



## **User Guide**

**GU-CI-IC4614E**

**GU-CI-IC4614T**

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## Introduction

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

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

Further information about the product like Data Sheets, CE Documents, etc. can also be found on our Web page [www.grundig-security.com](http://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-IC4614E

GU-CI-IC4614T

# 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 Product Description

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

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

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

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

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### **1.3 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: IE1.

## 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.

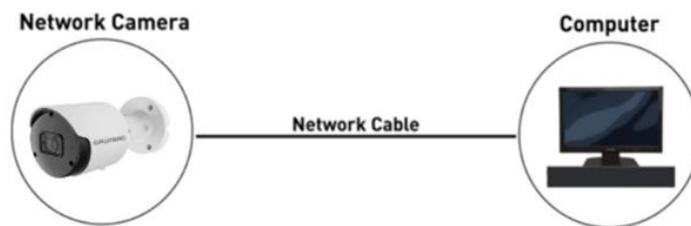


Figure 2.1 Connecting

### 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.

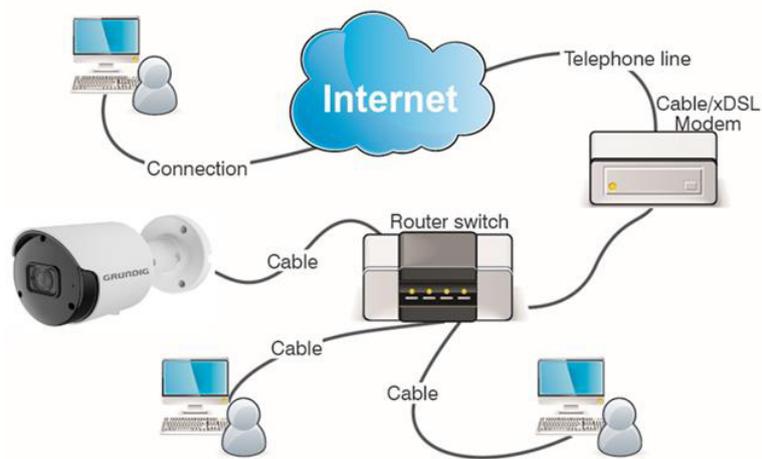
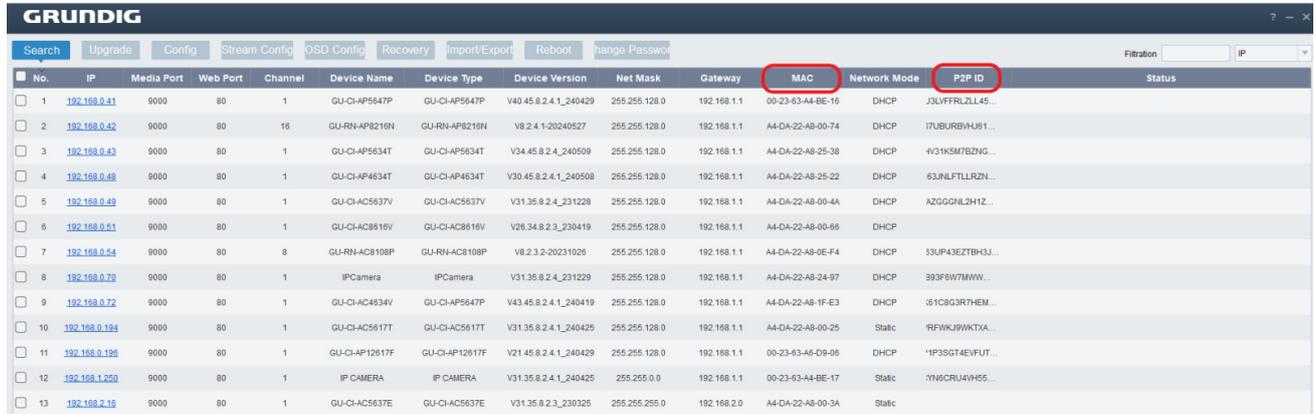


Figure 2.2 Connecting with Router

### 3 Setting the IP Address of an IPC using Device Config Tool

Step 1. Run Device Config Tool , 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.

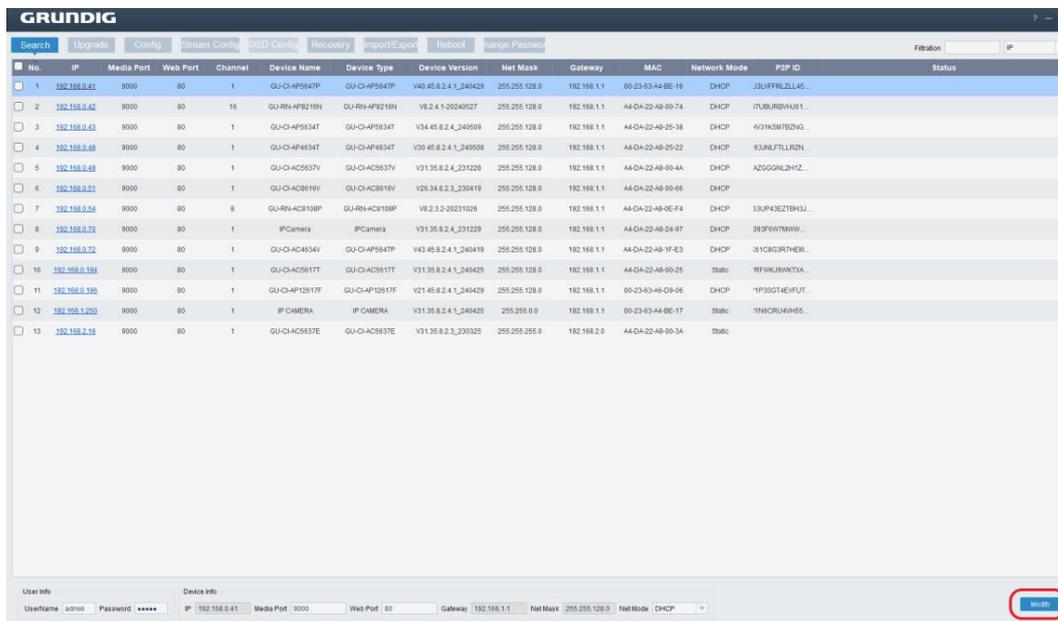


| No. | IP            | Media Port | Web Port | Channel | Device Name    | Device Type    | Device Version        | Net Mask      | Gateway     | MAC               | Network Mode | P2P ID           | Status |
|-----|---------------|------------|----------|---------|----------------|----------------|-----------------------|---------------|-------------|-------------------|--------------|------------------|--------|
| 1   | 192.168.0.41  | 9000       | 80       | 1       | GU-CH-AP5647P  | GU-CH-AP5647P  | V40.45.8.2.4_1_240429 | 255.255.128.0 | 192.168.1.1 | 00-23-93-A4-BE-16 | DHCP         | J3LVFFRLZLL45... |        |
| 2   | 192.168.0.42  | 9000       | 80       | 16      | GU-RN-AP8216N  | GU-RN-AP8216N  | V8.2.4.1-20240527     | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-00-74 | DHCP         | I7UBURBVHJ61...  |        |
| 3   | 192.168.0.43  | 9000       | 80       | 1       | GU-CH-AP5634T  | GU-CH-AP5634T  | V34.45.8.2.4_240509   | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-25-38 | DHCP         | 4V31K5M7BZNG...  |        |
| 4   | 192.168.0.48  | 9000       | 80       | 1       | GU-CH-AP4634T  | GU-CH-AP4634T  | V30.45.8.2.4_1_240508 | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-25-22 | DHCP         | 63JNLFTLLRZN...  |        |
| 5   | 192.168.0.49  | 9000       | 80       | 1       | GU-CH-AC5637V  | GU-CH-AC5637V  | V31.35.8.2.4_231228   | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-00-4A | DHCP         | AZGGGNL2H1Z...   |        |
| 6   | 192.168.0.51  | 9000       | 80       | 1       | GU-CH-AC816V   | GU-CH-AC816V   | V26.34.8.2.3_230419   | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-00-66 | DHCP         |                  |        |
| 7   | 192.168.0.54  | 9000       | 80       | 8       | GU-RN-AC8108P  | GU-RN-AC8108P  | V8.2.3.2-20231026     | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-0E-F4 | DHCP         | 33UP43E2TBH3J... |        |
| 8   | 192.168.0.70  | 9000       | 80       | 1       | IPCamera       | IPCamera       | V31.35.8.2.4_231229   | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-24-97 | DHCP         | 393F6W7MMW...    |        |
| 9   | 192.168.0.72  | 9000       | 80       | 1       | GU-CH-AC4634V  | GU-CH-AP5647P  | V43.45.8.2.4_1_240419 | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-1F-E3 | DHCP         | 351C83R7HEM...   |        |
| 10  | 192.168.0.194 | 9000       | 80       | 1       | GU-CH-AC5617T  | GU-CH-AC5617T  | V31.35.8.2.4_1_240425 | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-00-25 | Static       | 4RFWKJ9WKTXA...  |        |
| 11  | 192.168.0.195 | 9000       | 80       | 1       | GU-CH-AP12617F | GU-CH-AP12617F | V21.45.8.2.4_1_240429 | 255.255.128.0 | 192.168.1.1 | 00-23-93-A6-D9-96 | DHCP         | 1P3SGT4EVFUT...  |        |
| 12  | 192.168.1.250 | 9000       | 80       | 1       | IP CAMERA      | IP CAMERA      | V31.35.8.2.4_1_240425 | 255.255.0.0   | 192.168.1.1 | 00-23-93-A4-BE-17 | Static       | 1YNCRU4W465...   |        |
| 13  | 192.168.2.16  | 9000       | 80       | 1       | GU-CH-AC5637E  | GU-CH-AC5637E  | V31.35.8.2.3_230325   | 255.255.255.0 | 192.168.2.0 | A4-DA-22-A8-00-3A | Static       |                  |        |

**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 DHCP to get the IP address if the current network supports DHCP.



| No. | IP           | Media Port | Web Port | Channel | Device Name   | Device Type   | Device Version        | Net Mask      | Gateway     | MAC               | Network Mode | P2P ID           | Status |
|-----|--------------|------------|----------|---------|---------------|---------------|-----------------------|---------------|-------------|-------------------|--------------|------------------|--------|
| 1   | 192.168.0.41 | 9000       | 80       | 1       | GU-CH-AP5647P | GU-CH-AP5647P | V40.45.8.2.4_1_240429 | 255.255.128.0 | 192.168.1.1 | 00-23-93-A4-BE-16 | DHCP         | J3LVFFRLZLL45... |        |

|           |       |             |               |
|-----------|-------|-------------|---------------|
| User info |       | Device info |               |
| Username  | admin | IP          | 192.168.0.41  |
| Password  | ***** | Media Port  | 9000          |
|           |       | Web Port    | 80            |
|           |       | Gateway     | 192.168.1.1   |
|           |       | Net Mask    | 255.255.128.0 |
|           |       | Net Mode    | 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.

| No. | IP            | Media Port | Web Port | Channel | Device Name    | Device Type    | Device Version        | Net Mask      | Gateway     | MAC               | Network Mode | P2P ID           | Status |
|-----|---------------|------------|----------|---------|----------------|----------------|-----------------------|---------------|-------------|-------------------|--------------|------------------|--------|
| 1   | 192.168.0.41  | 9000       | 80       | 1       | GU-CH-AP5647P  | GU-CH-AP5647P  | V40.45.8.2.4_1_240429 | 255.255.128.0 | 192.168.1.1 | 00-23-63-A4-BE-16 | DHCP         | J3LFFRLZLL45...  |        |
| 2   | 192.168.0.42  | 9000       | 80       | 16      | GU-RN-AP8216N  | GU-RN-AP8216N  | V8.2.4.1-20240527     | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-00-74 | DHCP         | ITUBURBVHJ51...  |        |
| 3   | 192.168.0.43  | 9000       | 80       | 1       | GU-CH-AP5634T  | GU-CH-AP5634T  | V34.45.8.2.4_240509   | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-25-38 | DHCP         | 4V31K5M7BZNG...  |        |
| 4   | 192.168.0.48  | 9000       | 80       | 1       | GU-CH-AP4634T  | GU-CH-AP4634T  | V30.45.8.2.4_1_240508 | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-25-22 | DHCP         | 63JNLFTLLRZN...  |        |
| 5   | 192.168.0.49  | 9000       | 80       | 1       | GU-CH-AC5637V  | GU-CH-AC5637V  | V31.35.8.2.4_231228   | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-00-4A | DHCP         | AZOGGNL2H1Z...   |        |
| 6   | 192.168.0.51  | 9000       | 80       | 1       | GU-CH-AC8616V  | GU-CH-AC8616V  | V26.34.6.2.3_230419   | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-00-66 | DHCP         |                  |        |
| 7   | 192.168.0.54  | 9000       | 80       | 8       | GU-RN-AC8108P  | GU-RN-AC8108P  | V8.2.3.2-20231026     | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-0E-F4 | DHCP         | 33UP43E2TBH3J... |        |
| 8   | 192.168.0.70  | 9000       | 80       | 1       | IPCamera       | IPCamera       | V31.35.8.2.4_231229   | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-24-97 | DHCP         | 393F6W7MMW...    |        |
| 9   | 192.168.0.72  | 9000       | 80       | 1       | GU-CH-AC4634V  | GU-CH-AP5647P  | V43.45.8.2.4_1_240419 | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-1F-E3 | DHCP         | 351C8G3R7HEM...  |        |
| 10  | 192.168.0.184 | 9000       | 80       | 1       | GU-CH-AC5617T  | GU-CH-AC5617T  | V31.35.8.2.4_1_240425 | 255.255.128.0 | 192.168.1.1 | A4-DA-22-A8-00-25 | Static       | WFWKJ9WKTXA...   |        |
| 11  | 192.168.0.196 | 9000       | 80       | 1       | GU-CH-AP12617F | GU-CH-AP12617F | V21.45.8.2.4_1_240429 | 255.255.128.0 | 192.168.1.1 | 00-23-63-A6-D9-06 | DHCP         | *1P3SGT4EYFUT... |        |
| 12  | 192.168.1.250 | 9000       | 80       | 1       | IP CAMERA      | IP CAMERA      | V31.35.8.2.4_1_240425 | 255.255.0.0   | 192.168.1.1 | 00-23-63-A4-BE-17 | Static       | *1N6CRU4VH55...  |        |
| 13  | 192.168.2.16  | 9000       | 80       | 1       | GU-CH-AC5637E  | GU-CH-AC5637E  | V31.35.8.2.3_230325   | 255.255.255.0 | 192.168.2.0 | A4-DA-22-A8-00-3A | Static       |                  |        |

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.

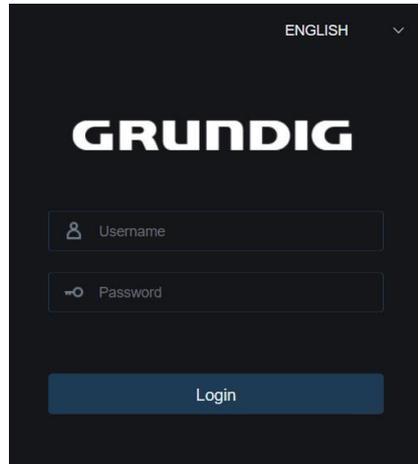


Figure 4.3.1 Login

### 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.

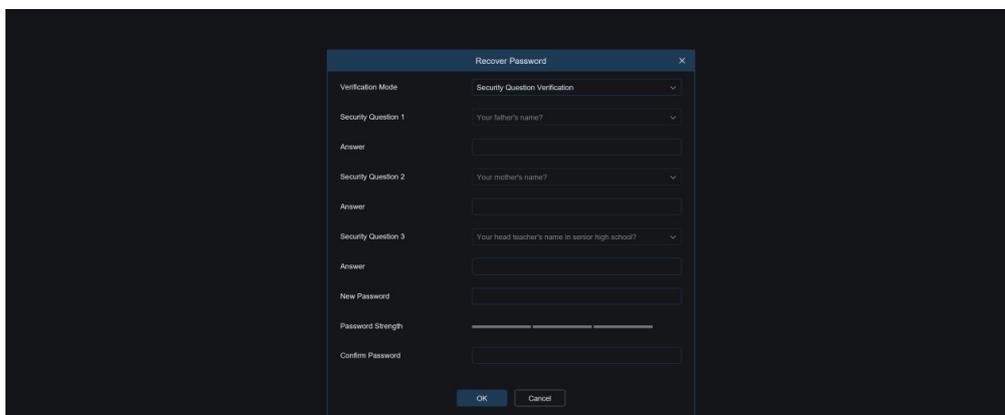


Figure 4.4.1 security Questions

### 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.

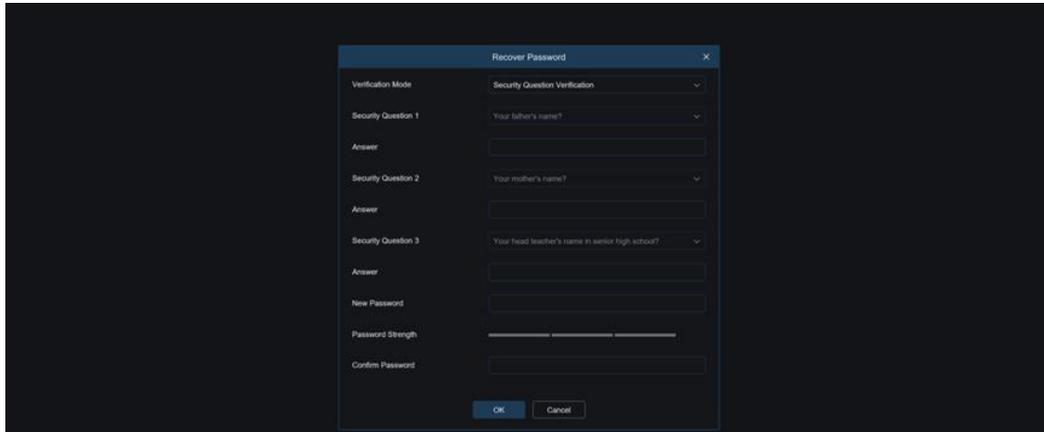


Figure 4.4.2 Recover

### 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.

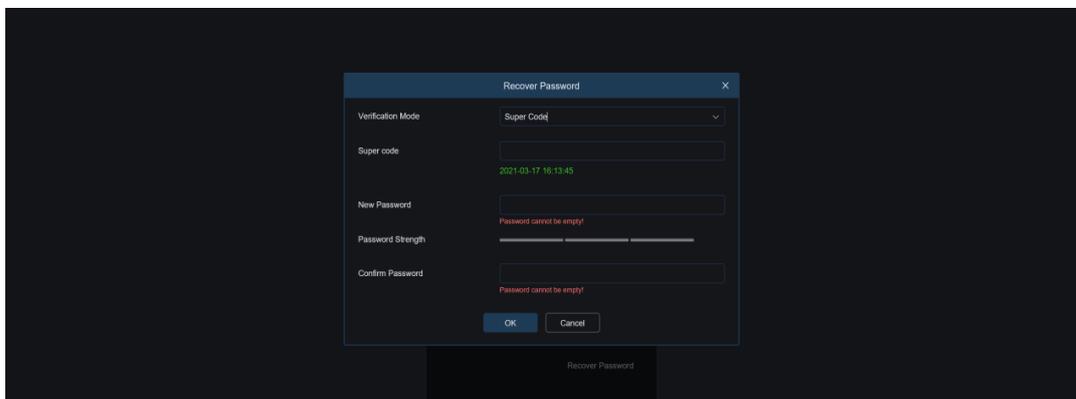


Figure 4.4.3 Super Code

## 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.

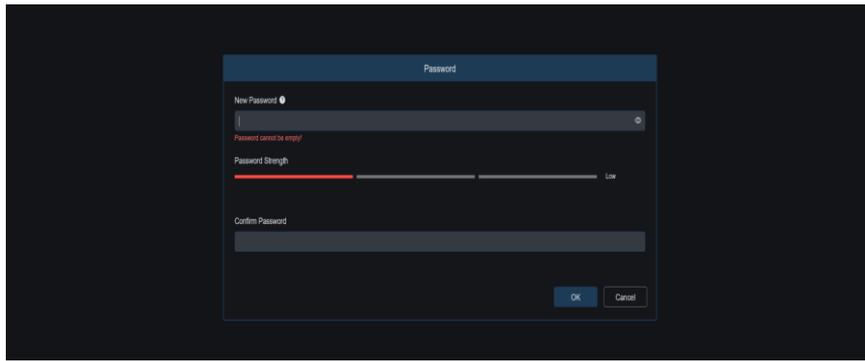


Figure 4.5.1 Password Expire

## 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.

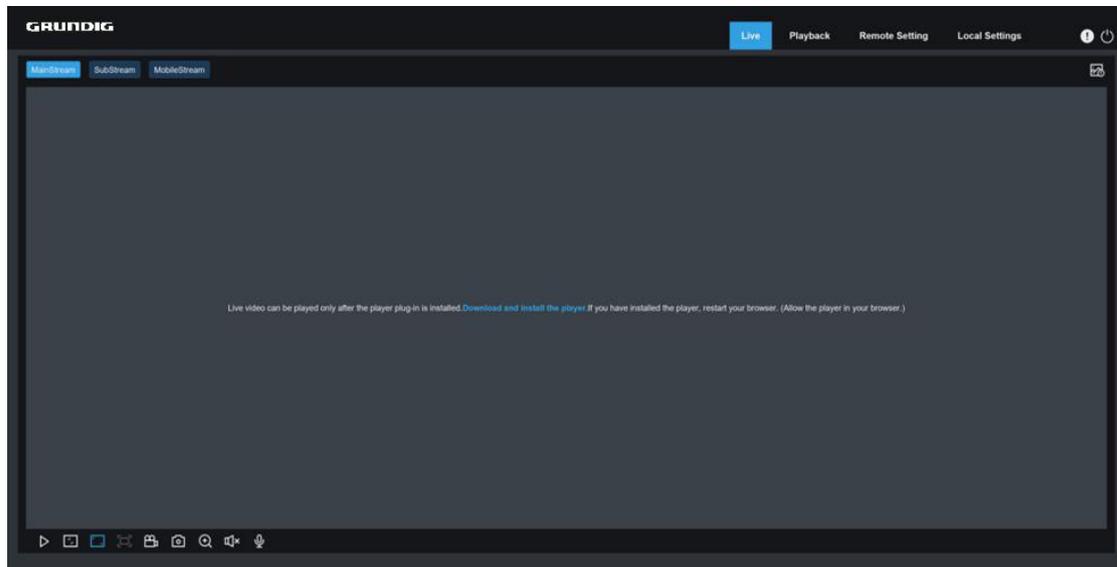


Figure 5.1.1

## 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 differ depending on product models.

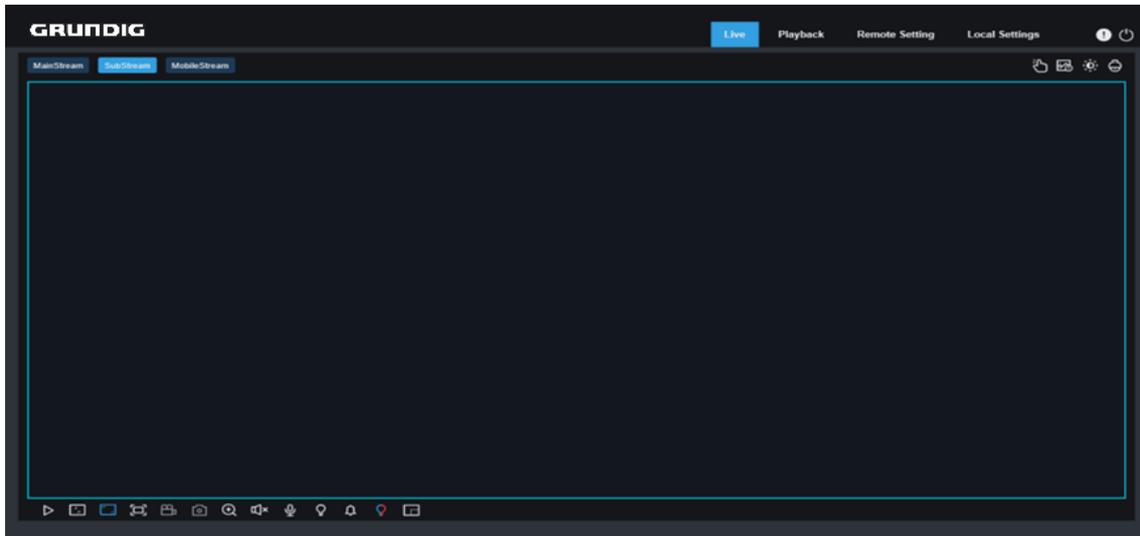


Figure 6.1 Live View

**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.



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



**Exit:** Log out.

Recording & alarm status: Displays the 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.



**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.

## 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.

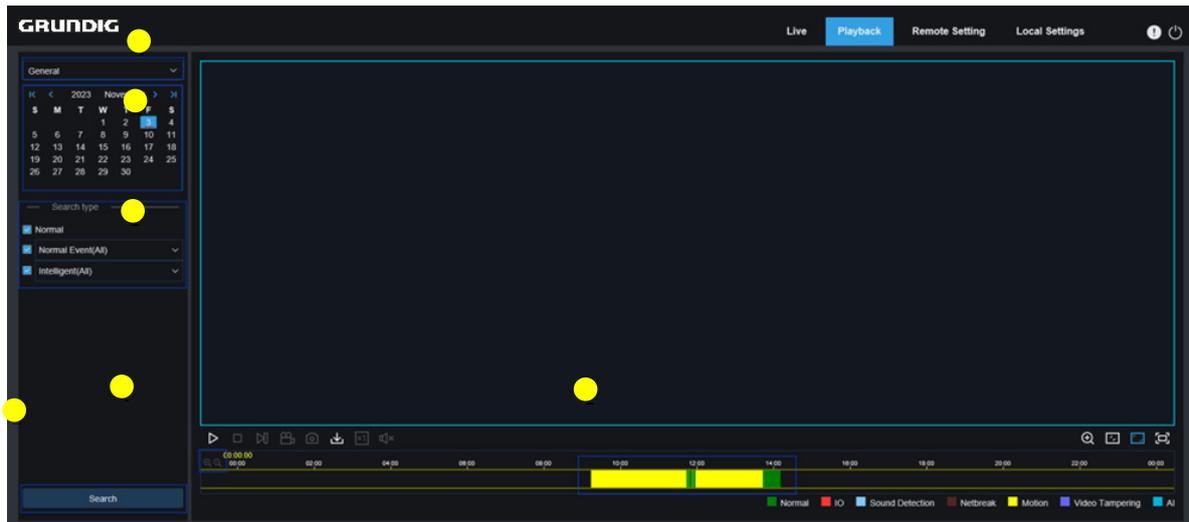


Figure 7.1.1 Playback

- 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.)

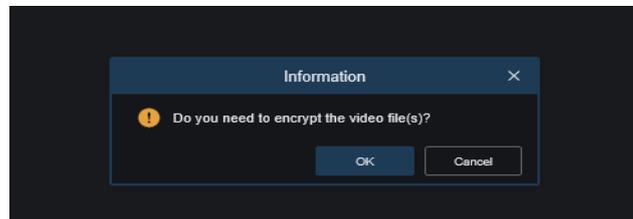


Figure 7.1.2 Download info

 **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.

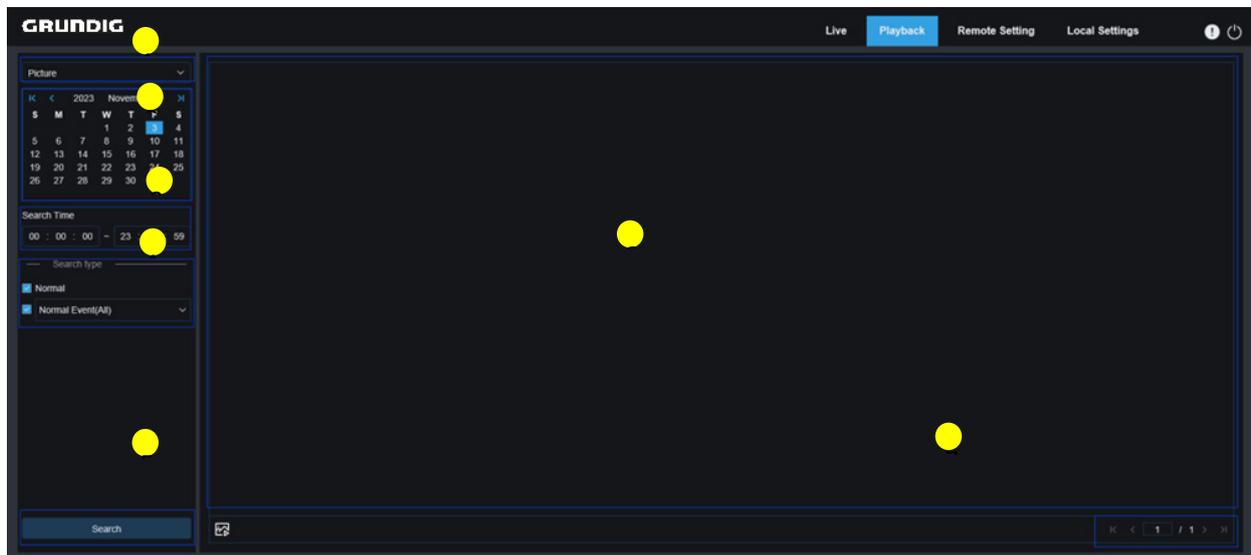


Figure 7.2.1 Image Search

- 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.

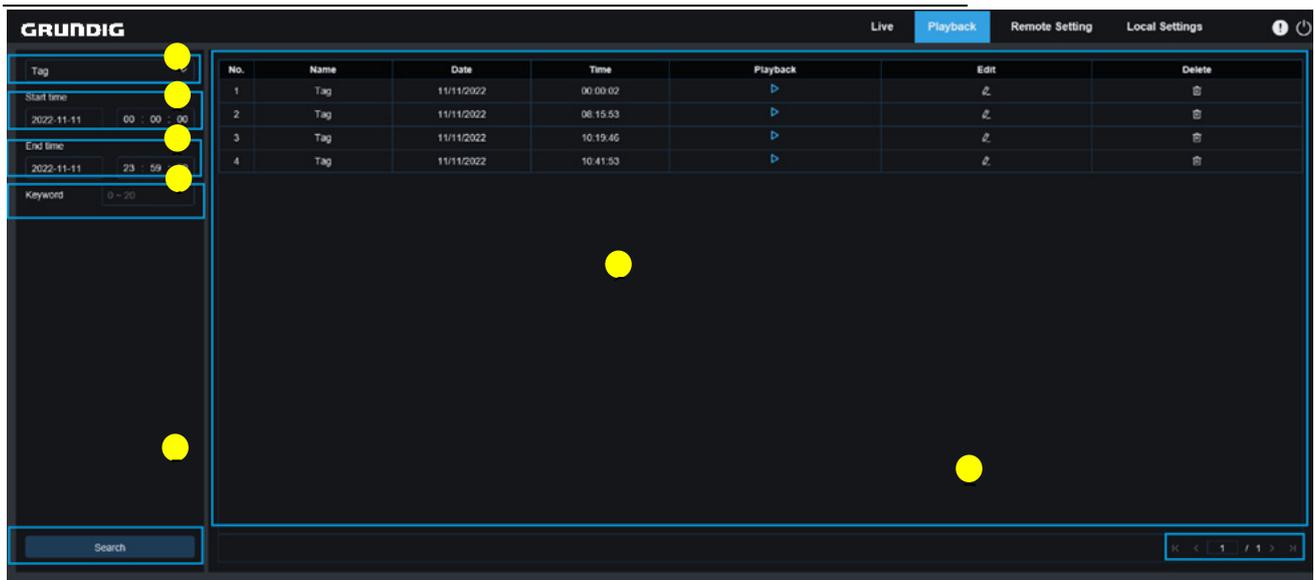


Figure 8.3.1 Playback Tag

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:

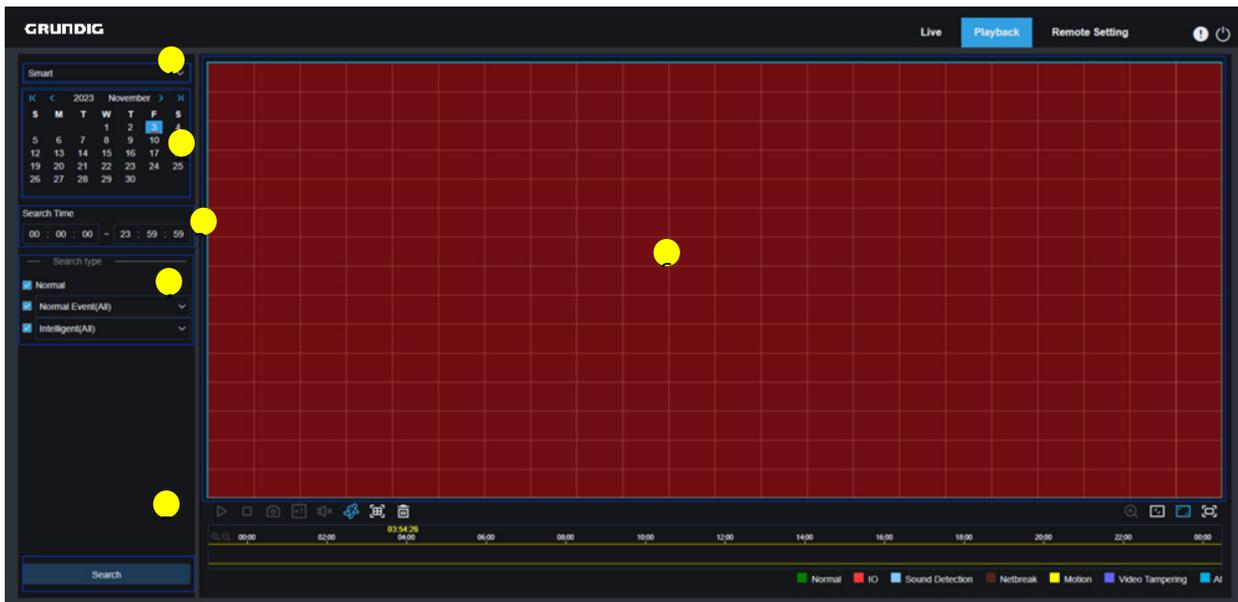


Figure 7.4.1 Smart Playback

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:** 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.



**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.

## 7.5 AI

### 7.5.1 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.

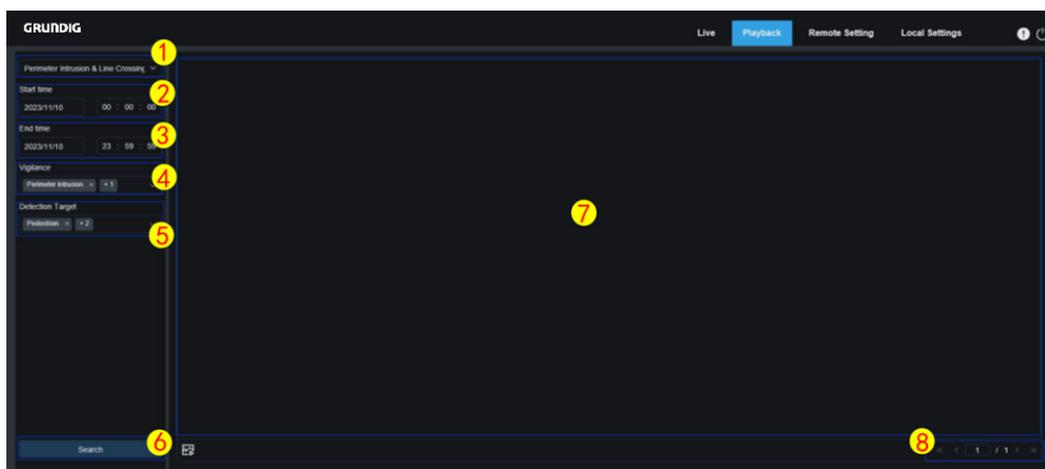


Figure 7.5.1 PI & LC Search

**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.

### 7.5.2 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.

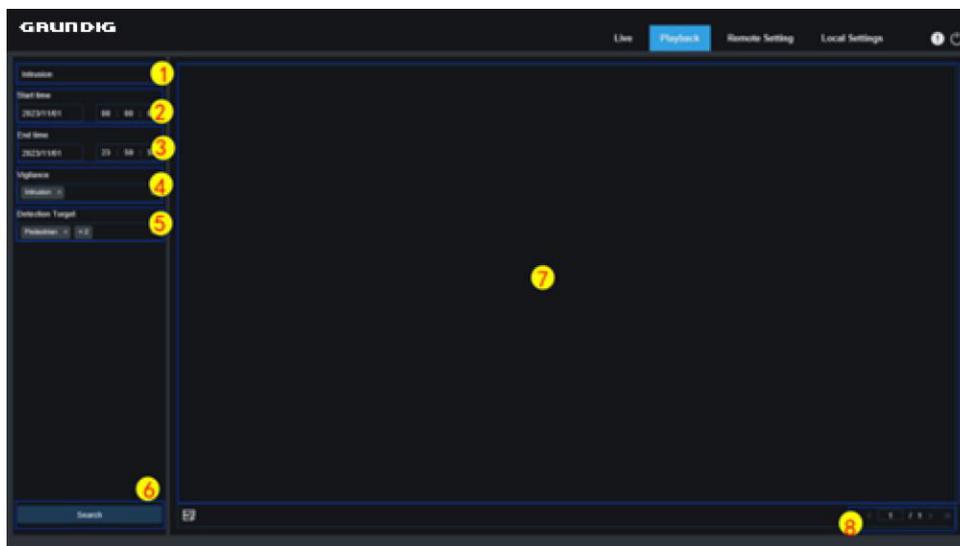


Figure 7.5.2 Intrusion

**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.

### 7.5.3 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.

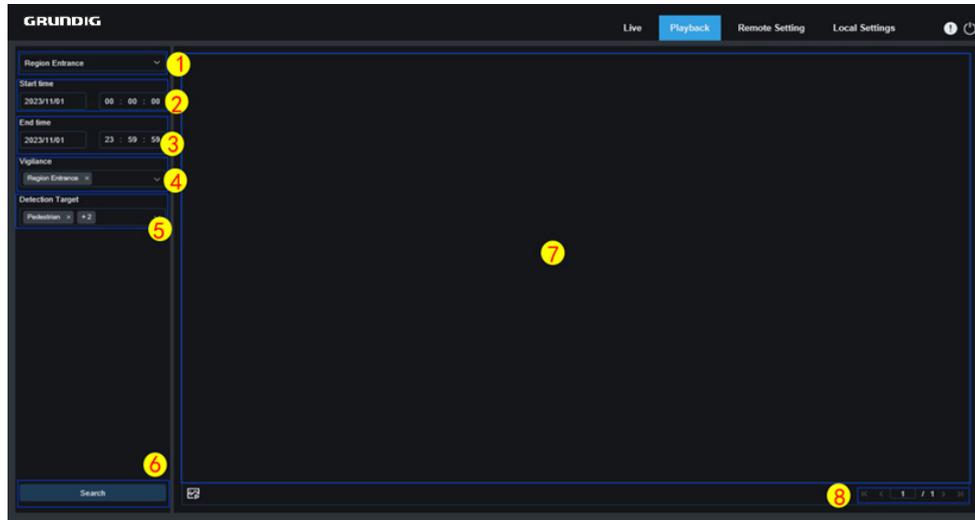


Figure 7.5.3 Region Entrance

- 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.

### 7.5.4 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.

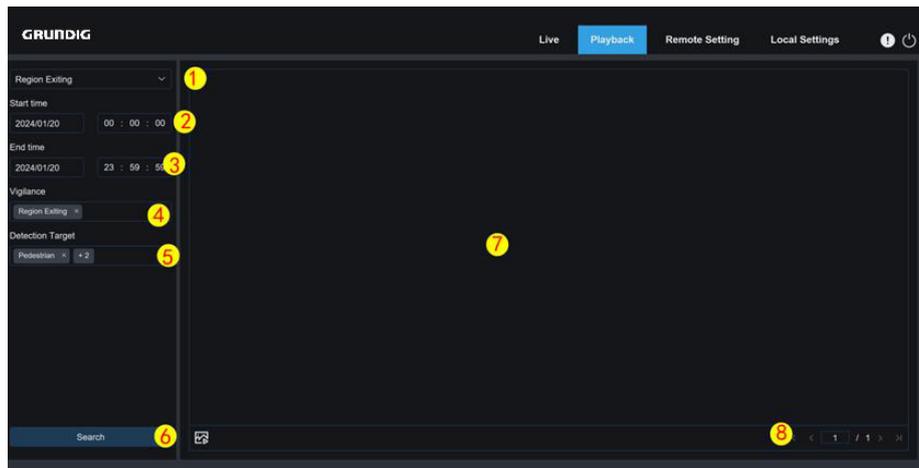


Figure 7.5.4 Region Exiting

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, CC, as well as statistical data and image covering. The view is shown in the figure below.

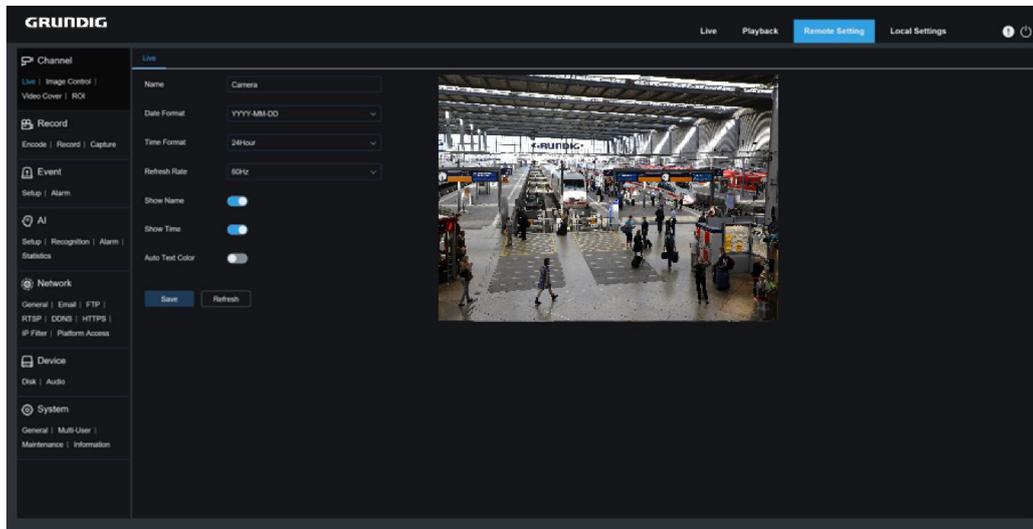


Figure 8.1.1 Live

**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.

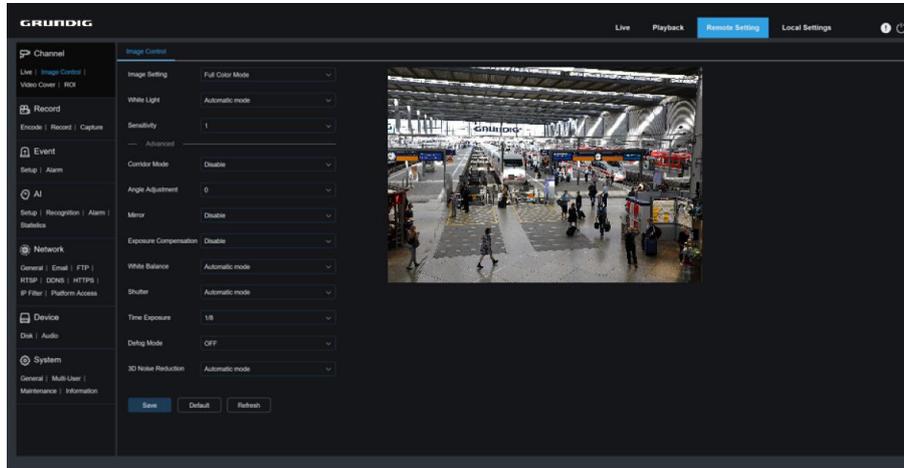


Figure 8.1.2 Image Control

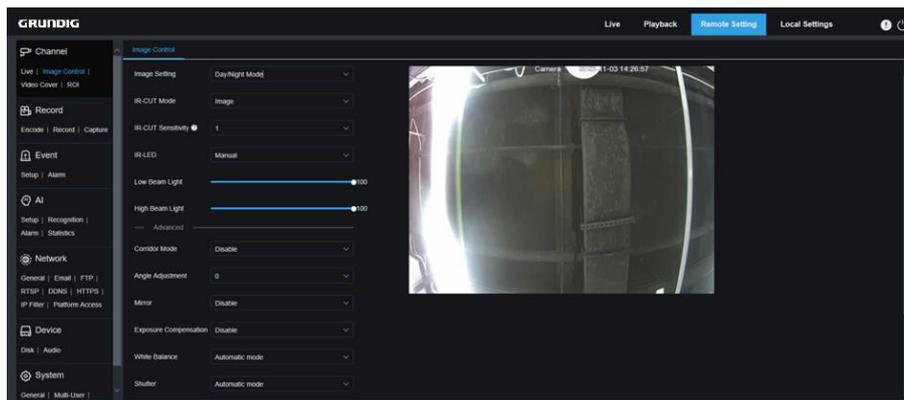


Figure 8.1.3 IR-settings

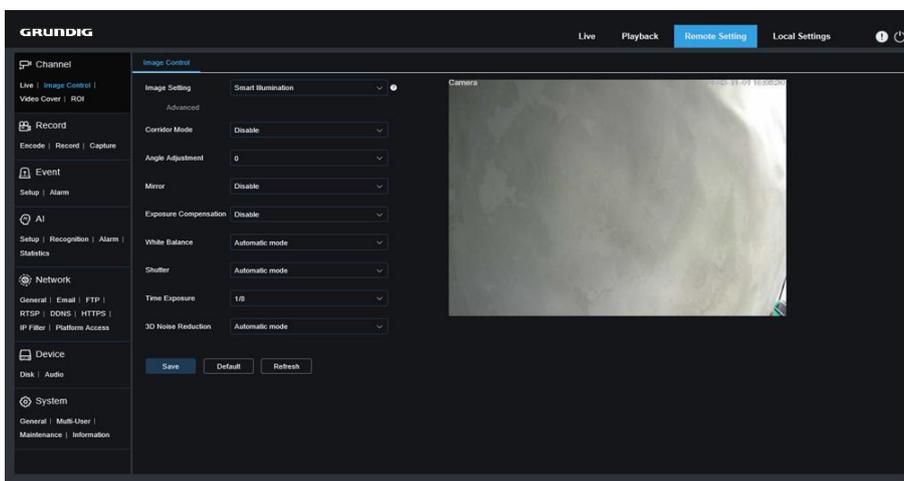


Figure 8.1.4 Image Settings

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**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 black and black 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 to 100, 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 to 100,

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of which 0 indicates that the IR light is off and 100 indicates the highest brightness).

**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.

**DWDR:** Digital 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.

**Save:** Save parameter changes to an image.

**Default:** Restore image parameters to default settings.

**Refresh:** Refresh image parameters.

## 8.3 Video Cover

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 privacy zones of any size and location. The screen is shown in the figure below.

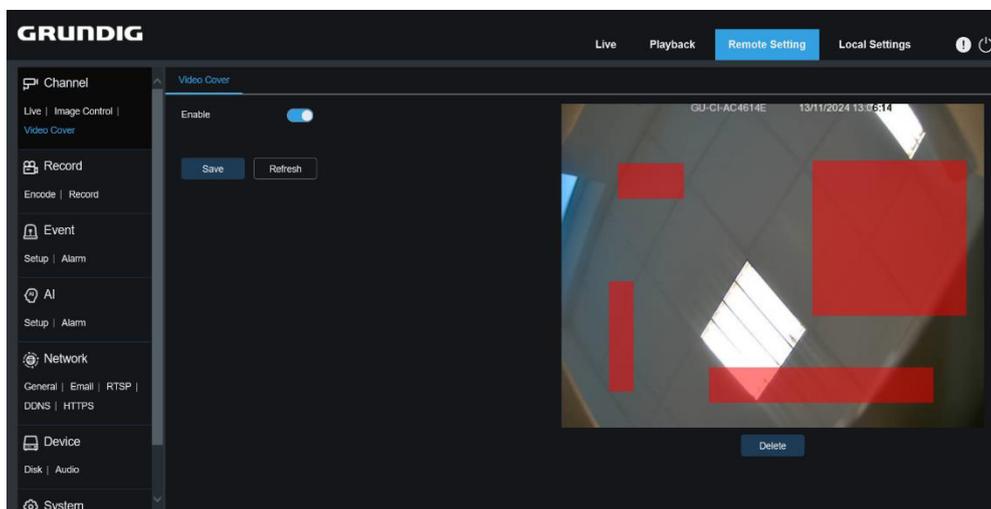


Figure 8.3.1 Video Cover

**Enable:** Enable the video tampering function.

**Tampering Area Setting:** Set the areas to be tampered in the monitoring screen. The tampered blocks are red while setting and will turn to black after they take effect. You can set four tampering blocks.

**Delete:** Delete selected tampering blocks.

## 8.4 Record Parameters

This menu allows to configure preview parameters and recording parameters.

### 8.4.1 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 CMS, and "Mobile Stream" (can be turned off) defines the quality parameters of live views that are remotely accessed and viewed from mobile devices.

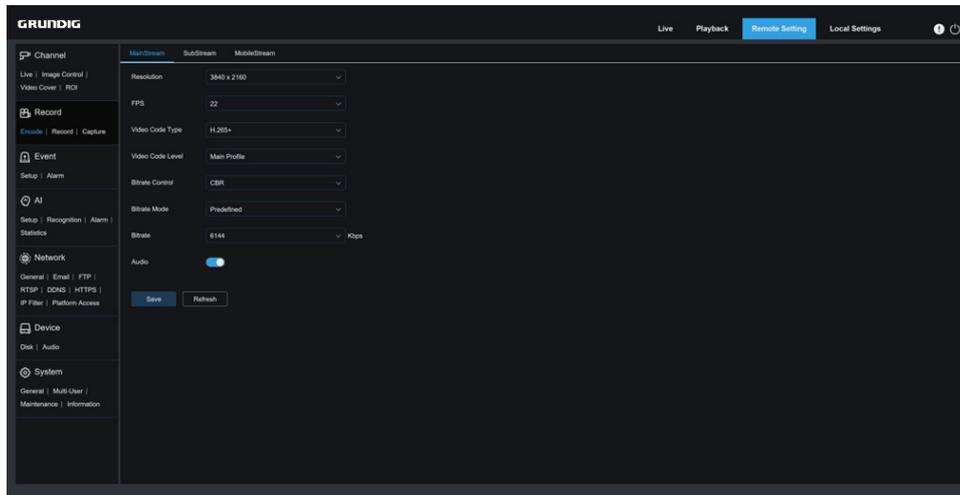


Figure 8.4.1 Stream Settings

**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 and H.265.

**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 such as a plastered wall, 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. This option is only available in the IPC.

**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.

## 8.4.2 Record

### 8.4.2.1 Record Parameters

This menu allows to set recording parameters.

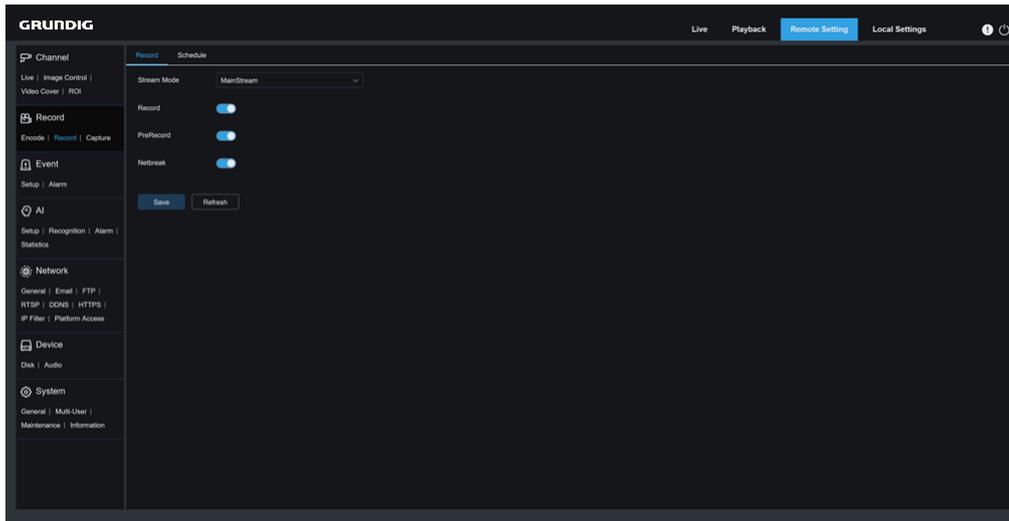


Figure 8.4.2.1 Record Parameter

**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.

### 8.4.2.2 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.

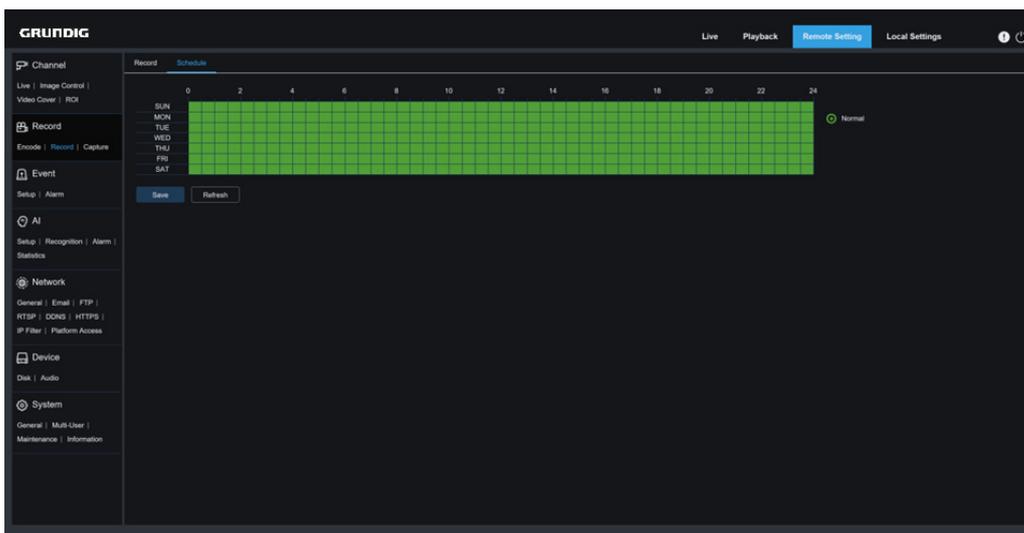


Figure 8.4.2.2 Record Schedule

## 8.4.3 Capture

### 8.4.3.1 Capture Settings

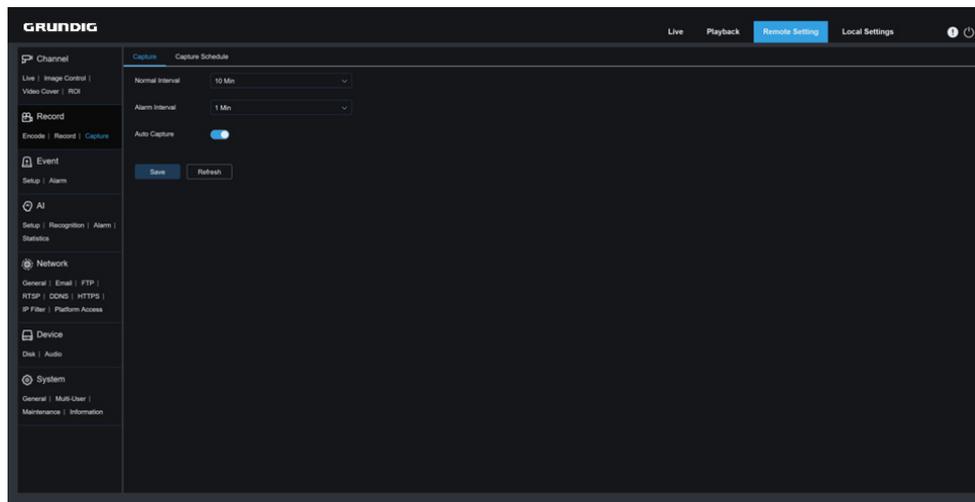


Figure 8.4.3.1 Capture Settings

**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.

### 8.4.3.2 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.

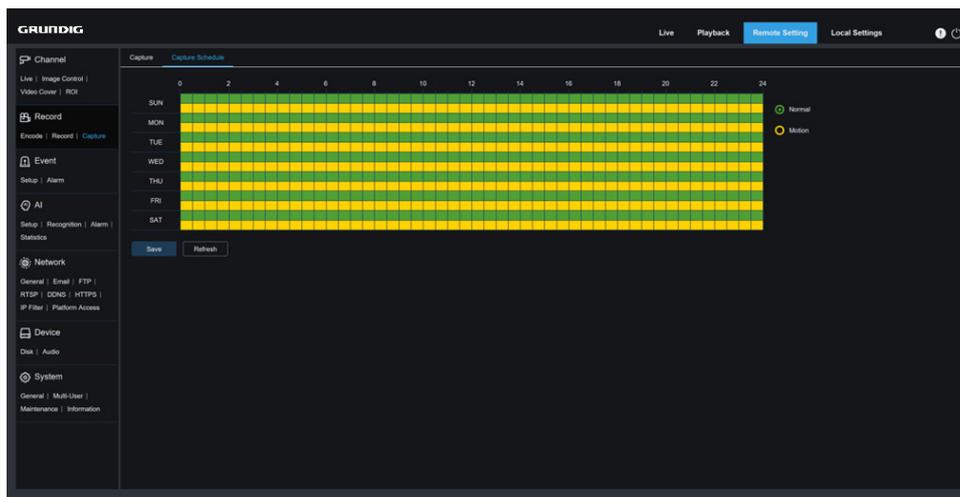


Figure 8.4.3.2 Capture Schedule

**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.

## 8.5 Event Setup

### 8.5.1 Parameter Setup

#### 8.5.1.1 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.

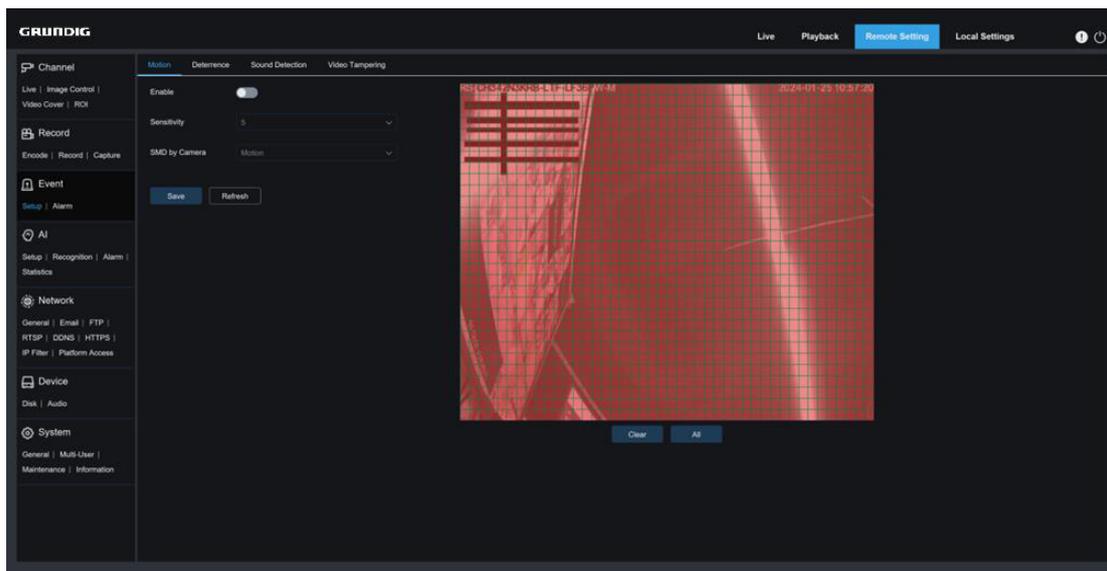


Figure 8.5.1.1 Motion

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.

### 8.5.1.2 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:

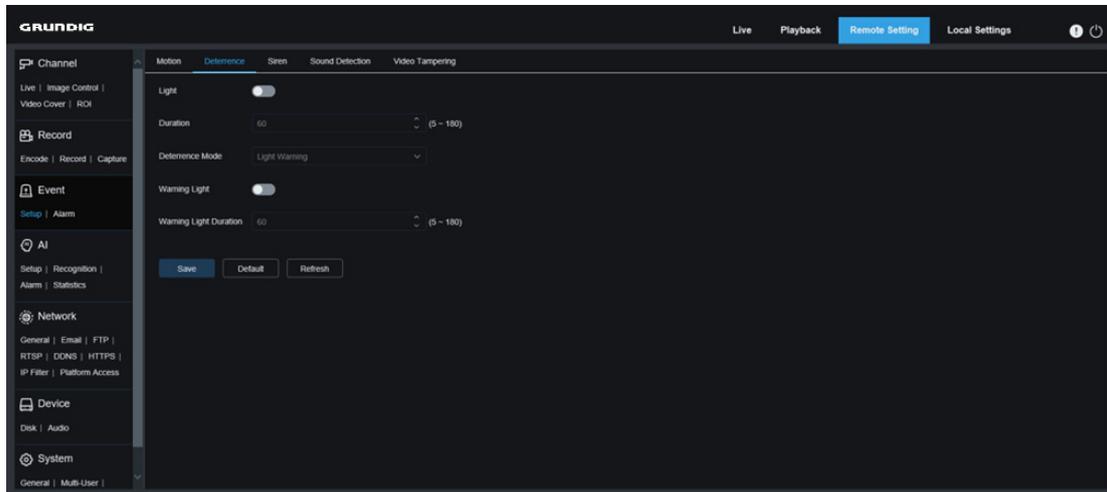


Figure 8.5.2.1 Deterrence

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.

### 8.5.1.3 Sound Detection

Set the response to [8.6.1.2 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.

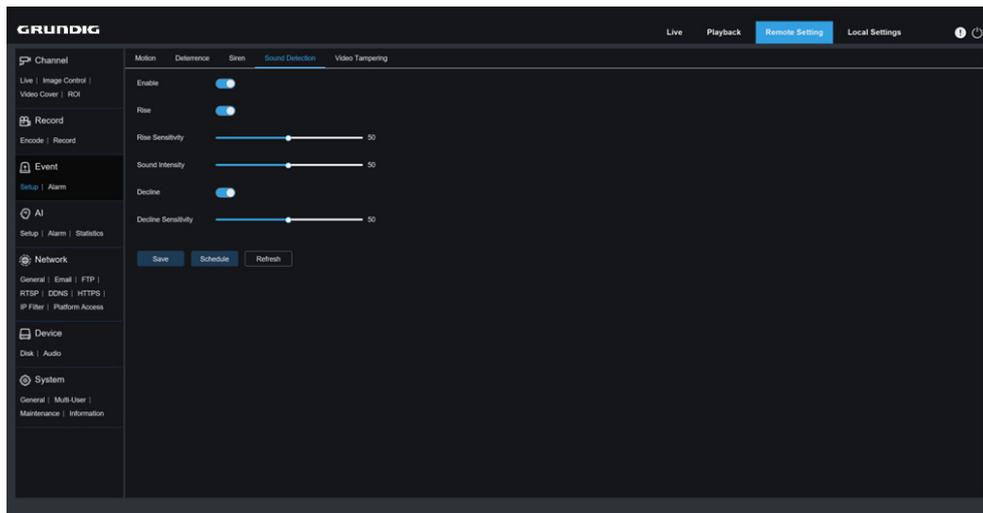


Figure 8.5.1.3.1 Sound Detection

**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:** 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.

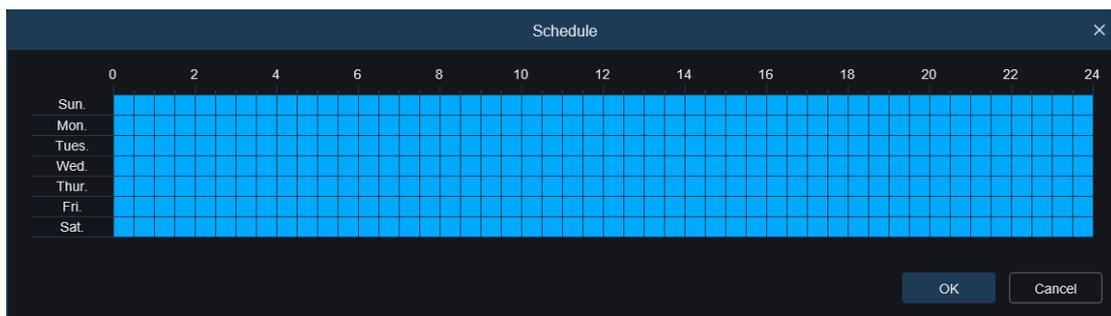


Figure 8.5.1.3.2 Schedule

## 8.6.2 Alarm Setting

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

8.5.1.4 Motion Detection

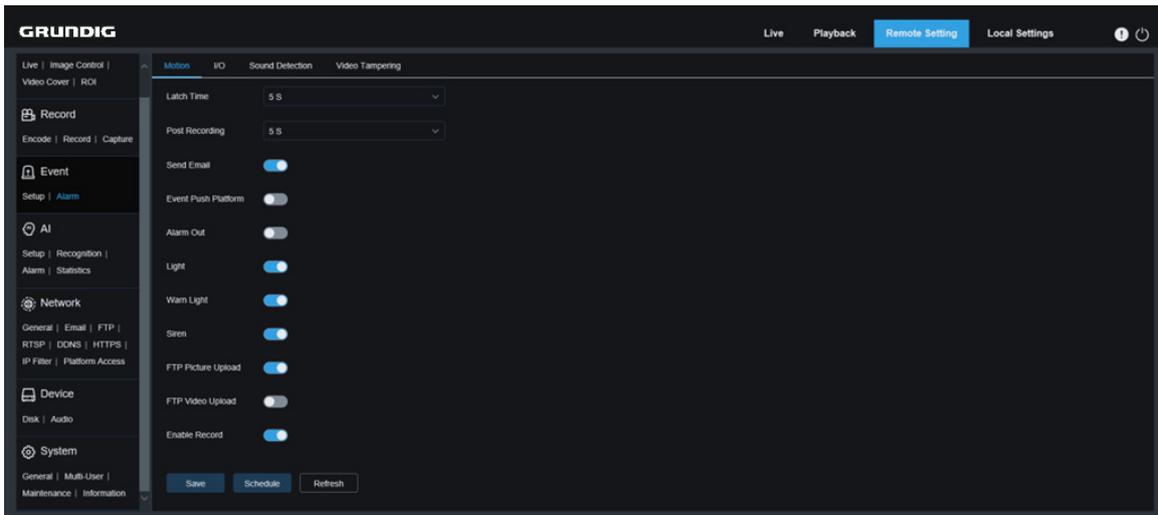


Figure 8.5.1.4.1 Motion

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

**Send Email:** The device automatically send 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.

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

**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. A series of alarm actions are triggered only within the scheduled time.

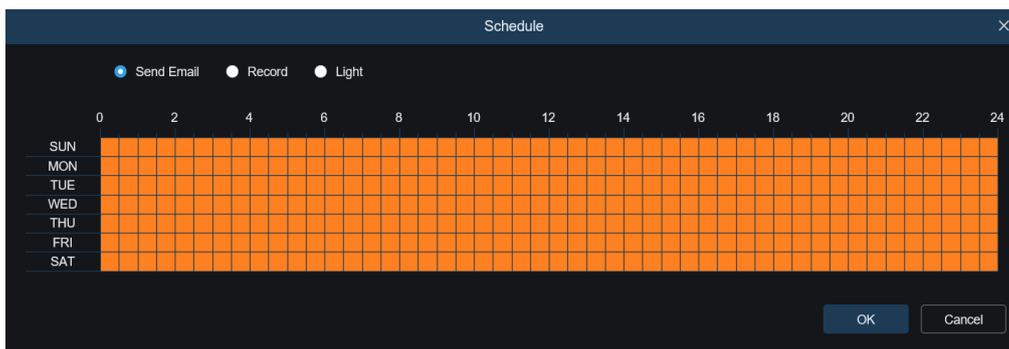


Figure 8.5.1.4.2 Schedule

8.5.1.5 Sound Detection

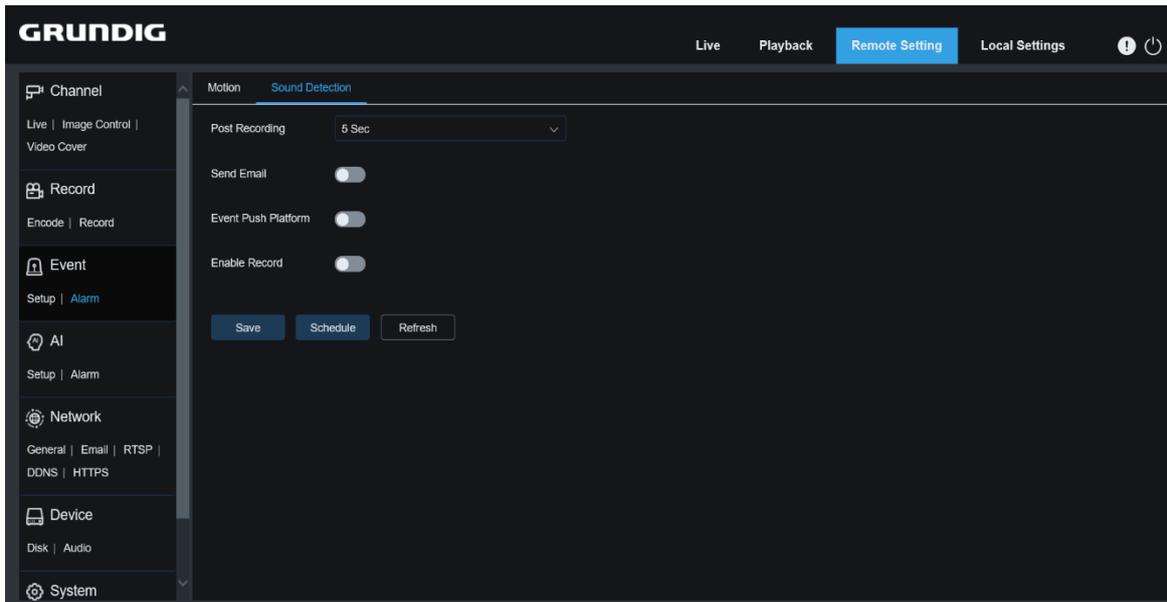


Figure 8.5.1.5.1 Sound Detection

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

**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, this type of information will be pushed to the client when an alarm is triggered.

**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. A series of alarm actions are triggered only within the scheduled time.

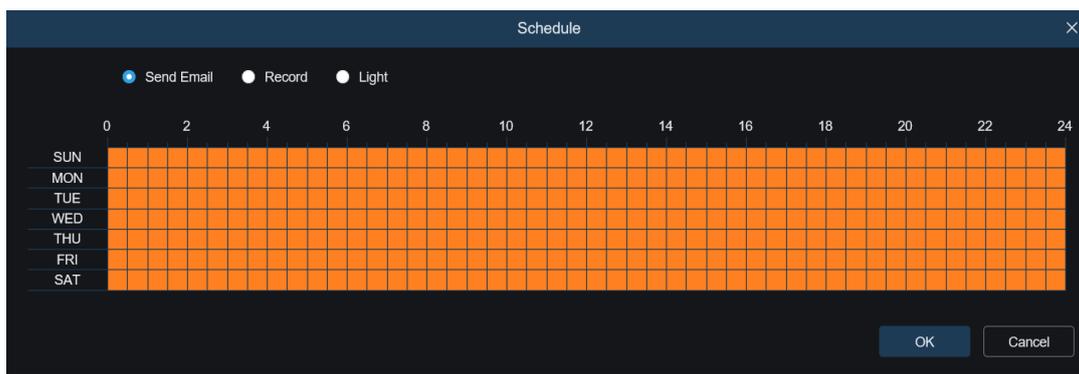


Figure 8.5.1.5.2 Schedule

## 8.6 AI

### 8.6.1 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.

#### 8.6.1.1 Perimeter Intrusion

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

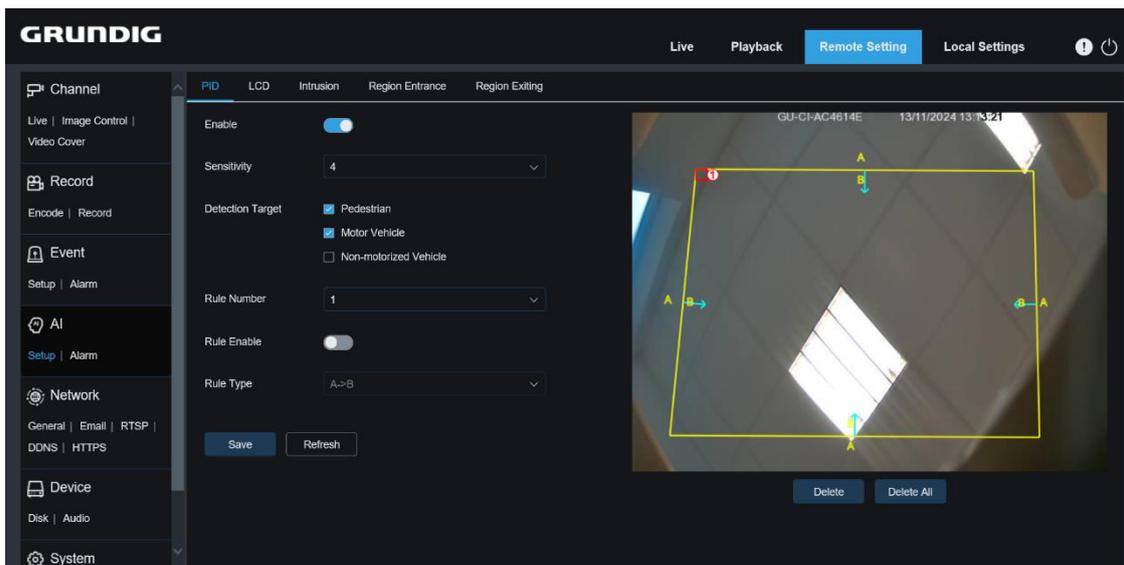


Figure 8.6.1.1 Perimeter Intrusion

**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 rule lines. There are  $A \rightarrow B$ ,  $B \rightarrow A$ , and  $A \leftarrow \rightarrow B$  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.

### 8.6.1.2 Line Crossing

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

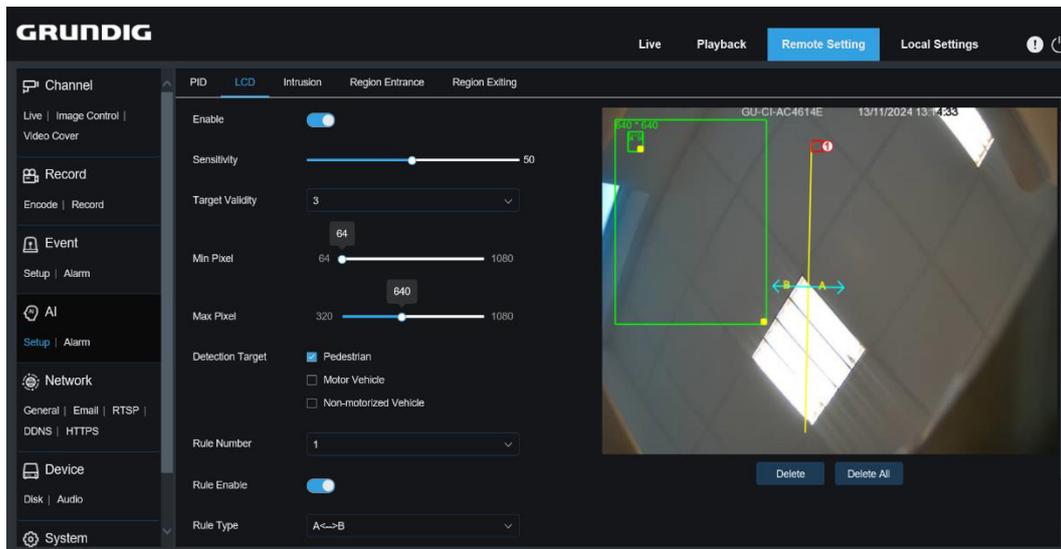


Figure 8.6.1.2 Line Crossing

**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.

### 8.6.1.3 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.

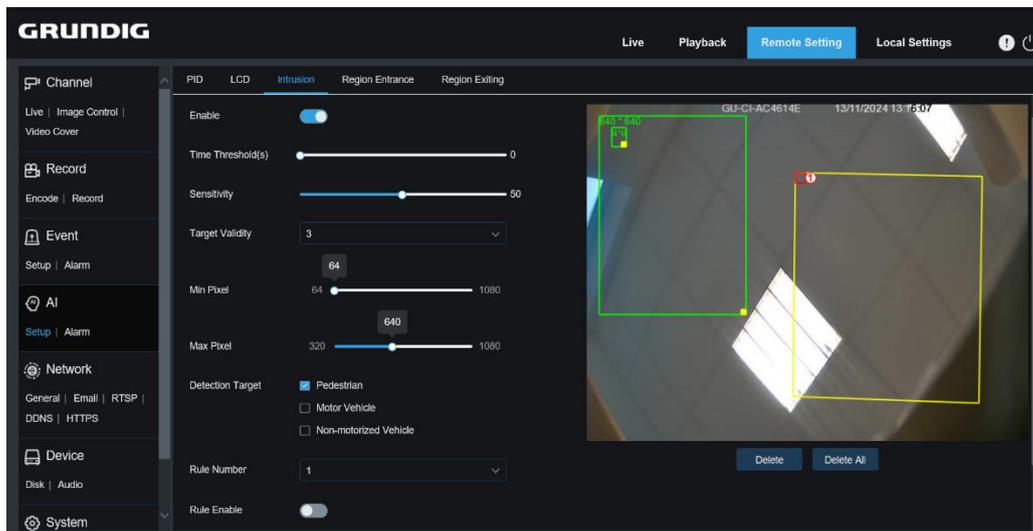


Figure 8.6.1.3 Intrusion

**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

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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.

#### **8.6.1.4 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.

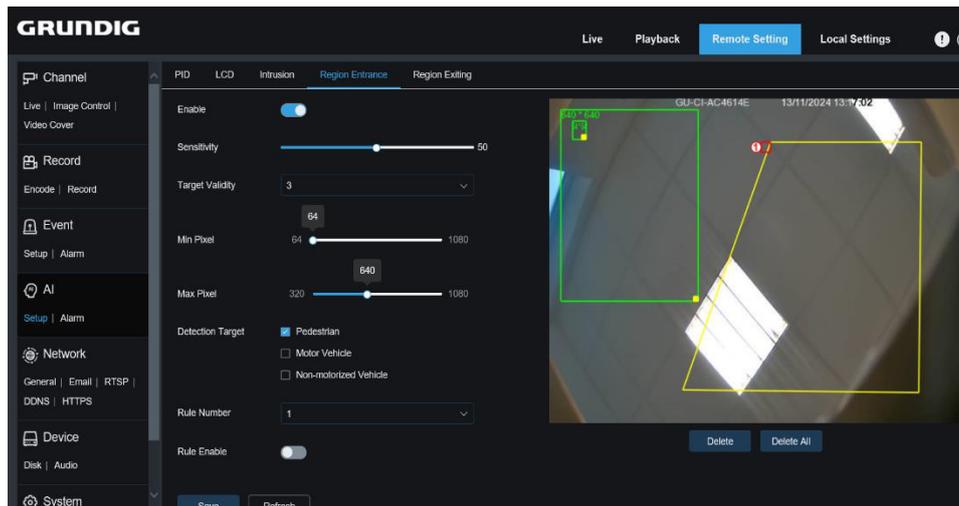


Figure 8.6.1.4 Region Entrance

**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.

### 8.6.1.5 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.

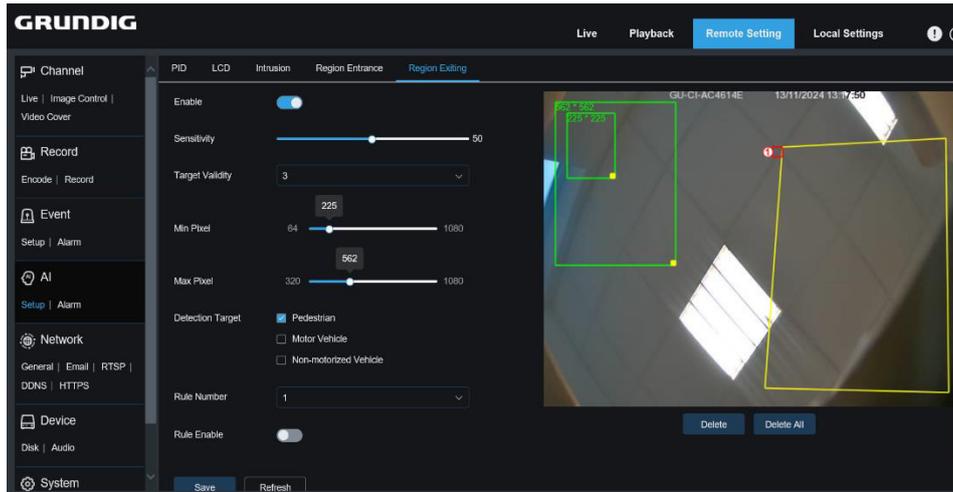


Figure 8.6.1.5 Region Exiting

**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 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.

### 8.6.2 Alarm Setup

Alarm responses can be set to the camera's AI functions:

It includes Perimeter Intrusion, Line Crossing, Region Entrance, Region Exiting. Alarm response will be generated directly if alarm conditions are met as determined by the camera.

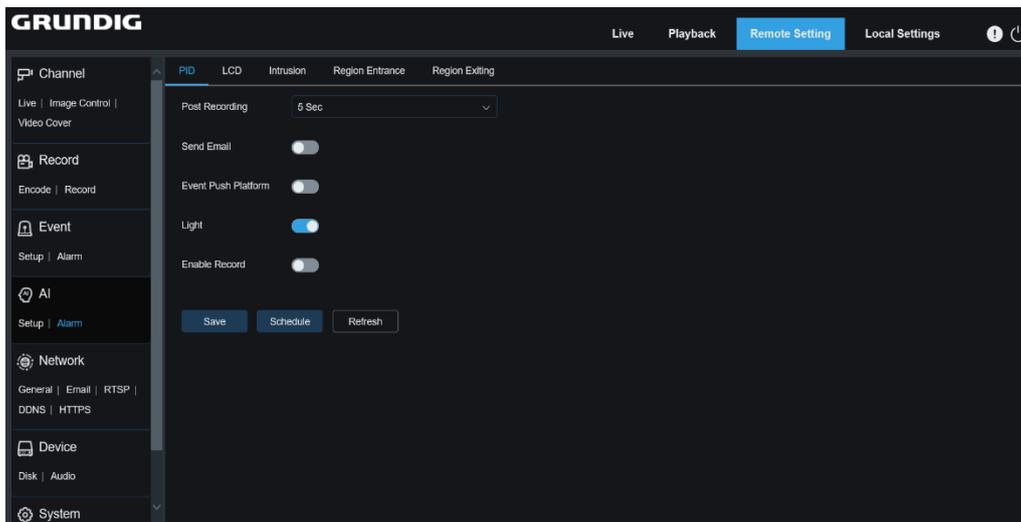


Figure 8.6.2 Alarm Settings

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

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

**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**.

**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 some models support White light).

**Enable Record:** Specifies whether to enable Post Recording.

## 8.7 Network Settings

This menu allows to configure the network parameters. In most cases, the network type is DHCP unless the static IP address is set manually. Basic Settings

### 8.7.1.1 General

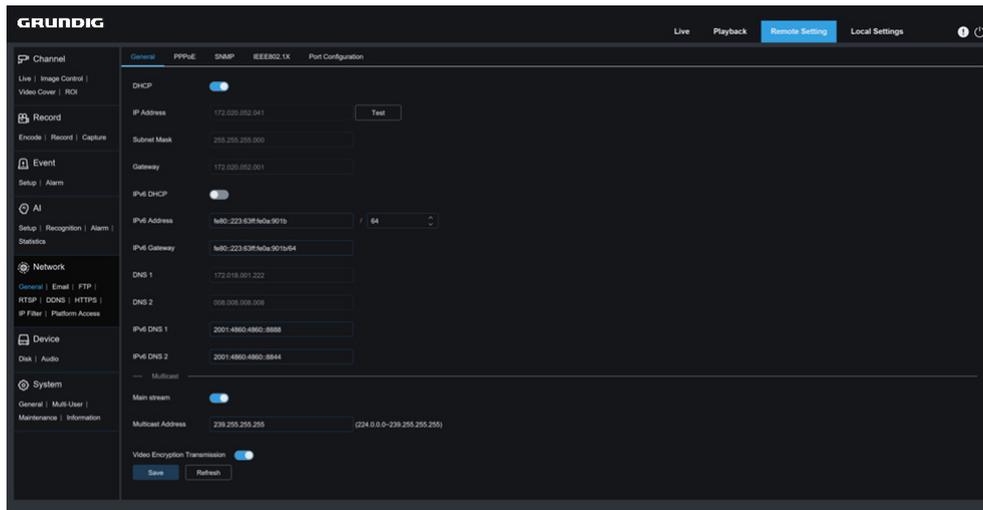


Figure 8.7.1.1 General

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".

**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.

**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  icon:

IP Address

The address is used

Subnet Mask

### 8.7.1.2 Port Configuration

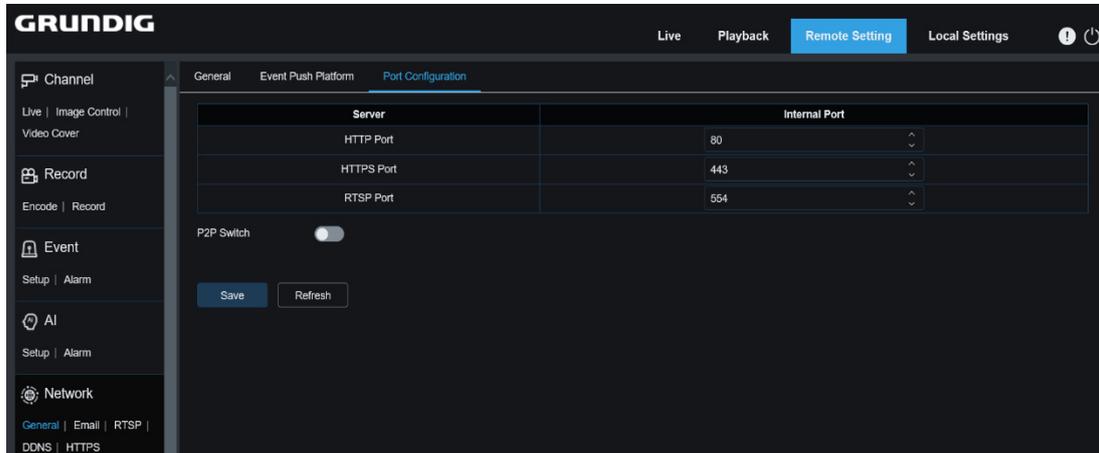


Figure 8.7.1.2 Port

**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.

**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.

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

### 8.7.2 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 and your hard drive is full.

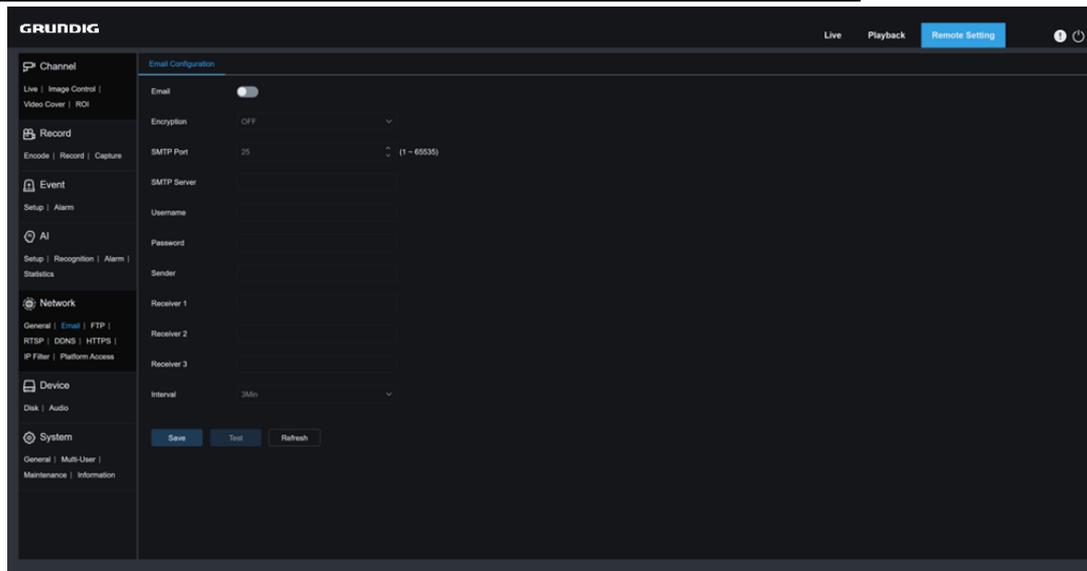


Figure 8.7.2 E-Mail

**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.

### 8.7.3 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.

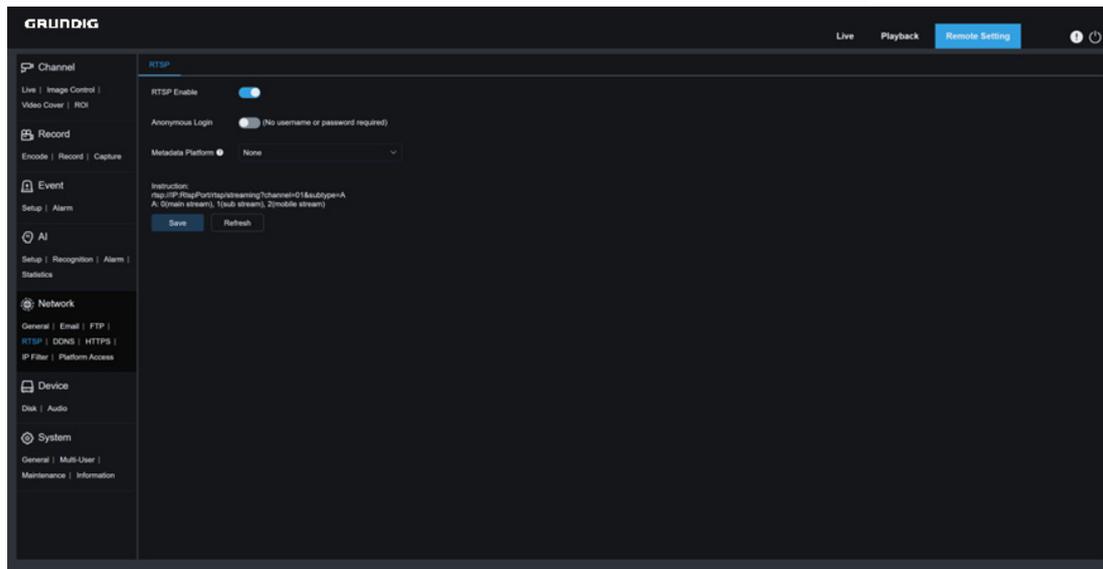


Figure 8.7.3 RTSP

### 8.7.4 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.

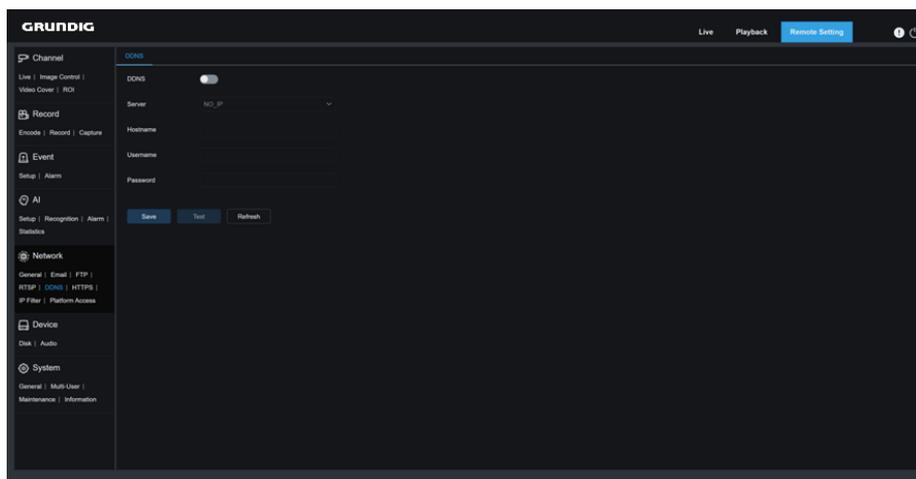


Figure 8.7.4 DDNS

**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.

## 8.7.5 HTTPS

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

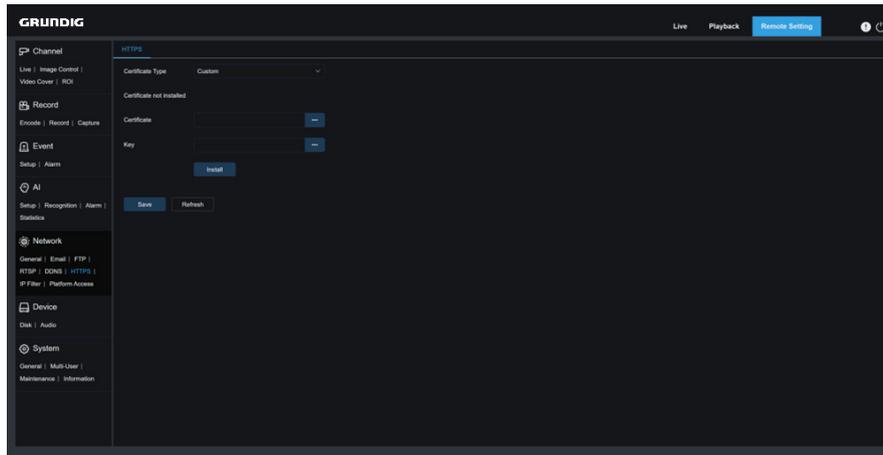


Figure 8.7.5 HTTPS

**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 Device Management

### 8.8.1 Disk Management

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

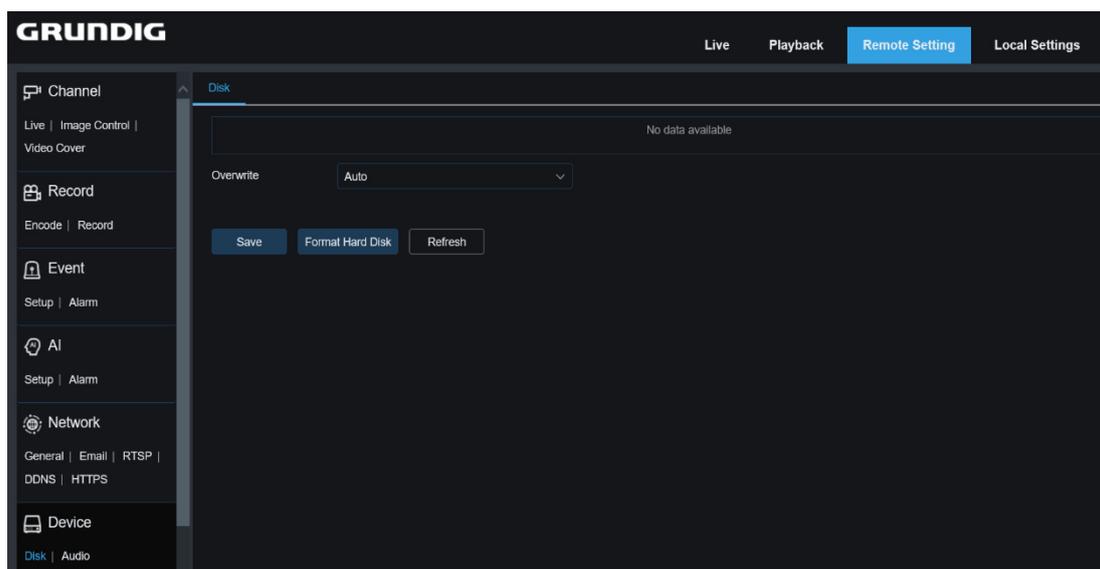


Figure 8.8.1 Disk Management

1. **Format Hard Disk:** Select the TF card to be formatted, and then click Format TF Card. To start formatting, enter your username and password and then click OK.
2. **Overwrite:** This option to overwrite old records in the TF card when the TF card is full. If **Auto** is selected, the oldest data will be automatically overwritten when the TF 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 TF card periodically to ensure that the TF card is not full.

## 8.8.2 Audio Management

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

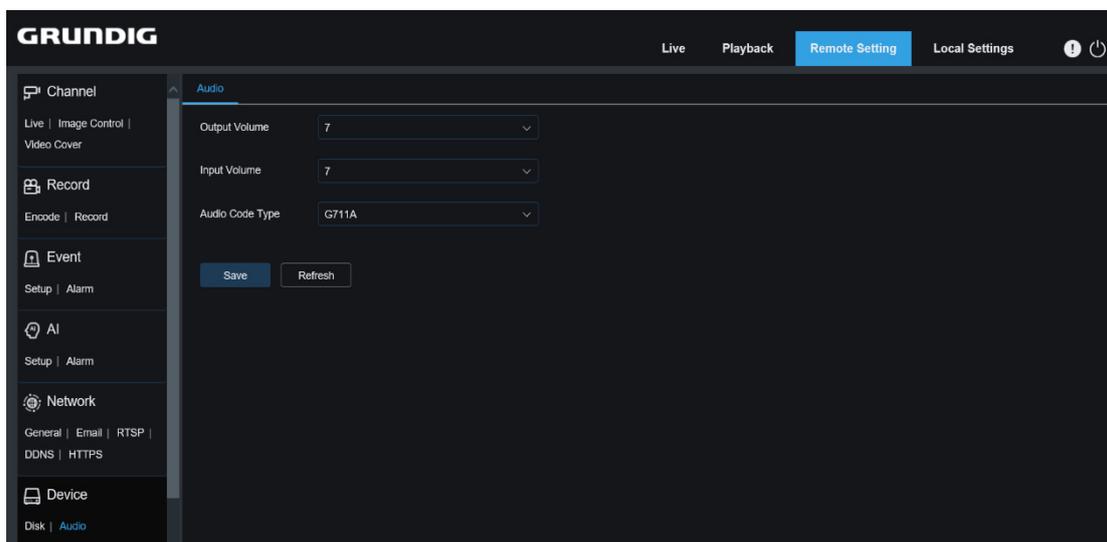


Figure 8.8.2 Audio Management

**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.

## 8.9 System Settings

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

## 8.9.1 General

### 8.9.1.1 Date and Time

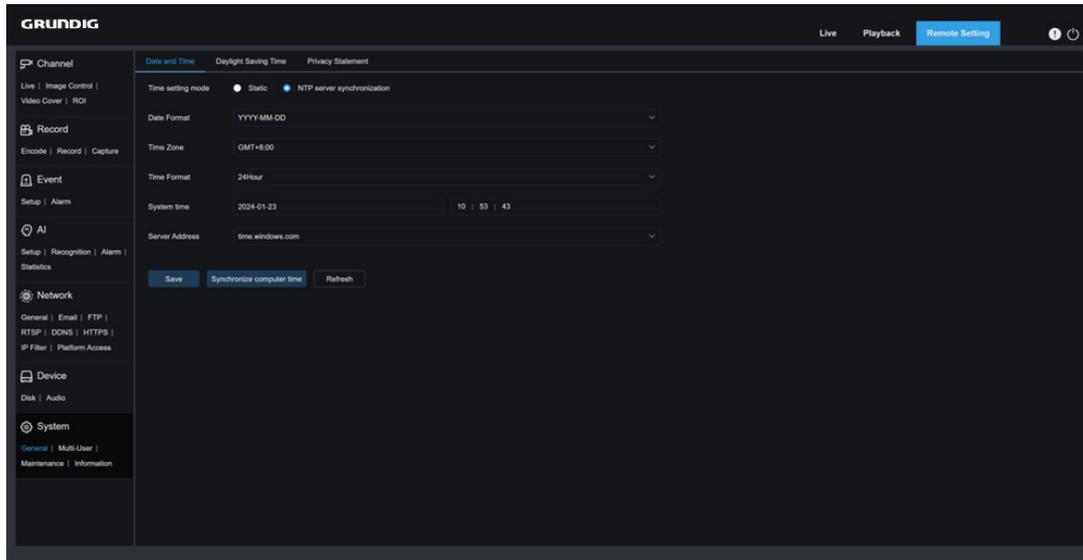


Figure 8.9.1.1.1 Date & Time

**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.

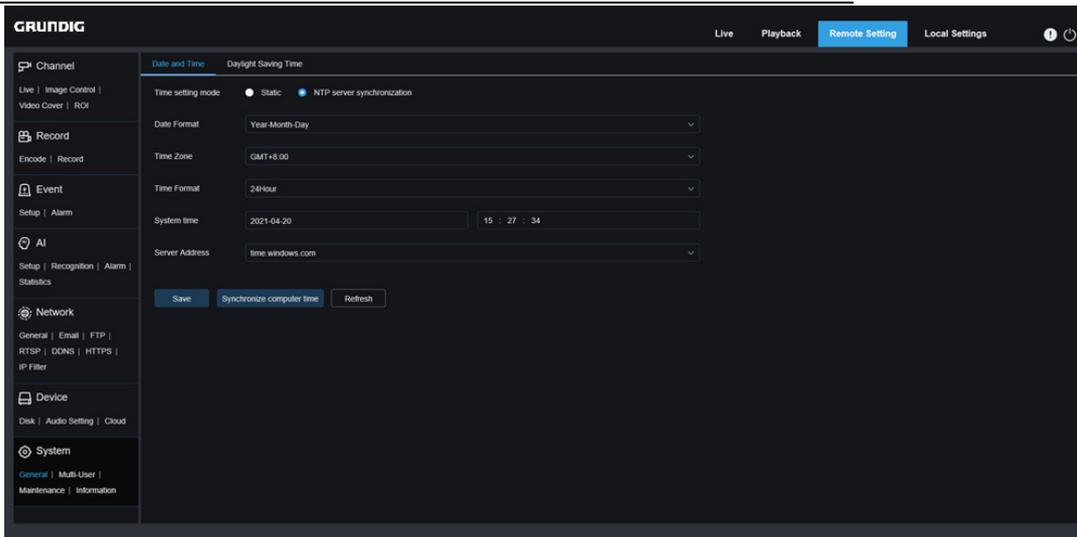


Figure 8.9.1.1.2

### 8.9.1.2 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.

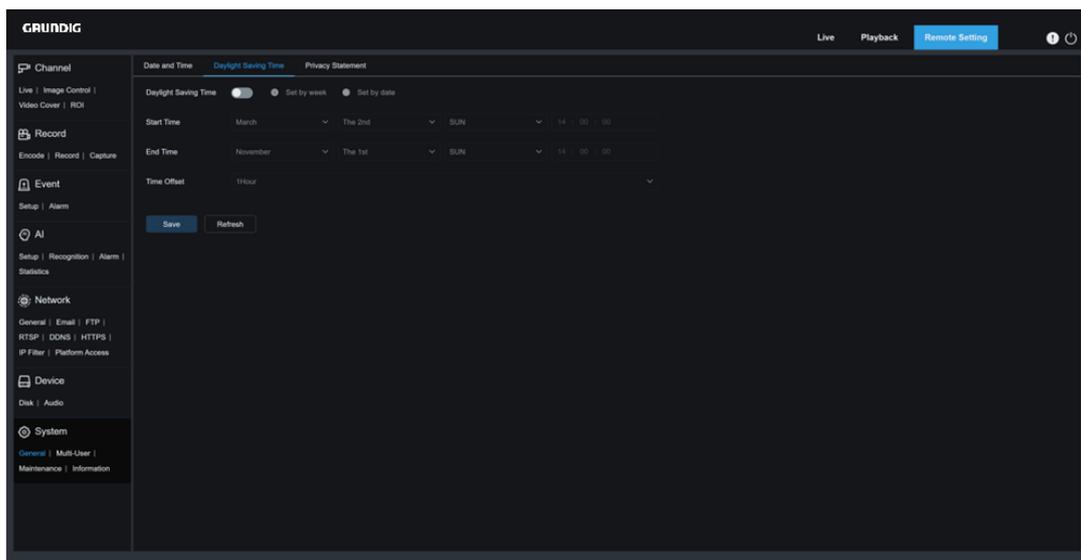


Figure 8.9.1.2 Daylight Saving

**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.

### 8.9.1.3 Privacy Statement

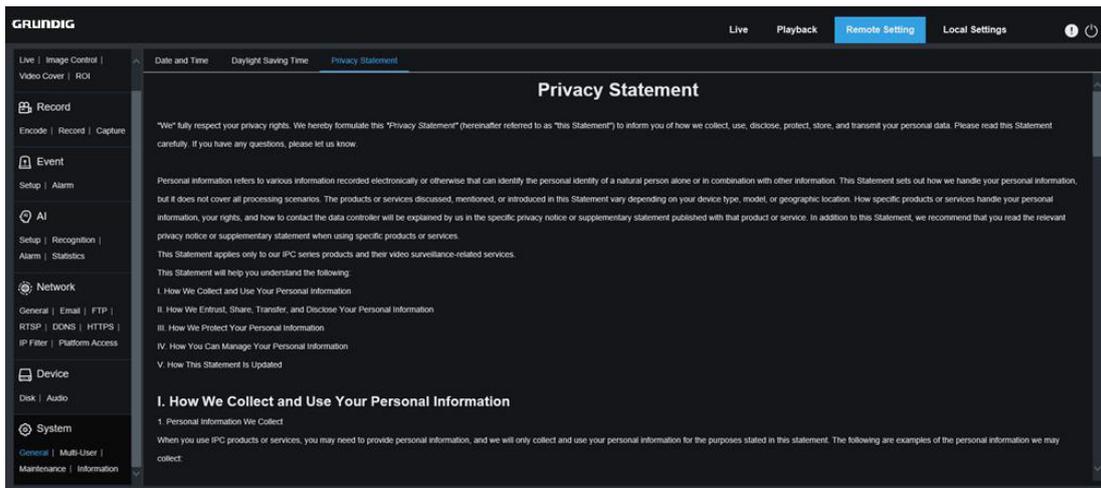


Figure 8.9.1.3 Privacy

## 8.9.2 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.

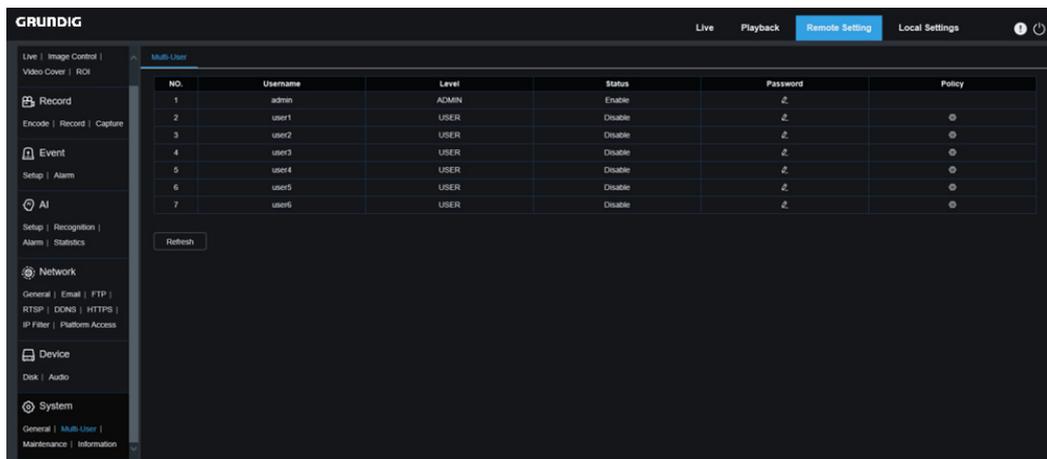


Figure 8.9.2.1 Multi User

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.

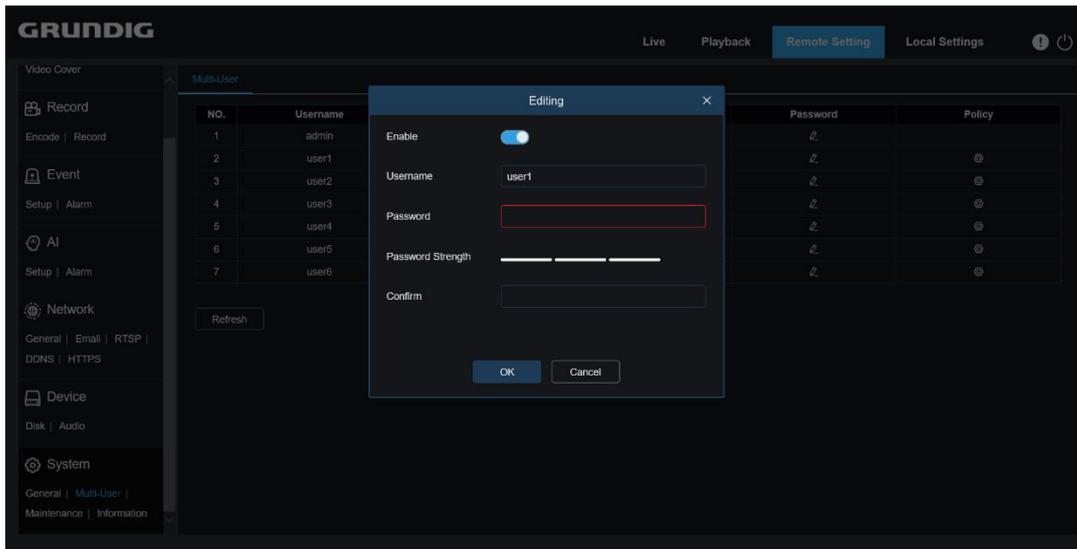


Figure 8.9.2.2 Editing

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.

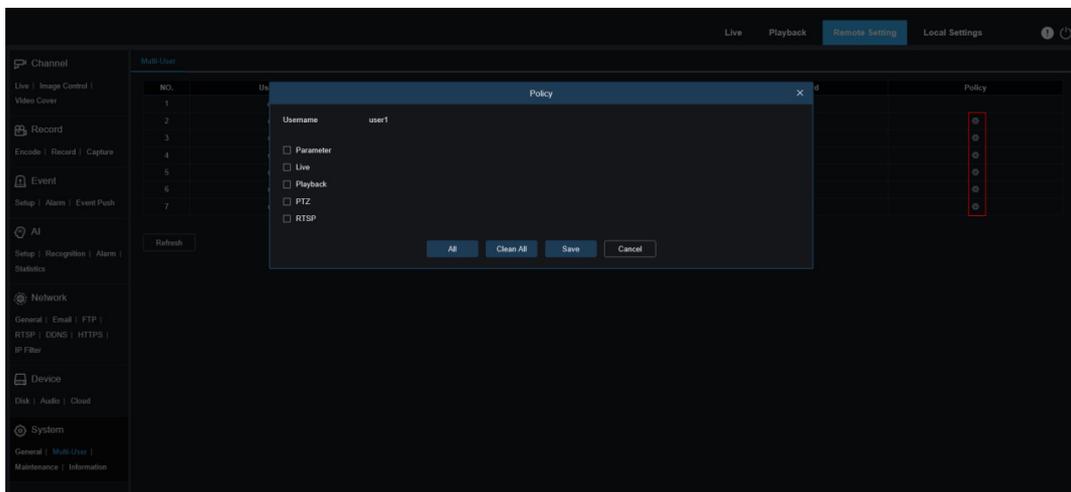


Figure 8.9.2.3 Policy

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

### 8.9.3 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.

### 8.9.3.1 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.

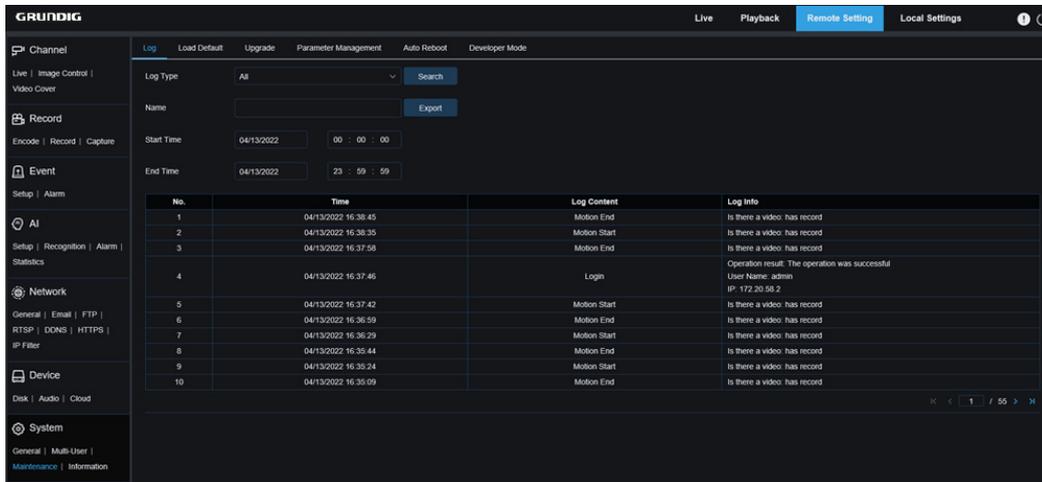


Figure 8.9.3.1 Log Files

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, 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 Line Crossing, end of Line Crossing, 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 **<< / >>** 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.

### 8.9.3.2 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.

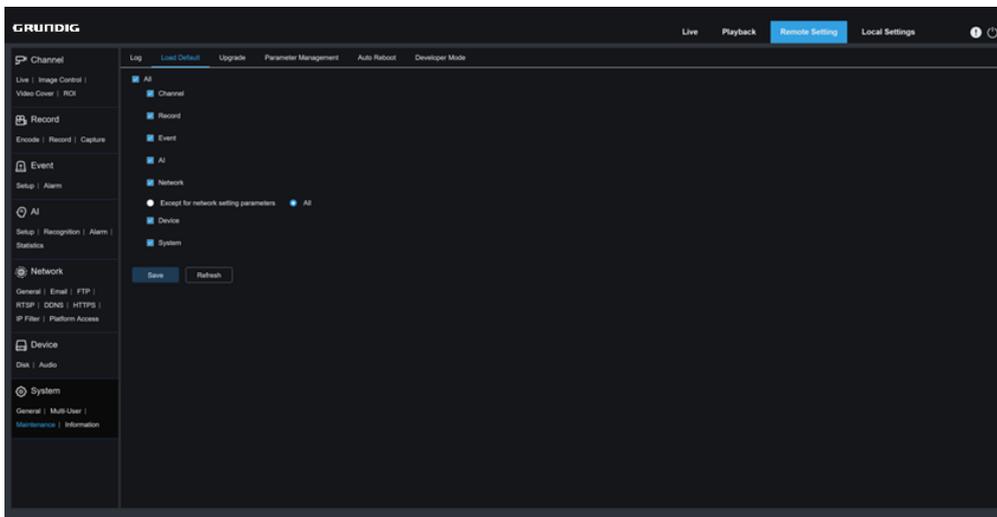


Figure 8.9.3.2 Default

Select the item to restore, or **All** to select all items. Click **"Save"** to load the default settings for the selected items.

### 8.9.3.3 System Upgrade

This menu allows to upgrade firmware.

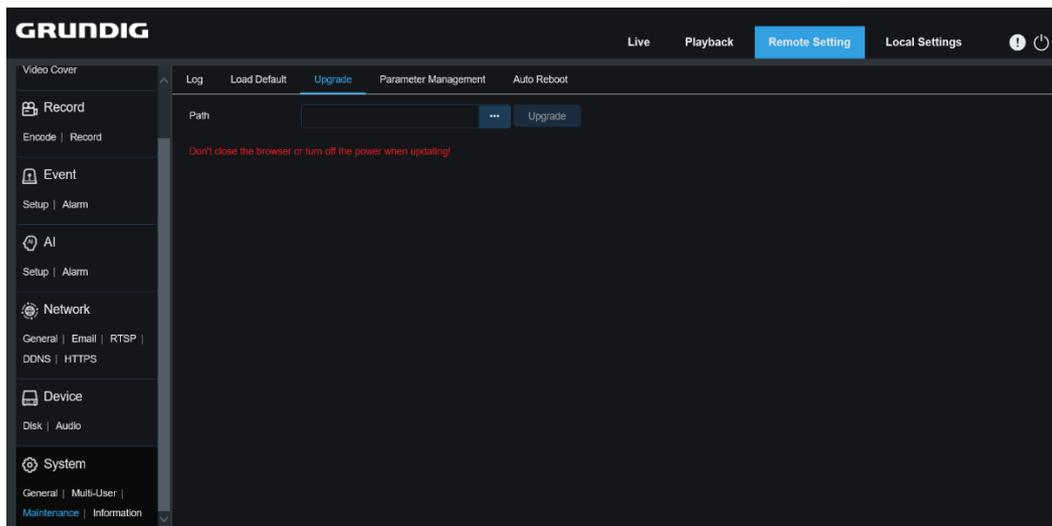


Figure 8.9.3.3 System Upgrade

**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 IE browser while system upgrade is in progress.

### 8.9.3.4 Parameter Management

You can export the configured parameters to your PC or import the exported configuration file from your PC to the device.

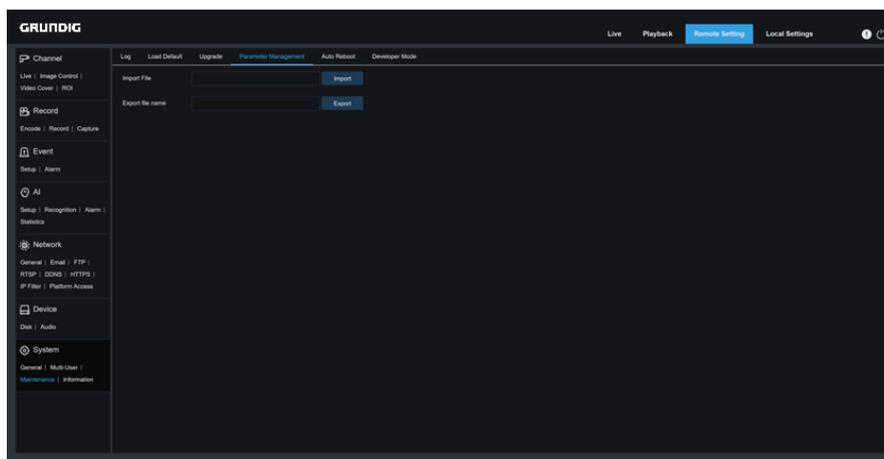


Figure 8.9.3.4 Parameter

**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.

### 8.9.3.5 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.

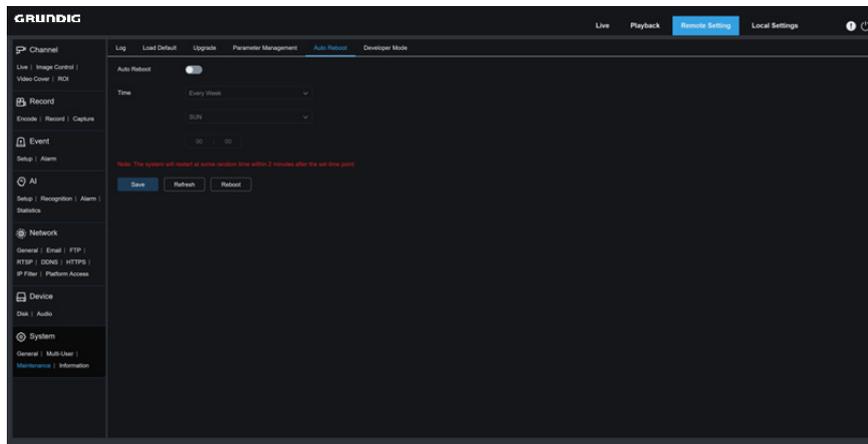


Figure 8.9.3.5 Reboot

**Auto Reboot:** Enable or disable auto reboot feature.

**Time:** Set IPC to reboot by day, week, or month.

### 8.9.4 System Information

This menu allows to view system information, such as device ID, device model, MAC address, firmware version.

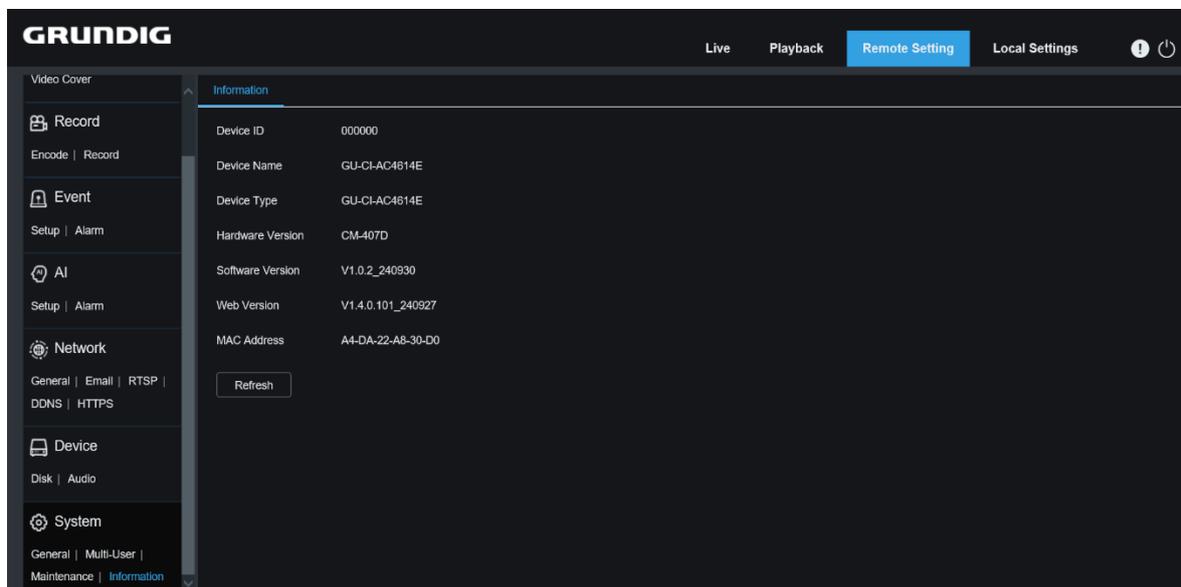


Figure 8.9.4 System Info

## 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.

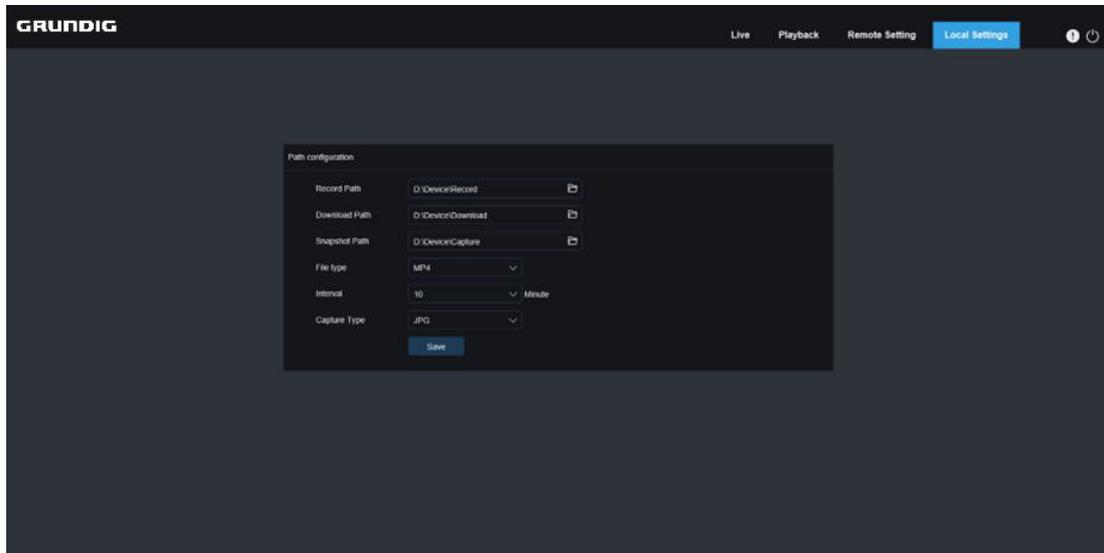


Figure 9.1 Local Settings

