left corner:

Main stream: HD picture, but higher requirements on bandwidth and PC performance.

Sub stream: Moderate requirements on bandwidth and PC performance, but lower picture quality when compared with main stream.

Mobile stream: Lowest requirements on bandwidth and PC performance, and lowest picture quality.

Main switching bar: Switches web function screens. The web client provides four menus: Live, Playback, Remote Setting, Local Settings.

Info: Displays the information about the active user, web version and plugin version.

Manual Alarm: Enable/disable the manual alarm (Note: for cameras with alarm I/O function only).

AI alarm: Open the alarm push bar on the right to display the captured images during face detection and human & vehicle detection.

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

PTZ Setting: PTZ settings and re-focusing.

Exit: Log out.

Recording & alarm status: Displays alarm and recording status of the camera. For details, check Section 6.2.

Stop/Play: Play and stop the preview of the current stream.

Original Proportions: Displays the current live view in its original proportion.

Stretch: Displays the current live view in a way that stretches the display area.

Full Screen: Displays the live view in full screen. You can double-click the screen to enable or disable the function, and press Esc to exit the full screen mode.

Record: Manually record the stream in preview.

Capture: Manually capture the image of the current stream.

Digital Zoom: Zoom in a certain area of the display.

Audio: Turn on/off or adjust the audio in preview.

Voice Intercom: Communicate with the camera.

Light: Manually turn on/off the white light.

Siren: Manually turn on/off the siren.

Warning Light: Turn on/off the red and blue lights

Pixel Counter: Select an area to check its pixel size in the stream.

Add Tag: Add a label, click to add a label.
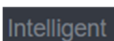
Popup Info: Prompt some alarm information in the lower right corner.

Fisheye: Enter/exit fisheye mode, please check section 6.3.

6.2 Recording Status

The recording status is a simple presentation of the current alarm at the web client and indicates whether the recording is normal. A variety of alarms can be stored at a time,as described below:

No icon: The memory card functions are normal but no recording is executing.

R : camera is normal recording.

Note: When the camera is recording an alarm, the icon will disappear, but the normal recording process continues.

H : The memory card is abnormal. Please check the memory card.

M : A motion alarm is in progress but the motion alarm recording is not turned on.

M : A motion alarm is in progress and the motion alarm recording is turned on.

I : An I/O alarm is in progress, but the I/O alarm recording is not turned on.

I : An I/O alarm is in progress, and the I/O alarm recording is turned on.

PIR : A PIR alarm is in progress, but the PIR alarm recording is not turned on.

PIR : A PIR alarm is in progress, and the PIR alarm recording is turned on.

S :   An intelligent alarm is in progress, but the intelligent alarm recording is not turned on.

Note: Intelligent alarms include face, human, and vehicle alarms.

S : An intelligent alarm is in progress, and the intelligent alarm recording is turned on.

7 Playback

The camera not only need to be able to show us images in real time, but also save the image information so that we can call it up when needed.

7.1 General Playback

The playback function mainly includes general video search and AI search, as shown in the following figure.

Figure 7.1.1 Playback

1.Switch search mode: Switch search functions, as shown in the figure above. General is selected by default to search for general recording files. You can switch to AI image search by referring to the following part in this section.

2.Date: Set the date to search for recording files, click Search, you will be prompted with the dates with available recording files.

3.Search type: Displays the search types supported by the camera. You can search for only part of recording files as required.

4.Playback process bar: Display and search for recording files stored in the memory card according to search settings.

 Pause/Play: Pause/play streams.

 Stop: Stop playing streams.

 Forward by One Frame: Play one frame with one click.

 Record: Manually record the stream in preview.

 Capture: Manually capture the image of the current stream.

Download: Download the searched recording file. (Note: When downloading RF format records, a Pop-up window will ask if encryption is required. AVI and MP4 formats will not have a pop-up window.)
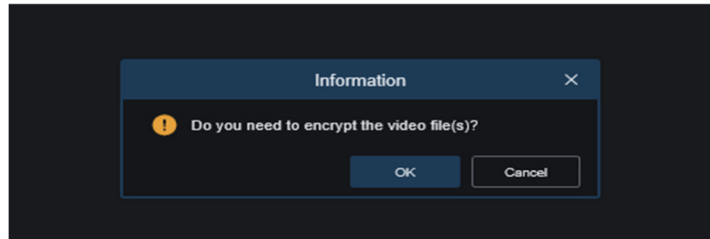
Figure 7.1.2 Download info

Speed: Supports playing at a speed of 1/8,1/4,1/2,1, X2, X4, X8, X16.

Audio: Turn on/off or adjust stream sound.

Playback progress bar: The time bar on the bottom displays the current playback progress bar and playback progress in different colors based on the search results.

Digital Zoom: Zoom in a certain area of the stream.

Original Proportions: Displays the current live view in its original proportion.

Stretch: Displays the current live view in a way that stretches the display area.

Full Screen: Displays the playback stream in full screen. You can double-click the screen to enable or disable the function, and press Esc to exit the full screen mode.

Zooming in/out playback progress bar: By default, the progress bar displays the progress within 24 hours.By zooming in and out the progress bar,you can jump to the corresponding playback position more accurately.You can also use the mouse wheel to zoom in/out the progress bar.

7.2 Image Search

When the auto capture function is enabled, you can search and play pictures on this screen.
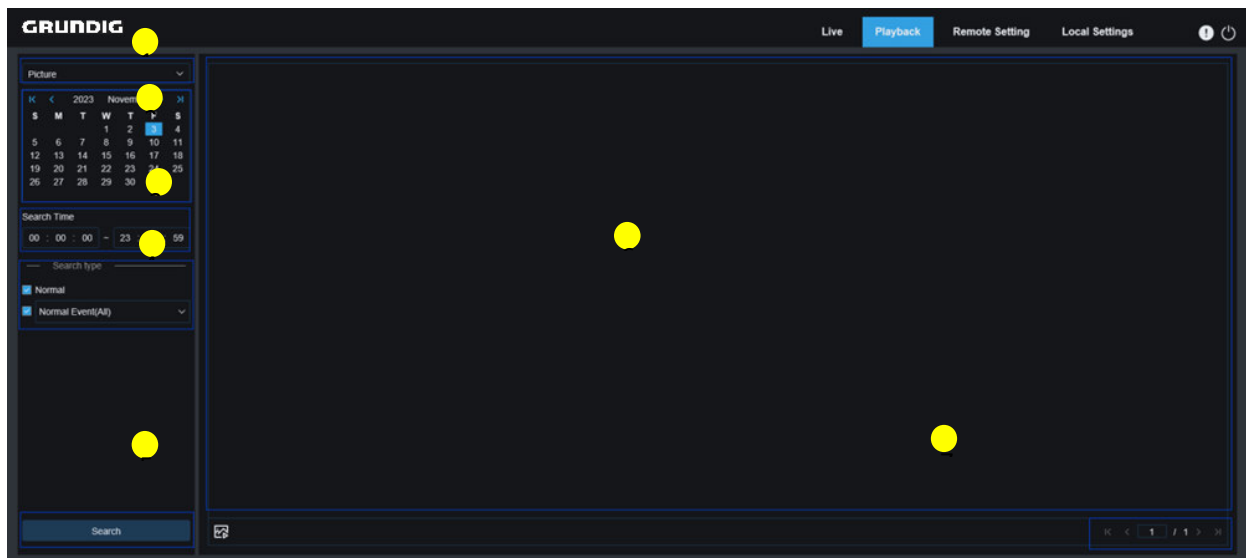
Figure 7.2.1 Image Search

1.Switch search mode: Switch the current search function. The current Search Mode is Picture.

2.Date: Set the date to search for pictures. By clicking Search, you will be prompted with the dates for which recording files are available.

3.Search time: Set the time to search for pictures, allowing users to search for pictures in a specific period of time.

4.Search type: Select the picture capture type you want to search for, or check "All Type" to select all pictures (Default select all).

5.Search: Click Search to start searching images.

6.Search Result Display Area: Displays the desired search results. Double-click on a picture will play the video after and before the picture.

7.Search results Flip: scroll through search results at the lower right corner.

7.3 Playback by Tag

This screen allows to view all previously added tags and edit, play back, or delete them.
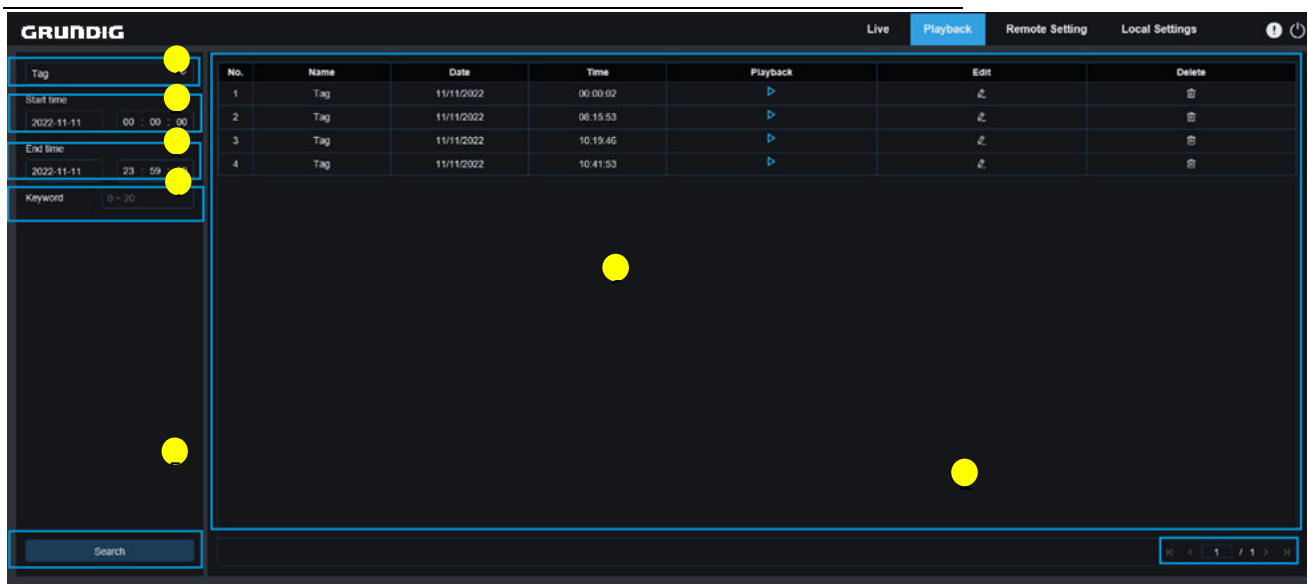
Figure 8.3.1 Playback Tag

1.Switch search mode: Switch the current search function. The current Search Mode is Tag.

2.Start time: Set the start time to search for tags.

3.End time: Set the end time to search for tags.

4.Keyword: Search for tags with keywords.

5.Search: Click Search to start searching.

6.Search Result Display Area: Displays the desired search results.

Click the ▷ button to playback events, click the ✎ button to change event name, click the Save button to display the Modify Success prompt dialog box, and click the 🗑 button to delete this event.

7.Search results Flip: Scroll through search results at the lower right corner.

7.4 Smart

Login from a browser without the need of plugin to start smart playback, as shown in the figure below:
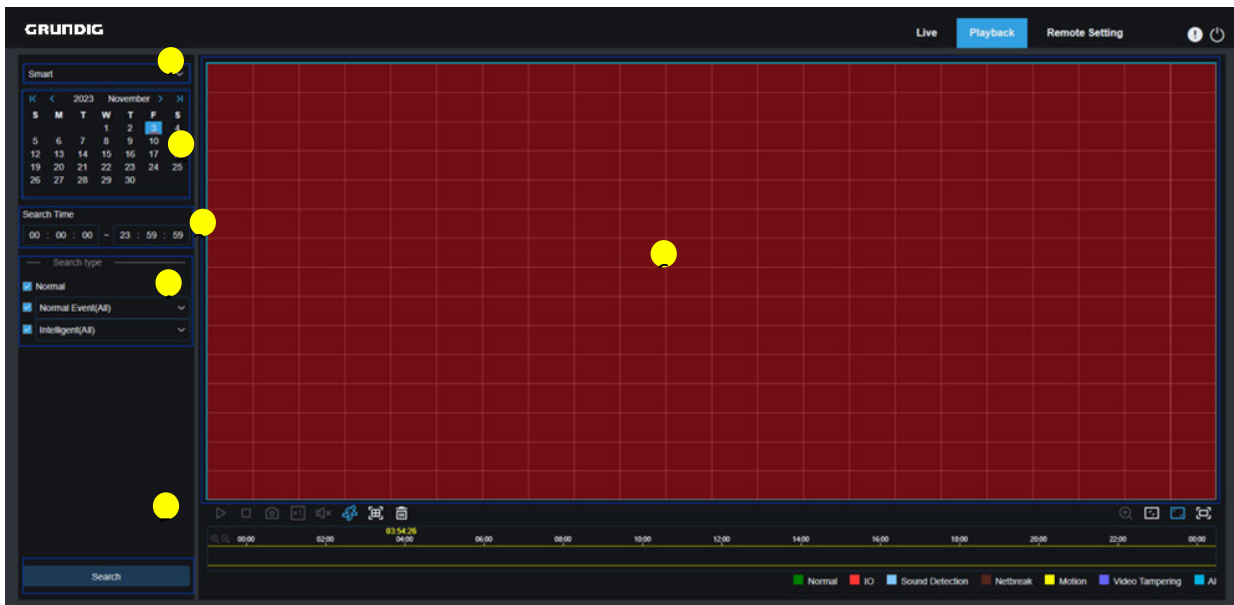
Figure 7.4.1 Smart Playback

This function can identify whether an alarm is triggered by human in daily life. If yes, the alarm will be shown in blue in the playback time bar on the bottom.

1. Switch search mode: Switch the current search function. The current Search Mode is Smart.

2. Date: Set the date to search for smart events. By clicking Search, you will be prompted with the dates for which recording files are available.

3. Search time: Set the time for searching for events.

4. Search type: Displays the search types supported by the camera. You can search for only part of recording files as required.

5. Search: Click Search to start searching.

6. Search Result Display Area: Displays the desired search results.

Pause/Play: Pause/play streams.

Stop: Stop playing streams.

Capture: Manually capture the image of the current stream.

Speed: Supports playing at a speed of 1/8,1/4,1/2,1, X2, X4, X8, and X16.

Audio: Turn on/off or adjust stream sound.

Add Default Tag: Add default tags. Mark the video playback start time at the current time in the current

channel and click this icon to add tags.

![Add Tag icon] **Add Tag:** Add custom tags. When you click this icon to add a tag, a custom window will appear and you can specify a name for this tag.

![Smart icon] **Smart:** Click this icon to enter the Smart area setting screen.

![All icon] **All:** Click on **All** will set the full screen as the Smart detection area.

![Delete icon] **Delete:** Click on **Delete All** will clear the entire area.

![Digital Zoom icon] **Digital Zoom:** Zoom in a certain area of the stream.

![Original Proportions icon] **Original Proportions:** Displays the current live view in its original proportion.

![Stretch icon] **Stretch:** Displays the current live view in a way that stretches the display area.

![Full Screen icon] **Full Screen:** Displays the playback stream in full screen. You can double-click the screen to enable or disable the function, and press Esc to exit the full screen mode.

7.5 AI

7.5.1 Face Search

The camera performs face recognition stores the obtained face information to the TF card, and saves the image-related information. You can quickly retrieve captured faces meeting user requirements and easily locate corresponding videos. The face search and playback screen is shown below.

Figure 7.5.1.1 Face Search

1. Switch search mode: Switch the current search function. The current Search Mode is Face Detection.

2. Start time: Set the start time to search for captured faces.

3. End time: Set the end time to search for captured faces.

4. Face Feature: The Face Features box is unchecked by default. When enabled, only face images captured when the face Feature detection function is turned on are searched. The firmware can recognize five face attributes, including gender, age, mask, glasses, and expression.

5. Alarm Group: The camera matches face images to the corresponding group according to the settings of the face database when capturing face images. This setting allows to search for images of only the groups you want.

6. Search: Search for face data according to settings.

7. Add: Add images to the camera for comparison purpose. You can add local images and captured images.

8. Delete: Delete currently added images.

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

10.Compare: Search for captured faces according to the set search time, group in which captured images are located, and selected reference face image for comparison.

11. Add Image Display Area: Displays images that are currently added and available for comparison.

12. Search Result Display Area: On the right side will display captured images searched by using Search and Compare.Double-click on a picture will play the video after and before the picture.

7.5.2 Pedestrian and Vehicle Search

Similar to the face capture function, the camera can distinguish humans or vehicles, and record them according to the required situation, which can be used to search for the required records. The interface effect is shown in the figure below. The screen is shown in the figure below.
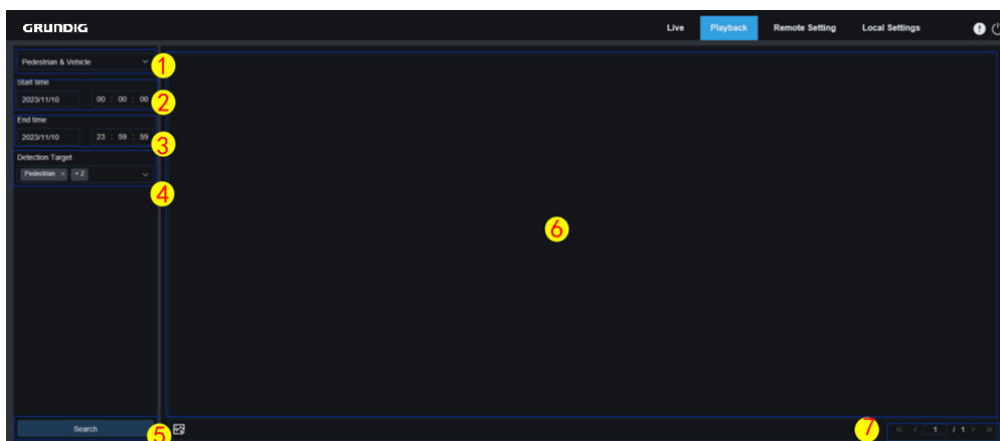
Figure 7.5.2.1 P & V Search

1.Switch search mode: Switch the current search function. The current Search Mode is Pedestrian & Vehicle.

2.Start time: Set the start time to search for Pedestrian and Vehicle images.

3.End time: Set the end time to search for Pedestrian and Vehicle images.

4.Detection Type: Select human or vehicle images as needed, or select both.

5.Search: Search for Pedestrian and Vehicle images according to search settings.

6.Search Result Display Area: Displays the desired search results. Double-click on a picture will play the video after and before the picture.

7.Search results Flip: Scroll through search results at the lower right corner.

7.5.3 Perimeter Intrusion & Line Crossing

With the development of technology, Perimeter Intrusion & Line Crossing is not only compatible with the old method to alarm targets entering the warning area, but also adds Pedestrian and Vehicle detection function, which only alarms human or vehicle targets and records image or video information for easy search and viewing. The screen is shown in the figure below.
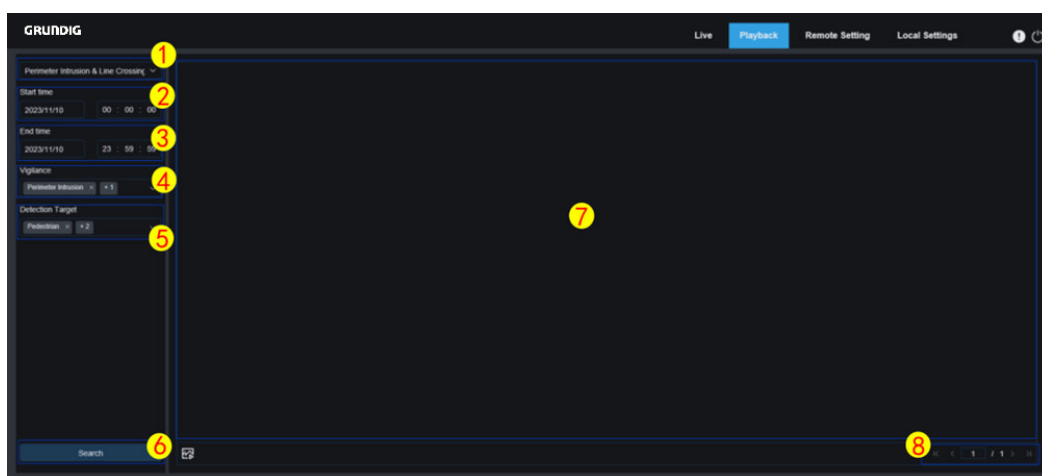
Figure 7.5.3.1 PI & LC Search

1.Switch search mode: Switch the current search function. The current search Mode is Perimeter Intrusion & Line Crossing.

2.Start time: Set the start time to search for Pedestrian and Vehicle images.

3.End time: Set the end time to search for Pedestrian and Vehicle images.

4.Vigilance: Select Perimeter Intrusion or Line Crossing or both as the capture method.

5.Detection Target: Select human or vehicle images as needed, or select both.

6.Search: Search for Pedestrian and Vehicle images according to search settings.

7.Search Result Display Area: Displays the desired search results. Double-click on a picture will play the video after and before the picture.

8.Search results Flip: Scroll through search results at the lower right corner.

7.5.4 Repeat Visitors

The face recognition function can not only provide alarms in real time, but also deeply dig into data to meet customer needs. For example, a camera is installed in a certain area of the mall, the repeat visitors function allows to check whether a customer stops to check out goods in this area. You can also monitor an area to check if a
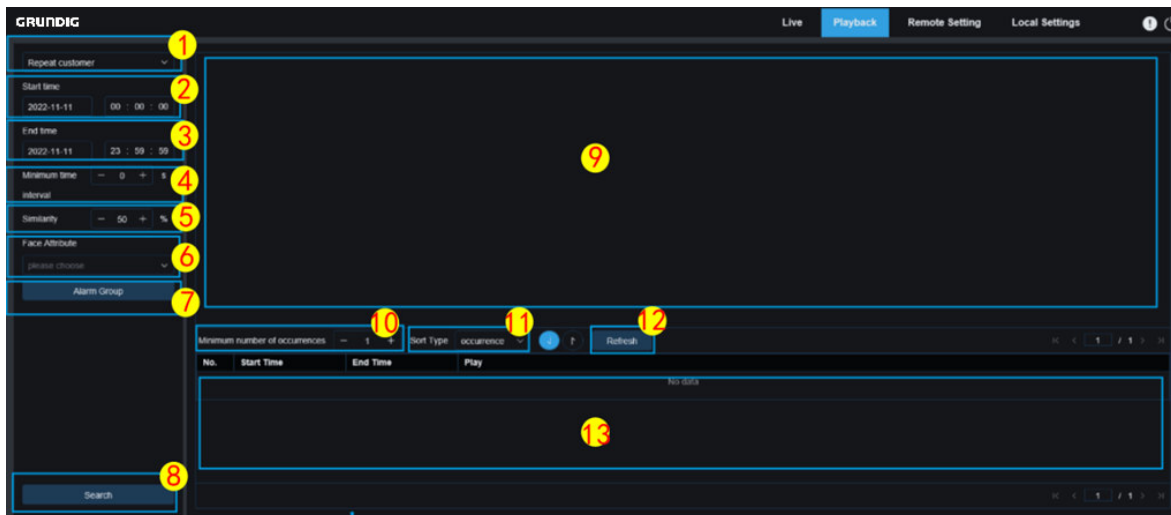
Figure 7.5.4.1 Visitors

1.Switch search mode: Switch the current search function. The current Search Mode is Repeat customer.

2.Start time: Set the start time to search for face images.

3.End time: Set the end time to search for face images.

4.Minimum time interval: Set the minimum time interval of capturing the same object twice to increase the search accuracy.

5.Similarity: Set the lowest similarity between other images and the reference image while matching repeat customers.

Note: This setting takes effect only when Alarm Group is unchecked for the current function.

6.Face Features: Filter searched images according to facial characteristic values.

Note: The search will be applied on all images when this option is not set. When this option is set,only captured images with Face Features enabled are searched.

7.Alarm Group: Identify repeat customers according to group settings in the database.

Note: All images will be searched when no group limitations are set. In this case, the similarity setting takes effect. Stranger information will be ignored when group limitations are set.

8.Search: Search for the information of captured images according to settings.

9.Search Result Display Area: Displays the search results in a stacked manner. Double-click on the displayed image information will list the stacked images on the bottom, and click on the corresponding image again will jump to its quick playback.

10.Minimum number of occurrences: Filter search results by number of occurrences. You have to click Refresh to update the display.

11. Sort Type: Sort search results chronologically or by capture count in ascending or descending sequence. You have to click Refresh to update the display.

12. Refresh: Refresh the sorting in your IE according to Minimum number of occurrences and Sort Type.

13. Secondary Search Result Display Area: Displays captured images of selected objects in the form of event list according to the information selected in the search result display area. You can click the Play button to go to quick playback.

7.5.5   Face Attendance

In addition to the repeat customer function, the face recognition function also provides the face attendance function. The face attendance (FA) function is used to retrieve face matching status in different groups (excluding stranger group) saved in the memory card in a specified period of time,and generate attendance results according to capture records.The functional screen is shown in the figure below.

Figure 7.5.5.1 Face Attendance

1. Switch search mode: Switch the current search function. The current Search Mode is Face Attendance.

2. Select Time Mode: Options include day, week, month, customize, and today. After you select a type, the system will automatically change the start date and end date. If day is selected,the end date and start date will be automatically synchronized.If week is selected,the start date and end date will be automatically changed to Monday and Sunday of the week to which the selected date belongs. If month is selected, the start date and end date will be automatically changed to the first and last day of the month to which the selected date belongs. If customize is selected, the search date is customizable. If today is selected, the start date and end date will be changed to the current date.

3. Start Date: Set the start date for searching by face attendance.

4. End Date: Set the end date for searching by face attendance.

5. Import type: Select import type, including by group and by face. The former takes all the people in the existing group as detection objects to search for matching results. The latter selects people in a certain group to search for matching results.

6. Alarm Group: When by group is selected, face attendance results will be searched by groups in the database.
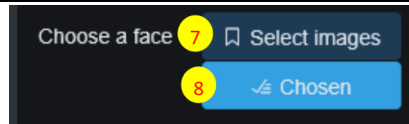
Figure 7.5.5.2 Select Image

When **by Face** is selected, the screen will change to the menu shown in the figure above.

7. **Select images:** Select and click the face image to be detected. The window shown below is displayed.
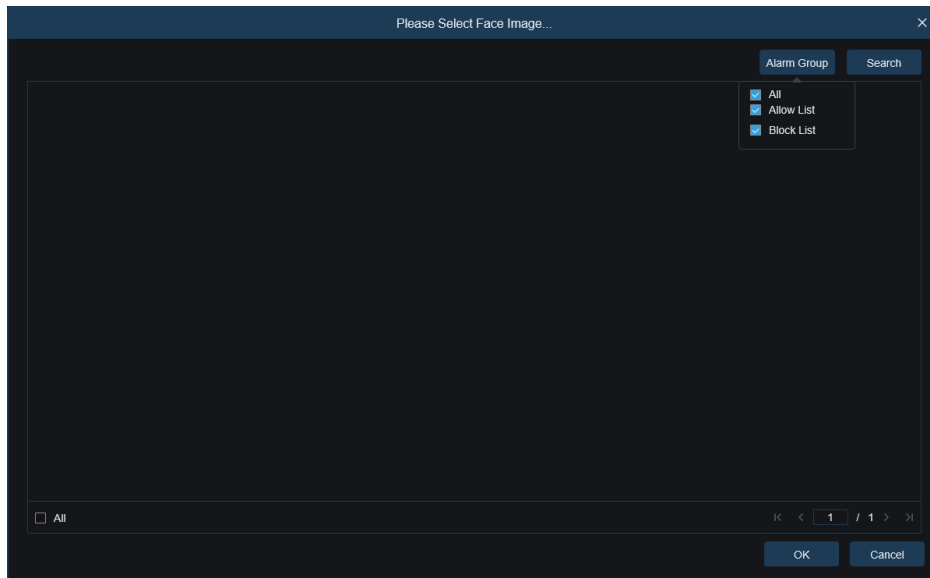
Figure 7.5.5.3 Select Image

Click **Alarm Group** to select a group and click Search again to search for all face images in this group. Select the face image for face attendance detection, and click **OK**. The face image will be added to the **Chosen** list. You can click **Cancel** to close this window.

8. Displays a list of selected face images. You can click Chosen to display the window shown in the figure below Select a face image and click **Delete**.
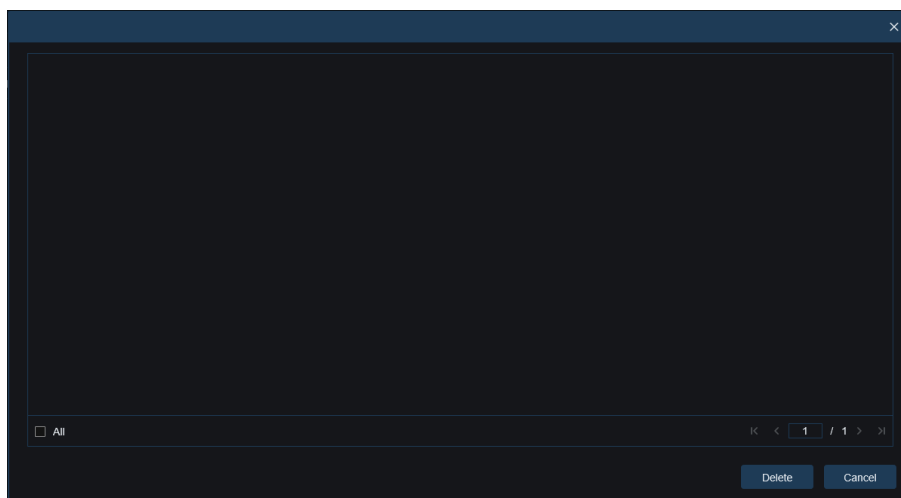
Figure 7.5.5.4 Delete Image

The face image will be deleted from the list. You can also click **All** to select all face images. You can click **Cancel** to

close this window.

9. Search: Search face attendance information according to settings.

10. Working Day: Set working day here.

11. Duty Time: Set duty time here.

12. Refresh: After changing attendance parameters, you can click Refresh to refresh search results.

13. Export: Click Export to export results to your PC.

Attendance Results:"←" indicates leave early,"→" indicates late, both indicates late and leave early,"∨" indicates normal attendance, and "○" indicates absence. The green lines indicate the start and end time of attendance.

14. Secondary Search Result Display Area: Clicking on a person will display detailed time information at the lower right.
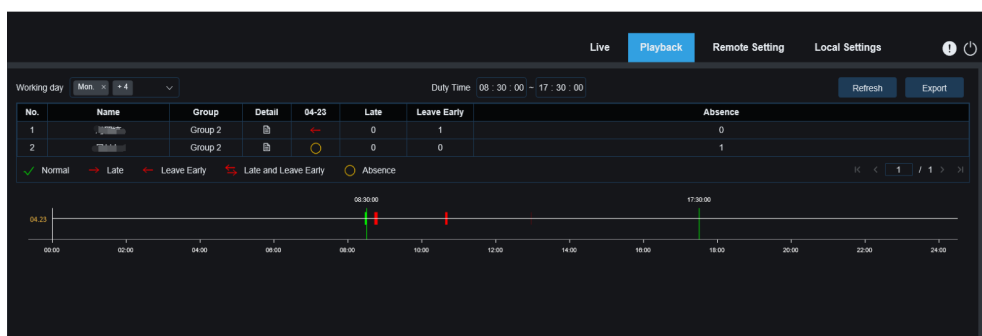
Figure 7.5.5.5 Detailed Information

15. Secondary display area for search results: Clicking on a person will display detailed time information down the right-hand side. The time-point that matches this person will be marked with a red bar. Click on the red bar will jump to the corresponding quick replay.

16. Click the **Detail** icon to check details. You can click the **playback** icon to go to quick replay.
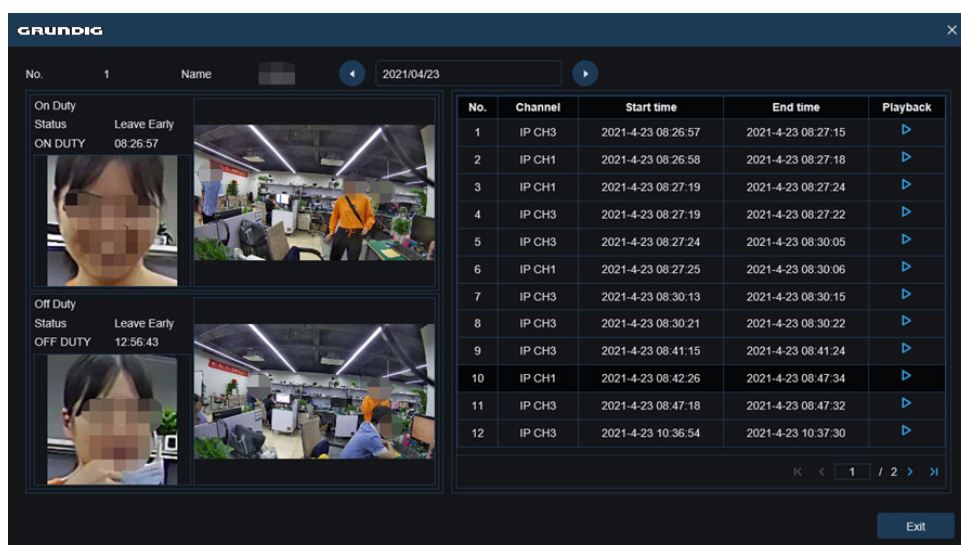
Figure 7.5.5.6 Secondary Display

You can click the arrow at the lower right corner to scroll through results.

7.5.6 License Plate Detection

When the license plate detection function is enabled for the IPC, an alarm will be triggered for recognized license plates, and images or videos will be recorded for easy search and viewing. The screen is shown in the figure below.
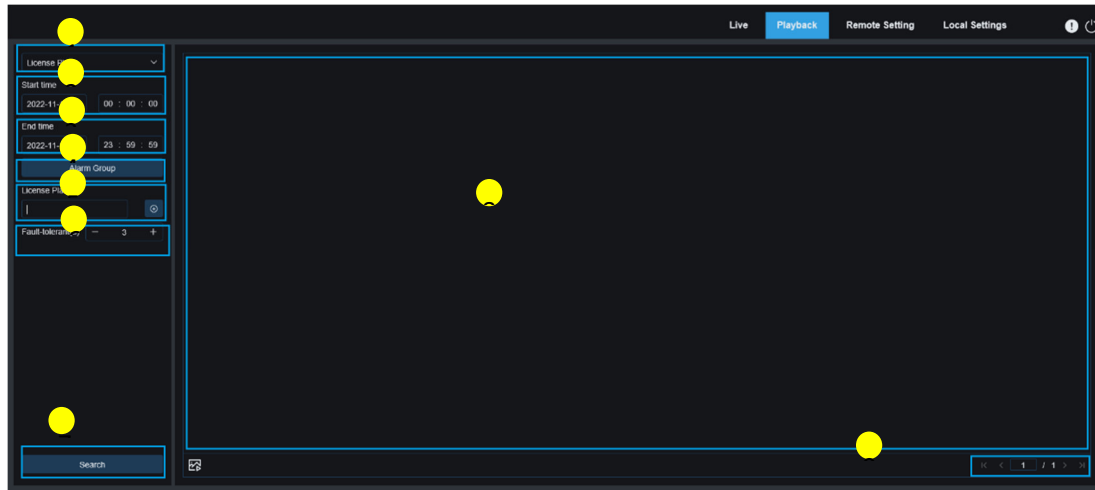
Figure 7.5.5.7 License Plate

1.Switch search mode: Switch the current search function. The current Search Mode is License Plate.

2.Start time: Set the start time to search for captured license plates.

3.End time: Set the end time to search for captured license plates.

4.Alarm Group: Recognize license plates by groups in the database.

Note: All images will be searched when no group limitations are set. In this case, the similarity setting takes effect. Unknown license plates will be ignored when group limitations are set.

5.License Plate: Filter and query license plates.

6.Fault-tolerant: Fault-tolerant rate. For example, three characters are set as the querying criteria. When the license plate number is **B594SB** in the allow list in the group, an alarm will also be triggered when the vehicle with license plate number **B734KB** approaches the surveillance area. That is, a license plate number has 0-3 characters different from that in the database will be recognized.

7.Search: Search for captured license plates according to settings.

8.Search Result Display Area: Displays the desired search results. Double-click on a picture will play the video after and before the picture.

9.Search results Flip: Scroll through search results at the lower right corner.

7.5.7 Intrusion

When the camera enabled the Intrusion function, it will alarm the target that enters into the intrusion of the alert area. Record video or capture picture information for easy search and view. Its interface is shown in the following figure.
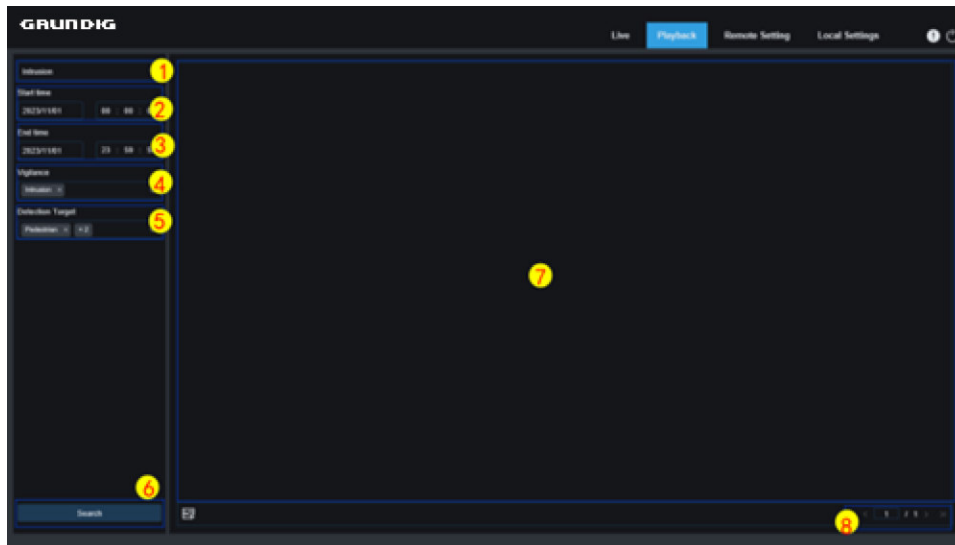
Figure 7.5.5.8 Intrusion

1.Switch search mode: Switch the current search function. The current Search Mode is Intrusion.

2.Start time: Set the start time to search for Intrusion snapshot.

3.End time: Set the end time to search for Intrusion snapshot.

4.Vigilance: Select Intrusion as the capture method.

5.Detection Type: Select Intrusion images as needed, or select both.

6.Search: Search for Intrusion images according to search settings.

7.Search Result Display Area: Displays the desired search results. Double-click on a picture will play the video after and before the picture.

8.Search results Flip: Scroll through search results at the lower right corner.

7.5.8 Region Entrance

When the camera enabled Region Entrance function, it will alarm the target that enters into the intrusion of the alert area. Record video or capture picture information for easy search and view. Its interface is shown in the following figure.
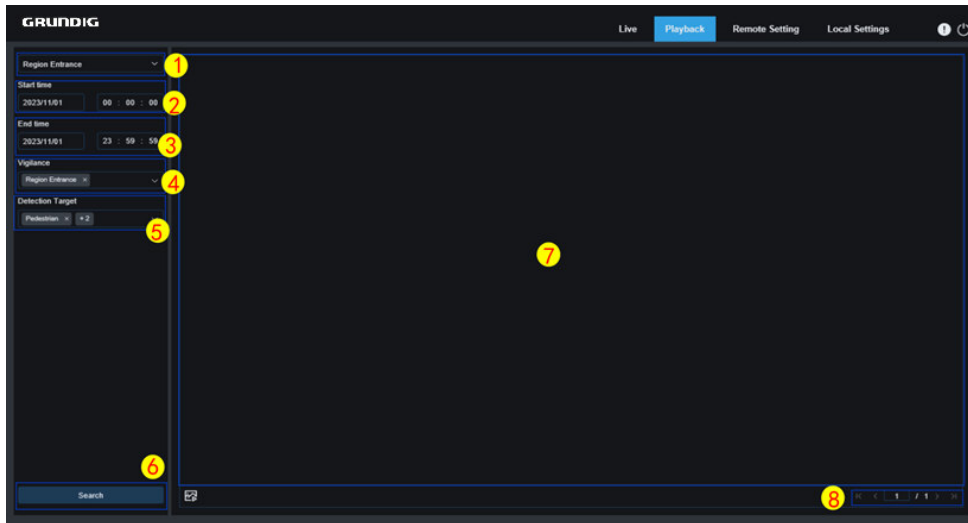
Figure 7.5.5.9 Region Entrance

1.Switch search mode: Switch the current search function. The current Search Mode is Region Entrance.

2.Start time: Set the start time to search for Region Entrance images.

3.End time: Set the end time to search for Region Entrance images.

4.Vigilance: Select Region Entrance as the capture method.

5.Detection Type: Select Region Entrance images as needed, or select both.

6.Search: Search for Region Entrance images according to search settings.

7.Search Result Display Area: Displays the desired search results. Double-click on a picture will play the video after and before the picture.

8.Search results Flip: Scroll through search results at the lower right corner.

7.5.9   Region Exiting

When the camera turns on Region Exiting function, Alarm triggered and detect targets leaving the guarded area. Record video or capture picture information for easy search and view. Its interface is shown in the following figure.
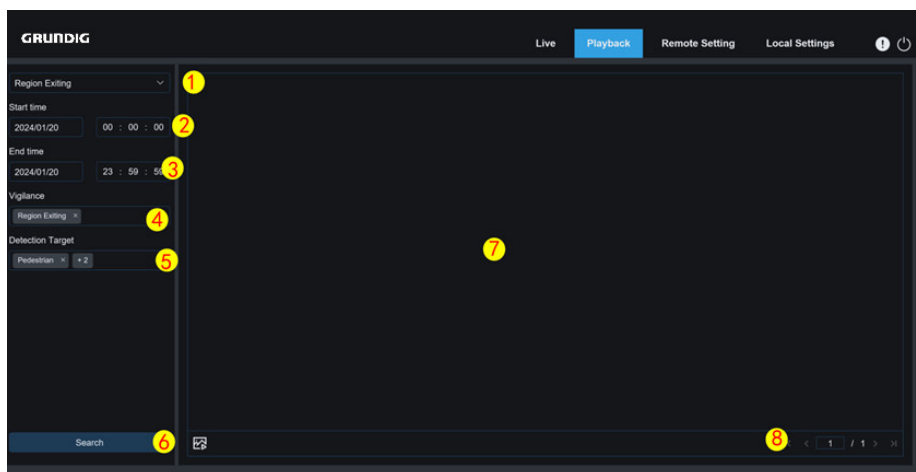
Figure 7.5.5.10 Region Exiting

1.Switch search mode: Switch the current search function. The current Search Mode is Region Exiting.

2.Start time: Set the start time to search for Region Exiting images.

3.End time: Set the end time to search for Region Exiting images.

4.Vigilance: Select Region Exiting as the capture method.

5.Detection Type: Select Region Exiting images as needed, or select both.

6.Search: Search for Region Exiting images according to search settings.

7.Search Result Display Area: Displays the desired search results. Double-click on a picture will play the video after and before the picture.

8.Search results Flip: Scroll through search results at the lower right corner.

8 Remote Setting

8.1 Live View

On the Live view, you can set channel name, device time, time standard, as well as camera information display. The view is shown in the figure below.
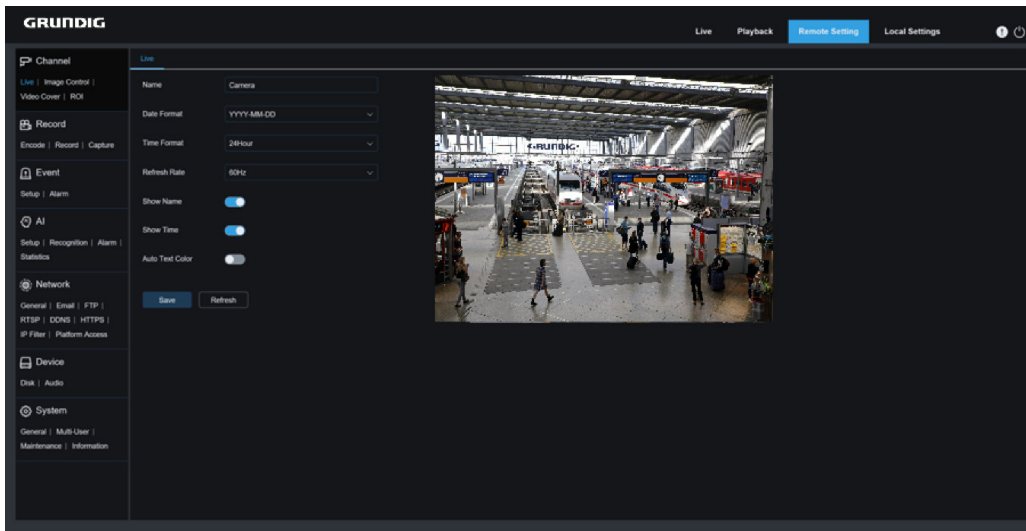
Figure 8.1.1 Live

Name: Set the channel name of the camera displayed on the OSD.

Date Format: Set the date format of the camera displayed on the OSD, including MM/DD/YYYY, YYYY-MM-DD, and DD/MM/YYYY.

Time Format: Set the hour format of the camera on the OSD, including 12-Hour and 24-Hour.

Flicker Control: Set the image refresh rate, including 60 Hz and 50 Hz, corresponding to N and P respectively.

Show Name: Set whether to display channel name on images.

Show Time: Set where to display channel time on images.

OSD Self-adaptive: The OSD font color of the camera time and channel name is self-adaptive. The color switches between white and black based on the image background to ensure clear display.

Channel Name Display Location: Set the location where the channel name appears by dragging its location on the image.

Time Display Location: Set the location where the channel time appears by dragging its location on the image.

Alarm Statistic Display Location: Set the location where alarm statistic appears by dragging its location on the image. This setting is available only when the alarm statistic display function is enabled.

Save: Save the current changes.

Refresh: Refresh parameters on the current view.

8.2 Image Control

Image control is to directly control and modify graphic parameters, such as color to black mode, wide dynamic range, backlight compensation, etc. The view is shown in below figure.
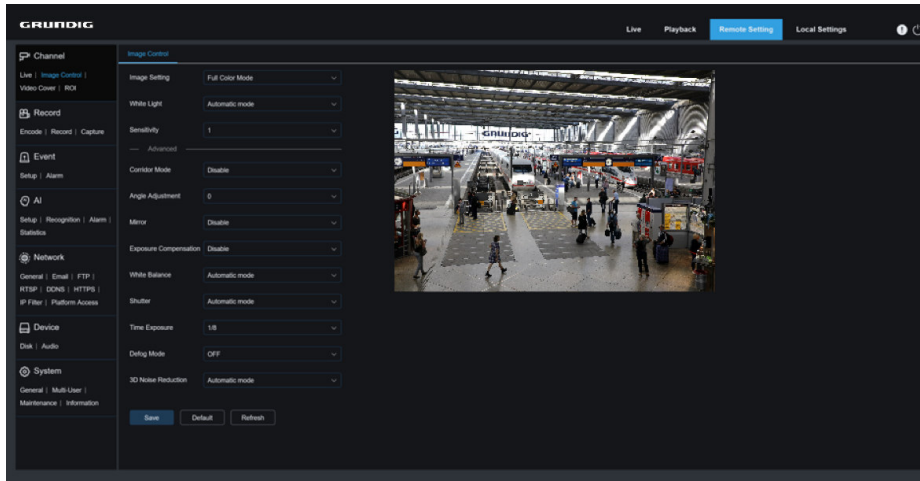
Figure 8.1.2 Image Control
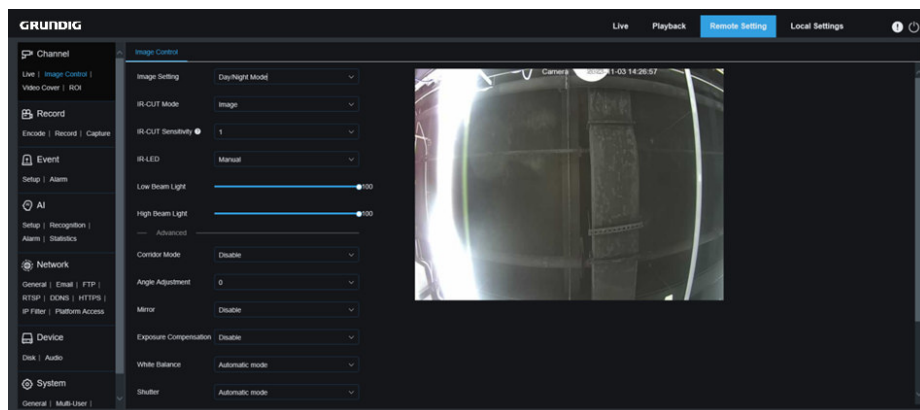
Figure 8.1.3 IR-settings
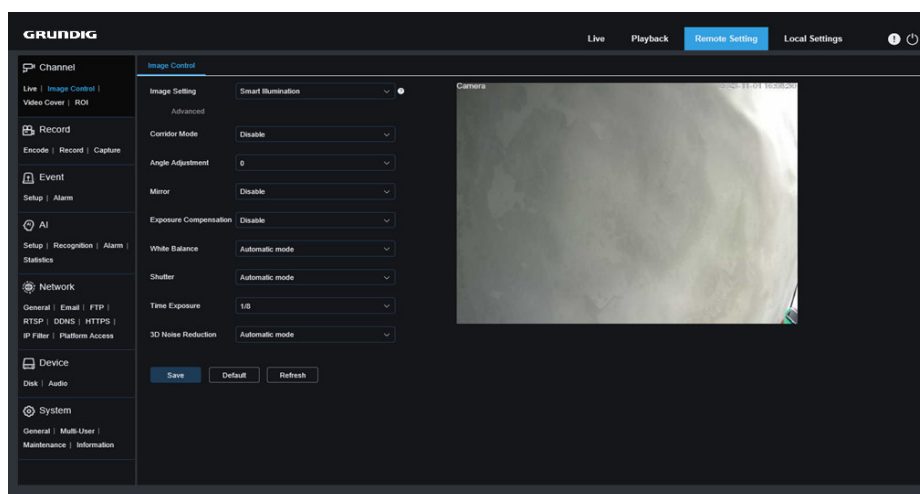
Figure 8.1.4 Image Settings

Image Setting: Set camera mode. There are three mode options.

Full Color Mode: The camera works in Full Color Mode.

Day/Night Mode: The camera works in Day/Night Mode.

Smart Illumination: In this mode, when the camera triggers an alarm in night vision mode, it will link with the warm light to fill in the light, and the image will be in color. The camera will return back to night mode after the alarm ends.

White Light: Set the fill-in light for the white light in Full Color Mode.There are four mode options.

Automatic mode: In Automatic Mode, the camera automatically adjusts the intensity of the fill-in light according to ambient illumination.

Manual: In Manual Mode, the fill-in light is applied on the environment with a fixed brightness value.

Schedule: In Schedule Mode, the white light is automatically switched on and off for fill-in as scheduled.

OFF: Disable the white light.

Sensitivity: Sensitivity 0-3. The degree to which the camera is sensitive to ambient light. The higher the value is, the higher the sensitivity is.

Light Distance: Ranging from 0 to 100 and used to adjust the brightness of the fill-in light. The higher the value is, the higher the brightness is.

IR-CUT Mode: Set the day/night switching mode of the camera in Day/Night Mode.There are five mode options.

Auto: Automatically controls the Switching mode. Among them, color to b/w is judged by images and b/w to color is judged by light sensitivity to ambient light.

Day: Forced Color mode will not be switched to b/w.

Night: Forced B/W mode will not be switched to color.

Image: Similar to the Auto Mode, color to B/W and B/W to color are judged by images (for non-photosensitive models).

Schedule: Switch between b/w and color as scheduled. If this function is enabled, the start time and end time for night vision shall be set.

IR-LED: Set the fill-in light effect of the IR light at night vision. There are three mode options.

SmartIR: Intelligently control the fill-in light intensity of the IR light according to focal length and overexposure condition.

Manual: Manual Mode in which the fill-in light is applied in the form of the set brightness of the IR light.

OFF: No fill-in light is applied for any light.

Low/High Beam Light: manually adjust the first group IR light brightness (0 to100, of which 0 indicates that the IR light is off and 100 indicates the highest brightness).

High Beam Light: Manually adjust the second group IR light (Only support by varifocals camera) brightness (0 to100, of which 0 indicates that the IR light is off and 100 indicates the highest brightness).

Corridor Mode: Corridor Mode.

Angle Trad: Image rotation setting. The camera is reverse to the presetting in some usage scenarios. For example, the camera is designed to be hung upside down, but in practice it is used flatwise. Set this value to adjust the image.

Mirror: Set the mirror mode to adjust the picture effect. There are four mode options.

Disable: Disable the Mirror Mode.

Vertical: Set the Mirror Mode in the vertical direction to interact the image on the picture up and down.

Horizontal: Set the Mirror Mode in the horizontal direction to interact the image on the picture left and right.

All: Enable Vertical and Horizontal at the same time. The effect is similar to that of 180° rotation, but the implementation principle is different.

Exposure Compensation： Set firmware performance when backlight. There are four mode options.

WDR: Wide dynamic range in which the picture is uniformly balanced based on the setting and both light and dark areas can be clearly distinguished.

HLC: Highlight compensation in which the objects in the highlighted area are clearer in the picture (applicable for some models).

Back Light: Backlight compensation in which the objects in the dark area are clearer.

Disable: An image will not be optimized with backlight on.

White Balance: White balance is a measure of the accuracy of white produced by mixing red, green, and blue. There are two mode options.

Automatic mode: Adjust the white light using default parameters.

Manual: Actively set the synthetic gained white light of red, green, and blue.

Shutter: Set the shutter exposure time. There are two mode options.

Automatic mode: The program automatically selects a proper exposure time according to the Time Exposure setting.

Manual: Allows to directly use the Time Exposure setting.

Note: Deselect the flickerless option of the exposure time in shutter manual mode, and select the option in shutter auto mode. If you switch the shutter to manual mode, the exposure time is switched automatically to 1/100 or 1/120.

Time Exposure: Set the exposure time of the camera and use this parameter in combination with Shutter.When the exposure time is too long, there may be overexposure. When the exposure time is too short, the picture may be dark.

3D Noise Reduction: Reduce image noise by setting this parameter to obtain a clearer picture. There are three mode options.

Automatic mode: In this mode, the camera will automatically select the noise reduction effect according to algorithms.

OFF: Disable the noise reduction function.

Manual: Allows to manually set the noise reduction coefficient to reduce image noise.

Defog: Foggy will lead to deteriorated images. The defog function can optimize image rendering in foggy days. There are three settings:

OFF: Disable the defog function.

Automatic mode: In this mode, the camera automatically judges the defog effect.

Manual: Allows to manually set the defog value.

Save: Save parameter changes to an image.

Default: Restore image parameters to default settings.

Refresh: Refresh image parameters.

8.3 Privacy Zone

In practical applications, if areas that can be monitored by the camera are not suitable for monitoring and recording, you can use this function to occlude these areas. This feature will allow users to create 4 or 6 (depending on model) privacy zones of any size and location. The screen is shown in the figure below.
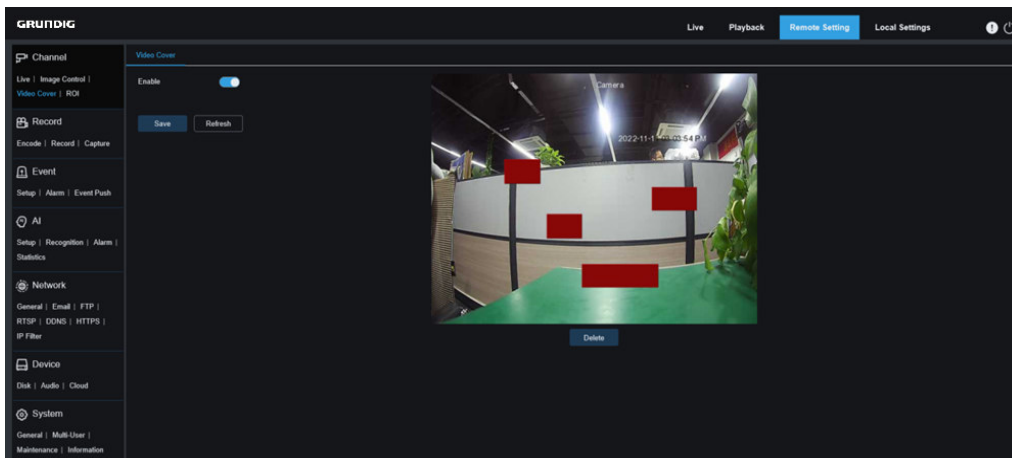
Figure 8.3.1 Privacy Zone

Enable: Enable the privacy zone function.

Tampering Area Setting: Set the areas to be masked in the monitoring screen. The masked blocks are red while setting and will turn to black after they take effect. You can set up to 6 (depending on model) blocks.

Delete: Delete selected blocks.

8.4 ROI

ROI (sensitive area) is a region of interest selected from the video area. This area can be set to a different frame rate and sharpness than the unselected area.

Note: This feature is mutually exclusive with H.264+ and H.265+ encoding types and cannot be enabled at the same time.
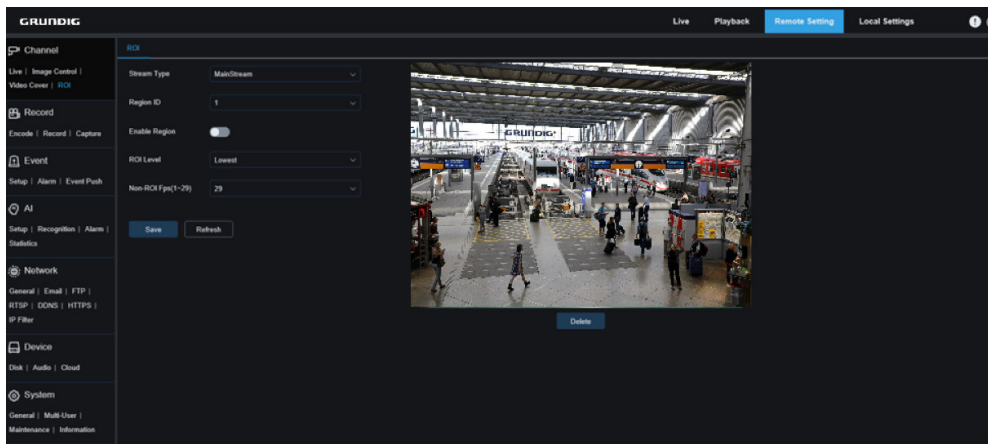
Figure 8.4.1 ROI Settings

frame rate of non-region of interest

Note: not supported from all models.

If the video code type is H264+ or H265+, the ROI function and the type are mutually exclusive. Therefore, the ROI function cannot be enabled, as shown in the following figure:
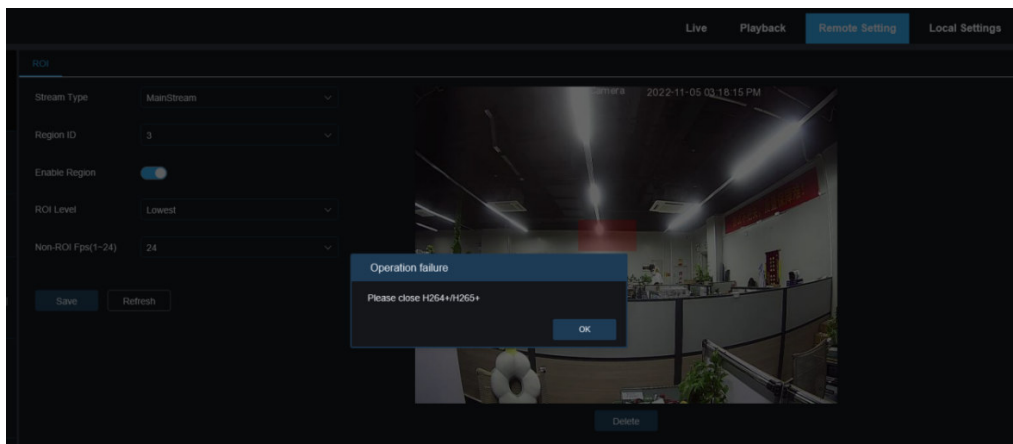
Figure 8.4.2 Operation failed

Enabling ROI does not take effect when Sub-Stream is in MJPEG format

Note: ROI is not supported from all models.

8.5 Recording Parameters

This menu allows to configure preview parameters and recording parameters.

8.5.1 Encode Parameters

This menu allows to configure the image quality for video recording or network transmission. In general, "Main

Stream" defines the quality parameters of recorded videos that will be stored in the HDD, "Sub Stream" defines the quality parameters of live videos that are remotely accessed from for example the web client and VMS, and "Mobile Stream" (can be turned off) defines the quality parameters of live views that are remotely accessed and viewed from mobile devices.
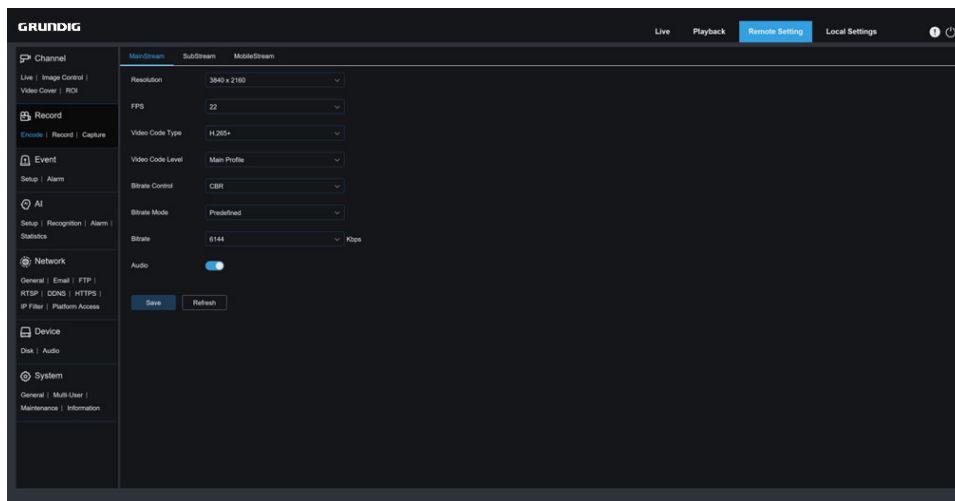
Figure 8.5.1.1 Stream Settings

Resolution: This parameter defines the resolution of a recording image.

FPS: This parameter defines the frame rate of recording in your IPC.

Video Code Type: Channel decoding types. The options include H.264, H.265, H.264+, H.265+, and MJPEG (MJPEG only exists in Sub Stream mode).

Video Code Level: Video quality levels. The options include Bestline, Main Profile, and High Profile (for H.265, only Main Profile is available).

Bitrate Control: Select a bit rate level. For a simple scenario, a constant bit rate is preferred. For a complicated scenario such as a busy street, a variable bit rate is preferred.

Bitrate Mode: To manually set a bit rate, select the "Custom" Mode. To select a preset bit rate, select the "Preset" Mode.

Bitrate: This parameter corresponds to the data transmission speed used by the IPC to record a video. Recording in a higher bit rate will gain better image quality.

I Frame Interval: Set an I-frame interval.

Audio: Select this option if you want to record both audio and video and connect your microphone to IPC or use a camera with audio capability.

8.5.2   Record

8.5.2.1   Recording Parameters

This menu allows to set recording parameters.
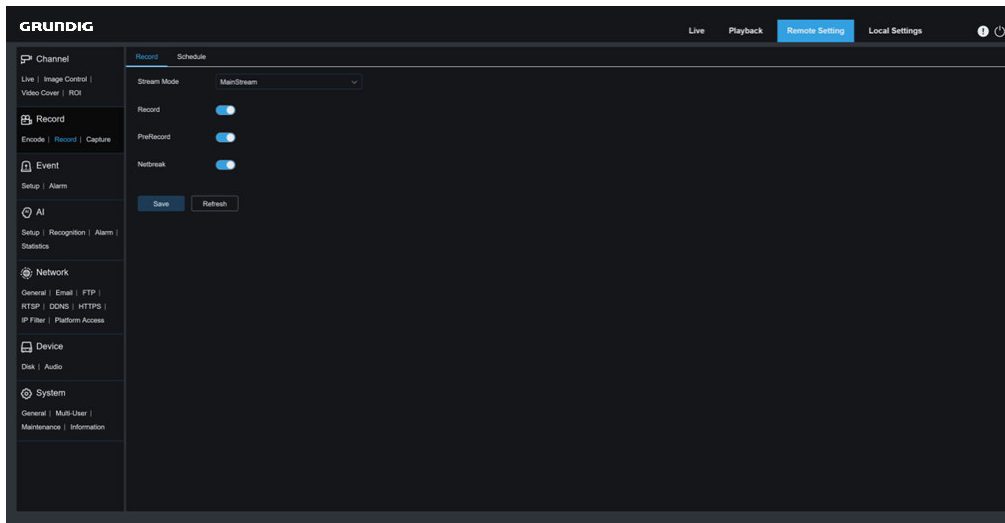
Figure 8.5.2.1.1 Record Parameter

Stream Mode: Select a Recording Mode, that is, video stream to be saved in the memory card. The main stream is selected by default.

Record: Select this option to start recording.

PreRecord: If this option is enabled, the IPC will start recording a few seconds before an alarm event occurs. This option is recommended if your main recording type is based on motion detection or I/O alarm.

Netbreak: If this option is selected, recording continues even when the network is disconnected or network failure occurs.

8.5.2.2 Schedule

This menu allows to specify when the IPC starting recording. You can set a recording plan in the recording schedule. The recording is performed only within the selected time period. You can drag your cursor to mark areas.
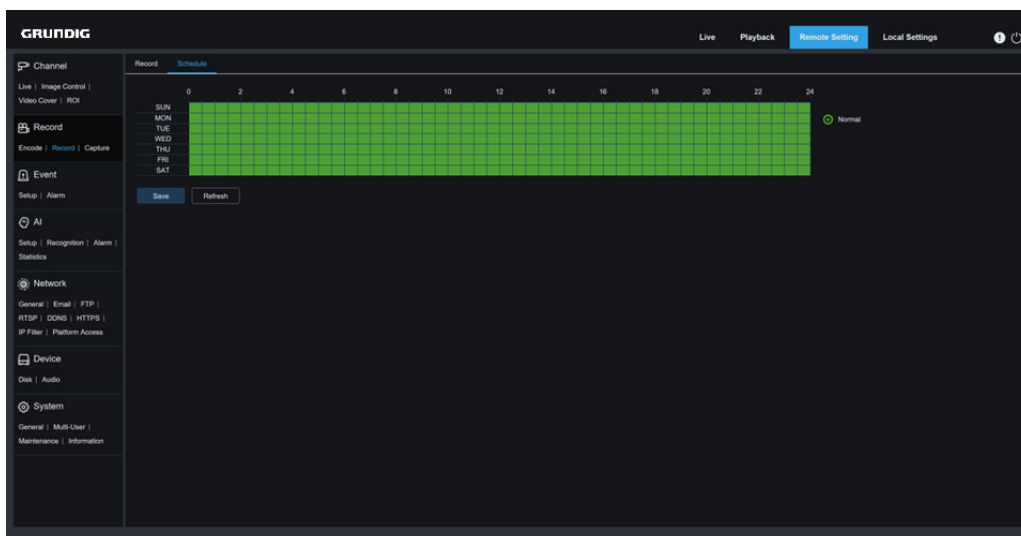
Figure 8.5.2.2.1 Record Schedule

8.5.3 Capture

8.5.3.1 Capture Settings
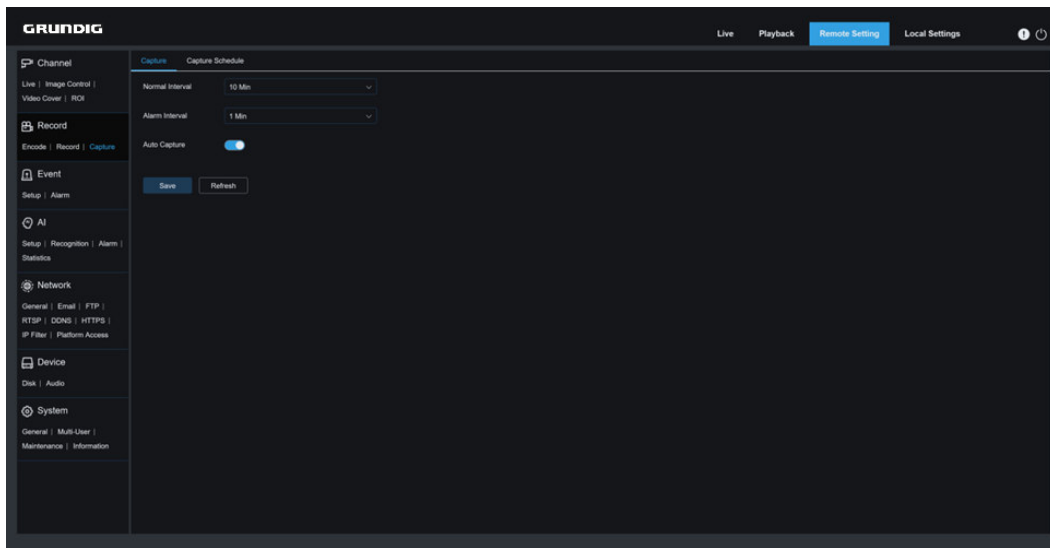
Figure 8.5.3.1.1 Capture Settings

Normal Interval: Normal capture interval, used to specify the capture interval in normal recording.

Alarm Interval: Alarm capture interval, used to specify the capture interval when motion detection, I/O alarm, or PIR is triggered.

Auto Capture: Automatic capture.

8.5.3.2 Capture Schedule

This menu allows to specify when the IPC capture images. You can set a capture plan in the capture schedule. The capture is performed only within the selected time period.You can drag your cursor to mark areas.
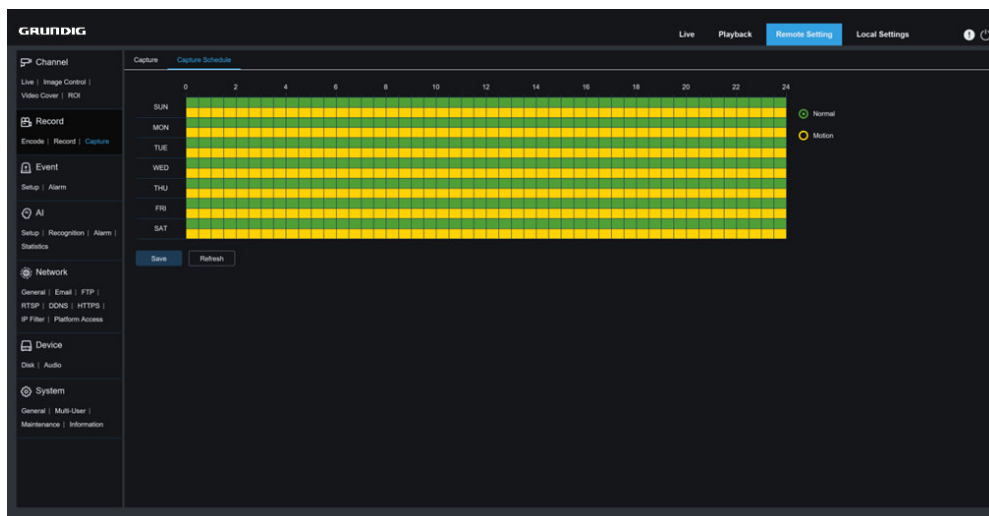
Figure 8.5.3.2.1 Capture Schedule

Normal: When the area is marked green, the channel performs normal capture on the area in the corresponding

time period.

Motion: When the area is marked yellow, the channel performs motion capture on the area in the corresponding time period.

IO: When the area is marked red, the channel performs I/O alarm capture on the area in the corresponding time period.

PIR: When the area is marked purple, the channel performs PIR alarm capture on the area in the corresponding time period.

No Capture: When the area is marked black, the channel will not perform capture in this time period.

8.6 Event Setup

8.6.1   Parameter Setup

8.6.1.1   Motion Detection

This menu allows to configure motion detection parameters. When motion is detected, a series of alarms will be triggered, such as sending an email alert with attached images from the camera (if this option is enabled) and a push notification via the app.
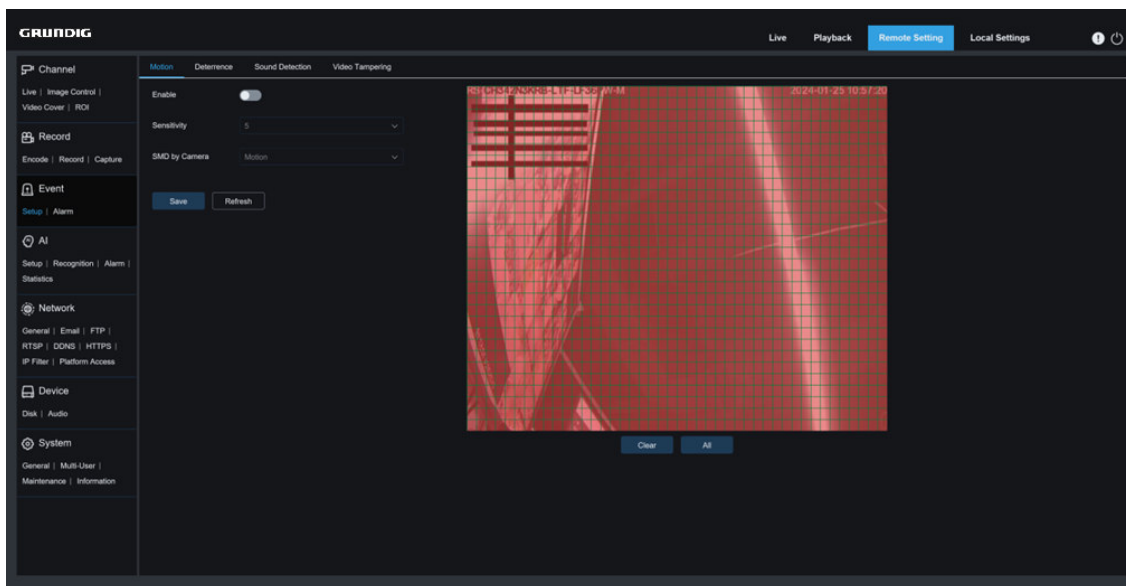
Figure 8.6.1.1.1 Motion

You can drag the left mouse button to delimit the detection area in the right window. An alarm will be triggered only when motion is detected in this area.

Enable: Enable or disable motion detection.

Sensitivity: Set the sensitivity of motion detection. The higher the value, the higher the sensitivity.

Target Detection: Intelligent motion detection. You can set the target detection type and area. The motion

detected in the area can trigger an alarm. The detection type includes the following four options: Motion, Pedestrian, Vehicle and Pedestrian & Vehicle (Note: Only some models support target detection. The default detection type is Pedestrian).

8.6.1.2   Deterrence

This menu allows to configure white light deterrence parameters when the camera supports white light and the image control is set to Day/Night Mode.When the alarm linking to deterrence is triggered, the white light will be automatically turned on for deterrence purpose as shown in the figure below:
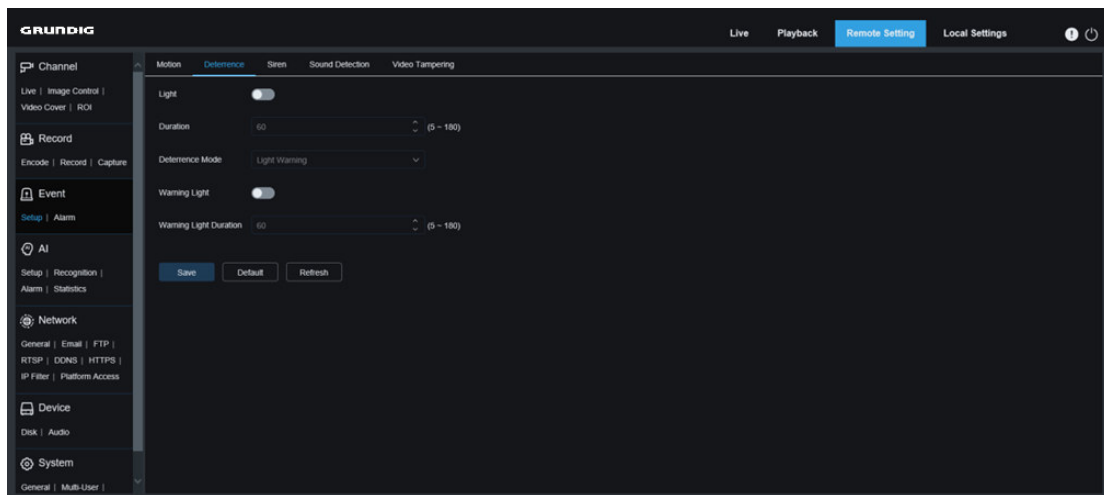
Figure 8.6.2.1.1 Deterrence

Note: When the camera supports white light and image control is set to Full Color Mode, the white light parameters such as **Light** become unavailable; when image control is set to Day/Night Mode, all parameters on this screen are available. When the image control is set to **Smart Illumination** mode, all parameters of this interface are grayed out and cannot be set.

Light: White light deterrence switch.

Duration: set the duration of white light deterrence.

Deterrence Mode: White light Deterrence Mode.There are two mode options:

Light Warning: The white light is steady on during deterrence.

Light Strobe: The white light blinks at a set frequency during deterrence.

Warning Light: Turn on or turn off warning light.

Warning Light Duration: Set the warning light duration.

8.6.1.3   Siren

When the camera supports siren, you can set the siren deterrence parameters on this screen. When an alarm linking to deterrence is triggered, the siren is automatically turned on for deterrence purpose, as shown in the following figure.
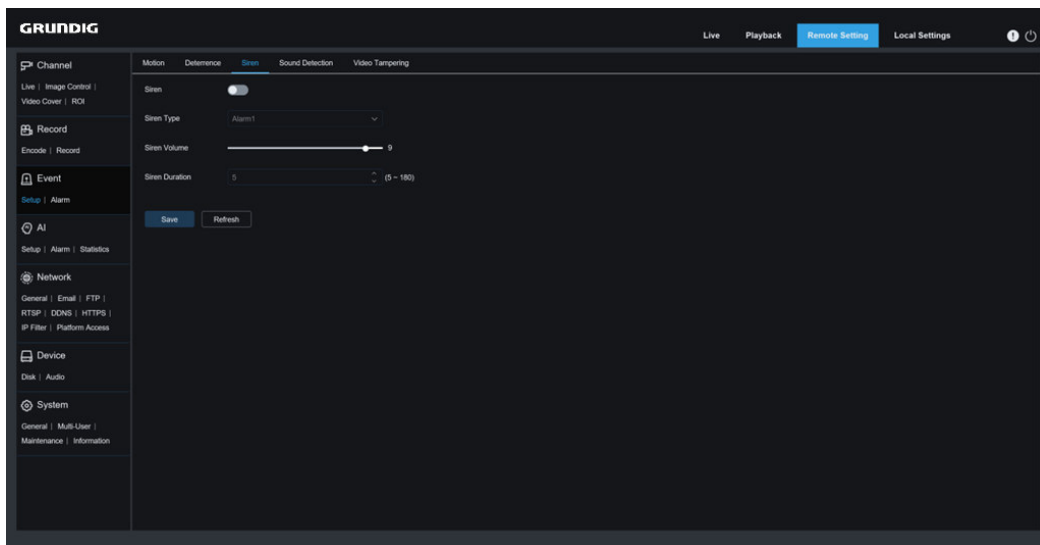
Figure 8.6.1.3.1 Siren

Siren: Turn on/off the siren.

Siren Type: Set the siren file type.

By default, there are two files for users to configure. You can customize and import three siren audio files (the audio file format should be **.wav** and **.pcm**,audio sampling rate can't exceed 8000Hz, and the file size is not larger than 256K).

Siren Level: Set the siren level.

Siren Duration: Set the siren duration.

8.6.1.4 Sound Detection

An alarm will be triggered when the camera detects that the connected audio has changed and the requirement of alarm detection is met.
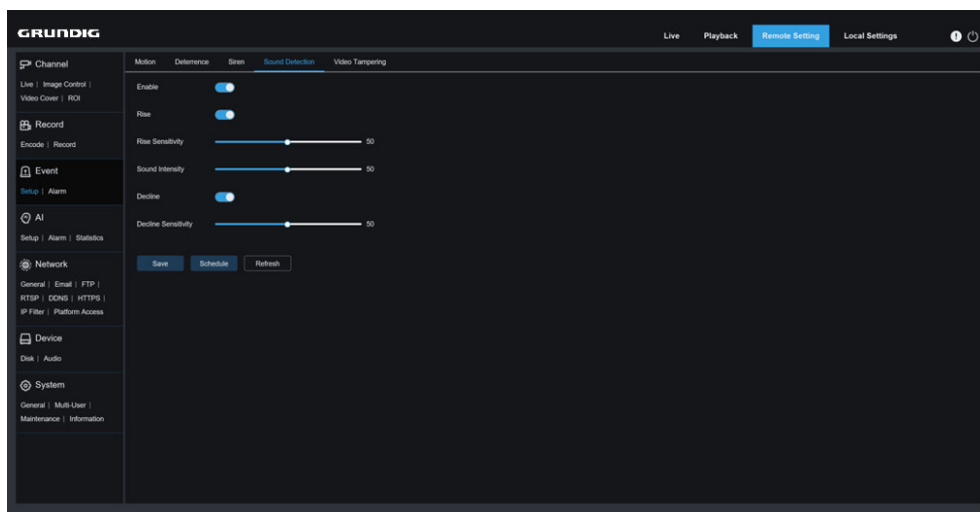
Figure 8.6.1.4.1 Sound Detection

Enable: enable or disable audio detection.

Rise: Volume rise switch. When this option is turned on, an alarm will be triggered only when the volume rises steeply.

Rise Sensitivity: Rise sensitivity. The higher the value, the easier it is to trigger an alarm.

Sound Intensity: Send sound intensity. This setting is the sound threshold. The larger the threshold, the louder the sound is required to trigger a rise alarm, and vice versa.

Decline: Volume decline switch. When this option is turned on, an alarm will be triggered only when the volume declines steeply.

Decline Sensitivity: Decline sensitivity. The higher the value, the easier it is to trigger an alarm.

Schedule: Set a sound alarm schedule. A sound alarm will be triggered only within the planned time.
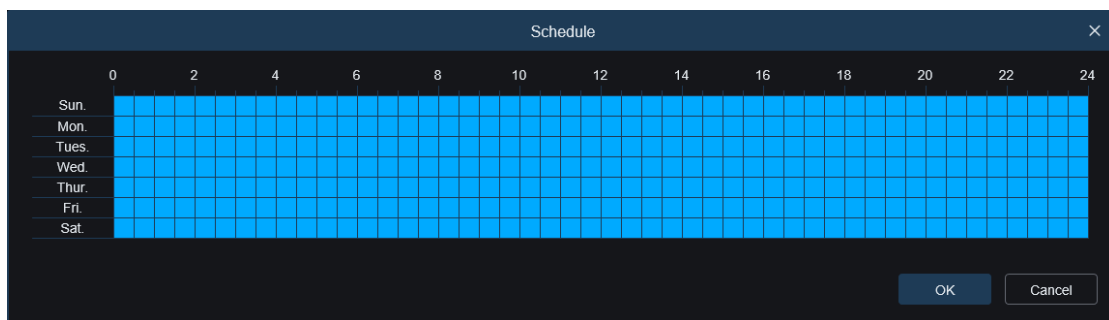
Figure 8.6.1.4.2 Schedule

8.6.1.5   Video Tampering

Detects the live view tampering and trigger an alarm.
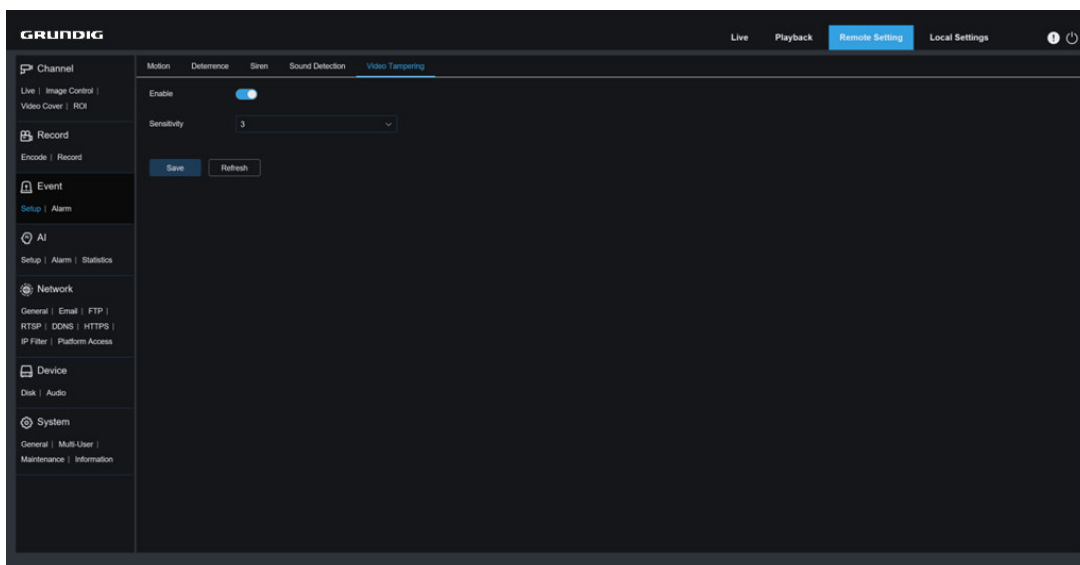
Figure 8.6.1.5.1 Video Tampering

Enable: enable or disable video tampering detection.

8.6.2 Alarm Setting

This menu allows to set the actions to be performed when an alarm is triggered.

8.6.1.6   Motion Detection

Figure 8.6.1.6.1 Motion

Latch Time: Set the duration for triggering an external alarm when motion is detected.

Post Recording: Set the duration of continuous recording after an event occurs. The options include 5s, 10s, 20s, and 30s. The default duration is set to 5s.

Send Email: The camera automatically sends an Email when it detects motion.

Event push Platform: If this option is set to ON, this type of information will be pushed to the client when an alarm is triggered.

Alarm Out: Optional. If your device supports connection to an external alarm device, you can turn on this switch to activate the external alarm device.

Light: If this option is set to ON, the white light will be turned on for deterrence when an alarm is triggered.

Warn Light: If this option is set to ON, the warning light will be turned on for deterrence when an alarm is triggered.

Siren: If this option is set to ON, the siren will be turned on for deterrence when an alarm is triggered.

FTP Picture Upload: Upload alarm pictures to the FTP server.

FTP Video Upload: Upload alarm videos to the FTP server.

Enable Record: If this option is turned on, this kind of recording will be enabled when an alarm is triggered.

Schedule: Set the scheduled time when an alarm acts. An alarm action is triggered only within the scheduled time.

Figure 8.1.8.6.2 Schedule

8.6.1.7 I/O Alarm

This function is available only when your camera supports I/O sensors and connected to an external I/O alarm device.
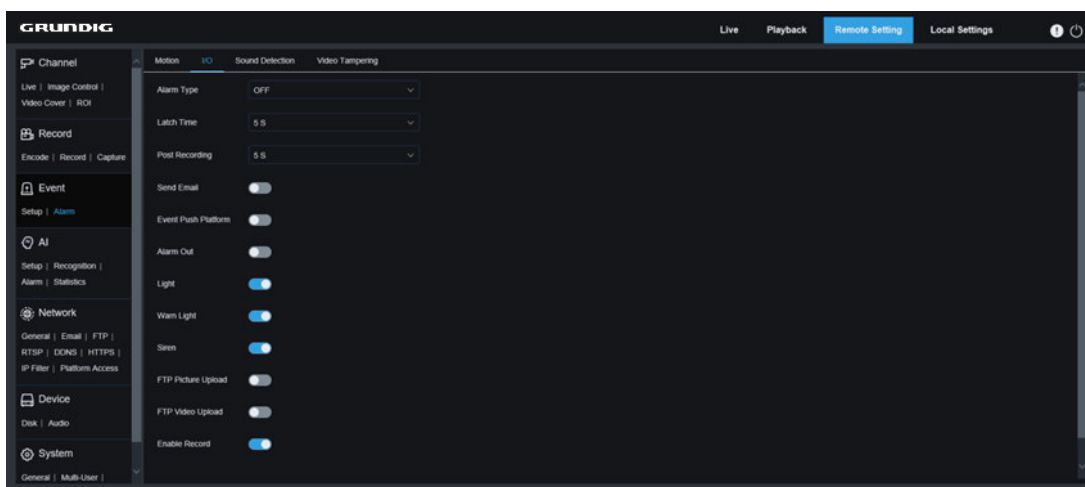
Figure 8.6.1.7.1 I/O Alarm

Latch Time: Set the duration for triggering an external alarm when an alarm is detected.

Post Recording: Set the duration of continuous recording after an event occurs. The options include 5s, 10s, 20s, and 30s.The default duration is set to 5s.

Send Email: The device automatically sends you an Email when it detects an alarm.

Event push Platform: If this option is set to ON, an information will be pushed to the client when an alarm is triggered.

Alarm Out: Optional. If your device supports connection to an external alarm device, you can turn on this switch to activate the external alarm device.

Light: If this option is set to ON, the white light will be turned on for deterrence when an alarm is triggered.

Warn Light: If this option is set to ON, the warning light will be turned on for deterrence when an alarm is triggered.

Siren: If this option is set to ON, the siren will be turned on for deterrence when an alarm is triggered.

FTP Picture Upload: Upload alarm pictures to the FTP server.

FTP Video Upload: Upload alarm videos to the FTP server.

Enable Record: If this option is turned on, the recording will be enabled when an alarm is triggered.

Schedule: Set the scheduled time when an alarm acts. An alarm action is triggered only within the scheduled time.

Figure 8.6.1.7.2 Schedule

8.6.1.8 Sound Alarm
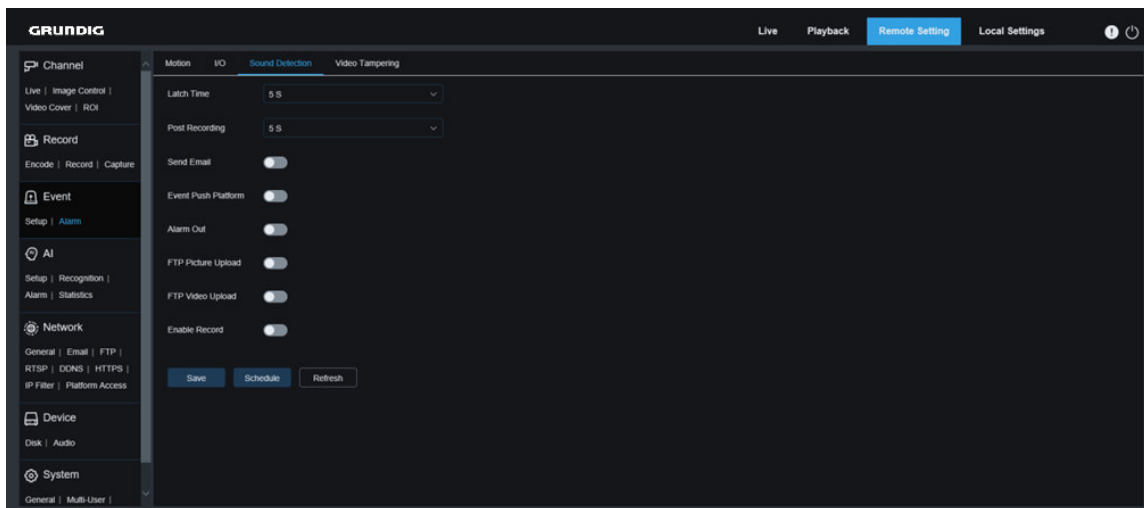
Figure 8.6.1.8.1 Sound Alarm

Latch Time: Set the duration for triggering an external alarm when a sound alarm is triggered.

Post Recording: Set the duration of continuous recording after an event occurs. The options include 5s, 10s, 20s, and 30s.The default duration is set to 5s.

Send Email: The device automatically sends you an Email when it detects a sound alarm.

Event push Platform: If this option is set to ON, an information will be pushed to the client when an alarm is triggered.

Alarm Out: Optional. If your device supports connection to an external alarm device, you can turn on this switch to activate the external alarm device.

FTP Picture Upload: Upload alarm pictures to the FTP server.

FTP Picture Video: Upload alarm videos to the FTP server.

Enable Record: If this option is turned on, a recording will be enabled when an alarm is triggered.

Schedule: Set the scheduled time when an alarm acts. An alarm action is triggered only within the scheduled time.
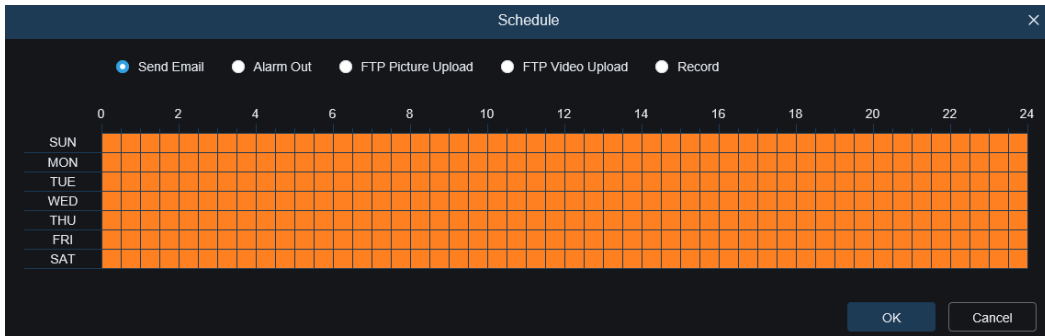
Figure 8.6.1.8.2 Schedule
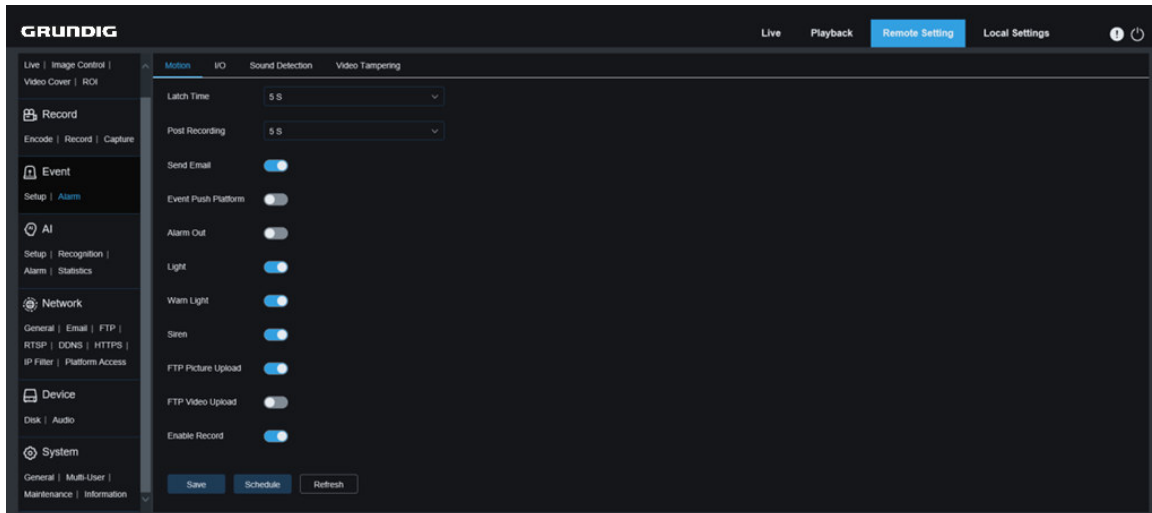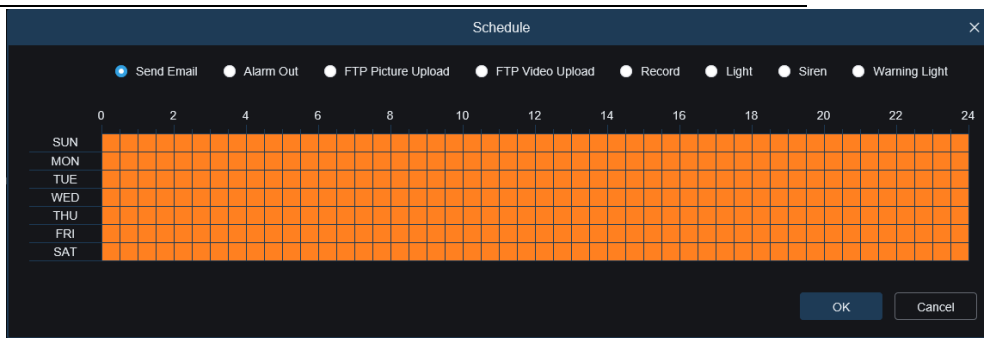
8.6.1.9 Video Tampering
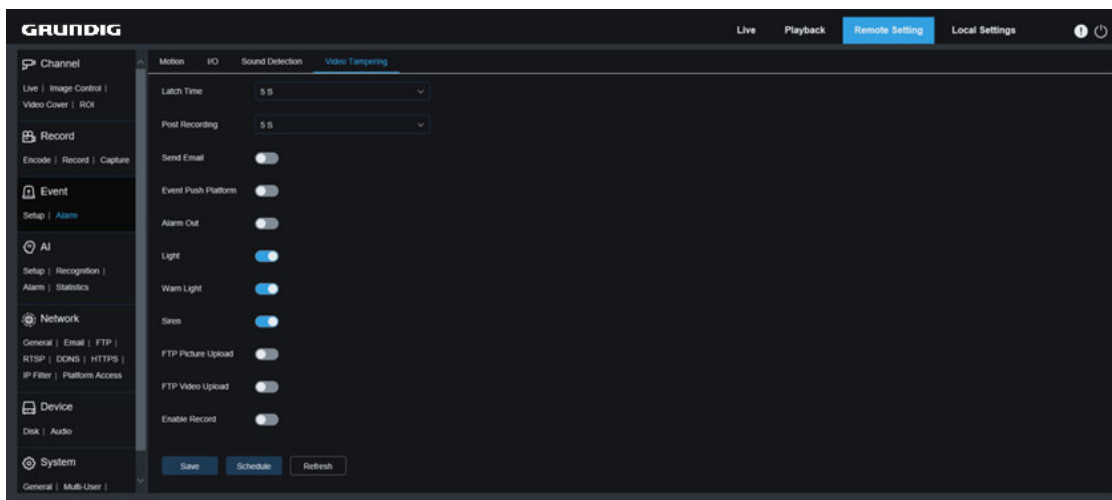
Figure 8.6.1.9.1 Video Tampering

Latch Time: Set the duration for triggering an external alarm when a manipulation is detected.

Post Recording: Set the duration of continuous recording after an event occurs. The options include 5s, 10s, 20s, and 30s.The default duration is set to 5s.

Send Email: The device automatically sends an Email when it detects a manipulation.

Event push Platform: If this option is set to ON, an information will be pushed to the client when an alarm is triggered.

Alarm Out: Optional.If your device supports connection to an external alarm device, you can turn on this switch to activate the external alarm device.

Light: If this option is set to ON, the white light will be turned on for deterrence when an alarm is triggered.

Warn Light: If this option is set to ON, the warning light will be turned on for deterrence when an alarm is triggered.

Siren: If this option is set to ON, the siren will be turned on for deterrence when an alarm is triggered.

FTP Picture Upload: Upload alarm pictures to the FTP server.

FTP Video Upload: Upload alarm videos to the FTP server.

Enable Record: If this option is turned on, a recording will be enabled when an alarm is triggered.

Schedule: Set the scheduled time when an alarm acts. An alarm action is triggered only within the scheduled time.
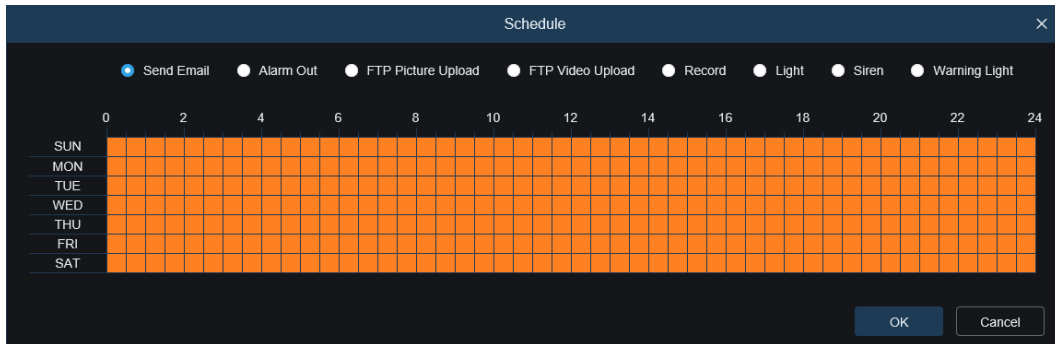

Figure 8.6.1.9.2 Schedule

Note: Video tampering alarm is not supported on all models.

8.7 AI

8.7.1 Setup

To use the AI alarm function, enable the alarm function in the Setup menu. Enabling the function consumes the computing power of the camera. Due to the limited performance of the camera. Some AI functions are not supported to be turned on at the same time,please refer to the relevant restriction tips of the specific model.

8.7.1.1 Face Detection

Face detection function. First, the camera detects the face and obtain the capture image that meets the requirements. Then, the face feature data of the capture image is calculated by the face model algorithm and then compared with that in the face database. Finally, an alarm is triggered. To do this, you need to enable the face detection function.
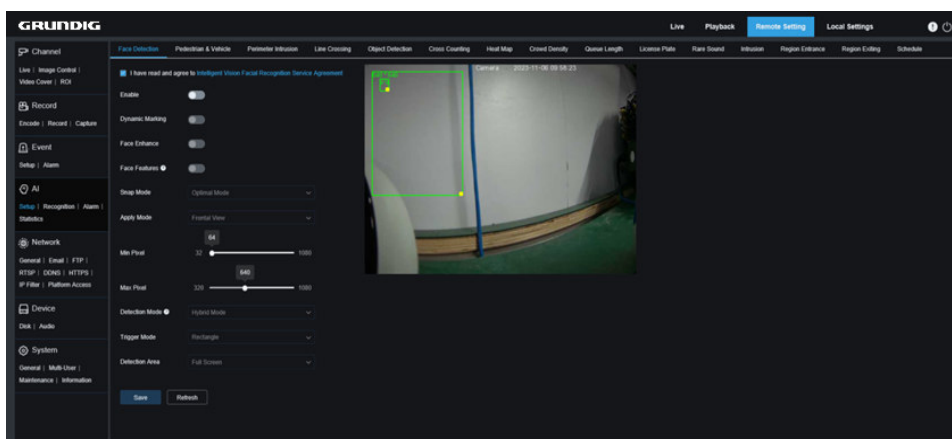
Figure 8.7.1.1.1 Face Detection

Service Agreement: Face Recognition Algorithm Agreement will automatically pop up when logging in for the first time, and the user can check to agree or not. If you do not click the apply button, it will appear every time you login. Before turning on the face detection switch, you must check to agree to the agreement, otherwise the face detection function cannot be used.

Enable: Enable the face detection function.

Dynamic Marking: Displays the face detection box and used to turn on or off the detection rule line (supported by some models).

Face Enhance: Face enhancement switch to increase the capture effect of moving objects. It will also adjust the brightness of the recognized face closest to the camera to optimize the capture effect (supported by some models).

Face Features: recognize the features of the detected face image, including age, gender, mask, glasses, expression, and so on.

Note: To use the Face Features alarm, enable this function.

Snap Mode: Set the snap mode. You can receive push notifications in live view or connect an NVR to check the image effect. The program supports three Snap Modes.

Optimal Mode: The camera only pushes an image that it considers best from detecting an object until the object disappears.

RealTime Mode: When detecting an object, the camera immediately pushes an image, and then pushes the best image when the object disappears.

Interval Mode: set the snap number and the snap and push interval as required. The options for Snap Num include 1,2,3, and unlimited. The Snap Frequency ranges from 1s to 255s. For example, when the snap frequency is set to 5s, an image is pushed at 5s, 10s and 15s when the object is detected.

Apply Mode: Screen the captured images. That is, only the captured images that meet angle setting will be pushed. There are three mode options.

Frontal View: Only the frontal view of an object is pushed.

Multi Angle: Choose to push images containing only side faces.

Customize: Customize the angle of an object for which images can be pushed. If this function is enabled, Roll Range, Pitch Range, Yaw Range, and Picture Quality options, as well as Frontal Default and Multi Default buttons will be available.

Roll Range: Set the roll range of the captured face image in the 3D model. When the angle does not meet the setting limit, face detection can be carried out but the image will not be pushed.

Pitch Range: Set the pitch range of the captured face image in the 3D model. When the angle does not meet the setting limit, face detection can be carried out but the image will not be pushed.

Yaw Range: Set the yaw angle of the captured face image in the 3D model. When the angle does not meet the setting limit, face detection can be carried out but the image will not be pushed.

Picture Quality: High quality images are good for filtering out detected non-face images.

Frontal Default Apply Mode：Selecting Customize displays the control, setting the values for Push Angle to Range: 30, Pitch Range: 30, Yaw Range: 45, and Picture Quality: 100.

Multi Default Apply Mode：Selecting Customize displays the control, setting the values for Push Angle to Range: 180, Pitch Range: 180, Yaw Range: 180, and Picture Quality: 100.

Min Pixel: Based on the 1080p resolution, filter out faces lower than the setting in the snap screen. The default

resolution is 64×64 pixels, and the setting range is 32 to 1080 pixels. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Max Pixel: Based on the 1080p resolution, filter out faces greater than the setting in the snap screen. The default resolution is 640×640 pixels, and the setting range is 320 to 1080 pixels. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Detection Mode: Filter the performance of detected objects in the camera. There are two mode options.

Hybrid Mode: Allow do face detection for all objects in the view.

Motion Mode: Allow to filter out motionless faces, such as such as portraits and statues in the scene.

Trigger Mode: Set the detection rule type. There are two rule types.

Rectangle: Allows to detect only face objects in the set area.

Line: In this mode, face objects are tracked only when the detection line is crossed according to settings.

Detection Area: Setting options are changed when the detection area is used to recognize objects by default. There are two modes.

Full Screen: All areas that can be monitored by the camera are detected.

User-defined: Only user-defined boxed areas are detected.

The Rule Type setting option is available only when the line-crossing detection mode is used. There are A→B and B→A detection Trigger Modes.

Rule Line Setting Area: Supports setting the detection area of 3-8 sides, or detecting the trigger line.

8.7.1.2   Pedestrian & Vehicle

Pedestrian detection and vehicle detection function, used to recognize pedestrian or vehicles in the view, generate an alarm, and record capture images, according function settings.
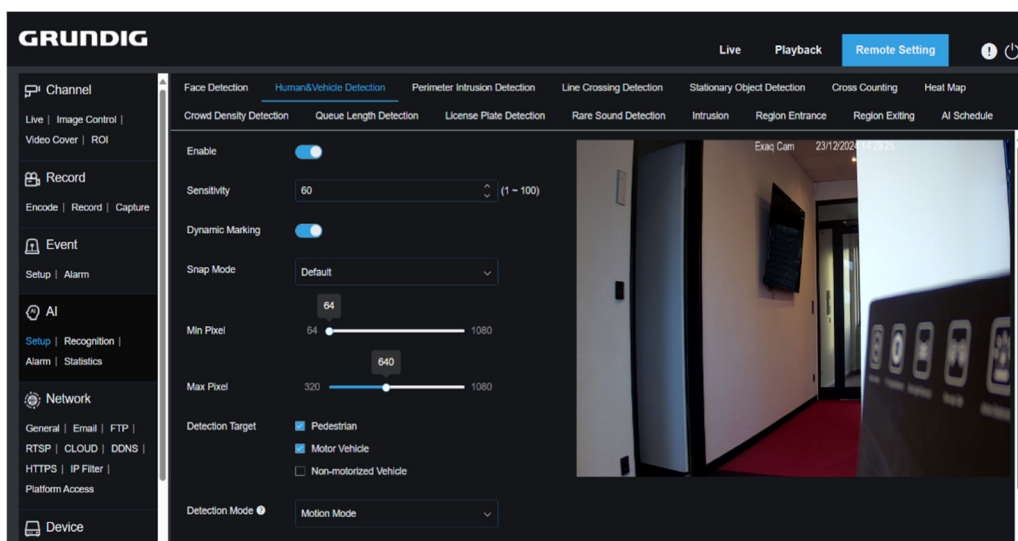

Figure 8.7.1.2.1 Pedestrian & Vehicle

Enable: Enable the pedestrian and vehicle detection function.

Sensitivity: With higher detection sensitivity, pedestrian or vehicle objects can be detected easier, but false alarms may be easily generated.

Dynamic Marking: Displays the pedestrian and vehicle detection box and used to turn on or off **the detection rule line.**

Snap Mode: set the snap mode. You can receive push notifications in live view or connect an NVR to check the image effect. The program supports three Snap Modes.

Default: The camera pushes only one pedestrian or vehicle image from detecting an object until the object disappears.

RealTime Mode: When detecting an object, the camera immediately pushes one image, and then pushes another image when the object disappears.

Interval Mode: push images at a set interval.

Snap Num: Images for the same object as determined by the camera will be pushed 1,2,3, or unlimited times at an interval set in Snap Frequency.

Snap Frequency: Images will be pushed based on the set time upon appearance of an object or since the last push.

Min Pixel: Based on the 1080p resolution, filter out pedestrian or vehicle objects lower than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Max Pixel: Based on the 1080p resolution, filter out pedestrian or vehicle objects greater than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Detection Target: The options include pedestrian, motor vehicle, non-motorized vehicle, and all.

Detection Mode: Filter object behaviors in the detection area. There are two mode options.

Hybrid Mode: Allow to detect all pedestrians or vehicles in the view.

Motion Mode: Allow to filter out motionless pedestrians or vehicles.

Detection Range: Detection area setting. There are two mode options:

Full Screen: All areas that can be monitored by the camera are detected.

User-defined: Only user-defined boxed areas are detected.

Rule Line Setting Area: Supports setting the detection area of 3-8 sides, or detecting the trigger line.

8.7.1.3   Perimeter Intrusion

Perimeter intrusion detection. An alarm is triggered when a specific object enters or leaves the warning area.
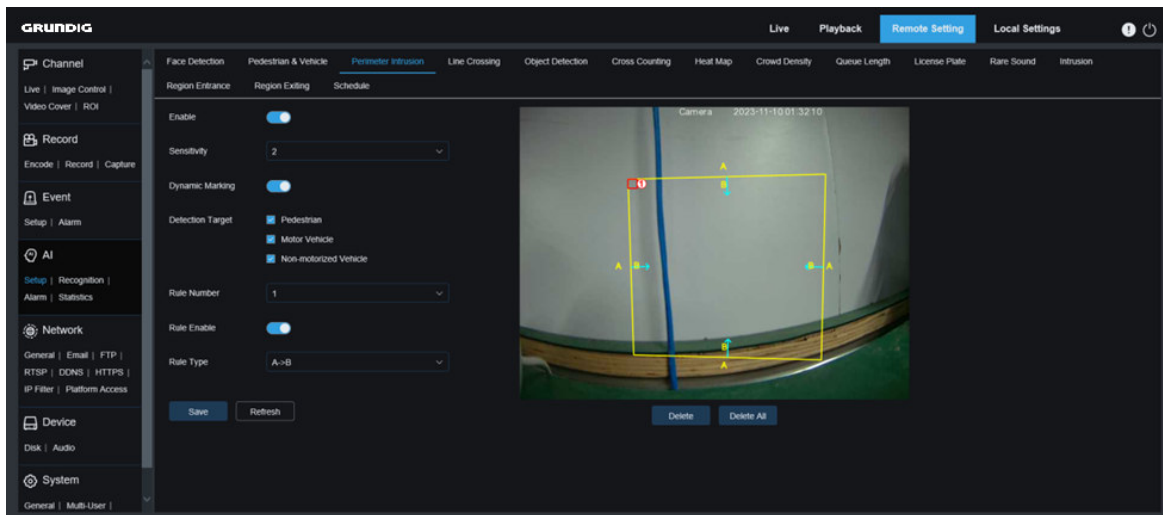
Figure 8.7.1.3.1 Perimeter Intrusion

Enable: Turn on or off the perimeter intrusion alarm function.

Sensitivity: Filter small disturbing objects. The higher the sensitivity, the smaller the object can be detected.

Dynamic Marking: Displays the detection box and used to turn on or off the detection rule line.

Detection Target: Set objects for perimeter intrusion detection:

Pedestrian: An alarm is triggered when a pedestrian intrudes the perimeter.

Motor Vehicle: An alarm is triggered when a motor vehicle intrudes the perimeter.

Non-motorized Vehicle: An alarm is triggered when a non-motorized vehicle intrudes the perimeter.

Rule Number: Allows to select a rule line number. The PID function Allow to set four detection rule lines.

Rule Enable: Turn on or off rule lines. Each rule line has an independent enable switch that is associated with the currently selected Rule Number.

Rule Type: Specifies the rule to trigger rules. There are A → B, B → A, and A ← → B line-crossing rules whose settings are related to the currently selected Rule Number.

Rule Line Setting Area: Allows to set and view edited rule lines.

Delete: Allow to delete selected rule Lines in the rule line setting area.

Delete All: Allow to delete all rule lines.

8.7.1.4   Line Crossing

Line-crossing detection function. An alarm is triggered when a specific object crosses the preset detection line.

Figure 8.7.1.4.1 Line Crossing

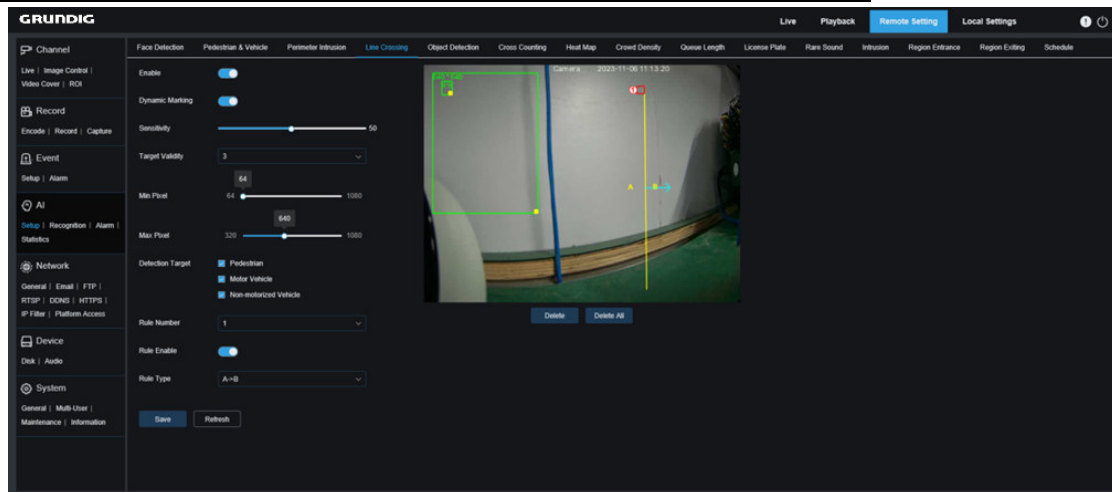**Enable:** Enables the line-crossing detection function.

Sensitivity: The sensitivity is related to the percentage of the target that enters the area; the higher the sensitivity setting of Line Crossing, the more likely the alarm will be triggered. For example, if it is set to 100%, the alarm will be triggered when the detection target has just touched the boundary of the set area. If set to 50%, the alarm is triggered after 50% of the detection target has already crossed the boundary of the set area.

Dynamic Marking: Displays the detection box and used to turn on or off the detection rule line.

Target Validity: The similarity between the detection target and the set detection type.1 represents a similarity of 80% or more, 2 represents a similarity of 60% or more, 3 represents a similarity of 40% or more, 4 represents a similarity of 20% or more.

Min Pixel: Based on the 1080p resolution, filter out pedestrian or vehicle objects lower than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Max Pixel: Based on the 1080p resolution, filter out pedestrian or vehicle objects greater than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Detection Target: Set objects for perimeter intrusion detection:

Pedestrian: A perimeter intrusion alarm is triggered only for pedestrians.

Motor Vehicle: A perimeter intrusion alarm is triggered only for motor vehicles.

Non-motorized Vehicle: A perimeter intrusion alarm is triggered only for non-motorized vehicles.

Rule Number: Allows to select a rule line number. Allows to set four detection rule lines.

Rule Enable: Turn on or off rule lines. Each rule line has an independent enable switch that is associated with the currently selected Rule Number.

Rule Type: Specifies the rule to trigger rule lines. There are A → B, B → A, and A ←→ B line-crossing rules whose

settings are related to the currently selected Rule Number.

Rule Line Setting Area: Allows to set, modify, and view edited rule lines.

Delete: Allows to delete selected rule Lines in the rule line setting area.

Delete All: Allows to delete all rule lines.

8.7.1.5   Object Detection

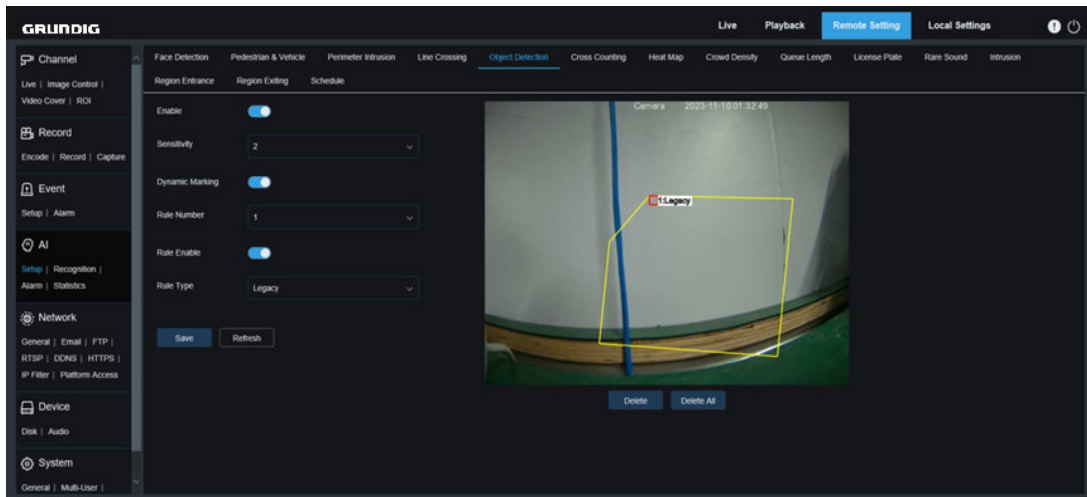An alarm will be triggered when there are items left or lost in the monitored scene.

Figure 8.7.1.5 Object Detection

Enable:T urn on or off the SOD function.

Sensitivity: Filter small disturbing objects. The higher the sensitivity, the smaller the object can be detected.

Dynamic Marking: Displays the detection box and used to turn on or off the detection rule line.

Rule Number: Allows to select a rule line number. The LCD function allows to set four detection rule lines.

Rule Enable: Turn on or off rule lines. Each rule line has an independent enable switch that is associated with the currently selected Rule Number.

Rule Type: Specifies the rule to trigger rule lines. You can set to trigger an alarm when an item is left or lost in the detection area. There are three rules including Legacy, Lost, and Lost & Legacy whose settings are related to the currently selected Rule Number.

Rule Line Setting Area: Allows to set, modify, and view edited rule lines.

Delete: Allows to delete selected rule Lines in the rule line setting area.

Delete All: Allows to delete all rule lines.

8.7.1.6   Cross Counting

Cross counting (CC) statistics function. Record the line-crossing information of a specific object in the monitored area. Set a crossing line. There are A and B areas on two sides of the set line. For example, the triggering rule for the rule line is A → B. When an object enters from area A and crosses the detection line, in is increased by 1 when the

object leaves area B. When the object enters from area B and crosses the detection line, out is increased by 1 when the object leaves area A. When the increase is to be calculated, an alarm is triggered only when the current IN count minus the out count is greater than or equal to the set Alarm Number, as shown in the following figure.
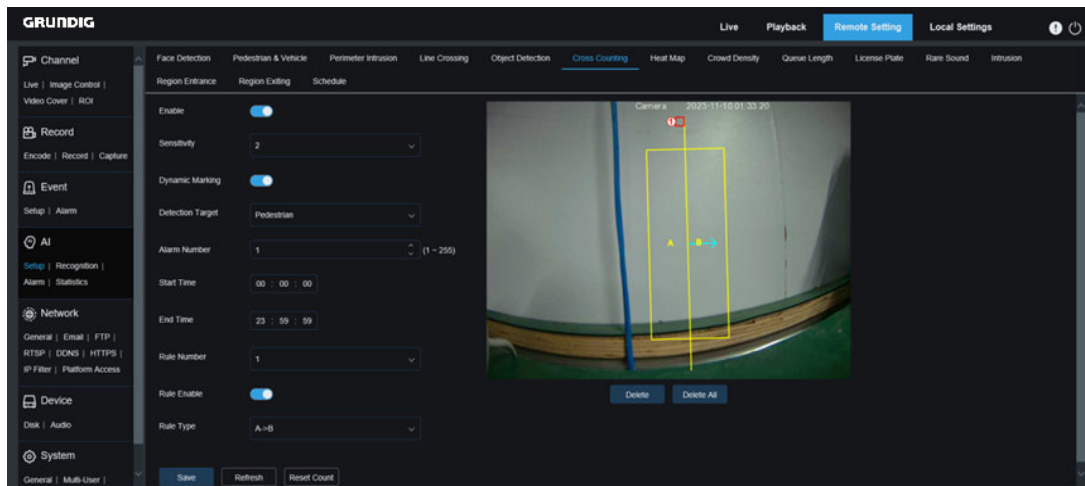

Figure 8.7.1.6 Cross Counting

Enable: Enables the cross-counting statistics function.

Sensitivity: Filters small disturbing objects. The higher the sensitivity, the smaller the object can be detected. This can also be used to detect distant objects in the scene.

Dynamic Marking: Displays the detection box and used to turn on or off the detection rule line.

Type: Set the type of objects to be recognized in the cross-counting detection. There are three modes. Switchover or saving operation will clear the current count.

Motion: All objects, including pedestrians, vehicles, and cartons, will be detected.

Pedestrian: Only pedestrian objects will be recognized.

Motor Vehicle: Only motor vehicle objects will be recognized.

Non-motorized Vehicle: Only non-motorized vehicle objects will be recognized.

Alarm Number: Set conditions to trigger an alarm. The camera will trigger a cross-counting alarm when the count is updated and the in count minus the out count is greater or equal to the current setting.

Start Time: The time when the line-crossing detection function starts to work every day.

Start Time: The time when the line-crossing detection function stops working every day.

Rule Number: Only one detection rule line is supported for cross counting.

Rule Enable: Turn on or off the current rule line.

Rule Type: Set the direction to increase the in/out trigger count, that is, A → B and B → A. For example, if A → B is selected, the in-count increases when the monitored object enters area A and leaves area B, and the out-count increases when the monitored object enters area B and leaves area A.

Reset Count: Clear the currently displayed count.

Line-crossing Setting Area: Allow to set the rule line for cross counting detection in this area.

Count Area: Displays cross counting statistics. For details, refer to Adjusting Display Location in Section 8.1.

8.7.1.7 Heat Map

You can set all areas or a specific area to detect the people activity information in the specified area. You can also save and upload changes at an interval of 10 minutes. The heat map can intuitively present people distribution in temporal and spatial dimensions for good understanding of activity degrees in each area in the scene. This function only supports data recording, not alarming.
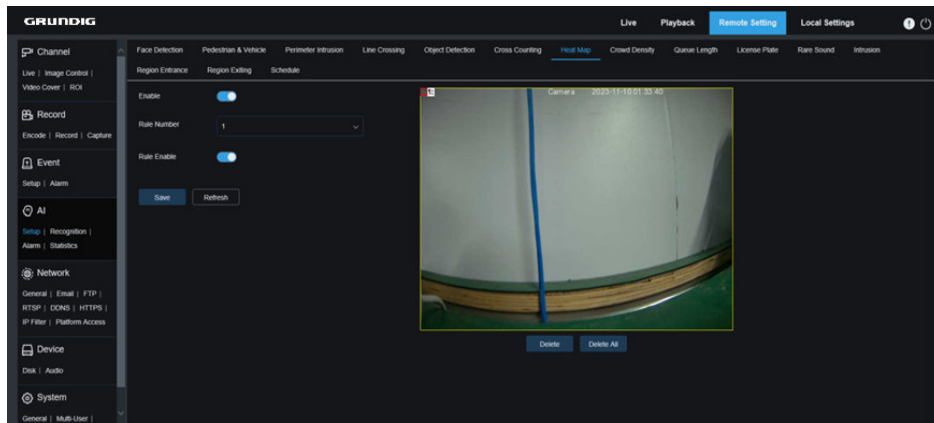
Figure 8.7.1.7 Heat Map

Enable: Turn on or off the HM statistics.

Rule Number: Only one detection rule line is supported for HM.

Rule Enable: Turn on or off the current rule line.

Monitoring Area Setting: Set the areas for collecting heat statistics. By default, all areas are selected.

8.7.1.8 Crowd detection

Performs people counting and identify number of people in the monitored area. An alarm is triggered when the number of people exceeds the preset value.

Figure 8.7.1.8 Crowd Detection

Enable: Turn on or off the crowd detection function.

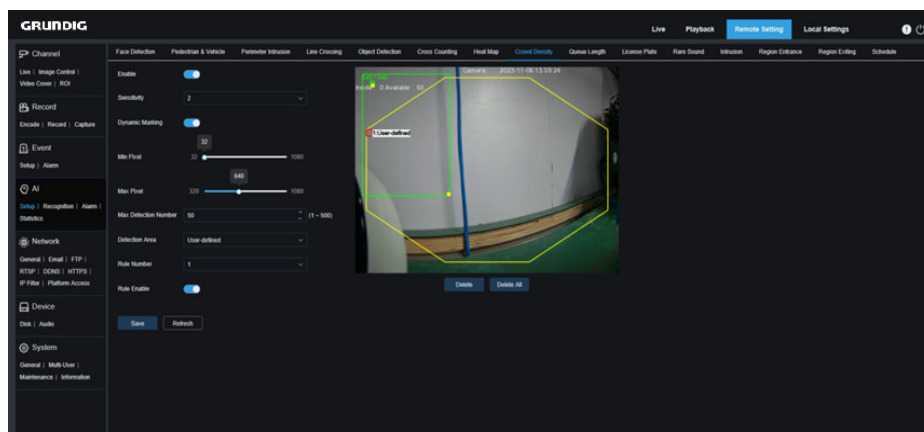**Sensitivity:** Filter small disturbing objects. The higher the sensitivity, the smaller the object can be detected.

Dynamic Marking: Displays the detection box and used to turn on or off the detection rule line.

Min Pixel: Based on the 1080p resolution, filter out objects with heads smaller than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Max Pixel: Based on the 1080p resolution, filter out objects with heads larger than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Max Detection Number: Maximum number of heads that can be detected in the detection area. An alarm will be triggered when this value is exceeded.

Detection Area: Set the area where the crowd detection function will be applied. There are two modes.

Full Screen: In this mode, all areas covered by the camera will be detected.

User-defined: Only user-defined boxed areas are detected.

Rule Number: This number is displayed when you set a custom detection area. One detection rule line is supported.

Rule Enable: Turn on or off the current rule line. This switch is displayed when you set a custom detection area.

Detection Area Setting: This setting is available when you set a custom detection area. Supports setting the detection area of 3-8 sides.

Count Display Area: Displays the number of people in the current monitored area. For adjustment of display location, see Section 8.1.

8.7.1.9   Queue Length

Queue Length detection function set the people number in the queue and wait time. An alarm will be triggered when the queue is too long or the wait time is too long.
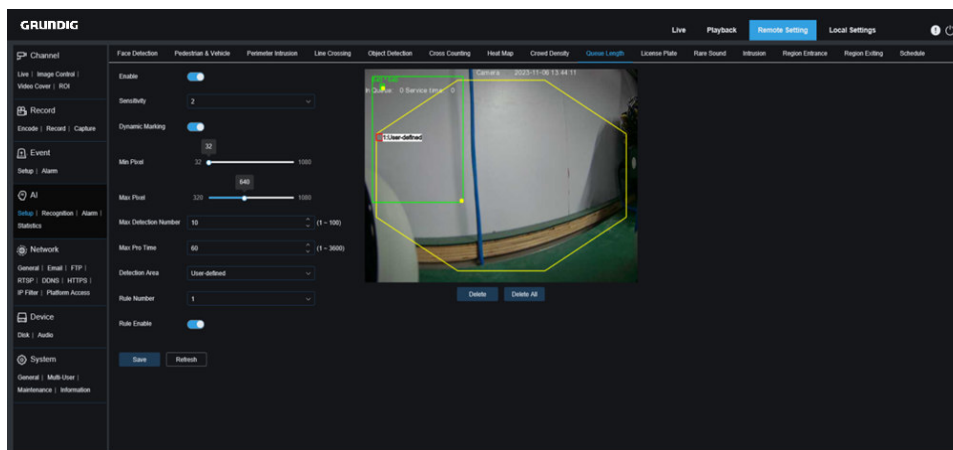

Figure 8.7.1.9.1 Queue Lenght

Enable: Enable or disable the Queue Length detection function.

Sensitivity: Filter small disturbing objects. The higher the sensitivity, the smaller the object can be detected.

Dynamic Marking: Displays the detection box and used to turn on or off the detection rule line.

Min Pixel: Based on the 1080p resolution, filter out objects with heads smaller than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Max Pixel: Based on the 1080p resolution, filter out objects with heads larger than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Max Detection Number: Maximum number of heads that can be detected in the detection area. An alarm will be triggered when this value is exceeded.

Max Pro Time: The maximum duration allowed for people to stay in the detection area. An alarm will be triggered when the set duration is exceeded and no one leaves the detection area (This duration starts from the time when the last person leaves the detection area. If no one leaves within the set duration, the processing will be considered as timeout and an alarm will be triggered).

Note: Counting is restarted only when a target leaves the detection area. Counting will be ignored if the target in the area suddenly disappears. Counting is started only if a target is detected in the detection area.

Detection Range: Set the area where the queue detection function will be applied. There are two modes.

Full Screen: In this mode, all areas covered by the camera will be detected.

User-defined: Only user-defined boxed areas are detected.

Rule Number: Rule line number. This number is displayed when you set a custom detection area. One detection rule line is supported.

Rule Enable: Turn on or off the current rule line. This switch is displayed when you set a custom detection area.

Detection Area Setting: This setting is available when you set a custom detection area. Supports setting the detection area of 3-8 sides.

Detection Area Setting: This setting is available when you set a custom detection area. An octagonal detection area needs to be set.

Count Display Area: Displays the number of people in the current monitored area and queue time. For adjustment of display location, see Section 8.1.

8.7.1.10   License Plate

License plate detection function detects license plates of passing vehicles to determine whether vehicles are registered to the database or not. An alarm will be triggered where necessary. Therefore, the license plate detection function needs to be enabled.

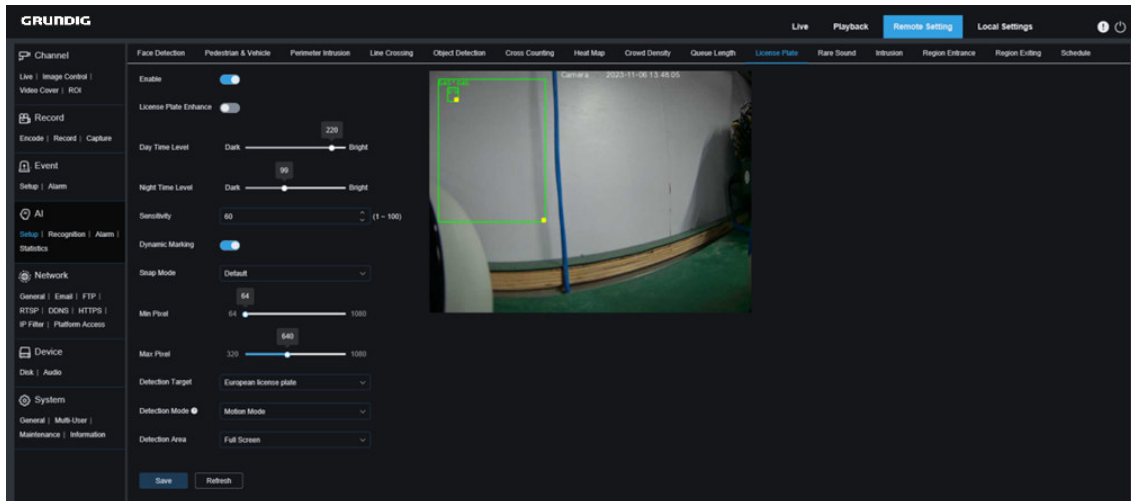Currently, the license plate detection function is only available for European and American regions.

Figure 8.7.1.10.1 LPR Detection

Enable: Enable or disable the license plate detection function.

License plate Enhance: Enable or disable the License plate Enhance function. This function and WDR, HLC, as well as BLC are mutually exclusive. Therefore, they cannot be enabled simultaneously. If the enhancement mode is enabled, the shutter mode and exposure time also cannot be adjusted.

Day Time Level: When IR light is disabled for the camera, the higher the level, the brighter the image. Likewise, the lower the level, the dimmer the image. The level value ranges from 0 to 255 (Some models range from 0 to 150).

Night Time Level: When IR light is enabled for the camera, the higher the level, the brighter the image. Likewise, the lower the level, the dimmer the image. The level value ranges from 0 to 255 (Some models range from 0 to 150).

Note: The level can be adjusted only when License plate and License plate Enhance are both enabled. When the License plate Enhance mode is enabled, the image brightness is adjusted based on the specified value for the day mode and night mode respectively. The two modes do not interfere with each other as they are switched automatically depending on whether the camera IR light is enabled. In addition, the License plate Enhance mode and the exposure compensation of image control, as well as the shutter manual mode are mutually exclusive. Therefore, they cannot be enabled simultaneously. If the License plate Enhance mode is enabled, the time exposure of image control also cannot be changed.

Sensitivity: Filters small disturbing objects. The higher the sensitivity, the easier it is to detect an object.

Dynamic Marking: Displays the detection box and used to turn on or off the detection rule line.

Snap Mode: Set the snap mode. You can receive push notifications in live view or connect an NVR to check the image effect. The program supports three Snap Modes.

Default: The camera pushes only one license plate image from detecting an object until the object disappears.

RealTime Mode: When detecting an object, the camera immediately pushes one image, and then pushes another image when the object disappears.

Interval Mode: Push images at a set interval.

Min pixel: Minimum recognition pixel. Only license plates greater than the set minimum pixel can be recognized. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You

can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Max pixel: Maximum recognition pixel. Only license plates lower than the set maximum pixel can be recognized. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Detection Target: Type of license plates to be detected. There are two type options.

European license plate: License plates in European regions.

American license plate: License plates in American regions.

Detection Mode: License plate detection mode. There are two mode options.

Hybrid Mode: I n this mode, static license plates in the view will be detected.

Motion Mode: In this mode, motionless vehicles and their license plates will be filtered out and only license plates in motion will be detected.

Detection Area: Set the area where the license plate detection function will be applied. There are two type options.

Full Screen: Detection in full screen.

User-defined: Only user-defined boxed areas are detected, Supports setting the detection area of 3-8 sides.

8.7.1.11   Rare Sound

Rare Sound detection, here you can set different detection requirements depending on application requirements, for example, baby crying sound, gunshot, and dog barking. An alarm will be triggered when the camera detects the set sound.
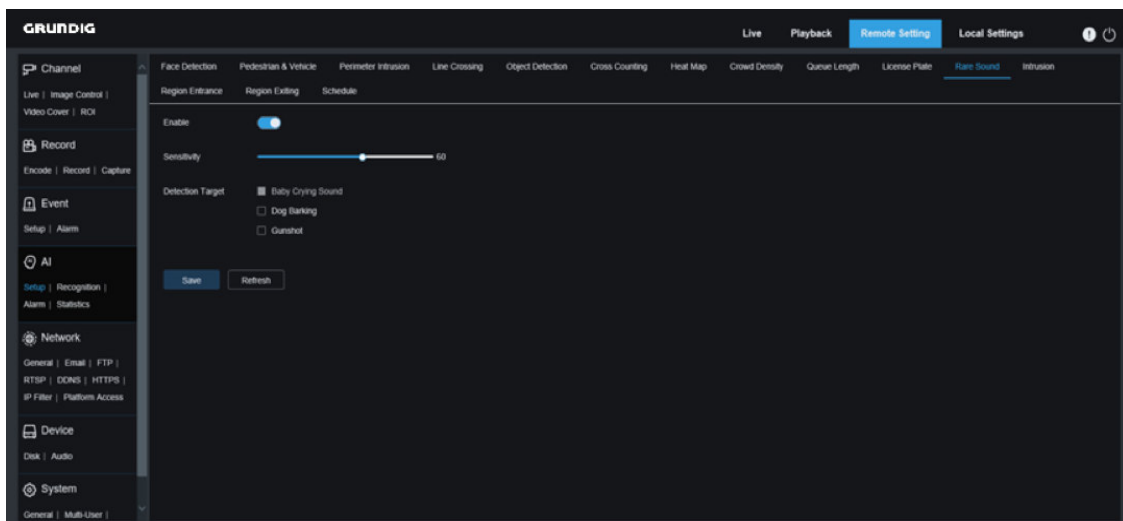

Figure 8.7.1.11.1 Rare Sound

Enable: Turn on or off the sound exception detection function.

Sensitivity: Sensitivity.1 indicates the minimum setting and 100 indicates the maximum setting.

Detection Target: Specify detection type.

Baby Crying Sound: A baby crying sound can be detected if this box is checked.

Dog Barking: A dog barking sound can be detected if this box is checked.

Gunshot: A gunshot sound can be detected if this box is checked.

8.7.1.12   Intrusion

The function will detect whether there is an object in the video to invade the set restricted area. Linkage alarm according to the judgment result.
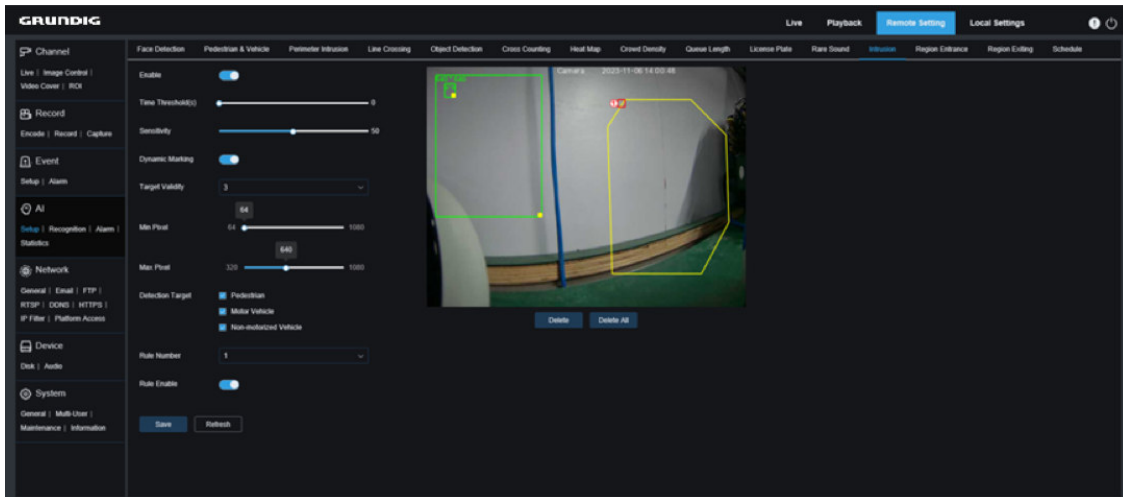

Figure 8.7.1.12.1 Intrusion

Enable: Enable the Intrusion detection function.

Time Threshold(s): Indicates that the alarm is generated after the target enters the alert area and stays there continuously for that amount of time. For example, if it is set to 1, the alarm will be triggered immediately after the target has invaded the area for 1s, and the maximum length of time can be set to 10s.

Sensitivity: The sensitivity is related to the percentage of the target that enters the area; the higher the sensitivity setting of Line Crossing, the more likely the alarm will be triggered. For example, if it is set to 100%, the alarm will be triggered when the detection target has just touched the boundary of the set area. If set to 50%,the alarm is triggered after 50% of the detection target has already crossed the boundary of the set area.

Dynamic Marking: Displays the detection box and used to turn on or off the detection rule line.

Target Validity: The similarity between the detection target and the set detection type.1 represents a similarity of 80% or more, 2 represents a similarity of 60% or more, 3 represents a similarity of 40% or more, 4 represents a similarity of 20% or more.

Min Pixel: Based on the 1080p resolution, filter out pedestrian or vehicle objects lower than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Max Pixel: Based on the 1080p resolution, filter out pedestrian or vehicle objects greater than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box.

You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Detection Target: Set objects for perimeter intrusion detection:

Pedestrian: A perimeter intrusion alarm is triggered only for pedestrians.

Motor Vehicle: A perimeter intrusion alarm is triggered only for motor vehicles.

Non-motorized Vehicle: A perimeter intrusion alarm is triggered only for non-motorized vehicles.

Rule Number: Allow to select a rule line number. Allow to set four detection rule lines.

Rule Enable: Turn on or off rule lines. Each rule line has an independent enable switch that is associated with the currently selected Rule Number.

Rule Line Setting Area: Allow to set, modify, and view edited rule lines. Supports setting the detection area of 3-8 sides

Delete: Allow to delete selected rule Lines in the rule line setting area.

Delete All: Allow to delete all rule lines.

8.7.1.13   Region Entrance

Region Entrance detection will detect targets entering the area from outside the area can be detected, and targets generated within the area will not generate an alarm, and the alarm will be linked according to the judgment result.
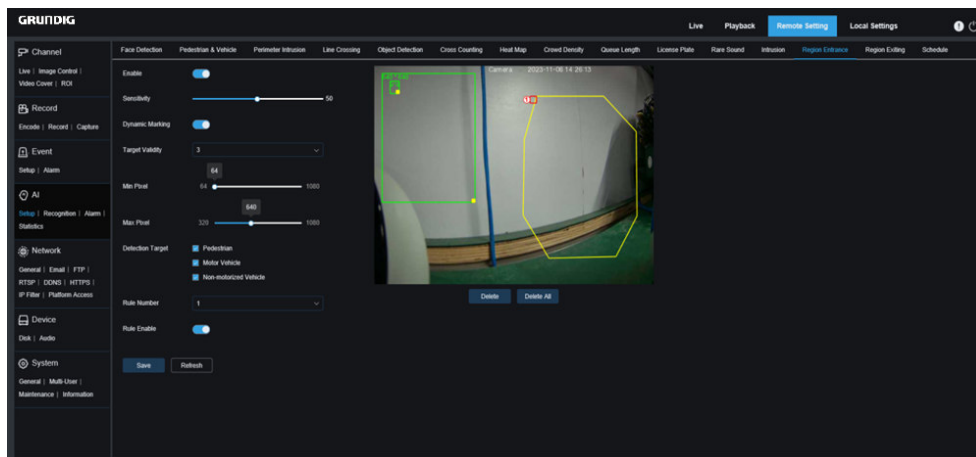

Figure 8.7.1.13 Region Entrance

Enable: Enable the Intrusion detection function.

Sensitivity: The sensitivity is related to the percentage of the target that enters the area; the higher the sensitivity setting of Line Crossing, the more likely the alarm will be triggered. For example, if it is set to 100%, the alarm will be triggered when the detection target has just touched the boundary of the set area. If set to 50%, the alarm is triggered after 50% of the detection target has already crossed the boundary of the set area.

Dynamic Marking: Displays the detection box and used to turn on or off the detection rule line.

Target Validity: The similarity between the detection target and the set detection type.1 represents a similarity of 80% or more, 2 represents a similarity of 60% or more, 3 represents a similarity of 40% or more, 4 represents a

similarity of 20% or more.

Min Pixel: Based on the 1080p resolution, filter out pedestrian or vehicle objects lower than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Max Pixel: Based on the 1080p resolution, filter out pedestrian or vehicle objects greater than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Detection Target: Set objects for perimeter intrusion detection:

Pedestrian: A perimeter intrusion alarm is triggered only for pedestrians.

Motor Vehicle: A perimeter intrusion alarm is triggered only for motor vehicles.

Non-motorized Vehicle: A perimeter intrusion alarm is triggered only for non-motorized vehicles.

Rule Number: Allow to select a rule line number. Allow to set four detection rule lines.

Rule Enable: Turn on or off rule lines. Each rule line has an independent enable switch that is associated with the currently selected Rule Number.

Rule Line Setting Area: Allow to set, modify, and view edited rule lines. Supports setting the detection area of 3-8 sides

Delete: Allow to delete selected rule Lines in the rule line setting area.

Delete All: Allow to delete all rule lines.

8.7.1.14   Region Exiting

Region exiting detection, can detect the target walking from the area to the outside of the area, and the target generated outside the area will not generate an alarm, and the alarm will be linked according to the judgment result.
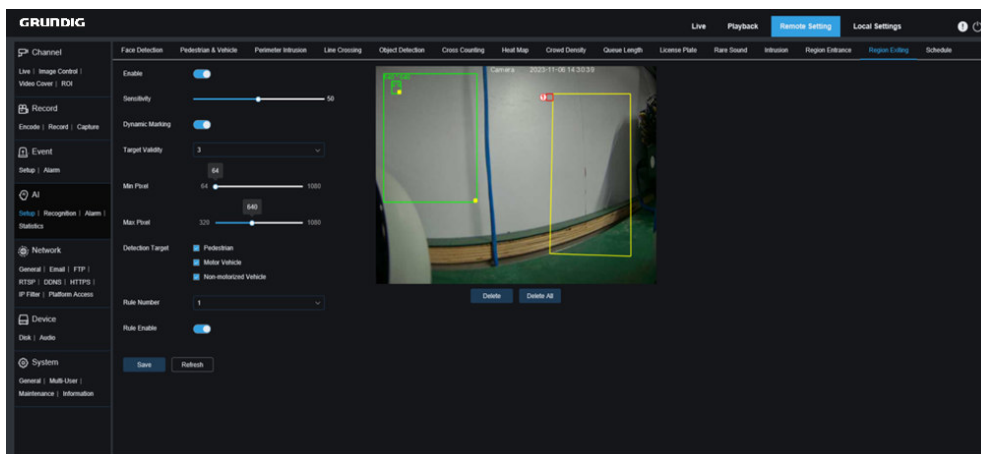

Figure 8.7.1.14.1 Region Exiting

Enable: Enable the Intrusion detection function.

Sensitivity: The sensitivity is related to the percentage of the target that enters the area; the higher the sensitivity setting, the more likely the alarm will be triggered. For example, if it is set to 100%, the alarm will be triggered when the detection target has just touched the boundary of the set area. If set to 50%, the alarm is triggered after 50% of the detection target has already crossed the boundary of the set area.

Dynamic Marking: Displays the detection box and used to turn on or off the detection rule line.

Target Validity: The similarity between the detection target and the set detection type. 1 represents a similarity of 80% or more, 2 represents a similarity of 60% or more, 3 represents a similarity of 40% or more, 4 represents a similarity of 20% or more.

Min Pixel: Based on the 1080p resolution, filter out pedestrian or vehicle objects lower than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Max Pixel: Based on the 1080p resolution, filter out pedestrian or vehicle objects greater than the setting in the view. When the mouse is moved to the progress bar, the right image preview shows the actual size of the pixel box. You can also drag the pixel box to set it. When the mouse is moved away for 5 seconds, the pixel box in the image preview disappears.

Detection Target: Set objects for perimeter intrusion detection:

Pedestrian: A perimeter intrusion alarm is triggered only for pedestrians.

Motor Vehicle: A perimeter intrusion alarm is triggered only for motor vehicles.

Non-motorized Vehicle: A perimeter intrusion alarm is triggered only for non-motorized vehicles.

Rule Number: Allow to select a rule line number. Allow to set four detection rule lines.

Rule Enable: Turn on or off rule lines. Each rule line has an independent enable switch that is associated with the currently selected Rule Number.

Rule Line Setting Area: Allow to set, modify, and view edited rule lines. Supports setting the detection area of 3-8 sides

Delete: Allow to delete selected rule Lines in the rule line setting area.

Delete All: Allow to delete all rule lines.

8.7.1.15   AI Schedule

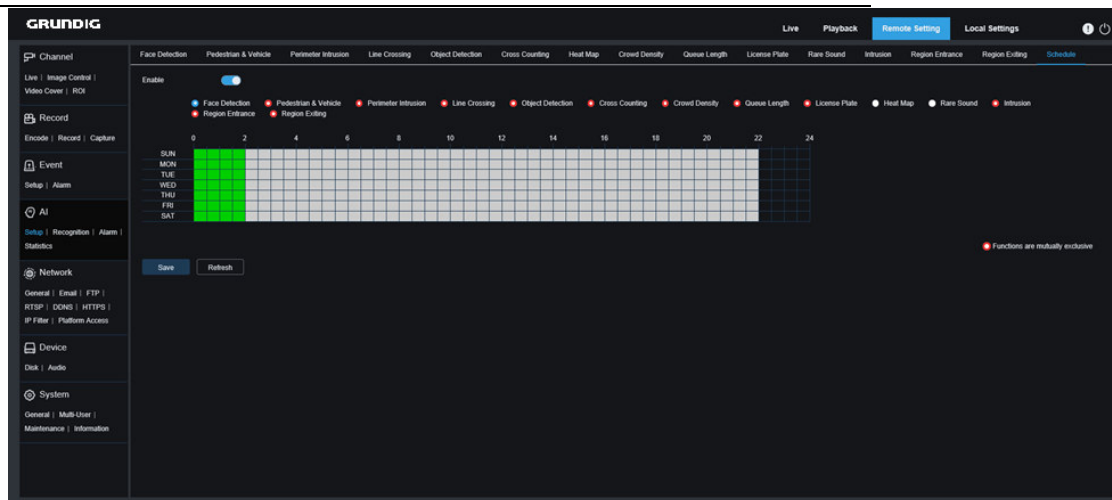The function of AI schedule, you can enable or disable this function, set the AI enable schedule.

Figure 8.7.1.15.1 AI Schedule

Enable: Enable or disable the AI function schedule.

Functions are mutually exclusive: Functions that are mutually exclusive to the selected functions.

Note:

- Functions that are mutually exclusive cannot be set at the same time. That is, two mutually exclusive AI functions cannot be enabled at the same time. There will be restrictions on this UI.

- After the AI schedule is enabled, all AI function switches for the channel can no longer be manually enabled or disabled and are controlled by the schedule. However, parameters such as sensitivity can be edited.

- When setting up the face detection function schedule for the first time, the user will be prompted to check and agree to the face privacy agreement. If the user unchecks it, the time period corresponding to the face detection function in the AI schedule will be cleared.

8.7.2   Recognition

8.7.2.1   Face Recognition

Face recognition function, the focus is to recognize the identity of a detection object and use base data for comparison. The program establishes a database for face matching using the database management function.

Note: Changes to the database take full effect after the system reloads data for a short period of time.
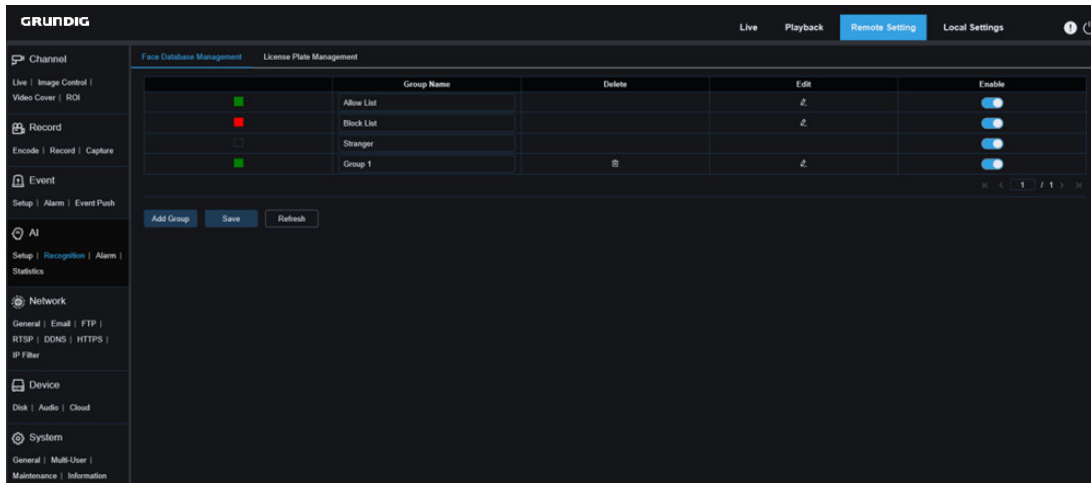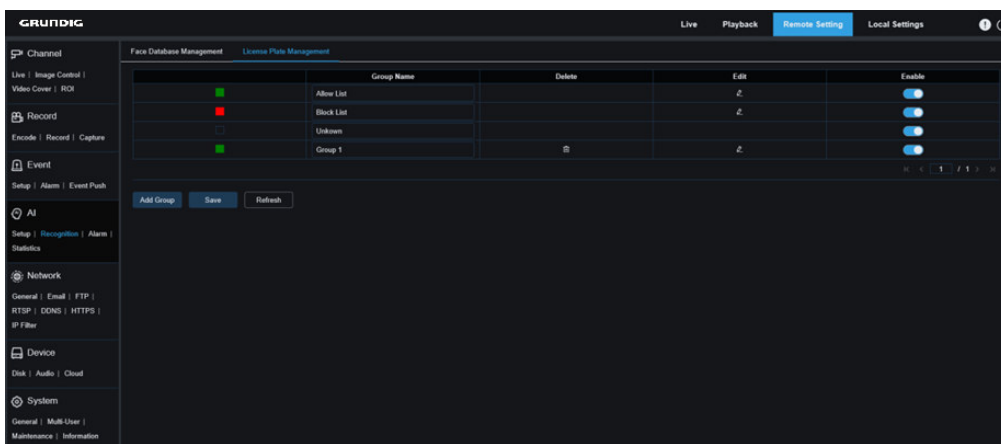
Figure 8.7.2.1.1 Face Recognition

Alarm Policy Display: This serves as a policy prompt only in the camera. Green indicates the allow list, red indicates the block list, and colorless indicates the stranger group.

Group Name: Edit, modify, and view the current group name. A group name will be pushed together with an alarm.

Delete: Delete a group. The first three group cannot be deleted.

Edit: Open the image setting example for this group. For details, please continue editing the content on the next image.

Enable: Open the face recognition function for data comparison between groups.

Add Group: Allow to add a new database group. Up to 16 database groups can be added.

You can click the **Edit** icon to set the reference for the corresponding group. The view is shown in the figure below.
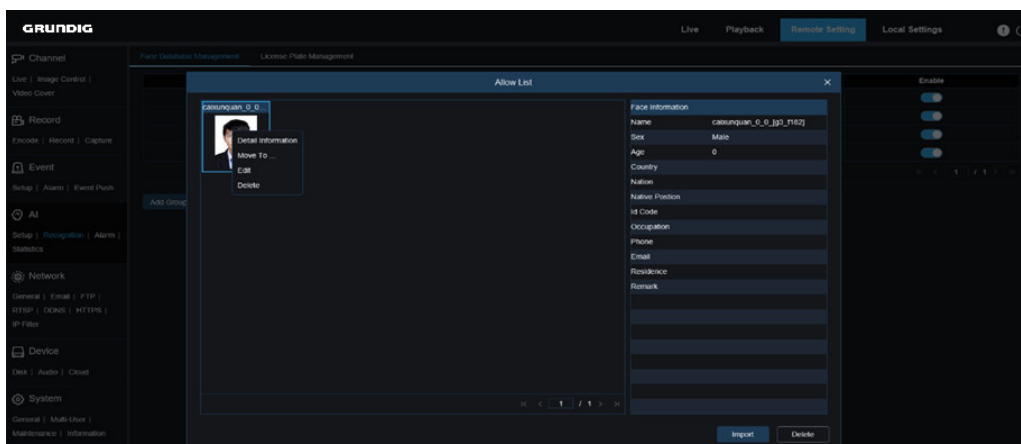

Figure 8.7.2.1.2 List

Added Image Display Area: Displays images that have been added to groups in the face database.

Info: Displays the editing information of the selected image.

Detail Information: Right click event to check the information of the selected image.

Move To…: Right click event to move the selected image to other groups.

Edit: Right click event to open the editing interface of the selected image to edit the information again.

Delete: Right click event to delete the selected image.

Import: Add new face data in the current group and import local images or captured images by the camera.

Delete: Delete face data in batches in the database. You can click this icon, select the image to be deleted, and then click the Delete icon again to delete the image.

8.7.2.2 License Plate Recognition

License plate recognition function, the focus is to recognize the identity of a detection object and use base data for comparison. The program establishes a database for license plate matching using the database management function.

Note: Changes to the database take full effect after the system reloads data for a short period of time.

Figure 8.7.2.2.1 LPR

Alarm Policy Display: This serves as a policy prompt only in the camera. Green indicates the allow list, red indicates the block list, and colorless indicates the unknown license plate list.

Group Name: Edit, modify, and view the current group name. A group name will be pushed together with an alarm.

Delete: Delete a group. The first three groups cannot be deleted.

Edit: Open the image setting example for this group. For details, please continue editing the content on the next image.

You can click the **Edit** icon to set the reference data for the corresponding group. The view is shown in the figure below.
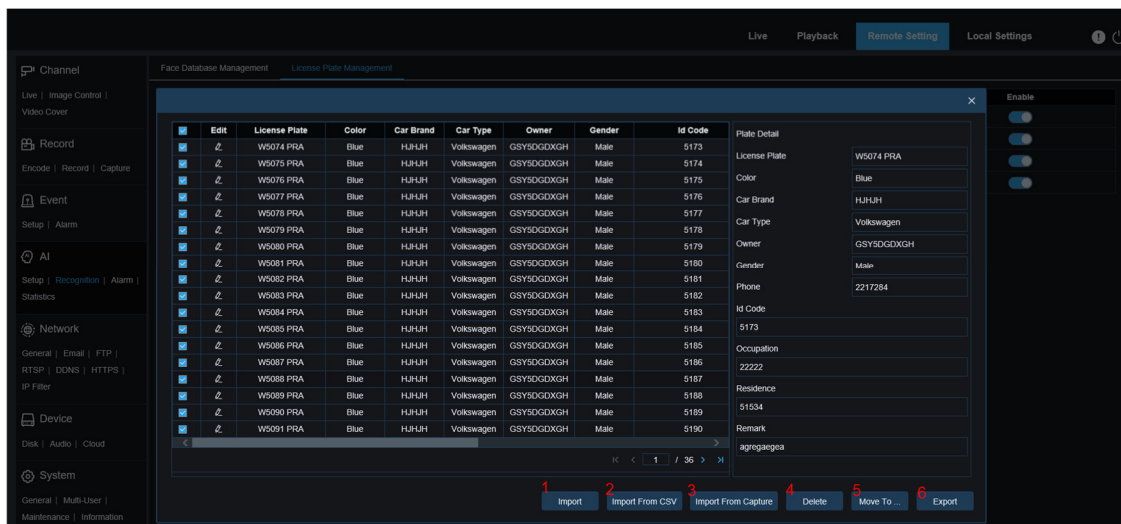
Figure 8.7.2.2.2 Edit List

There are three ways to add license plate information: Import, Import From CSV, and Import From Local Capture.

1) You can click the **Import** button to manually add individual entries of license plate information.

2) You can click the **Import from CSV** button to import one or multiple data entries from CSV. The CSV sheet is formatted as follows:

Figure 8.7.2.2.3 List

Select the license plate file in CSV format you want to import and click the Import button to add it to the group. You can click the Delete button to delete unwanted license plate information,as shown in the figure below.
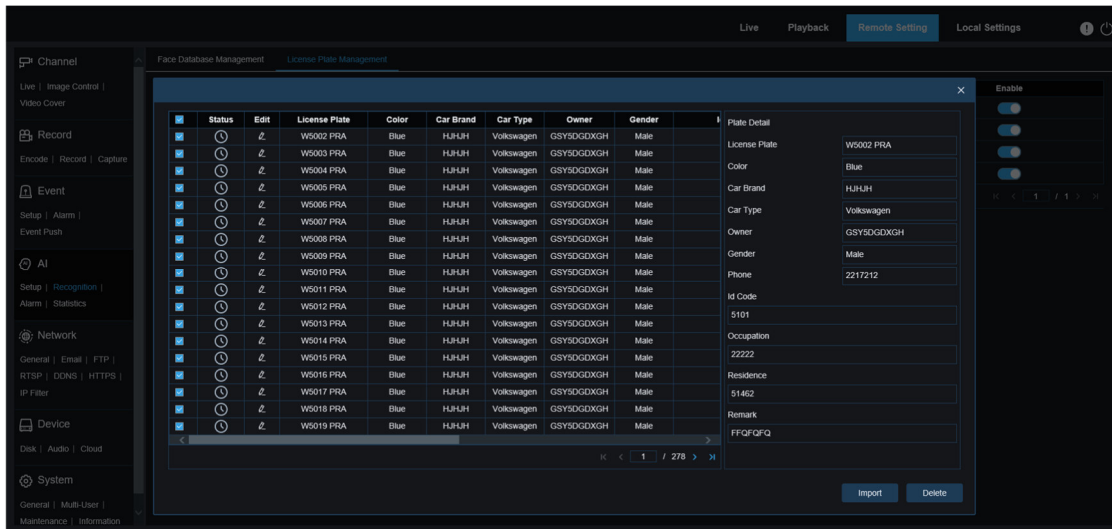
Figure 8.7.2.2.4 Import CSV

Note: When more than 5000 data entries will be added, a dialog box indicating "Data entries exceed the upper limit" will appear.

3) You can click the Import From Capture button to import license plate information from a local directory to the database.

Figure 8.7.2.2.5 Import Capture

You can select the date, duration, and Alarm Group, and then click the **Search** button to retrieve all the license plates saved by the device within this time range.

All: select all license plate information.

Figure 8.7.2.2.6 Import All

You can click a data entry to edit the corresponding license plate information. Then, you can click the **Save** button to save changes. Upon completion of change, will changes to .

4) **Delete:** check the checkbox next to the license plate information and then click this button to delete the information.

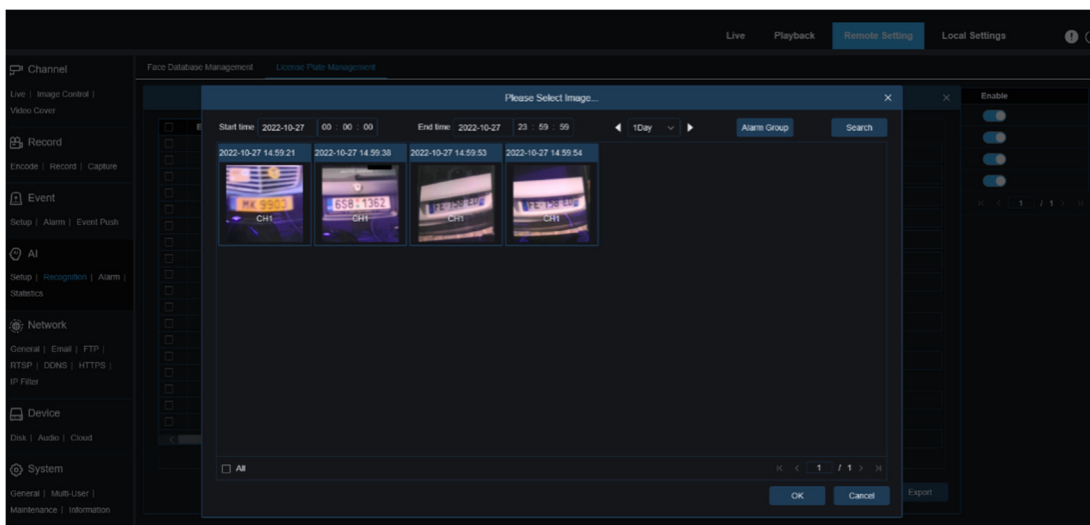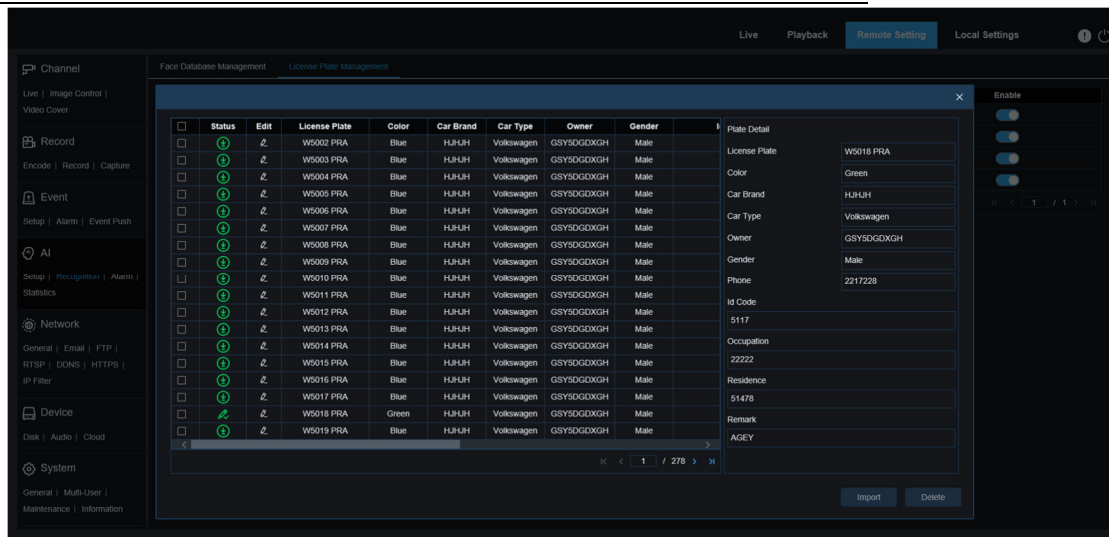5) **Move to...:** Check the checkbox next to the license plate information and then click this button to move the information to other groups.

6) You can click the **Export** button to export the information of the entire group and then save it.

1.Enable: Turn on or off the license plate recognition function for data comparison between groups.

2.Add Group: Allow to add a new database group. Up to 16 database groups can be added.

8.7.3   Alarm Setup

Alarm response to AI functions of the camera can be divided into three categories in the implementation dimension:

Category I includes Face Detection, Face Features, Pedestrian & Vehicle, Perimeter Intrusion, Line Crossing, Object Detection, Cross Counting, Crowd Density, Queue Length, License Plate, Rare Sound, Intrusion, Region Entrance, Region Exiting. Alarm response will be generated directly if alarm conditions are met as determined by the camera.

Category II includes Face Recognition and License Plate Recognition. The camera captures an alarm image and recognizes the facial characteristic value or license plate information in the image, then compares it with the information in the database, and finally generates an alarm response according to the alarm group setting.

Category III includes Face Attendance.Automatically search data at a specific time to generate alarm push email.

8.7.3.1   Face Detection, Face Features, Pedestrian & Vehicle, Perimeter Intrusion, Line Crossing, Object

   Detection, Cross Counting, Crowd Density, Queue Length, License Plate, Rare Sound, Intrusion,

   Region Entrance, Region Exiting

Alarm response will be generated directly if alarm conditions are met as determined by the camera.
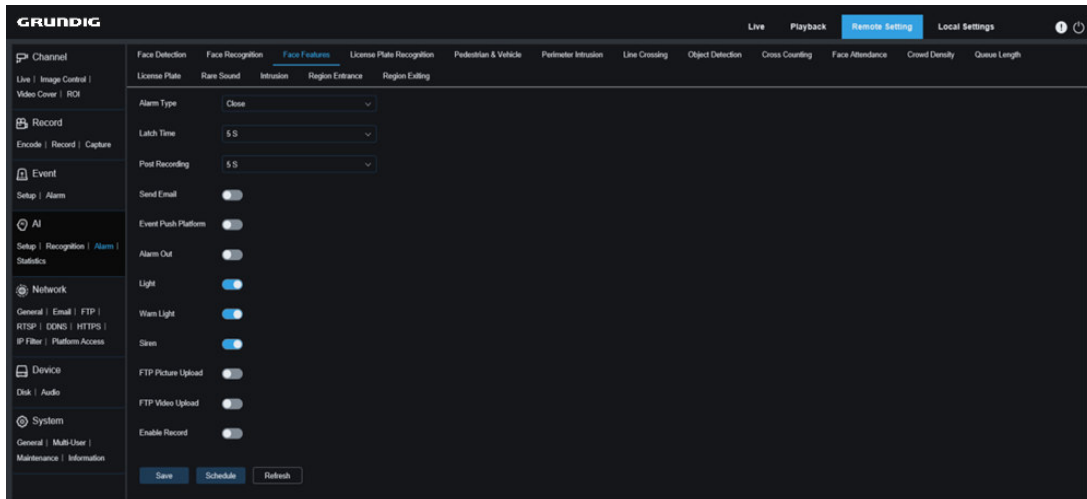
Figure 8.7.3.1.1 Alarm Settings

Alarm Type: This option is specific to Face Features alarms. Enable the face attribute recognition function for Face Features alarms according to Section 8.7.1.1. An alarm will be generated to alert whether the detected object wears a mask. There are three mode options.

Close: Face Features alarms are disabled.

NO Mask: An alarm is generated when the detected object is not wearing a mask.

Wear Mask: An alarm is generated when the detected object is wearing a mask.

Latch Time: Specifies the duration of an I/O alarm after the alarm is cleared.

Note: The camera must support the I/O feature and the working time is controlled by the schedule.

Post Recording: Specifies the duration of recording after the alarm is cleared.

Note: The effective time is also controlled by the schedule.

Send Email: Specifies whether to send an email when an alarm is being triggered.

Note: The effective time is also controlled by the schedule.

Event push Platform: If this option is set to ON, this type of information will be pushed to the **client when an alarm is triggered.**

Alarm Out: Specifies whether to enable Latch Time.

Light：White light deterrence switch. When an alarm is triggered, the alarm is reported in accordance with the warning light configuration on the **Deterrence** screen (GUI path: **Remote Setting > Event > Setup > Deterrence**). **Note:** Only **s**ome models support White light.

Warn Light: Warning light deterrence switch. When an alarm is triggered, the alarm is reported in accordance with the warning light configuration on the **Deterrence** screen (GUI path: **Remote Setting > Event > Setup > Deterrence**).

Note: Only some models support warning light.

Siren: Siren deterrence switch. When an alarm is triggered, the alarm is reported in accordance with the siren configuration on the **Siren** screen (GUI path: **Remote Setting > Event > Setup > Siren**).

Note: Only some models support siren deterrence.

FTP Picture Upload: Specifies whether to send pictures to the associated FTP server when an alarm is being triggered. If the alarm is continuously triggered, the pictures will be sent at an interval of 10s until the alarm is cleared.

Note: The effective time is also controlled by the schedule and the FTP server shall be associated in advance.

FTP Video Upload: Specifies whether to send videos to the associated FTP server when an alarm is being triggered. If the alarm is continuously triggered, the videos will be sent at an interval of 10s until the alarm is cleared.

Note: The effective time is also controlled by the schedule and the FTP server shall be associated in advance.

Enable Record: Specifies whether to enable Post Recording.

Schedule: configure the schedule of Send Email, Alarm Out, FTP Picture Upload, FTP Video Upload, Cloud Picture, Cloud Video, Record, Light (Deterrent), and Siren (Deterrent) for the current alarm.

Note: The white light deterrence feature is available for some models.

8.7.3.2 Face Recognition

Face recognition function, the camera captures a face image and retrieve matching face data from the database to obtain the group the object is in. Then, the camera generates an alarm by calling out the alarm setting in this group. Changes to parameters take effect after the system reloads data for a short period of time.
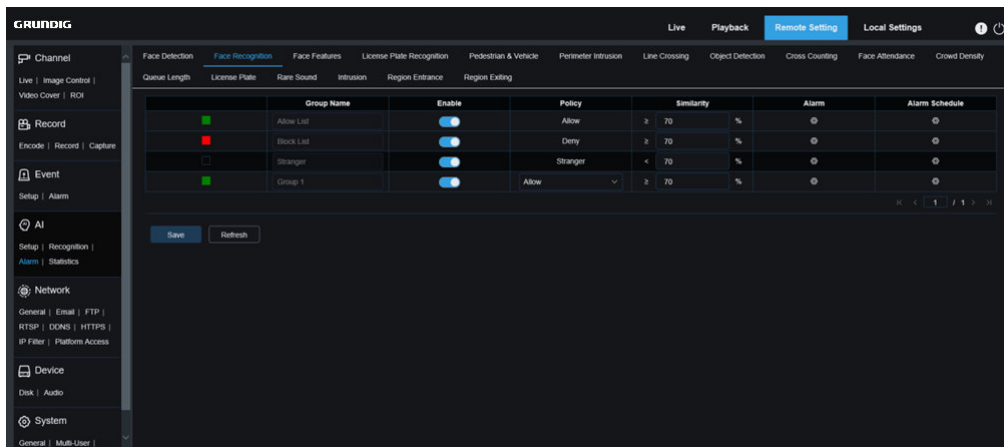
Figure 8.7.3.2.1 Face Recognition

Group Name: Edit, modify, and view the current group name. A group name will be pushed together with an alarm in the live view.

Enable: Specifies whether to enable alarm response settings.

Policy: Alarm policy. The first three groups cannot be edited and other groups can be customized as Allow or Deny.

Similarity: An alarm is triggered when the similarity exceeds the threshold during face matching.

Alarm: Specifies whether to enable group alarm settings.

Figure 8.7.3.2.2 Allow List

Alarm Schedule: Specifies the effective time of the Send Email, Alarm Out, FTP Picture Upload, and Cloud Picture settings.

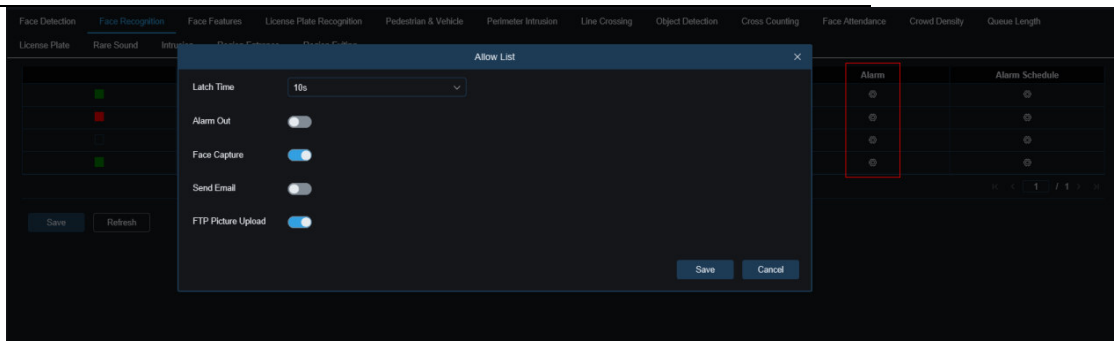**Latch Time:** Specifies the duration of an I/O alarm after the camera captures the image and successfully retrieves the matched image in the database.

Note: The camera must support the I/O feature and the working time is controlled by the schedule.

Alarm Out Latch Time: Specifies whether to enable settings.

Save Picture: Specifies whether to save face images to the memory card.

This setting is not controlled by the Enable status.

Save the Background: Specifies whether to save face images to the memory card and at the same time save background images.

This setting is not controlled by the Enable status.

Send Email: Specifies whether to send an email when faces in the group are recognized and matched.

Note: The effective time is also controlled by the schedule.

FTP Picture Upload: Specifies whether to send pictures to the associated FTP server when faces in the group are recognized and matched.

Note: The effective time is also controlled by the schedule and the FTP server shall be associated in advance.

Cloud Picture: Specifies whether to send pictures to the associated cloud storage server when faces in the group are recognized and matched.

Note: The effective time is also controlled by the schedule and the cloud storage server shall be associated in advance.

8.7.3.3 Face Attendance

The face attendance (FA) function is used to retrieve face matching status in different groups (excluding stranger group) saved in the memory card in a specified period of time, and generate attendance files according to capture records, and send these files to the associated email address.
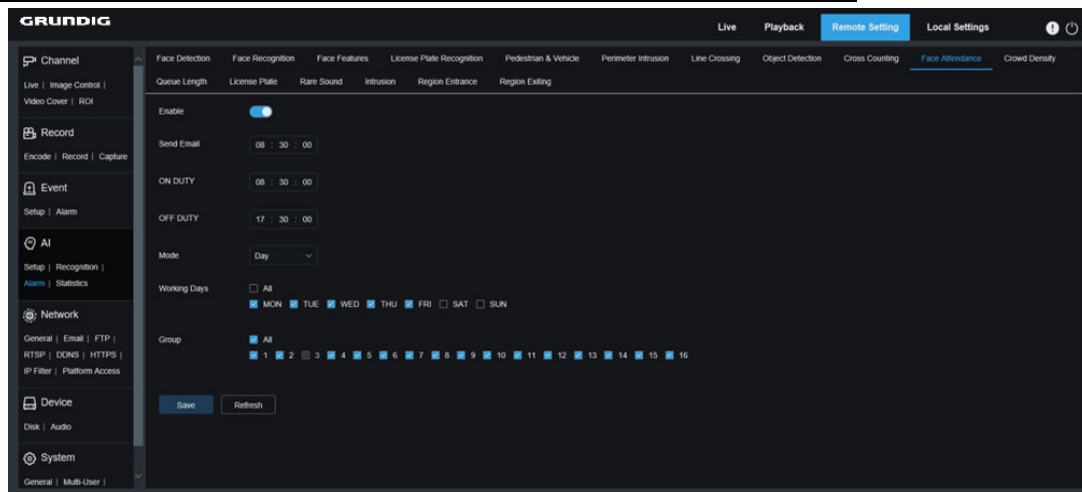
Figure 8.7.3.3.1 Face Attendance

Enable: Enable or disable the automatic face attendance file generation function.

Send Email: Specifies the time to send face attendance status. The program will make retrieval at a certain interval. When the retrieval time is greater than the set time, an attendance record file is automatically generated and an email is sent.

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

ON DUTY: Specifies the on-duty reference time to generate an attendance file.

OFF DUTY: Specifies the off-duty reference time to generate an attendance file.

Mode: Specifies the time to generate and send an attendance file. There are three mode options.

Day: Allow to send the attendance record file of the day before.

Week: For example, if it is set to Wednesday, the attendance information from last Wednesday to this Tuesday will be sent.

Month: For example, if it is set to the 15th day, the attendance information from the 15th day of the last month to the 14th day of this month will be sent.

Working days: Specifies the on-duty reference working days to generate an attendance file.

Group: Specifies the group subject to attendance check when an attendance file is generated.

Note: This function is unavailable for the stranger group and grayed out for group 3 by default.

8.7.4   Statistics

AI-enabled statistical analysis function.

8.7.4.1   Face Recognition

Face image statistical analysis function, this function allows to retrieve face data statistics stored in the memory card according to search settings. The screen is shown in the figure below.
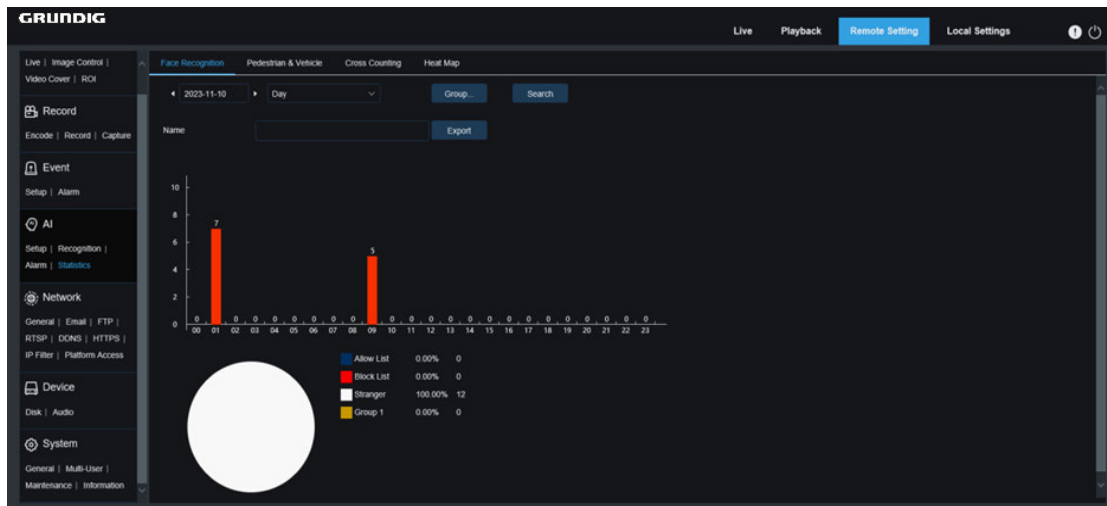
Figure 8.7.4.1.1 Face Recognition Statistic

Time: Specifies the reference time for the Search Mode.

Search Mode: Specify Day, Week, Month, Quarter, and Year as time range for data retrieval.

Group: Specifies the group subject to retrieval when statistical data is being retrieved.

Search: Allow to re-initiate data retrieval according to the current search settings.

Export: You need to give a name to an exported file. Export current search results to an Excel file.

Display Area: Displays search results in a graph below.

8.7.4.2   Pedestrian & Vehicle

Pedestrian and Vehicle statistics, including Pedestrian & Vehicle, Perimeter Intrusion, Line Crossing, Intrusion, Region Entrance, Region Exiting alarms. The screen is shown in the figure below.
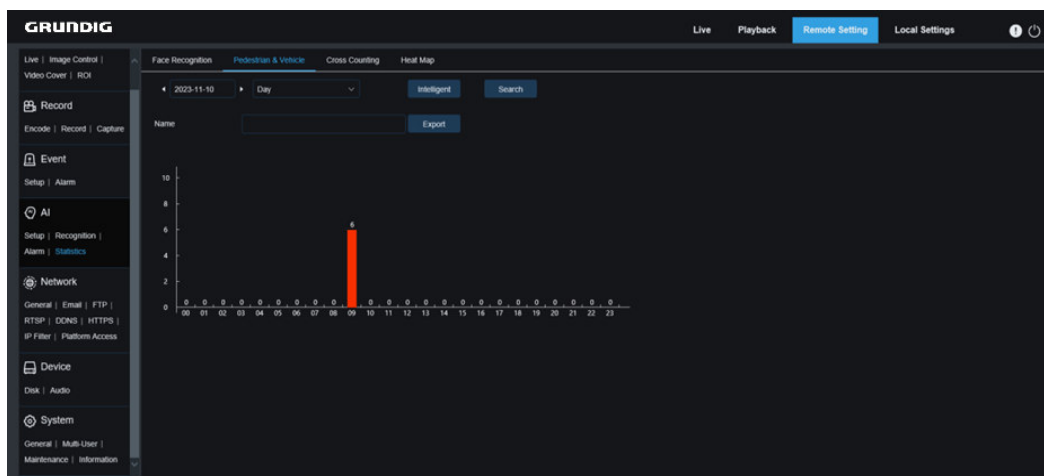

Figure 8.7.2.4.1 P & V Statistic

Time: Specifies the reference time for the Search Mode.

Search Mode: Specify Day, Week, Month, Quarter, and Year as time range for data retrieval.

Intelligent: Allow to perform search according to tag type of captured images, including Perimeter Intrusion [Human], Perimeter Intrusion [Motor Vehicle], Perimeter Intrusion [Non-motorized Vehicle], Line Crossing [Human], Line Crossing [Motor Vehicle], Line Crossing [Non-motorized Vehicle], Human, Motor Vehicle, Non-motorized Vehicle , Intrusion[Human], Intrusion[Motor Vehicle], Intrusion[Non-motorized Vehicle], Region Entrance[Human], Region Entrance[Motor Vehicle], Region Entrance[Non-motorized Vehicle], Region Exiting[Human], Region Exiting[Motor Vehicle], Region Exiting[Non-motorized Vehicle].

Search: Allow to re-initiate data retrieval according to the current search settings.

Export: You need to give a name to an exported file. Export current search results to an Excel file.

Display Area: Displays search results in a graph.

8.7.4.3   Cross Counting Statistics

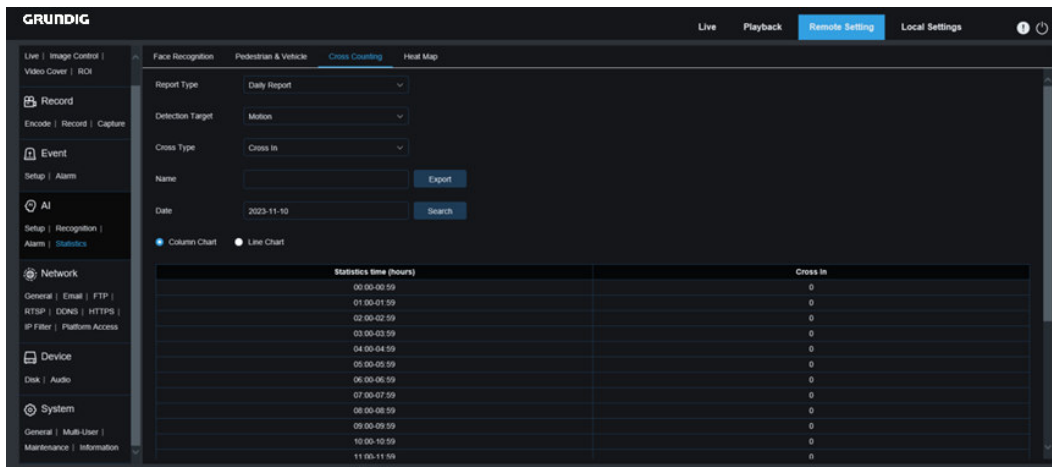Cross counting statistics function, the screen is shown in the figure below.

Figure 8.7.4.3.1 CC Statistic

Report Type: The options include Daily report, Weekly report, Monthly report, and Annual report.

Detection Target: Set your desired alarm model. For example, you cannot retrieve motion-triggered data if alarm models other than motion model are selected. There are three model options including Motion, Person, and Vehicle, corresponding to their function settings.

Cross Type: Allow to search for data according to cross counting (CC) statistics. There are two mode options, including Cross In and Cross Out.

Export: You need to give a name to an exported file. Export current search results to an Excel file.

System time: Specifies the reference time for the selected report type.

Mode: Specifies whether to display graphs in the icon display area in a column or line chart.

Display Area: Displays search results in a graph.

Search: search for data according to current settings.

8.7.4.4   Heat Map

The heat map can intuitively present people distribution in temporal or spatial dimension.

① **Space heat map:** People activity degree in different areas in the view. Red indicates the densest area,meaning the highest activity degree, and blue indicates the lowest dense area.

② **Time heat map:** People activity degree in different times in the view. The Y-axis value is the index calculated based on the number of people and the duration of stay. The higher the value is, the higher the activity degree will be. It does not represent the number of people.

The smart camera must be equipped with a SD disk with free space in which heat map information will be stored. The screen is shown in the figure below.
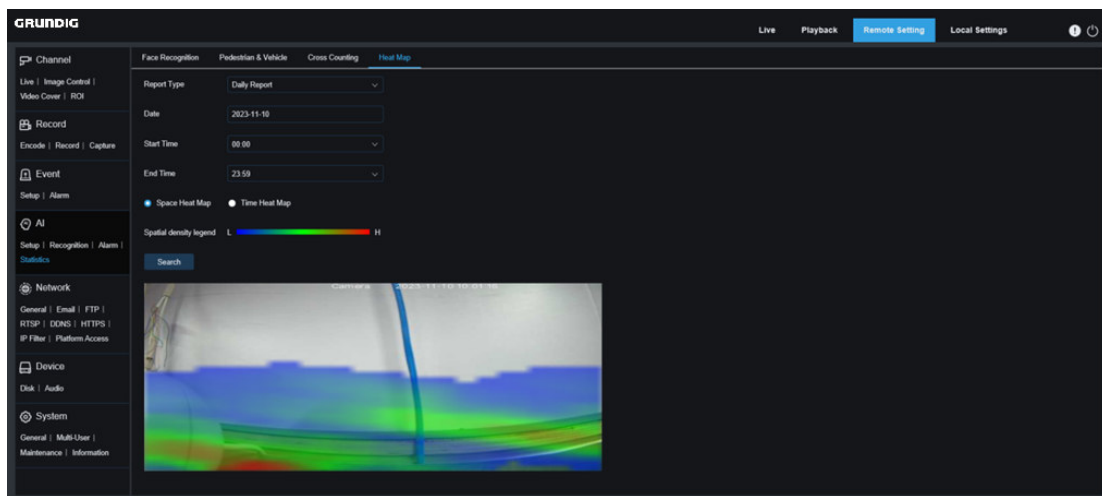

Figure 8.7.4.4.1 Heat Map

Report Type: The options include Daily report, Weekly report, Monthly report, and Annual report.

Date: Specifies the reference date for data search.

Start Hour: This option is available only for Daily report and used to set the hour to start searching.

End Hour: This option is available only for Daily report and used to set the hour to end searching.

Mode: Specifies the data display mode. There are two mode options including graph and table.

Display Area: Displays the change frequency of monitored areas as a graph, and displays the change frequency of monitored areas in different time periods as a table.

Search: Search for data according to current settings.

8.8 Network Settings

This menu allows to configure network parameters, such as PPPoE, DHCP, and SNMP, of which DHCP is the most common. In most cases, the network type is DHCP unless the static IP address is set manually. If you need an authenticated username and password to connect to the network, select PPPoE.

8.8.1 Basic Settings
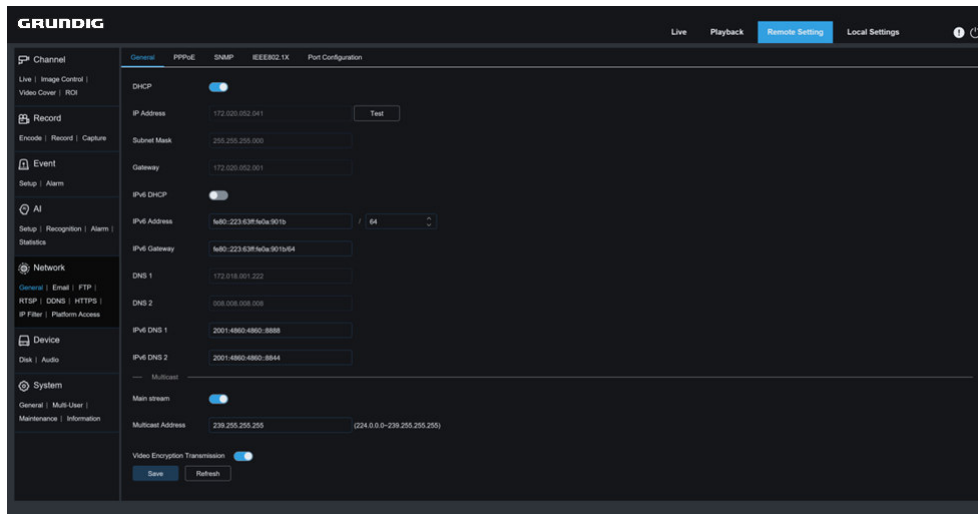
8.8.1.1 General

Figure 8.8.1.1.1 General

To connect to a router that allows DHCP, check the DHCP box. The router will automatically assign all network parameters to the device. You can also choose to manually set the following parameters for the network:

IP Address: The IP address is the identifier of IPC on the network. It consists of four numbers between 0 and 255 separated by periods, for example,"192.168.001.100".

Subnet Mask: A subnet mask is a network parameter that defines the range of IP addresses that can be used in the network. If the IP address is likened to the street you live on, then the subnet mask is the community. A subnet address also consists of four numbers separated by periods, for example,"255.255.000.000".

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

IPv6 Address: The IPv6 address is the identifier of IPC on the network. It consists of eight numbers between 0 and FFFF, separated by colons,f or example,"ABCD:EF01:2345:6789:ABCD:EF01:2345:6789".

DNS1/DNS2: DNS1 is the active DNS server and DNS2 is the standby DNS server. Usually you just need to enter the DNS1 server address.

Main Stream: If this option is enabled, the main stream can be used for multicast.

Multicast Address: Specifies a multicast address. A third-party player can request the camera to send a multicast media stream through the RTSP protocol.

Video Encryption Transmission: Indicates audio/video encryption transmission.

If the IPC is capable of warning you of repeated IP addresses in the same network segment, when IP addresses are repeatedly used, the following message will pop up when you click the [Test] icon:
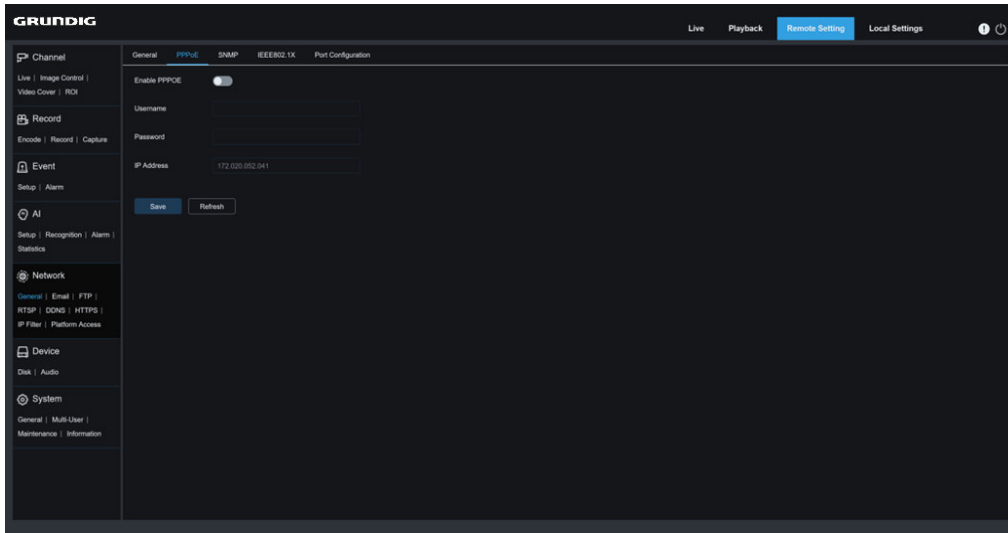
8.8.1.2   PPPoE

Figure 8.8.1.2.1 PPoE

This is an advanced protocol that allows the IPC to connect to the network more easily via DSL modems. Turn on the "Enable PPPoE" box and then enter the username and password of PPPoE. Click the "Apply" to save data. The system will restart to take PPPoE settings into effect.

8.8.1.3   SNMP

Simple Network Management Protocol (SNMP) is a standard application-layer protocol that is designed to manage nodes such as servers, workstations, routers, switches, and HUBS over IP networks.
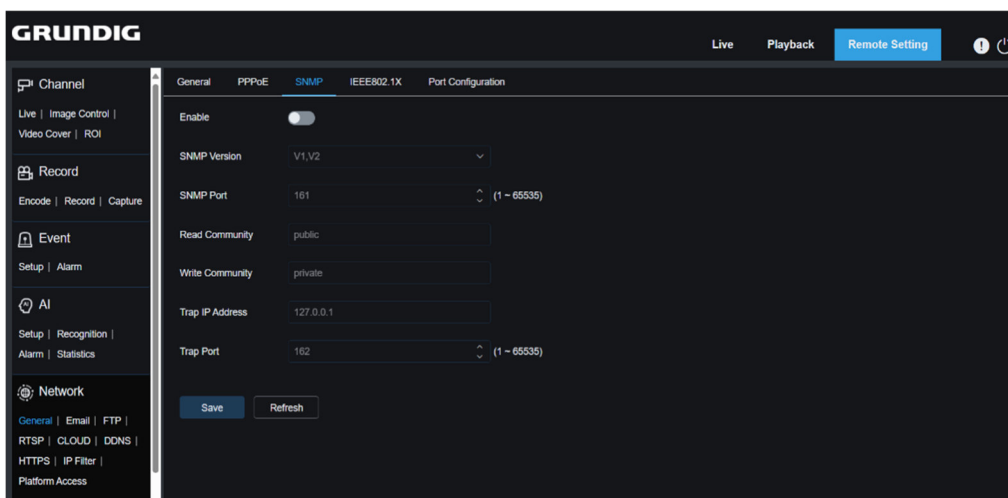

Figure 8.8.1.3.1 SNMP

Enable: Turn on or off SNMP.

SNMP Version: Specifies the version of the SNMP server. The options include V1, V2 and V1, V2, and V3.

SNMP Port: Specifies the port number of the SNMP server.

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

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

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

Trap Port: Specifies the Trap port number of the SNMP server.

8.8.1.4   IEEE802.1X

The 802.1x protocol is widely used in Ethernet as the access control mechanism for LAN ports, which mainly solves the problems of authentication and security in Ethernet. The 802.1x protocol is a port-based network access control protocol. "Port-based network access control" refers to the authentication and control of accessed user devices at the port level of the LAN access device. User devices connected to the port can access resources on the LAN if they can pass authentication; If it cannot pass authentication, it cannot access resources on the LAN.
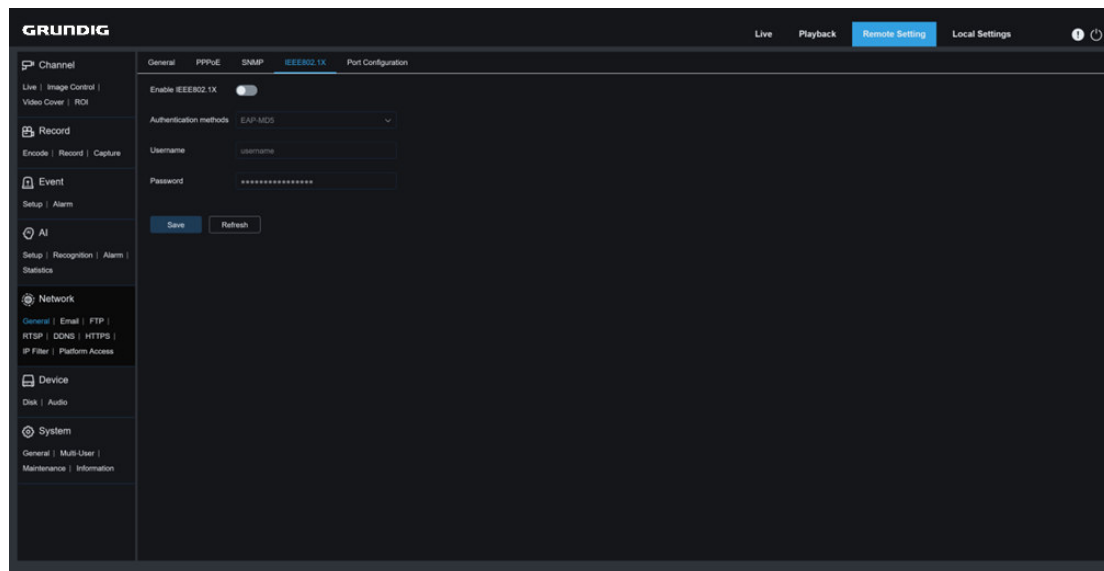

Figure 8.8.1.4 IEEE802.1X

Enable IEEE802.1X: Enable or disable IEEE802.1X.

Authentication Methods: Set the authentication methods of IEEE802.1X.

Username: Set IEEE802.1X authentication username.

Password: Set IEEE802.1X authentication password.
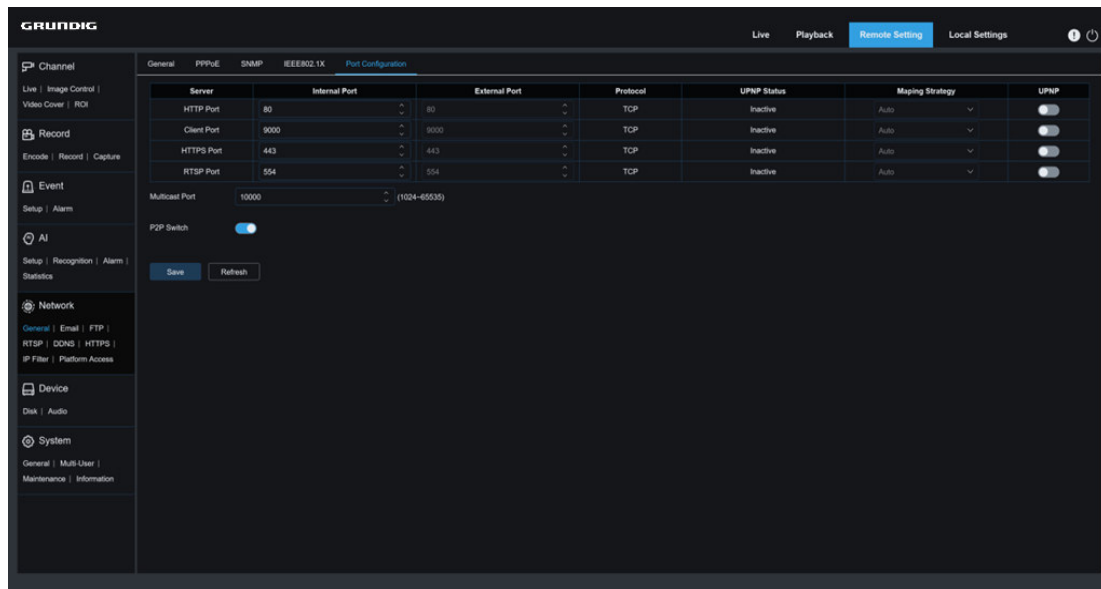
8.8.1.5 Port Configuration

Figure 8.8.1.5.1 Port

Web Port: This is the port you use to remotely login to the IPC (for example, using a web client). If port 80 is already used by other applications, change the port number.

Client Port: This is the port through which the IPC will send messages (for example, using a mobile application). If default port 9000 is already used by other applications, change the port number.

RTSP Port: The default port number is 554. If it is already used by other applications, change the port number.

HTTPS: It is an HTTP channel aiming for security. On the basis of HTTP, transmission encryption and identity authentication are used to ensure the security of transmission.

UPNP: To remotely login to the device from a web Client, perform port forwarding on the router. Enable this option if your router supports UPnP. In this case, you do not have to manually configure port forwarding on the router. If your router does not support UPnP, make sure that port forwarding is done manually on your router.

Multicast Port: Specifies a multicast port.

P2P Switch: P2P is ineffective if this switch is turned off.

8.8.2 Email Configuration

This menu allows to configure email settings. Complete these settings if you want to receive system notifications via email when an alarm is triggered or your hard drive is full.
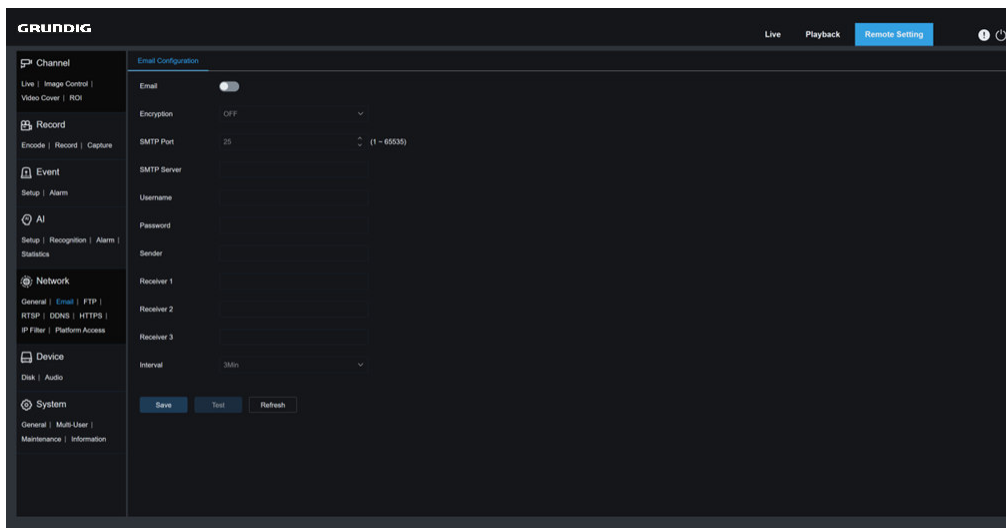
Figure 8.8.2.1 E-Mail

Email: Enable or disable email.

Encryption: Enable this option if your email server requires SSL or TLS authentication. Set it to Automatic if you are not sure.

SMTP Port: Specifies the SMTP port number of the email server.

SMTP Server: Specifies the SMTP server address.

UserName: Specifies your email address.

Password: Specifies your email password.

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

Interval: Specifies the interval between notification emails on the IPC.

To ensure that all settings are correct, click "**Test Email**". The system will send an email to your inbox. If you receive a test email,the configuration parameters are correct.

8.8.3   FTP

This menu enables you to enable the FTP server, through which you can view pictures and videos uploaded from the IPC to your FTP server.
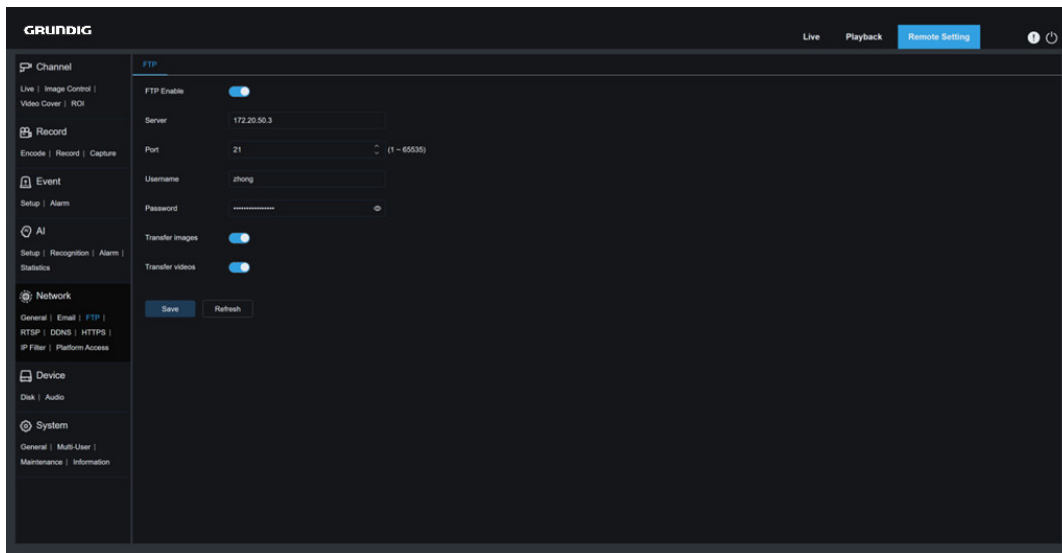
Figure 8.3.3.1 FTP

When option is turned on, alarm videos will be uploaded to the FTP server.

8.8.4 RTSP

Real Time Streaming Protocol (RTSP), RFC2326, is an application layer protocol in the TCP/IP protocol architecture. This protocol defines how one-to-many applications can efficiently transfer multimedia data over IP networks. You can view real-time images using a video player.

RTSP Enable: Enable or disable the RTSP. This protocol is available only when it is turned on.

Anonymous Login: Allow to login as an anonymous user. Authentication is not required for using this protocol if this option is turned on.
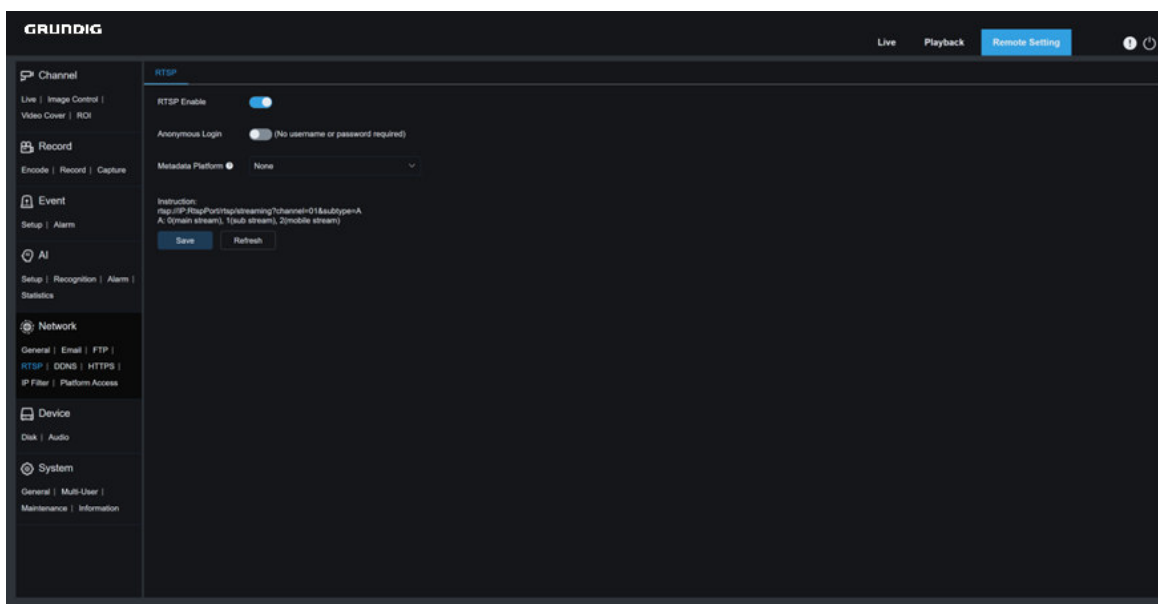

Figure 8.8.4.1 RTSP

8.8.5   Dynamic Domain Name

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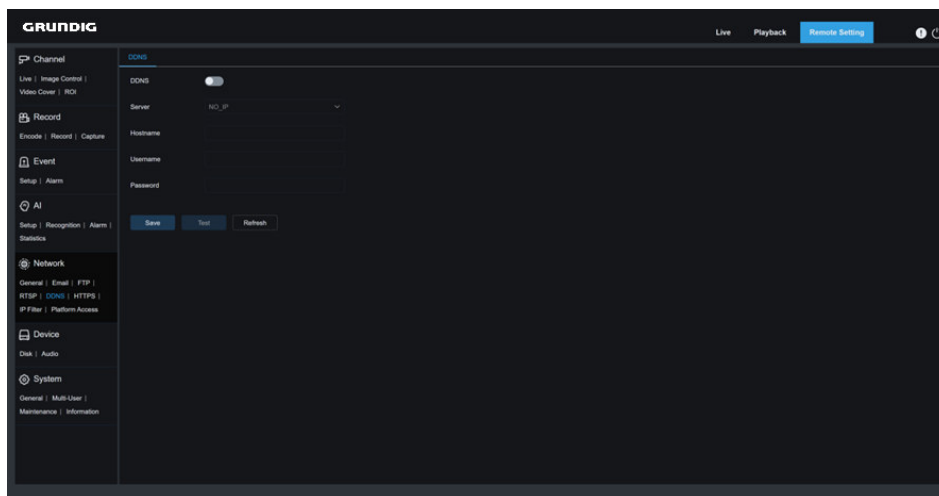

Figure 8.8.5.1 DDNS

DDNS: Enable or disable DDNS.

Server: Specifies your preferred DDNS server (DDNS_3322, DYNDNS, NO_IP, or even CHANGEIP, DNSEXIT).

Hostname: Specifies the domain name you created on the web page of the DDNS service provider. This is the address you type in the URL bar when you want to connect remotely to the IPC from your PC.

User/Password: Specifies the username and password obtained when you create an account on the web page of the DDNS service provider.

Enter all parameters and then click "**Test DDNS**" to test DDNS settings. If the test result is "Unreachable or DNS error", check whether the network works normally or the DDNS information is correct.

8.8.6   HTTPS

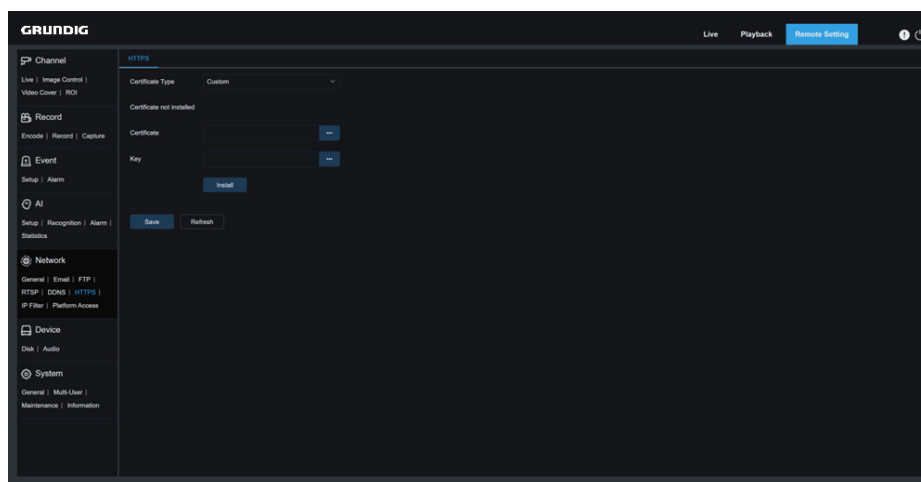This menu allows to set HTTPS. You can connect your device over HTTPS.

Figure 8.8.6.1 HTTPS

Certificate Type: There are two options, including default and custom. The Custom option Allow to connect devices using your own certificate.

Certificate: Select a custom certificate when the Custom option is selected.

Key: Select a custom key file when the Custom option is selected.

8.8.7 IP Filter

The IP filter can be used to set the allow list and block list of devices to be connected.
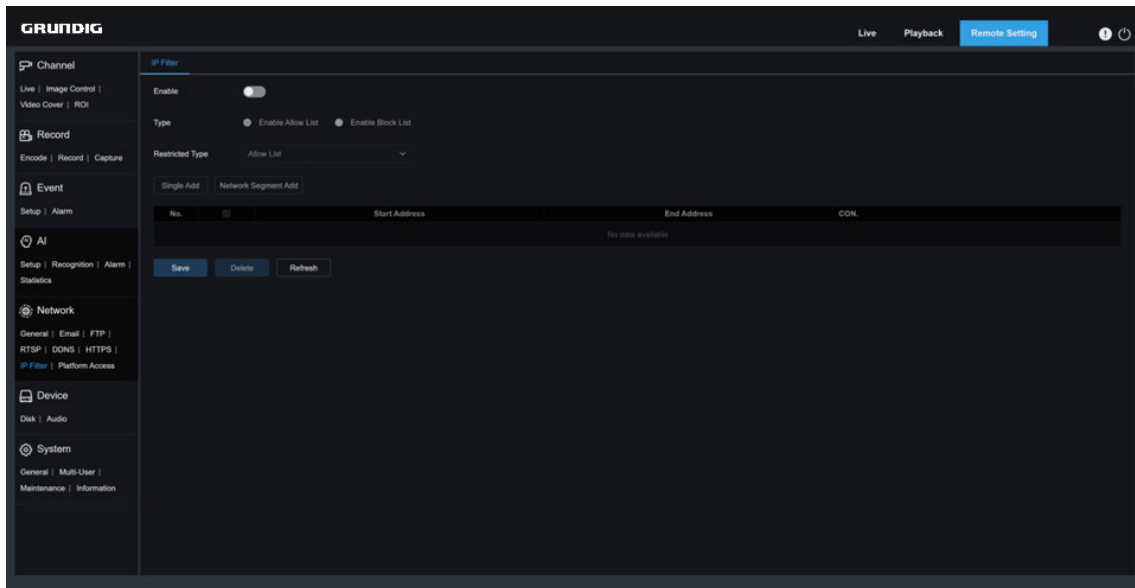

Figure 8.8.7.1 IP Filter

Enable: Enable or disable the IP filter. You can choose to enable the block list or allow list if this option is turned on.

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

Start Address: Specifies the start address.

End Address: Specifies the end address.

8.8.8 RTMP

RTMP function page, turn on the enable switch, fill in the correct server address and then you can push the audio and video streams of the device to the YouTube live server.
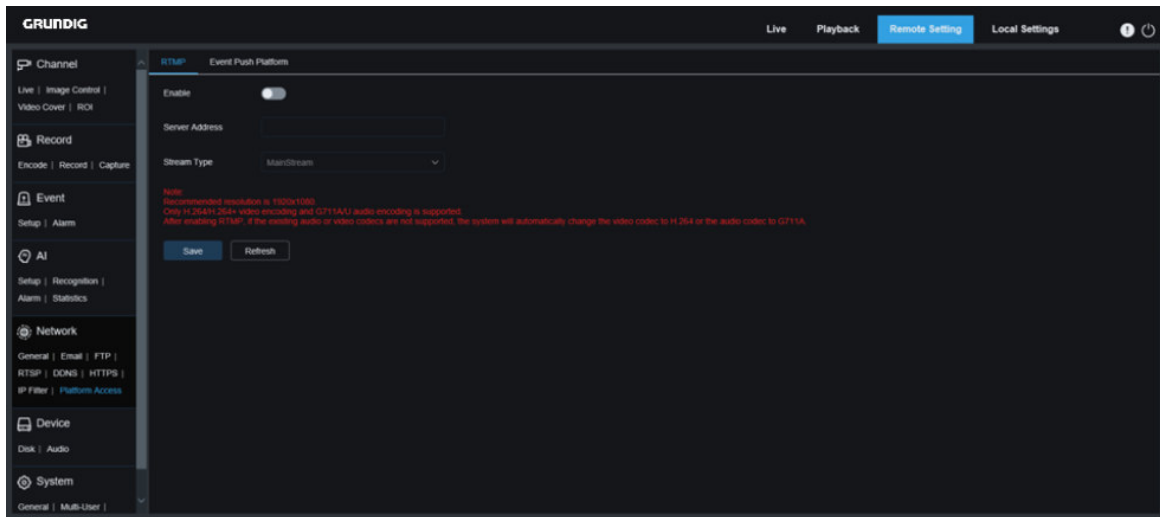
Figure 8.8.8.1 RTMP

Enable: Enable or disable the RTMP function.

Server Address: The address of the server to be pushed.

Stream Type: Select the video stream to be pushed to the server.

8.8.9　Event Push Platform

Event push can be implemented in two modes: HTTP push mode and UDP push mode. HTTP push mode provides POST method and GET method. UDP push mode provides unicast, multicast, and broadcast methods.

Note: Only some models support the event push function.
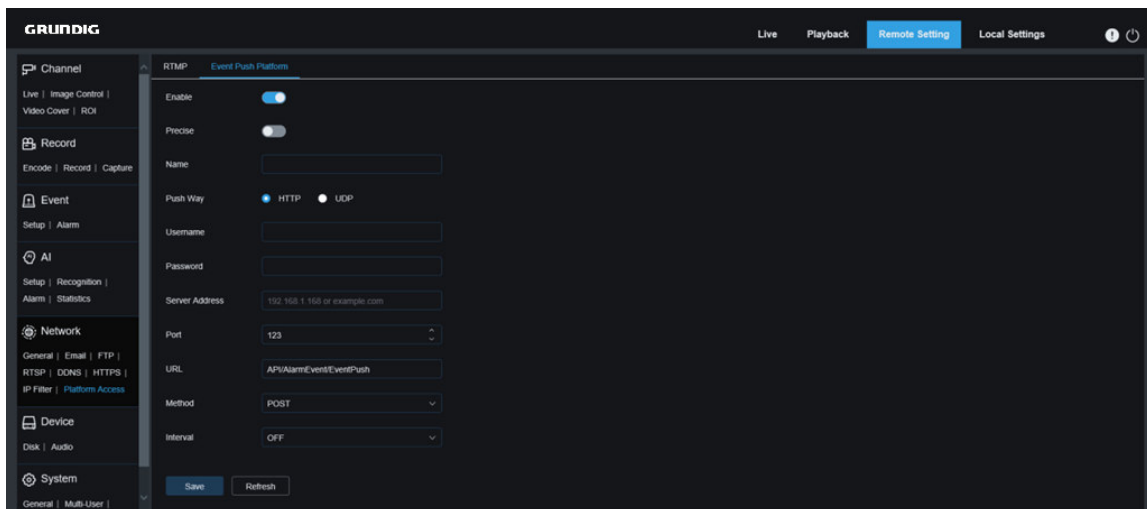
8.8.9.1　HTTP Push

Figure 8.8.9.1.1 HTTP Push

Enable: Enable or disable the event push function.

Precise: Enable or disable the Precise function. When on, pushes once when an alarm is triggered and again when the alarm ends. When it is off, it will only push once when the alarm is triggered.

Name: Set the channel name. Does not support Chinese display.

Push Way: Set the push mode. Both HTTP push mode and UDP push mode are supported. You can select **HTTP** or **UDP** as required.

Username: Set the username. It can be set to NULL if there is not any.

Password: Set the password. It can be set to NULL if there is not any.

Server Address: Set the server address.

Port: Set the server port (port number range:1–65535).

URL: Set the server API. It can be set to NULL if there is not any.

Method: Set the HTTP push method. Both POST and GET methods are supported. Only the HTTP-POST method supports image push. Other methods push notifications only. The alarm type of image push is the same as that in the alarm column of live view on the Web client.

Interval: Set the keep-alive interval. The keep-alive mechanism ensures that a notification is periodically pushed to the client in accordance with the preset time while normal alarm push is not affected. There is no keep-alive mechanism in UDP mode.
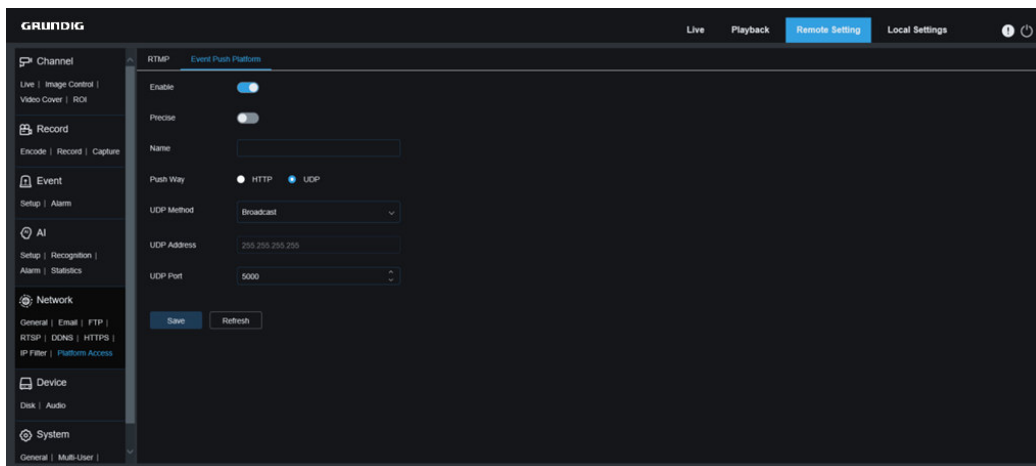

8.8.9.2   UDP Push

Figure 8.8.9.2.1 UDP Push

Enable: Enable or disable the event push function.

Precise: Enable or disable the Precise function. When on, pushes once when an alarm is triggered and again when the alarm ends. When it is off, it will only push once when the alarm is triggered.

Name: Set the channel name. Does not support Chinese display.

Push Way: Set the push mode. Both HTTP push mode and UDP push mode are supported.You can select **HTTP** or **UDP** as required.

UDP Method: Set the UDP push method. There are three options: Unicast, Multicast, and Broadcast.

Unicast: Enter the IP address and port number of the client UDP server for receiving push notifications. The notifications can be received by this address only.

Multicast: Multiple clients in the same network segment of which the UDP servers use the same UDP address and port number can receive notifications. Other UDP addresses cannot receive notifications.

Broadcast: All UDP servers in the same network segment can receive notifications.

UDP Address: Set the UDP server address.

UDP Port: Set the UDP server port (port number range:1–65535).

8.9 Device Management

8.9.1 Disk Management

This menu allows to check and configure the internal SD-card. Formatting is required only for initial access and when a new SD-card is used.
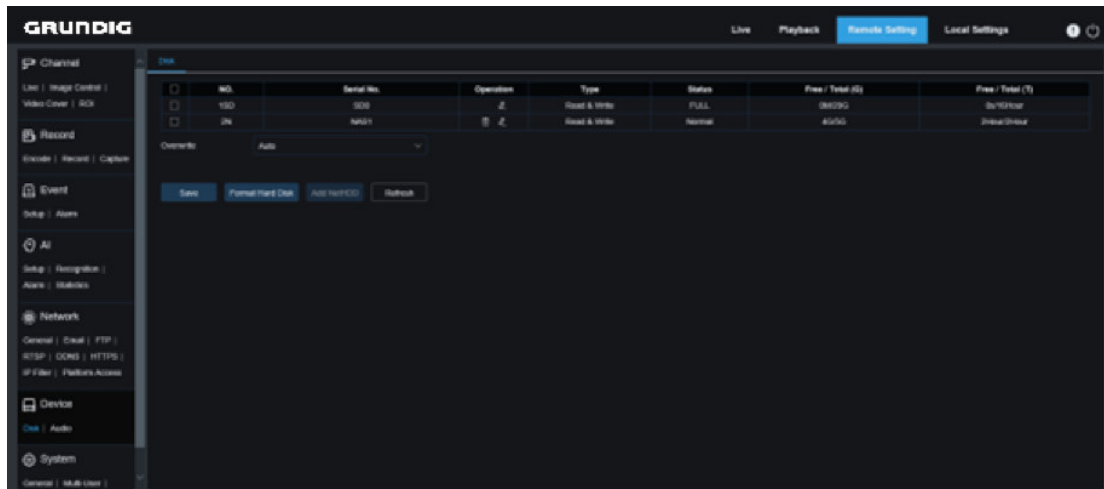

Figure 8.9.1.1 Disk Management

1. **Format Hard Disk:** Select the SD-card to be formatted, and then click Format hard disk. To start formatting, enter your username and password and then click OK.

2. **Overwrite:** This option to overwrite old records in the SD-card when the SD-card is full. If **Auto** is selected, the oldest data will be automatically overwritten when the SD-card is full. Select **OFF** if you do not want to overwrite any old videos. If this function is disabled, check the status of the SD-card periodically to ensure that the SD-card is not full.

3. **ADD NetHDD:** This function Allow to add a network HDD. After a network HDD (NAS) is configured, you can connect the NAS to the Internet to record channel videos or capture images. The AI face database can only be stored in the HDD.

Mounting type: There are two options, including NFS and SMB/CIFS. Among them, NFS does not need username and password, but SMB/CIFS needs.

User Name: Specifies the username of NAS (unavailable in NFS mode).

Password: Specifies the password of NAS (unavailable in NFS mode).

Server IP: Specifies the IP address of NAS.

Directory Name: Specifies the folder where you want to store data in the NAS.

Disk Size: Specifies the size of the network HDD.

Test: Test the connectivity of NAS.

Add NetHDD: Click this option to add NAS.

8.9.2   Audio Management
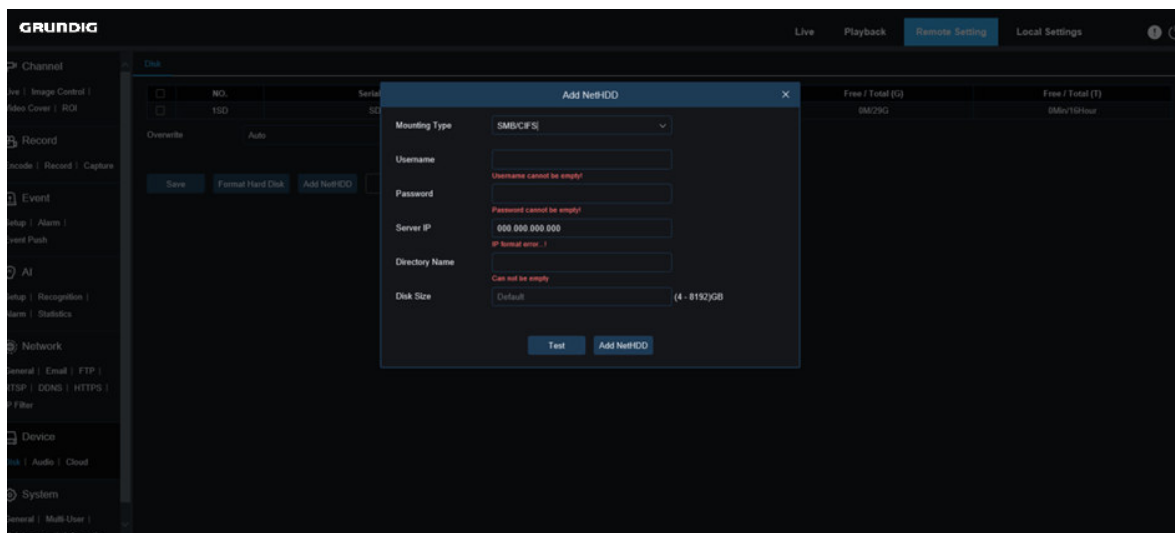
This menu is used to set the volume of your device.

Figure 8.9.2.1 Audio Management

Audio Input Type: Select the audio input type. There are two ways: Mic/In and Line/In. Mic/In means the audio is input through the internal microphone of the camera, Line/In means the audio is input through the tail cable of the camera (supported by some models).

Enable Audio: Enable or disable camera audio.

Output Volume: Specifies the volume of output audio.

Input Volume: Specifies the volume of input audio.

Audio Code Type: Specifies the audio decoding type. There are two options, including G711A and G711U.

8.10   System Settings

You can change system information such as date and time and regions, and change the password and permissions.

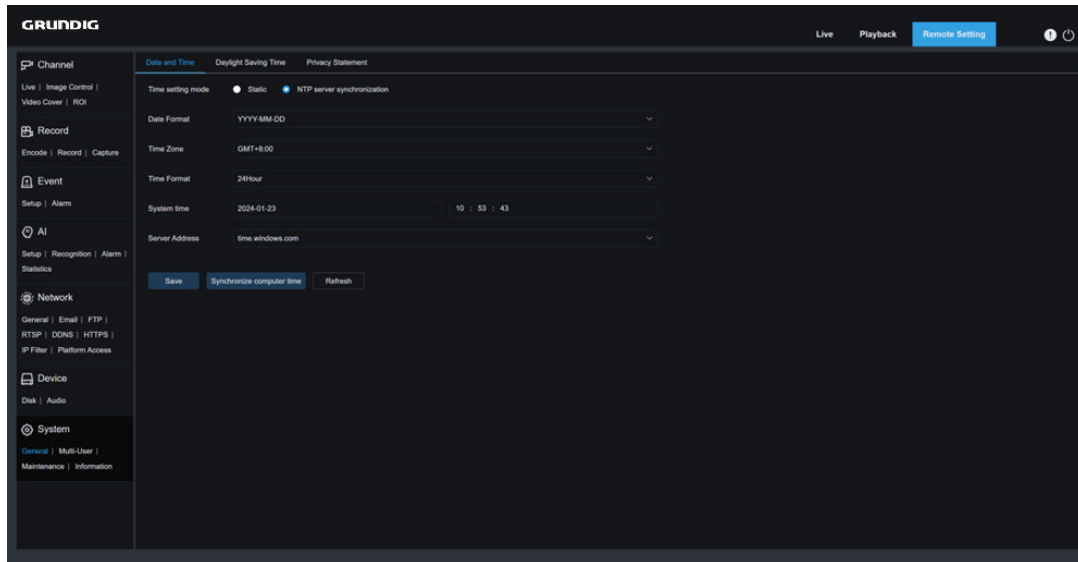### 8.10.1 General

8.10.1.1   Date and Time

Figure 8.10.1.1 Date & Time

Time settings mode: There are two options including Static and NTP server synchronization. When Static is selected, you have to set the time manually. When NTP server synchronization is selected, the time will be synchronized to the network time.

Date Format: Specifies the date format.

Time Zone: Specifies the time zone associated with your region or city.

Time Format: Specifies your preferred time format.

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

Synchronize computer time: Here you can synchronize the time to the computer time.

You cannot set the time manually if NTP server synchronization is selected.

Sever Address: Specifies the automatic time synchronization website.

8.10.1.2   Daylight Saving Time

The Daylight-Saving Time (DST) function enables you to choose when to add daylight saving time to a specific time zone or region.
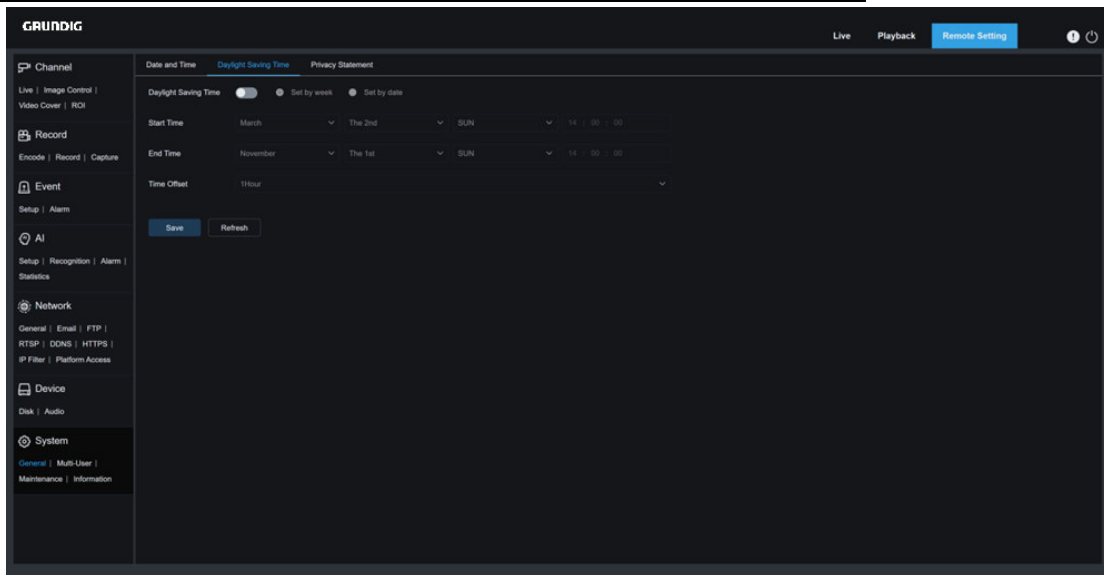
Figure 8.10.1.2 Daylight Saving

Daylight Saving Time: Enable or disable this option if DST is used in your time zone.

Set by week: Specifies the month, weekday, and time when daylight saving time begins and ends, for example, 2:00am on the first Sunday of a month.

Set by date: Specifies the date and time when daylight saving time begins and ends.

Start Time / End Time: Specifies the start time and end time of daylight-saving time.

Time Offset: Specifies the time that daylight saving time adds to your time zone. This is the difference between Universal Time Coordinated (UTC) and your local time.
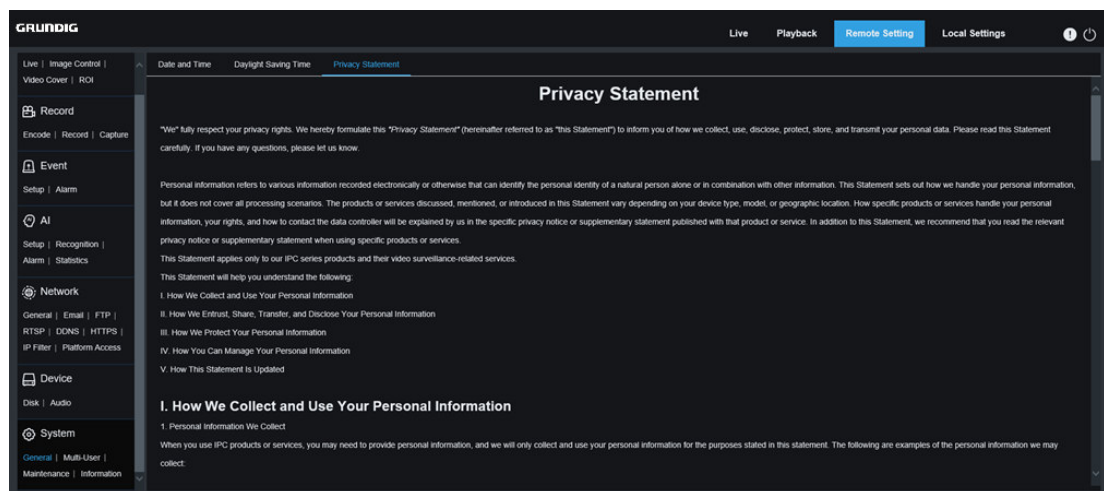
8.10.1.3   Privacy Statement

Figure 8.10.1.3 Privacy

8.10.2 Multi-user Management

This menu allows to configure username, password, and permissions.

The system supports user types as follows:

ADMIN - System Administrator: A system administrator can fully configure the system and can change administrator and user passwords as well as enable/disable password protection.

USER - Normal User: A normal user can only access the preview, search, playback and other appropriate functions. You can set multiple users with different system access permissions.
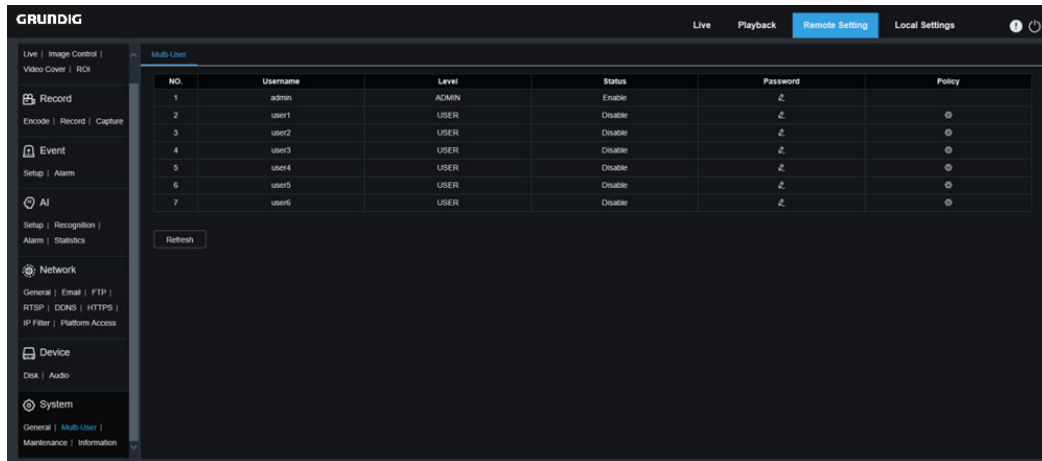

Figure 8.10.2.1 Multi User

To change an administrator or user password, click the "Edit Password" icon. The password must be at least 8 characters long and a combination of numbers, letters, and symbols. Enter the new password again for confirmation. Save the new password. You will be asked to enter the old password for authentication.
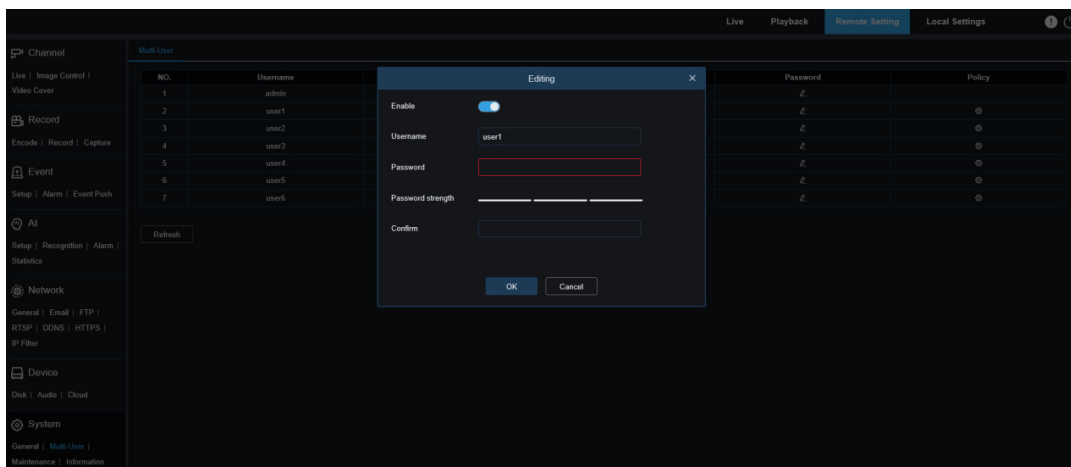

Figure 8.10.2.2 Editing

1. Select one of inactive users and click the "Edit Password" icon.

2. Turn on "**Enable**" to enable users.

3. Click "**Username**" to edit the username.

4. Click the field next to **Password** to enter your password.

5. Click the field next to **Confirm** to enter your confirm password.

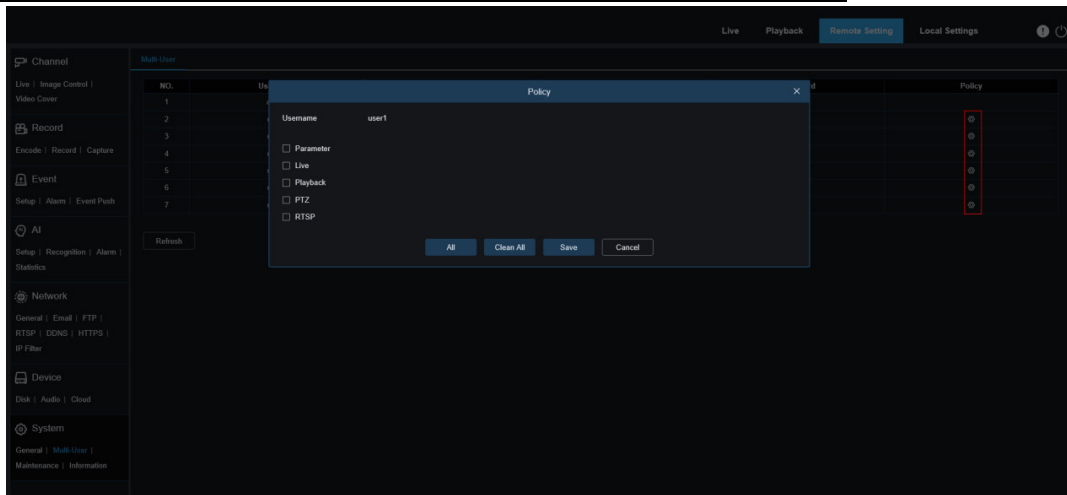Click **Save**. You will have to enter the administrator password for authentication.

Figure 8.10.2.3 Policy

Set user permissions and check the boxes corresponding to the functions. Click **All** to check all boxes. Click **Clear** to clear all boxes.

8.10.3 System Maintenance

This menu enables you to search for and view system logs, restore factory settings, upgrade the system, export and import system parameters, and configure automatic system restart.

8.10.3.1   Log Management

The system log displays important system events, such as motion alarms and system warnings. You can easily import backup files in the system log to your computer within a set time range.
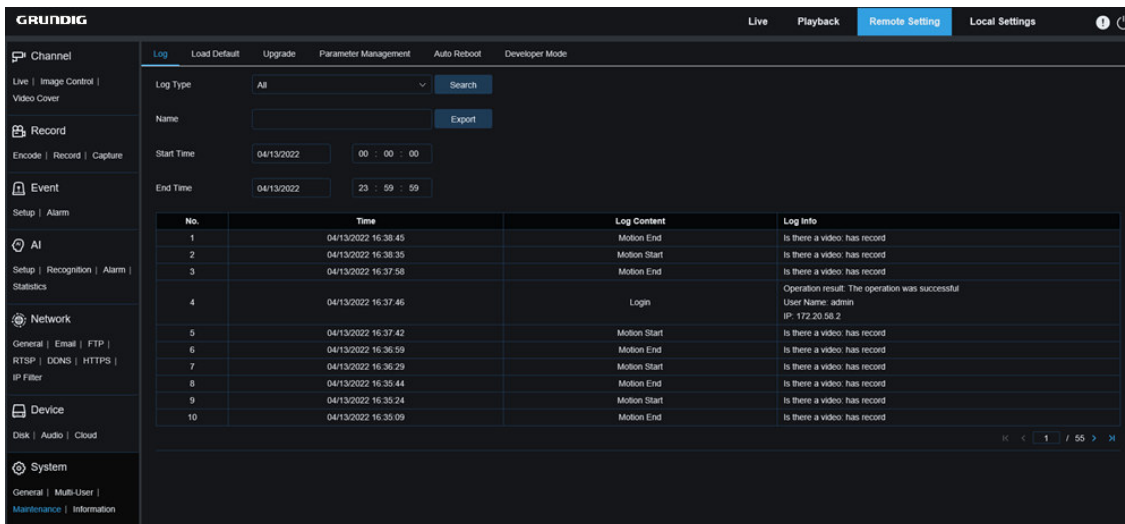

Figure 8.10.3.1.1 Log Files

Log Search and Backup:

1. Click the field next to **Start Time** and select the start date and time from the on-screen calendar.

2. Click the field 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 for from the drop-down list next to **Log Type**, or select **All** to view

the entire system log for the selected time range. The type options include: system log, configuration log, warning log, account log, recording log, storage log, and network log.

4. Select the event type you want to search for from the drop-down list next to **Minor Type** (this menu is unavailable if ALL is selected for Log Type), or select **All** to view the entire system log for the selected time range. The type options include:

- **System:** System settings, restart, automatic restart, upgrade, time settings, and NTP.

- **Configuration:** IPC live control, private area settings, recording mode settings, recording plan settings, main stream settings, network settings, Sub Stream settings, email settings, color settings, motion detection settings, hard disk settings, multi-user settings, NTP settings, image control, mobile stream settings, RTSP settings, IP filter settings, restore factory settings, rare sound detection settings, export settings, and import settings. Event Push settings, Capture settings, Deterrent settings, AI settings, FTP settings, DDNS settings, HTTPS settings, audio settings, Siren settings.

- **Alarm:** Start of motion detection, end of motion detection, start of I/O alarm, end of I/O alarm, start of Video Tamper, end of Video Tamper, start of Perimeter Intrusion, end of Perimeter Intrusion, start of Line Crossing, end of Line Crossing, start of Object Detection, end of Object Detection, start of Pedestrian & Vehicle, end of Pedestrian & Vehicle, start of Face Detection, end of Face Detection, start of Cross Counting, end of Cross Counting, start of Crowd Density, end of Crowd Density, start of Queue Length, end of Queue Length, start of License plate detection, end of License plate detection, start of Rare Sound, end of Rare Sound, start of Sound Alarm, end of Sound Alarm, start of Intrusion, end of Intrusion, start of Region Entrance, end of Region Entrance, start of Region Exiting, end of Region Exiting**.**

- **Account:** login, log out, locked and switch users.

- **Recording:** Search, playback, and backup.

- **Storage:** Formatting HDD, HDD full, and HDD error.

5. **network:** Network disconnected, network online, network exception, and Network Mode changed.

6. Click Search.

7. Browse system logs from the selected time range:

8. Use the $\mathbb{K}$ $\langle$ / $\gg$ $\rangle$ button in the lower right corner of the menu to switch between pages of system log events.

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

8.10.3.2   Load Default

Reset the device to factory settings. You can choose to reset all the settings at a time, or the settings on a specific menu.

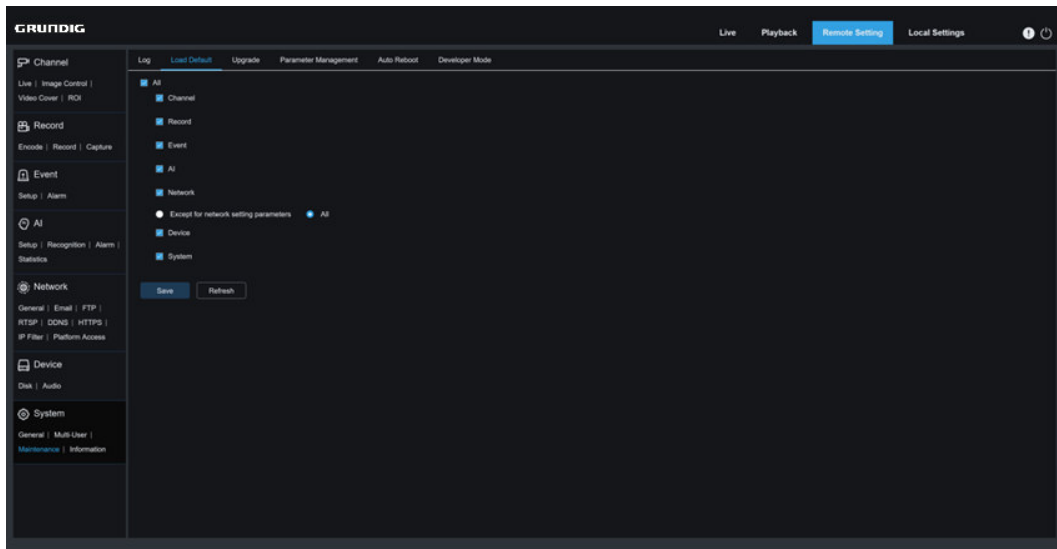**Note**: Restoring the default Settings will not delete videos and snapshots stored in the memory card.

Figure 8.10.3.2.1 Default

Select the item to restore, or **All** to select all items. Click "**Save**" to load the default settings for the selected items.

8.10.3.3   System Upgrade
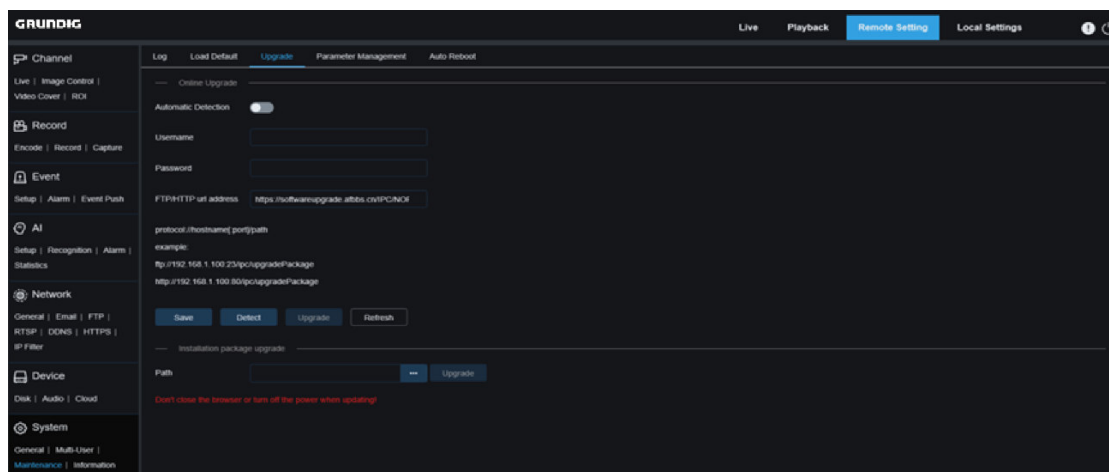
This menu allows to upgrade firmware.

Figure 8.10.3.3.1 System Upgrade

Automatic Detection: You can enable this function to automatically detect available updates.

Username: Specifies the username of your FTP server.

Password: Specifies the password of your FTP server.

FTP/HTTP URL address: Specifies the over-the-air upgrade address (no username or password is required for upgrade over HTTP).

Note: The FTP address is in the format as below: ftp://{IP address of FTP server:port}/Upgrade (the name of the folder containing the over-the-air upgrade path of the FTP server).

Save: Click this button to save current settings.

Detect: After the upgrade file is uploaded and the upgrade path is set, you can click Detect to manually detect the over-the-air upgrade file. A message pops up when updates are available, as shown in the figure below:
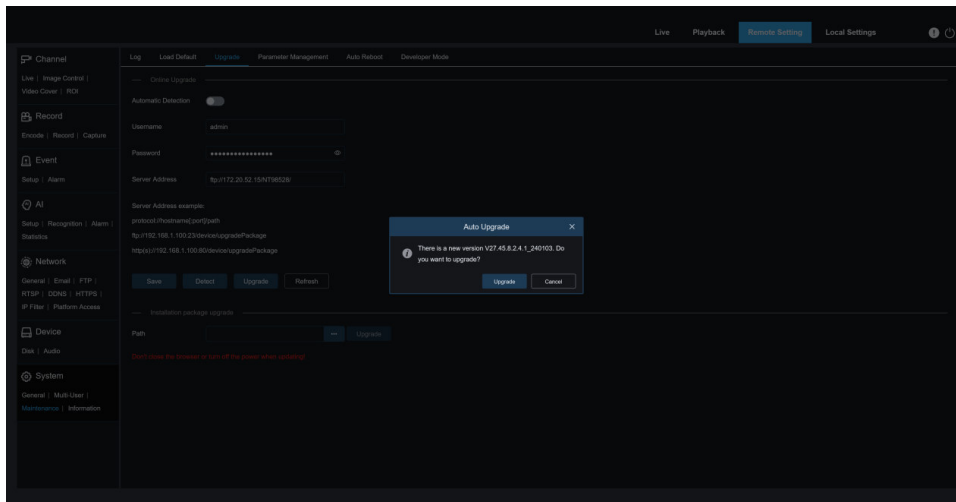

Figure 8.10.3.3.2 Auto Upgrade

Upgrade: Click this button to start system upgrade.

Place the firmware file (.sw) into the HDD of your PC.

Click "**…**" next to "**Path**" to select the firmware file from your PC.

Click the **Upgrade** button to start system upgrade. The system upgrade will take about 2 to 3 minutes. Do not power off the device or close your browser while system upgrade is in progress.

8.10.3.4   Parameter Management

You can export the configured parameters to your PC or import the exported configuration file from your PC to the camera.
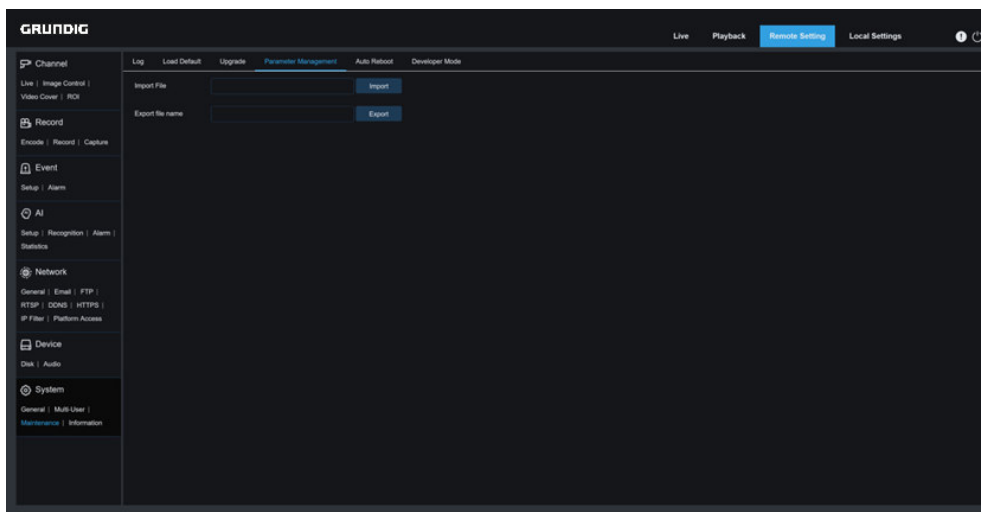

Figure 8.10.3.4 Parameter

Import File: Click the field to display the path window. Select the parameter file and then click **Import** to start importing parameters.

Export File Name: Click the field to enter the name of the file to which parameters are exported. Click **Export** to export parameters.

8.10.3.5   Auto Reboot

This menu enables the system to automatically reboot. You are advised to enable this function to guarantee the stable operation of the device.
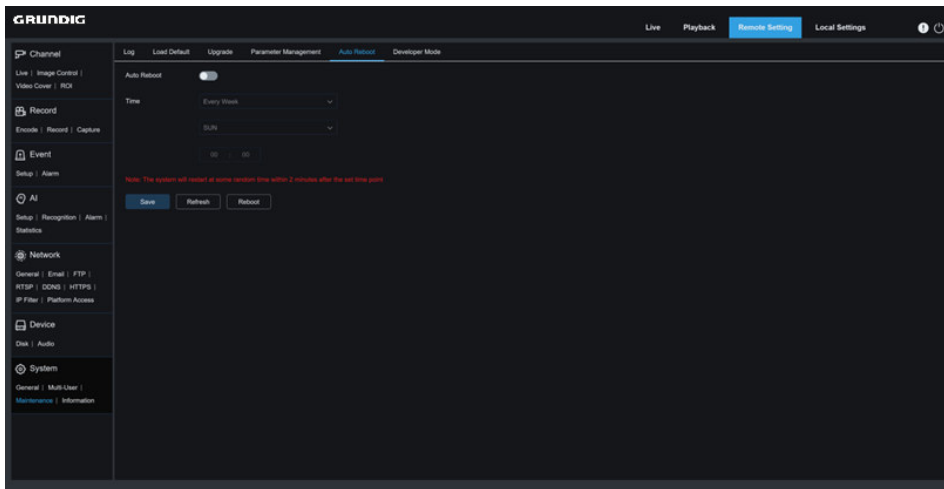

Figure 8.10.3.5 Reboot

Auto Reboot: Enable or disable auto reboot feature.

Time: Set IPC to reboot by day, week, or month.

8.10.4 System Information

This menu allows to view system information, such as device ID, device model, MAC address, firmware version.
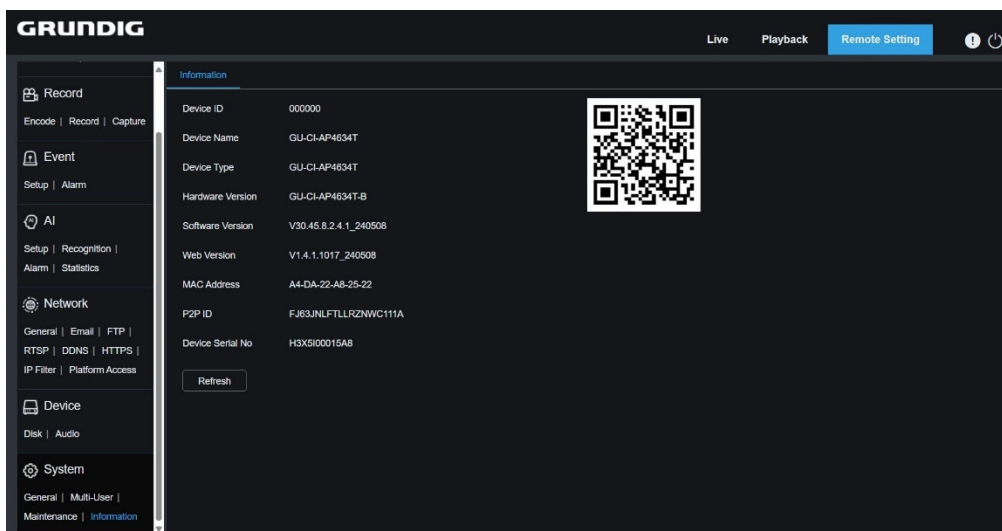

Figure 8.10.4.1 System Info

9 Local Settings

This menu allows to set the path for storing videos and downloaded and captured image files, as well as the format of videos and captured images.

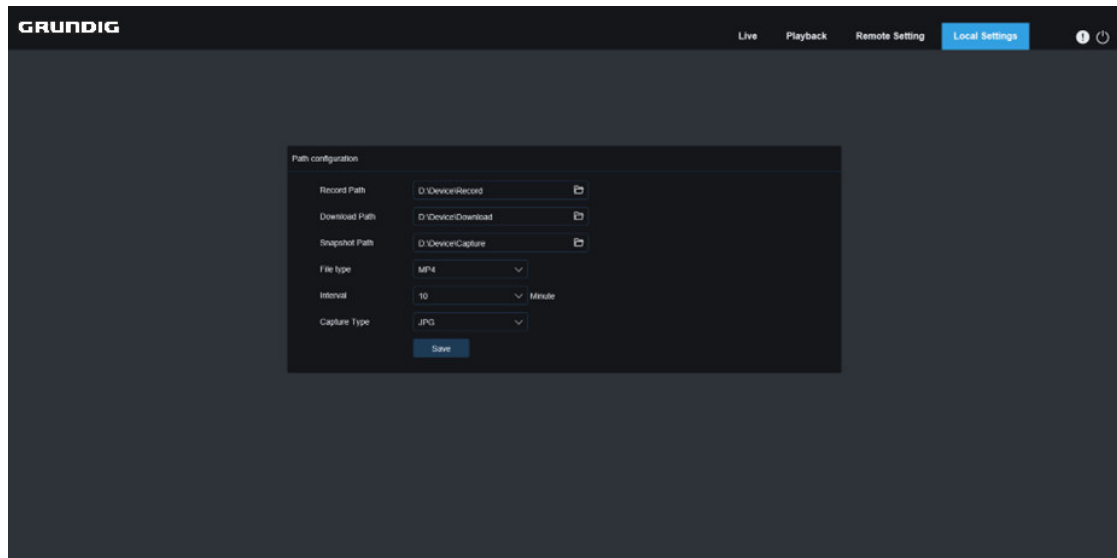**Note**: skip this page when you access the web client from Safari 12 and later, Chrome 57 and later, Firefox 52 and later, and Edge 41.

Figure 9.1 Local Settings