Emergency Phone Terminal

User's Manual

ZHEJIANG DAHUA VISION TECHNOLOGY CO., LTD. V1.0.0

Foreword

General

This manual introduces the installation, functions and operations of the emergency phone terminal (hereinafter referred to as "the device"). Read carefully before using the device, and keep the manual safe for future reference.

Models

DHI-VTA8311AB-4, DHI-VTA8311AB, DHI-VTA8311A-4, DHI-VTA8311A

Safety Instructions

The following signal words might appear in the manual.

Signal Words	Meaning
DANGER	Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
WARNING	Indicates a medium or low potential hazard which, if not avoided, could result in slight or moderate injury.
CAUTION	Indicates a potential risk which, if not avoided, could result in property damage, data loss, lower performance, or unpredictable result.
TIPS	Provides methods to help you solve a problem or save you time.
NOTE	Provides additional information as the emphasis and supplement to the text.

Revision History

Version	Revision Content	Release Time
V1.0.0	First release.	June 2022

Privacy Protection Notice

As the device user or data control panel, you might collect the personal data of others such as their face, fingerprints, and license plate number. You need to be in compliance with your local privacy protection laws and regulations to protect the legitimate rights and interests of other people by implementing measures which include but are not limited: Providing clear and visible identification to inform people of the existence of the surveillance area and provide required contact information.

About the Manual

- The manual is for reference only. Slight differences might be found between the manual and the product.
- We are not liable for losses incurred due to operating the product in ways that are not in compliance with the manual.
- The manual will be updated according to the latest laws and regulations of related jurisdictions.

For detailed information, see the paper user's manual, use our CD-ROM, scan the QR code or visit our official website. The manual is for reference only. Slight differences might be found between the electronic version and the paper version.

- All designs and software are subject to change without prior written notice. Product updates might result in some differences appearing between the actual product and the manual. Please contact customer service for the latest program and supplementary documentation.
- There might be errors in the print or deviations in the description of the functions, operations and technical data. If there is any doubt or dispute, we reserve the right of final explanation.
- Upgrade the reader software or try other mainstream reader software if the manual (in PDF format) cannot be opened.
- All trademarks, registered trademarks and company names in the manual are properties of their respective owners.
- Please visit our website, contact the supplier or customer service if any problems occur while using the device.
- If there is any uncertainty or controversy, we reserve the right of final explanation.

Important Safeguards and Warnings

This section introduces content covering the proper handling of the device, hazard prevention, and prevention of property damage. Read carefully before using the device, and comply with the guidelines when using it.

Transportation Requirements

- Transport the device under allowed humidity and temperature conditions.
- Pack the device with packaging provided by its manufacturer or packaging of the same quality before transporting it.
- Do not place heavy stress on the device, violently vibrate or immerse it in liquid during transportation.

Storage Requirements

- Store the device under allowed humidity and temperature conditions.
- Do not place the device in a damp, dusty or extremely hot or cold site that has strong electromagnetic radiation.
- Do not place heavy stress on the device, violently vibrate or immerse it in liquid during storage.

Operation Requirements

- Make sure that the power supply is correct before use.
- Do not unplug the power cord on the side of the device while the adapter is powered on.
- Operate the device within the rated range of power input and output.
- Transport, use and store the device under allowed humidity and temperature conditions.
- Do not drop or splash liquid onto the device, and make sure that there is no object filled with liquid on the device to prevent liquid from flowing into it.
- Do not disassemble the device.

Installation Requirements

- Do not connect the power adapter to the device while the adapter is powered on.
- Strictly comply with the local electric safety code and standards. Make sure the ambient voltage is stable and meets the power supply requirements of the device.
- Do not connect the device to two or more kinds of power supplies, to avoid damage to the device.

- Personnel working at heights must take all necessary measures to ensure personal safety including wearing a helmet and safety belts.

- Do not place the device in a place exposed to sunlight or near heat sources.
- Keep the device away from dampness, dust, and soot.
- The power supply must conform to the requirements of ES1 in IEC 62368-1 standard and be no higher than PS2. Please note that the power supply requirements are subject to the device label.
- The device is a class I electrical appliance. Make sure that the power supply of the device is connected to a power socket with protective earthing.
- Operating temperature: –30 °C to +65 °C (–22 °F to +149 °F).
- When installing the device, make sure that the power plug and appliance coupler can be easily reached to cut off power.
- Prevent liquid from dripping or splashing on the device. Do not put any objects filled with liquid, such as a vase, on top of the device.

Maintenance Requirements

WARNING

Power off the device before maintenance.

Table of Contents

1 Overview

1.1 Introduction

Specially built for emergencies, the VTA8 Series Emergency Phone Terminal is an emergency device that contacts the alarm receiving center by just the press of a button. It has a 2-MP HD camera, high-sensitivity microphone, dual network ports and an optional 4G module integrated into its design. Highly intuitive, it features functions such as two-way audio and voice broadcast, and for select models, the device can remotely open its own compartments.

Convenient and easy to use, the device has a built-in PSTN module that connects to the telephone line and links to the alarm receiving center, allowing you to make calls directly from the device. It is also compatible with external speed domes, bullet cameras and LED displays, and is applicable for use in schools, public squares, transit stations, scenic areas, hospitals, and more.

1.2 Functions

The device can be connected to the ICC platform, and configured on the webpage.

- Supports one-press alarm.
- The platform can make videos, take snapshots and monitor the alarm terminal.
- The platform can broadcast to multiple alarm terminals simultaneously.
- Swipe card.
- Extend with IPC, speed dome and snapshot camera.
- Dot matrix display can be connected to show information.
- The 10-inch built-in LCD display can play advertisements and provide guidance information (only applicable on select models).
- Remote unlock (only applicable on select models).

2 Unpack and Check

When you receive the device, check the items in your package against the following checking list. If any of the items are missing or damaged, contact the local retailer or after-sales service immediately.

Table 2-1 Unpack and check

No.	Item		Content
1	Whole package	Appearance	No obvious damage.
		Package	Whether there are signs of accidental impacts.
		Accessory	Whether accessories are complete.
2	Casing	Appearance	No obvious damage.
		Data cables, power cables, fan cables, and main board	No loose connections. Contact after-sales service immediately if any of the cables or lines are loose.
3	Quick start guide		—

3 Structure

3.1 Mainboard Ports

Figure 3-1 Mainboard ports

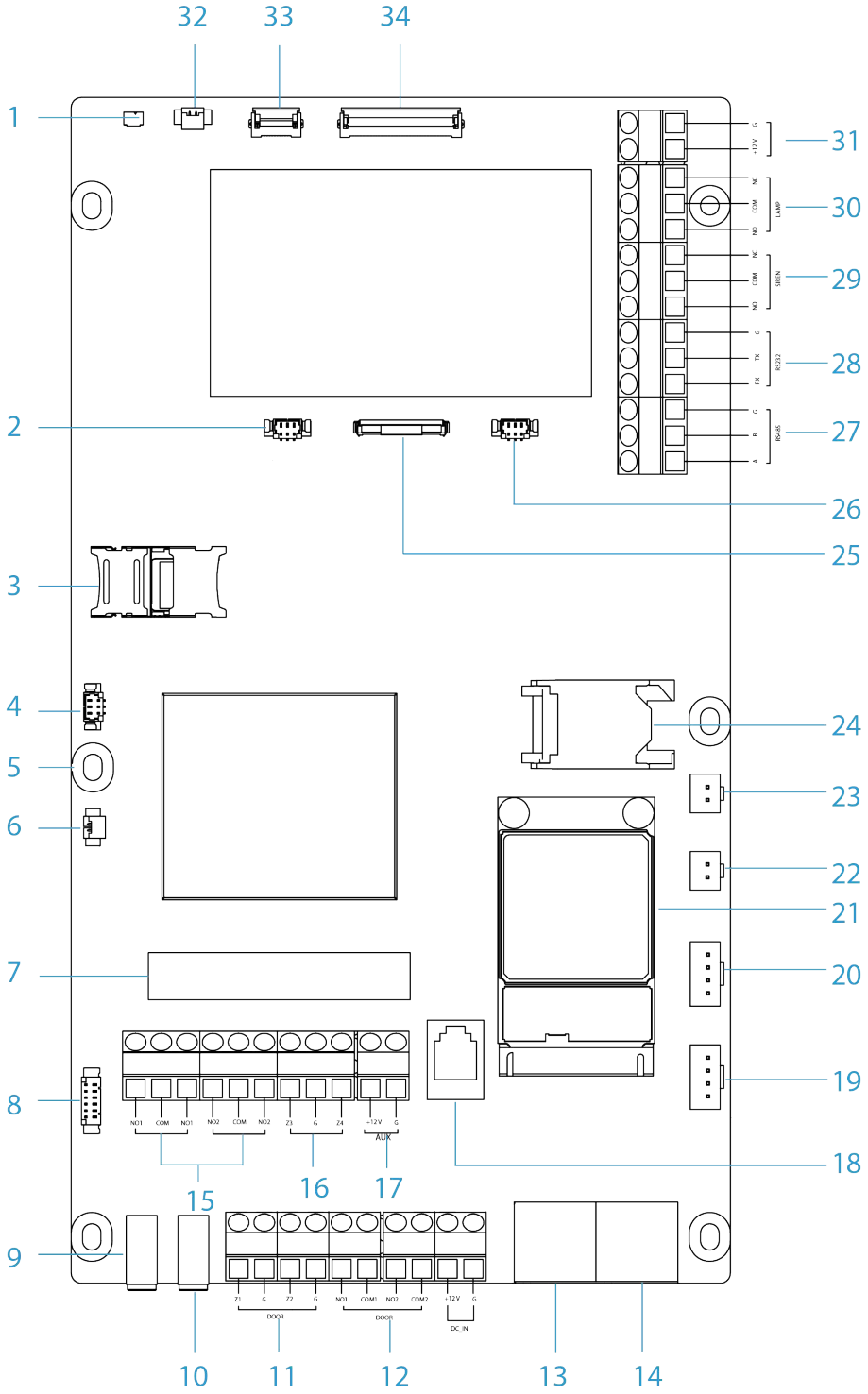


Table 3-1 Mainboard ports

No.	Name	No.	Name	No.	Name
1	LCD temperature port	13	NIC2	25	Sensor port
2	Illuminator module	14	NIC1	26	Illuminator module
3	SD card slot	15	Alarm output	27	RS-485
4	LCD heater module	16	Alarm input	28	RS-232
5	Heater control module	17	Auxiliary power output port	29	Siren port
6	MIC port	18	Telephone jack	30	Alarm light port
7	PSTN module	19	Alarm button 2	31	Alarm light/siren power port
8	Card swiping port	20	Alarm button 1	32	LCD module
9	Speaker output	21	4G module	33	Touchscreen port
10	MIC-in port	22	Speaker 1	34	LCD display port
11	Tamper port	23	Speaker 2	—	—
12	Lock control port	24	SIM card slot	—	—

Alarm button 2 is currently not available.

3.2 Front Panel

Figure 3-2 Front panel

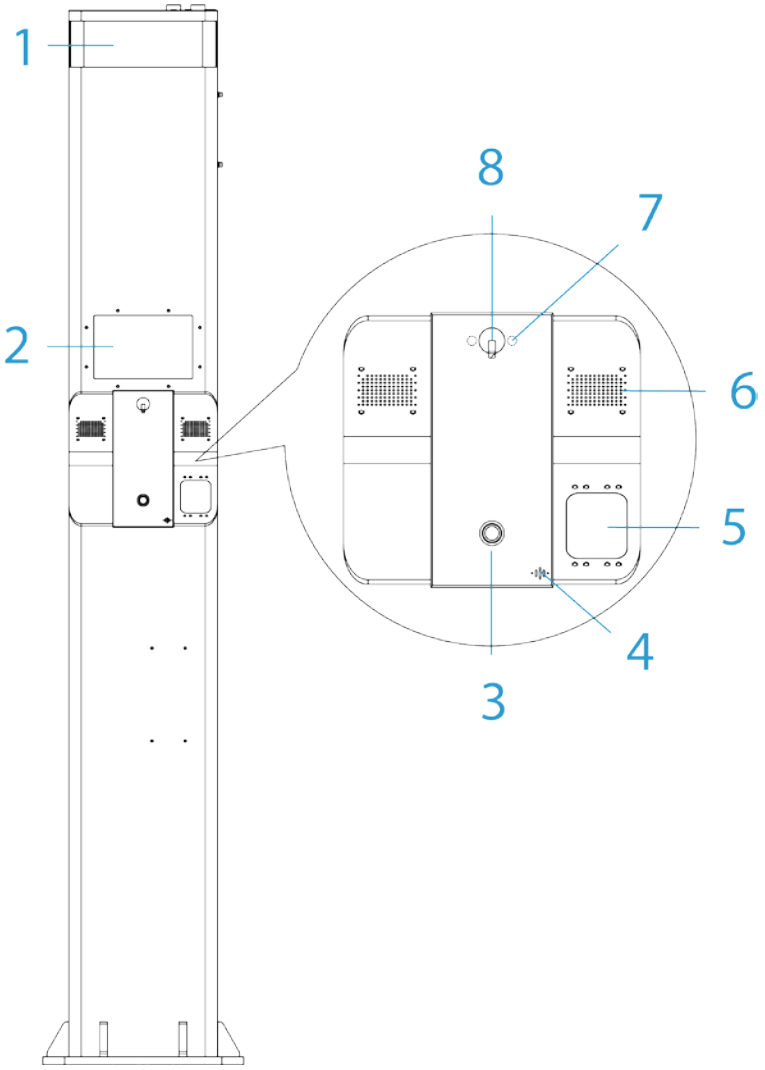


Table 3-2 Front panel description

No.	Name	Description
1	Alarm light	Indicates an alarm was triggered. • Normal: Solid on. • Being called: Flashes first and then returns to the normal status.
2	LCD display screen	Plays images or videos, and shows call status.
3	Alarm button	Press the button to call the management center or the ICC platform in an emergency.
4	Microphone	Audio input.
5	Card swiping area	Supports IC card recognition.
6	Speaker	Audio output.
7	Illuminator	Provides IR light for dark environments.
8	Camera	Captures visual images in front of the alarm terminal.

3.3 Rear Panel

There are 2 types of the device.

- Basic type: Designed with a mechanical lock.
- Electronic type: Designed with an electronic key.

Figure 3-3 Rear panel (basic)

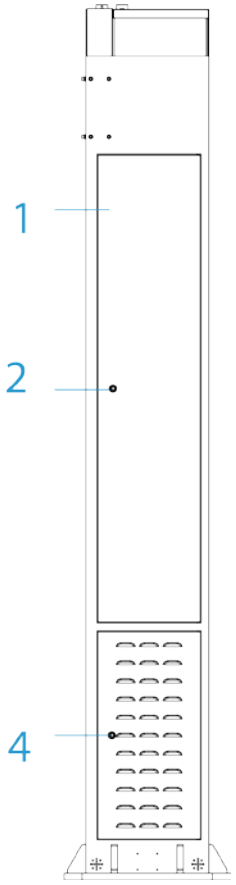


Figure 3-4 Rear panel (electronic)

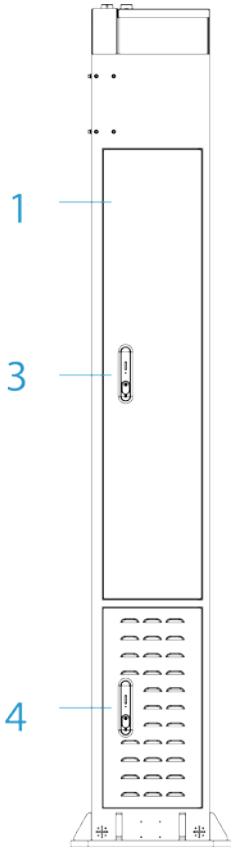
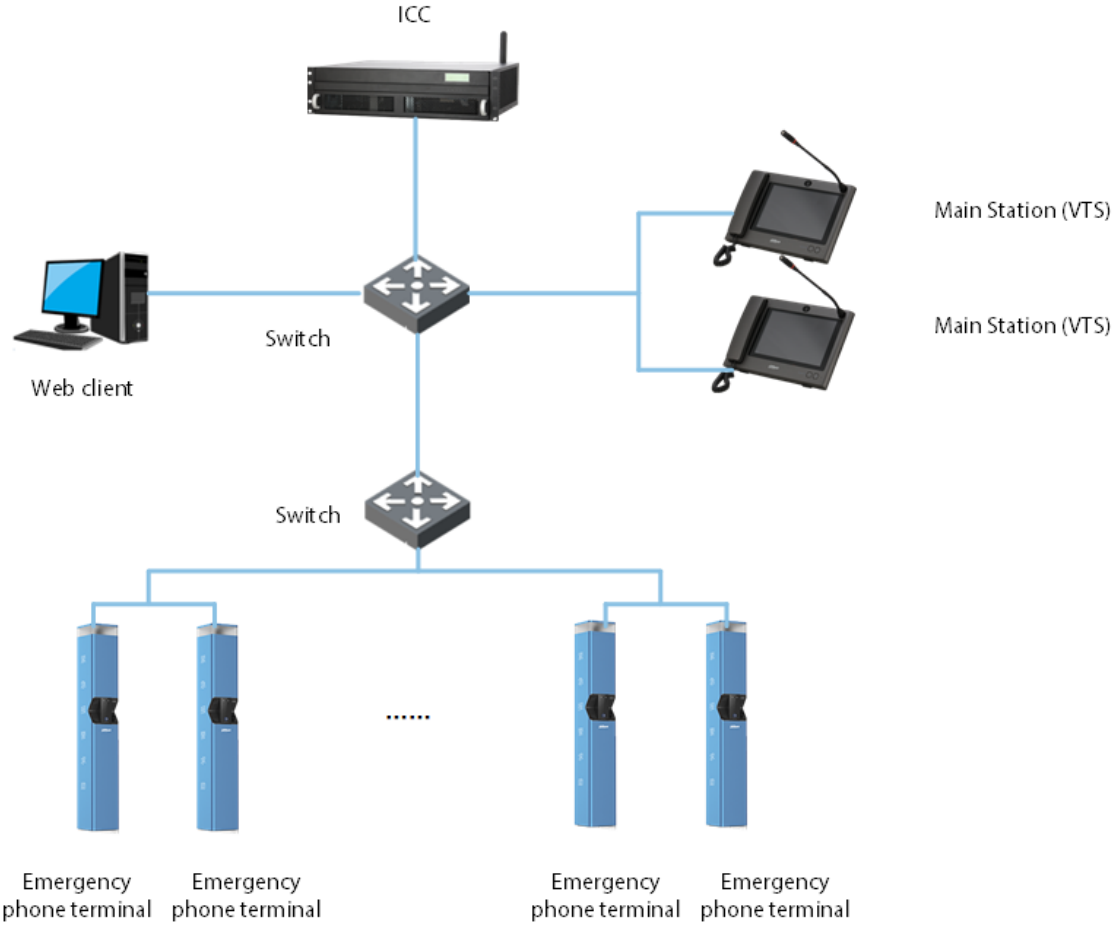


Table 3-3 Rear panel description

No.	Name	Description
1	Maintenance compartment	Open the maintenance compartment to perform maintenance on the internal device.
2	Mechanical lock	Unlock with key.
3	Electronic key	Remote unlock through the platform or web manager of the device.
4	Tool compartment	Stores tools.

4 Networking

Figure 4-1 Network diagram



5 Installation and Wiring

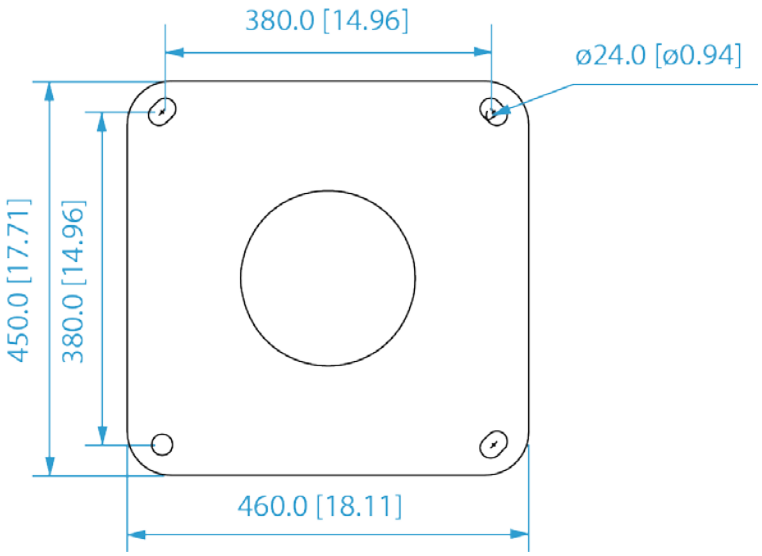
- Do not install the device in a poor environment that has condensation, high temperatures, stains, dust, and is exposed to corrosive chemicals.
- Installation and debugging must be carried out by a professional team. Do not dismantle or repair the device without professional assistance to avoid damaging the device.

5.1 Dimensions

Before installation, make sure you know the dimensions of the pedestal and the space between the screw holes.

Each screw hole is 24 mm in diameter, so the reinforced steel bar going through the hole must be 20 mm in diameter.

Figure 5-1 Dimensions (Unit: mm [inch])



5.2 Installation

5.2.1 Building the Foundation

We recommend you follow the industry standards when installing the device, such as digging trenches, burying pipes, laying cables, and performing insulation tests.

Step 1 Select the installation location of the device according to the construction drawings.

While you are making your selection, we recommend considering conditions such as wiring, drainage and ventilation.

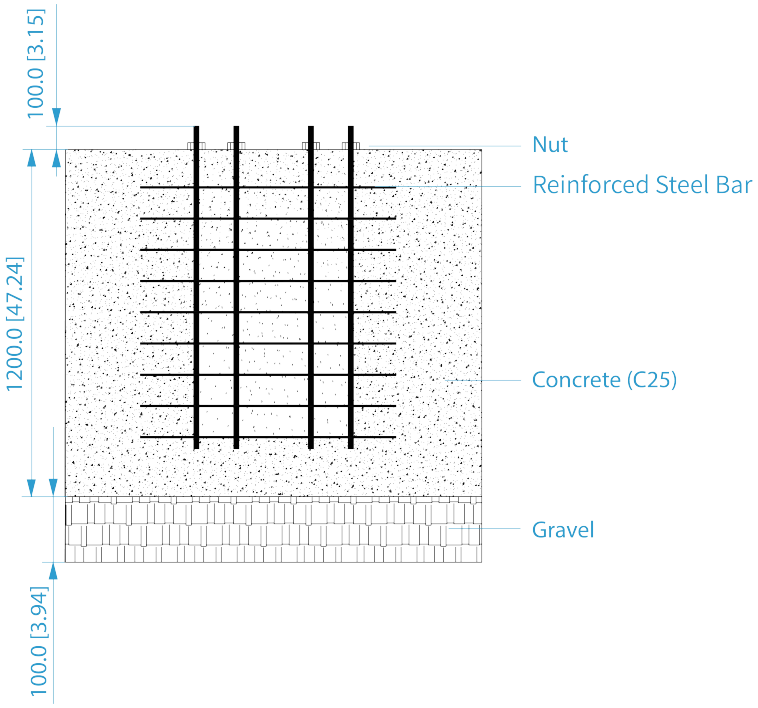
Step 2 Dig a groove.

Step 3 Embed pipes.

Step 4 Build the foundation.

1) At the bottom of the foundation, pave about 100 mm high gravels.

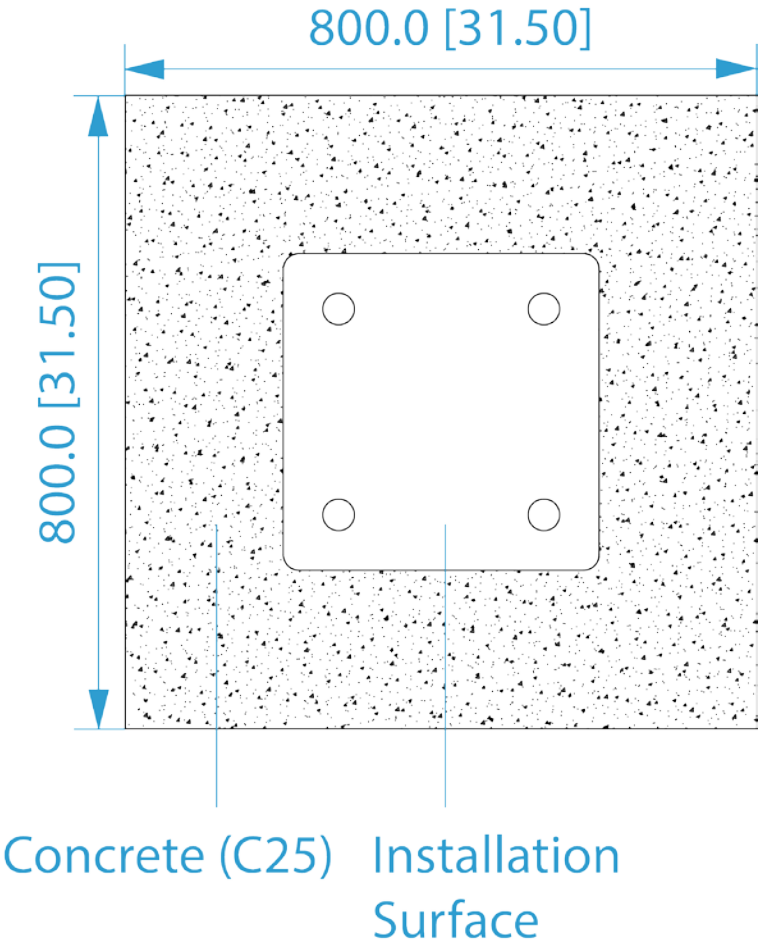
Figure 5-2 Build the foundation



2) Fill it with C25 cement. The length and the height must not be lower than 800 mm, and the width must not be lower than 1200 mm.

The length, width, and depth of the foundation must be adjusted depending on the texture of the soil, and the experience of the professionals with constructions. The measurement of 800 mm and 1200 mm is only for your reference.

Figure 5-3 Size of the foundation (Unit: mm [inch])

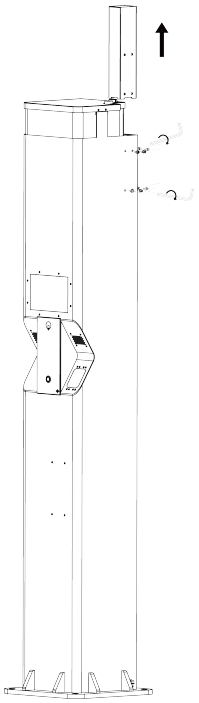


3) On C25 concrete, insert four 20 mm reinforced steel bars according to screw hole spacing.
4) Lay cables.
5) Carry out the insulation test.
6) Install the device.
   Guide the 20 mm reinforced steel bars through the 4 holes on the pedestal, and then tighten and attach them with the M20 bolts.

5.2.2 Pole Mount

Step 1 Remove the screws with a screwdriver to take out the cylinder-shaped pole.

Figure 5-4 Take out the cylinder-shaped pole



Step 2 Put in the L-shaped pole and then secure the device with the screw.

Figure 5-5 Put in the L-shaped pole

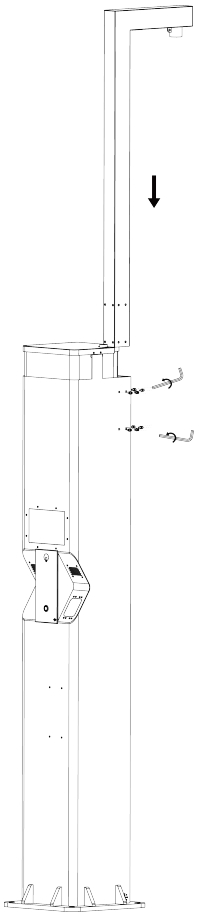
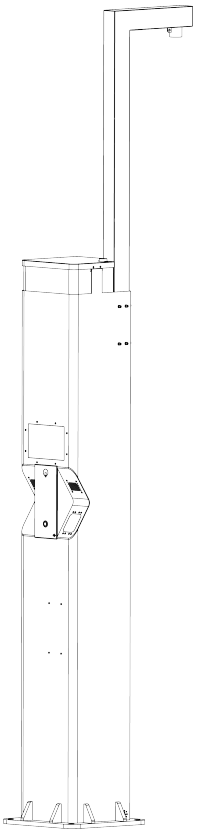


Figure 5-6 Pole mount



5.3 Wiring

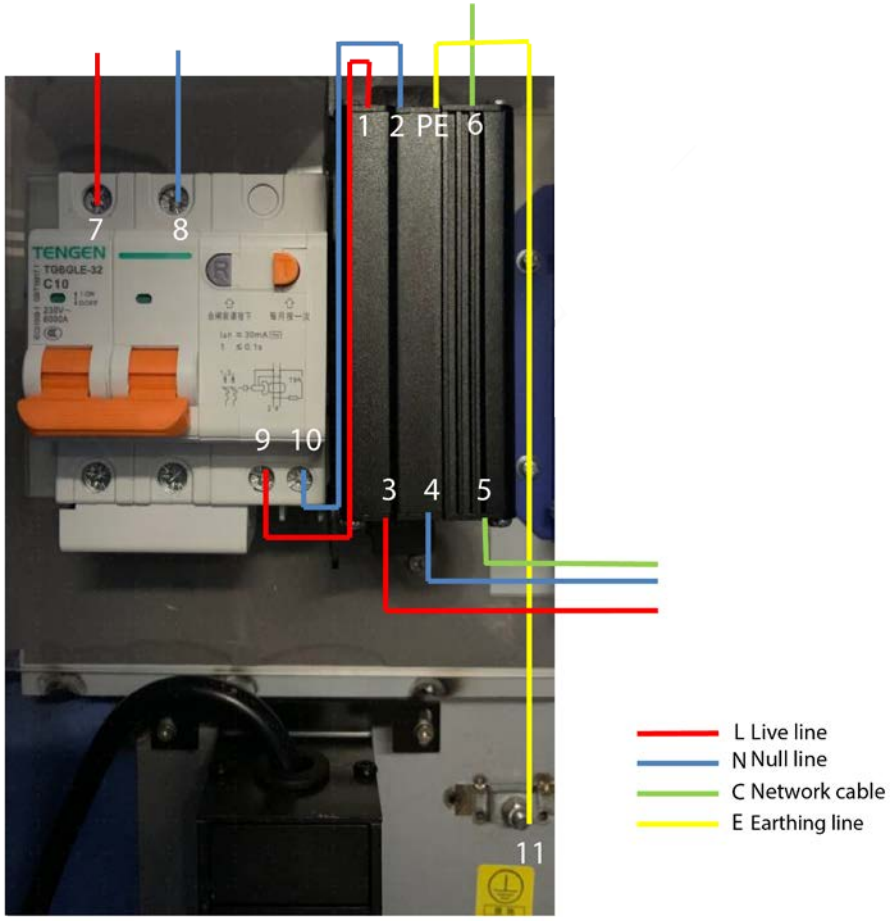
Internal modules were connected to the device before it left the factory
For the basic type of the device, you only need to connect external alternating current and an external network. This section uses wiring of the basic type as an example.

5.3.1 External AC Power Port Connection

WARNING

Before connecting the device, make sure that the air circuit breaker is turned off. After you finish wiring the device, turn on the air circuit breaker, and the device will be powered on.
Connect the mains electricity to the number 7 and 8. The number 11 earthing line must be connected to PE.

Figure 5-7 Connect external alternating current



5.3.2 Network Connection

Figure 5-8 Network connection

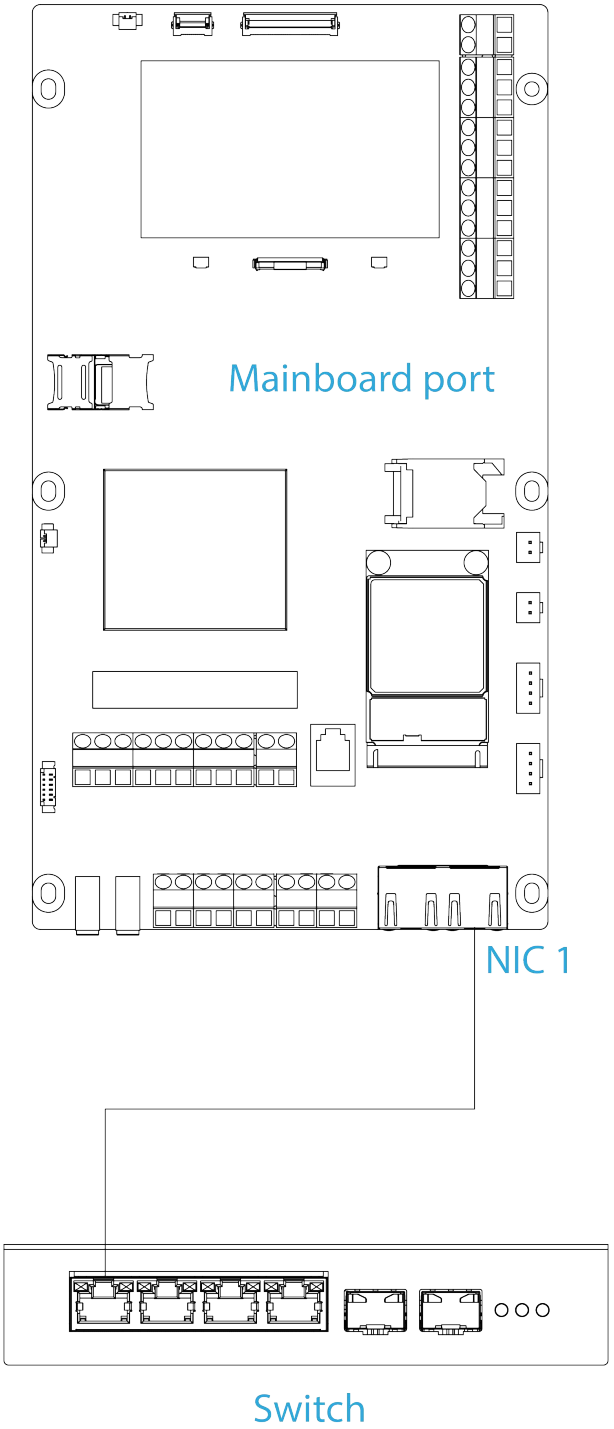


Figure 5-9 Network input port

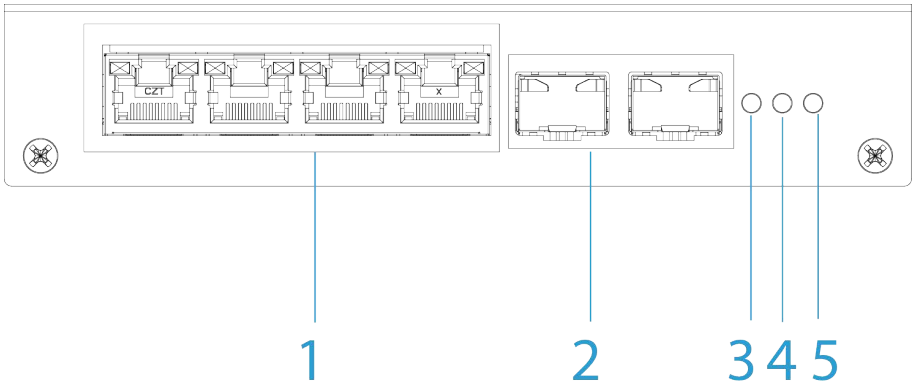


Table 5-1 Network input port description

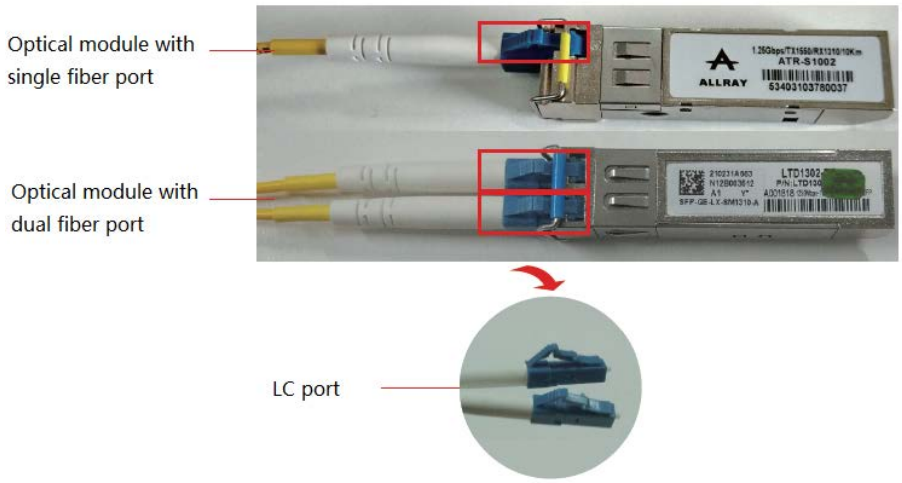
No.	Name	Description
1	10/100/1000 Base-T	There are four 10/100/1000 Mbps self-adaptive electrical ports.
2	1000 Base-X	There are two 1000 Mbps optical ports.
3	Optical fiber indicator	—
4		
5	Power indicator	

The device supports fiber connection.

- Wired connection: Through the RJ–45 Ethernet port (number 5) in Figure 5-7, connect the external network. Then lead a network cable from the RJ–45 Ethernet port (number 6) in Figure 5-7 to gigabit port (number 1) in Figure 5-9.
- Fiber connection: If an optical fiber is laid, connect the external network to the optical fiber port in Figure 5-10.

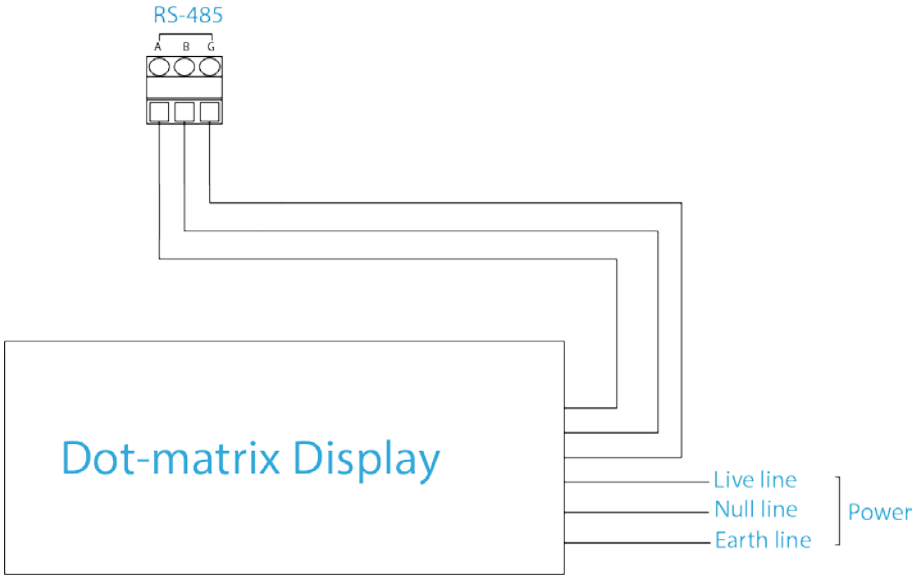
The receiving and sending of the working wave bands and bandwidth of optical modules at both ends of the optical fiber must be matched. Otherwise, the network will not function correctly.

Figure 5-10 Single fiber or dual fiber optical module port



5.3.3 Dot-matrix Display Connection

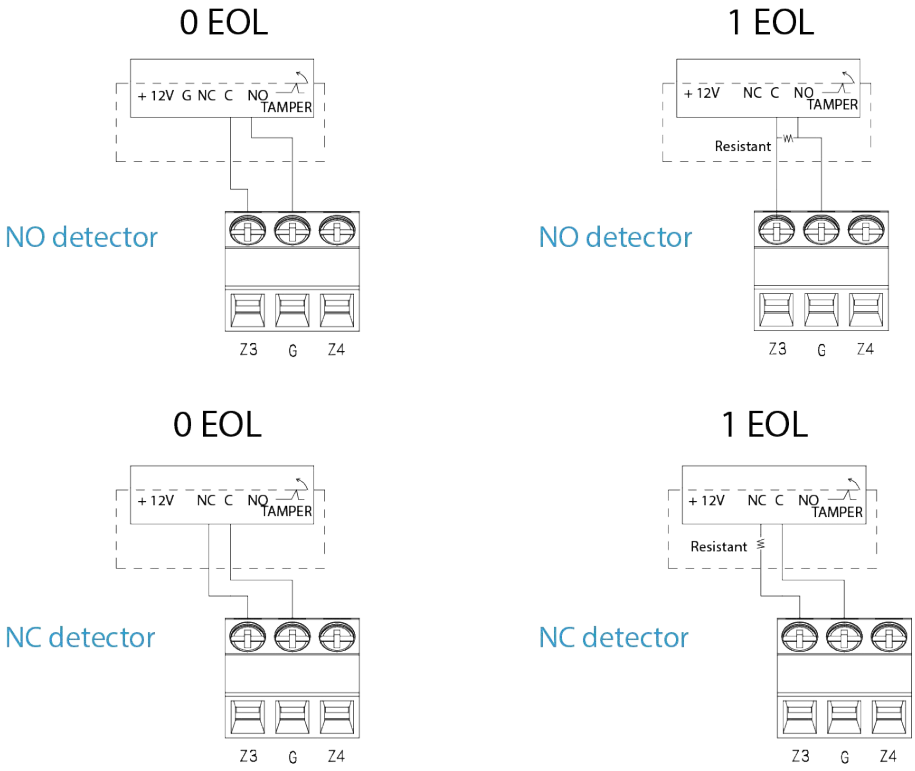
Figure 5-11 Connect dot-matrix display



5.3.4 Local Alarm Input Cable Connection

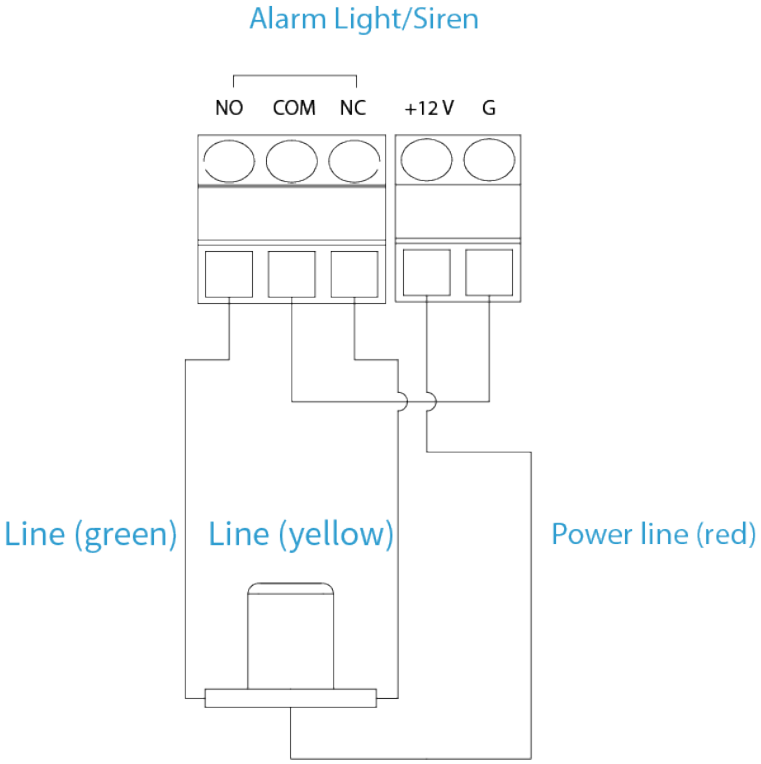
The device supports 0 EOL and 1 EOL.

Figure 5-12 Detector wiring



5.3.5 Local Alarm Output Cable Connection

Figure 5-13 Local alarm output cable connection



- Power line: Positive (public).
- Line (yellow): Negative. When the yellow line is connected, the alarm light will be solid on.
- Line (green): Negative. When the green line is connected, the alarm light will flash.

6 Web Operations

This section introduces the parameters of the device and how to configure them on the webpage.

Some operations of the device are available on the platform. For platform operations, see the corresponding user's manual of the platform.

6.1 Starting the Device

6.1.1 Initializing the Device

Background Information

For the first-time use after the device is restored to factory defaults, you need to set the login password for admin account. You can also reserve an email address to reset password when you forget it.

- For your device safety, keep your login password of admin well after the initialization, and change the password regularly.
- The default IP address of LAN1 is 192.168.1.108, LAN2 is 192.168.2.108.

Procedure

Step 1 Open the browser, enter the default IP address of the device, and then press the Enter key.

Step 2 Read **Software License Agreement** and **Privacy Policy**, select **I have read and agree to the terms of the Software License Agreement and Privacy Policy**, and then click **Next**.

Step 3 Select language, and then click **Next**.

Step 4 Set date format, time zone, and system time, and then click **Next**.

Click **Sync PC** to synchronize the system time with the PC.

Step 5 Enter and confirm the new password, set email address, and then click **Next**.

The reserved email address is used to receive security code for resetting password.

Step 6 Click **Completed**.

The system will prompt you that the initialization is successful, and then login page will be displayed.

6.1.2 Logging in to Webpage

Prerequisite

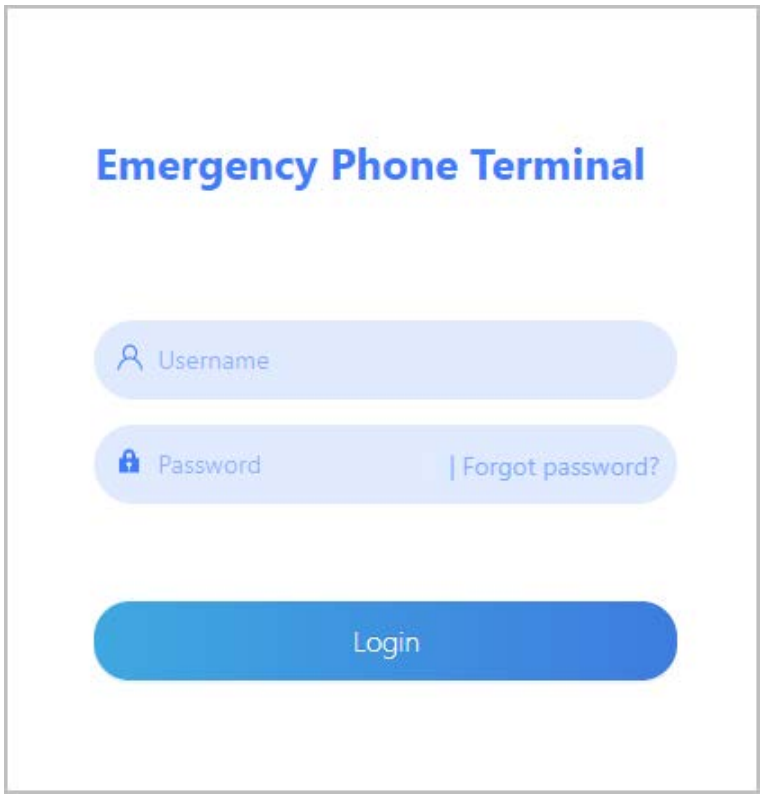
Make sure that the local computer and the device are on the same network segment.

Procedure

Step 1 Enter the device IP address in the address bar of the browser, and then press Enter.

Step 2 Enter username and password, and then click **Login**.

Figure 6-1 Login



6.1.3 Resetting Password

Prerequisites

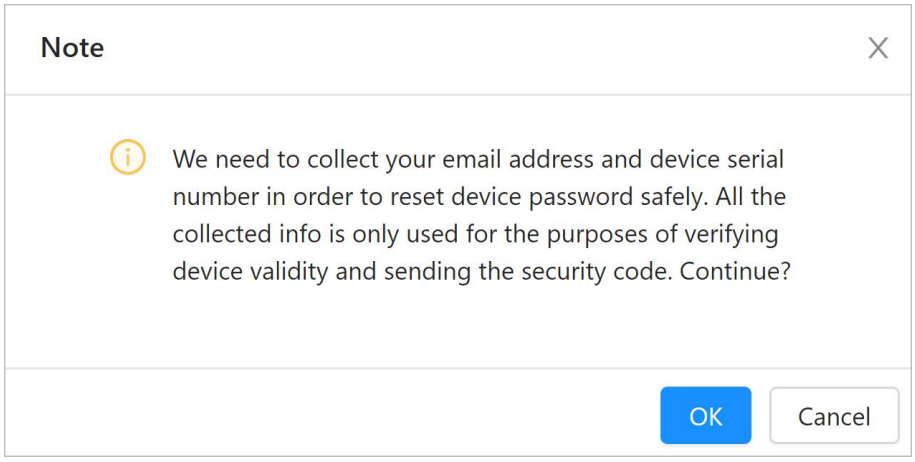
You can set the email address for password resetting during the initialization. For details, see "6.1.1 Initializing the Device".

Procedure

Step 1 Log in to the webpage, click **Forgot password?**.

Step 2 Click **OK**.

Figure 6-2 Forgot password



Step 3 Scan the QR code according to the prompt to receive the security code.

Step 4 Enter the security code in the **Security code** text box, and then click **Next**.

Please use the security code within 24 hours after you receive it. Otherwise, it will become invalid.

Step 5 Enter and confirm the password.

The password can contain 8 to 32 non-empty characters and must have at least 2 types of the following characters: capital letters, lower-case letters, numbers, and special characters (excluding ' " ; , : &). The confirming password should be the same as the new password. Use the password strength prompt as a guide to set a strong password.

Step 6 Click **Finish**.

6.2 General

On the **General** page, you can configure general settings, such as call linkage, PSTN, zones, videos, audios, and compartment unlock.

6.2.1 Call Linkage

Select **General** > **Call Linkage**, and then you can set call linkage actions, such as snapshot, recoding and siren.

Figure 6-3 Call linkage

Table 6-1 Call linkage parameter descriptions

Parameter	Description
Snapshot	Enabled by default. ● Snapshot interval ranges from 1 to 10 seconds. 5 seconds is set by default. ● Number of images ranges from 1 to 5. 5 is set by default.
Record	Enabled by default.
Siren	Enabled by default. Siren duration ranges from 1 to 60 seconds. 30 seconds is set by default.

6.2.2 PSTN

Select **General** > **PSTN**, and then you can set phone number and TSD threshold, by which you can make a voice talk to the alarm receiving center or calling person.

Figure 6-4 PSTN

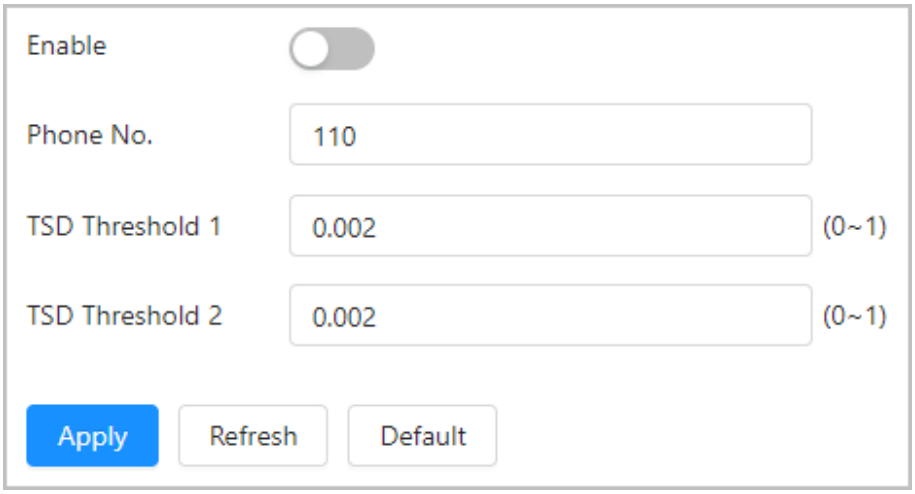


Table 6-2 Descriptions of PSTN parameters

Parameter	Description
Enable	Disabled by default.
Phone No.	Enter alarm receiving center or personal phone number.
TSD threshold 1	It is 0.002 by default, and the value ranges from 0 to 10. Configure the parameters according to the actual situation.
TSD threshold 2	

6.2.3 Zone

6.2.3.1 Zone Configuration

Select **General** > **Zone** > **Zone Config**, and then you can configure zone parameters and set alarm linkage actions, such as speaker, relay and siren.

Up to four zones can be configured.

Figure 6-5 Zone configuration

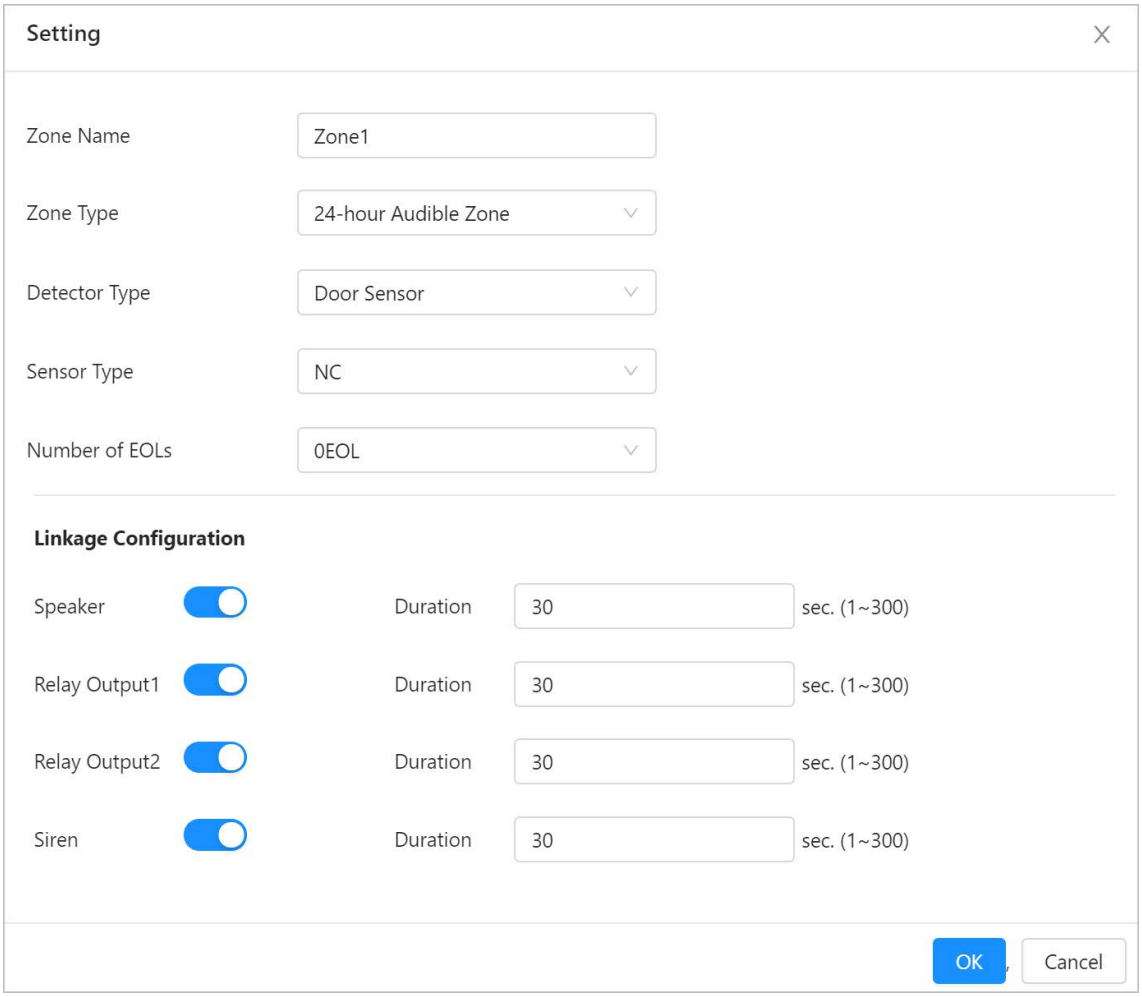


Table 6-3 Descriptions of zone parameters

Parameter	Description
Zone Name	Custom zone name.
Zone Type	Select zone as needed. ● 24-hour Audible Zone ● 24-hour Silent Zone ● Instant Zone ● Fire Zone ● Shielded Zone

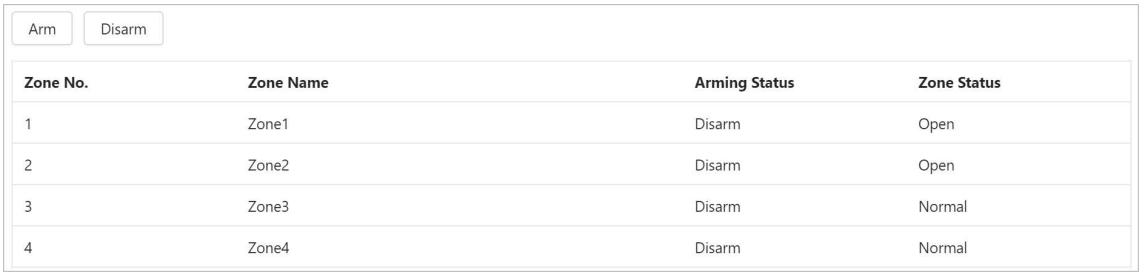
Parameter	Description
Detector Type	Select detector type as needed. ● Panic Button ● IR ● Door Detector ● Water Leak Sensor ● Vibration Sensor ● Dual-technology (IR + Microwave)
Sensor Type	Select sensor type as needed. ● Normally Closed ● Normally Open
Number of EOLs	Select the number of EOL. ● 0 EOL ● 1 EOL
Speaker	Enabled by default. Speaker duration ranges from 1 to 300 seconds. 30 seconds is set by default.
Relay Output 1	Enabled by default. Relay output duration ranges from 1 to 300 seconds. 30 seconds is set by default.
Relay Output 2	
Siren	Enabled by default. Siren duration ranges from 1 to 300 seconds. 30 seconds is set by default.

6.2.3.2 Protection Zone Management

Select **General** > **Zone** > **Protection Zone Management**, and then you can arm and disarm all the zones.

Up to four zones can be configured.

Figure 6-6 Protection zone management



6.2.4 Video

6.2.4.1 Encode

Select **General** > **Video** > **Encode**, and then you can configure video stream parameters, such as compression, resolution, frame rate, bit rate type, bit rate, I frame interval, SVC, and watermark.

Figure 6-7 Encode

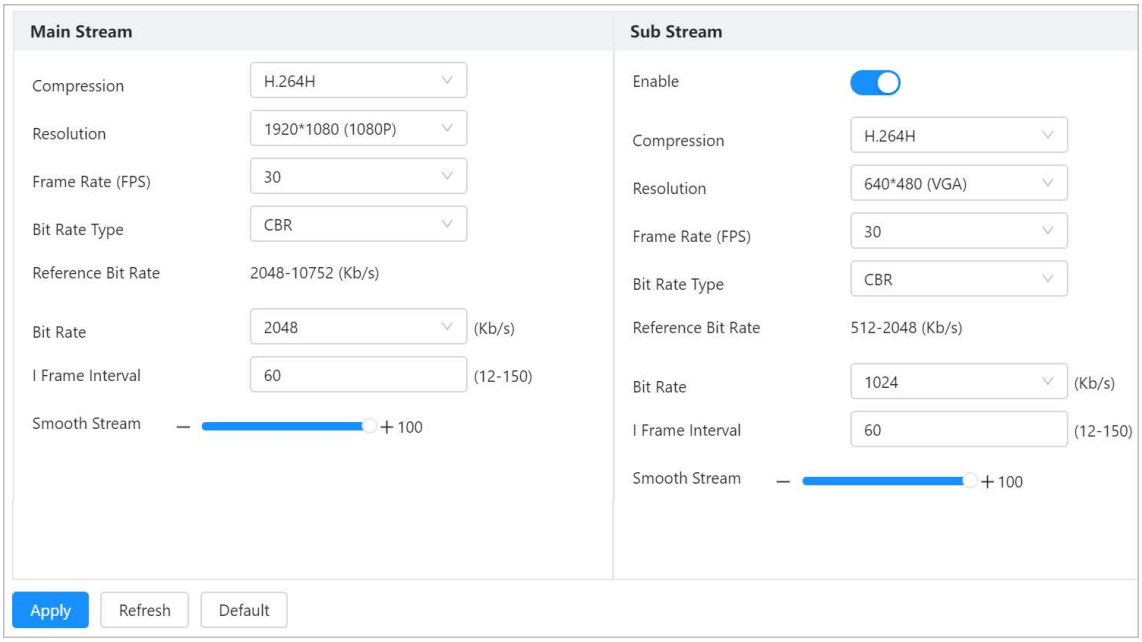


Table 6-4 Description of encode parameters

Parameter	Description
Sub Stream	Click to enable sub stream, it is enabled by default.
Compression	Select encode mode. • **H.264B**: Baseline profile encode mode. It requires smaller bandwidth. • **H.264**: Main profile encode mode. Compared with H.264B, it requires smaller bandwidth. • **H.264H**: High profile encode mode. Compared with H.264, it requires smaller bandwidth. • **H.265**: Main profile encode mode. Compared with H.264, it requires smaller bandwidth.
Resolution	The resolution of the video. The higher the value is, the clearer the image will be, but the bigger the bandwidth will be required.
Frame Rate (FPS)	The number of frame in one second of video. The higher the value is, the clearer and smoother the video will be.
Bit Rate Type	The bit rate control type during video data transmission. You can select bit rate type from: • **CBR** (Constant Bit Rate): The bit rate changes a little and keeps close to the defined bit rate value. • **VBR** (Variable Bit Rate): The bit rate changes as monitoring scene changes. The **Bit Rate Type** can be only be set as **CBR** when **Encode Mode** is set as **MJPEG**.
Reference Bit Rate	The most suitable bit rate value range recommended to user according to the defined resolution and frame rate.

Parameter	Description
Bit Rate	This parameter can be configured only when the **Bit Rate Type** is set as **CBR**. Select bit rate value in the list according to actual condition.
I Frame Interval	The number of P frames between two I frames, and the **I Frame Interval** range changes as **FPS** changes. It is recommended to set **I Frame Interval** twice as big as **FPS**.
Smooth Stream	Drag the scroll bar or click **+**or **-** to set smooth stream value. The higher the value is, the clearer the image will be.

6.2.4.2 Image

Select **General** > **Video** > **Image**, and then you can configure camera parameters according to the actual situation, including picture, exposure, backlight and white balance.

Figure 6-8 Image settings

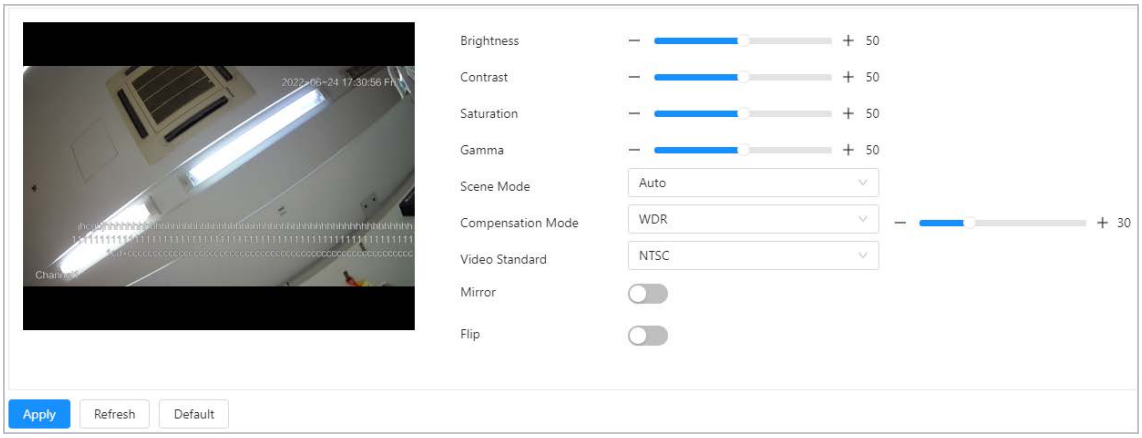


Table 6-5 Image setting parameters

Parameters	Description
Brightness	Change the overall brightness of the picture. The higher the value is, the brighter the picture will be, and the smaller the darker. The picture might be hazy if the value is configured too high.
Contrast	Changes the contrast of the picture. The higher the value is, the more the contrast will be between bright and dark areas, and the smaller the less. If the value is set too high, the dark area would be too dark and the bright area easier to get overexposed. The picture might be gray if the value is set too small.
Saturation	Makes the color deeper or lighter. The higher the value is, the deeper the color will be, and the lower the lighter. This value does not affect the overall brightness of image.
Gamma	Changes the picture brightness and contrast in a non-linear way. The higher the value is, the brighter the picture will be, and the smaller the darker.

Parameters	Description
Scene Mode	• **Close**: Close WB. • **Auto**: The system compensates WB according to color temperature to ensure color precision. • **Sunny**: The system compensates WB to outdoor sunny scene to ensure color precision. • **Night**: The system compensates WB to outdoor night scene to ensure color precision.
Compensation Mode	• **Close**: No backlight. • **BLC**: Enable **BLC**, the camera can get clearer image of the dark areas on the target. • **WDR**: The system dims bright areas and compensates dark areas to ensure the clarity of all the area according to the environmental lighting conditions. • **HLC**: The system constrains bright areas and reduces halo size to dim the overall brightness.
Video Encoding	Select **PAL** or **NTSC**.
Mirror	Click , and the picture will display with left and right side reversed.
Flip	Click , and the picture will display with up and down side reversed.

6.2.4.3 Overlay

Select **General** > **Video** > **Overlay**, and then configure overlay information, which will be displayed on the live page.

6.2.4.3.1 Configuring Channel Title

You can enable this function when you need to display channel title in the video image.

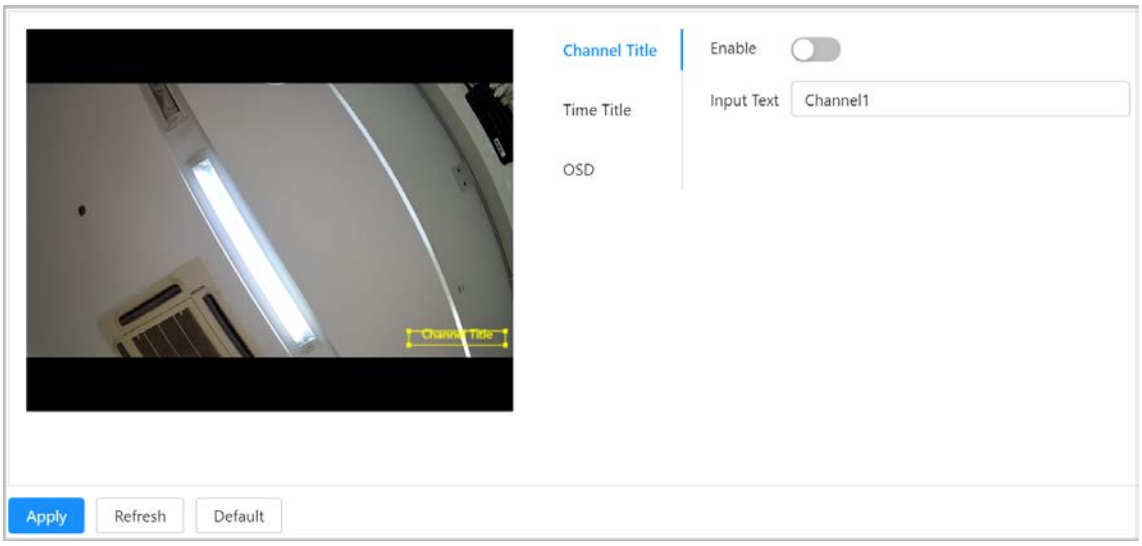
Step 1 Select **General** > **Video** > **Overlay** > **Channel Title**.

Step 2 Click to enable the channel title function.

Step 3 Configure channel title.

Step 4 Move the title box to the position that you want in the image.

Figure 6-9 Channel Title



Step 5 Click **Apply**.

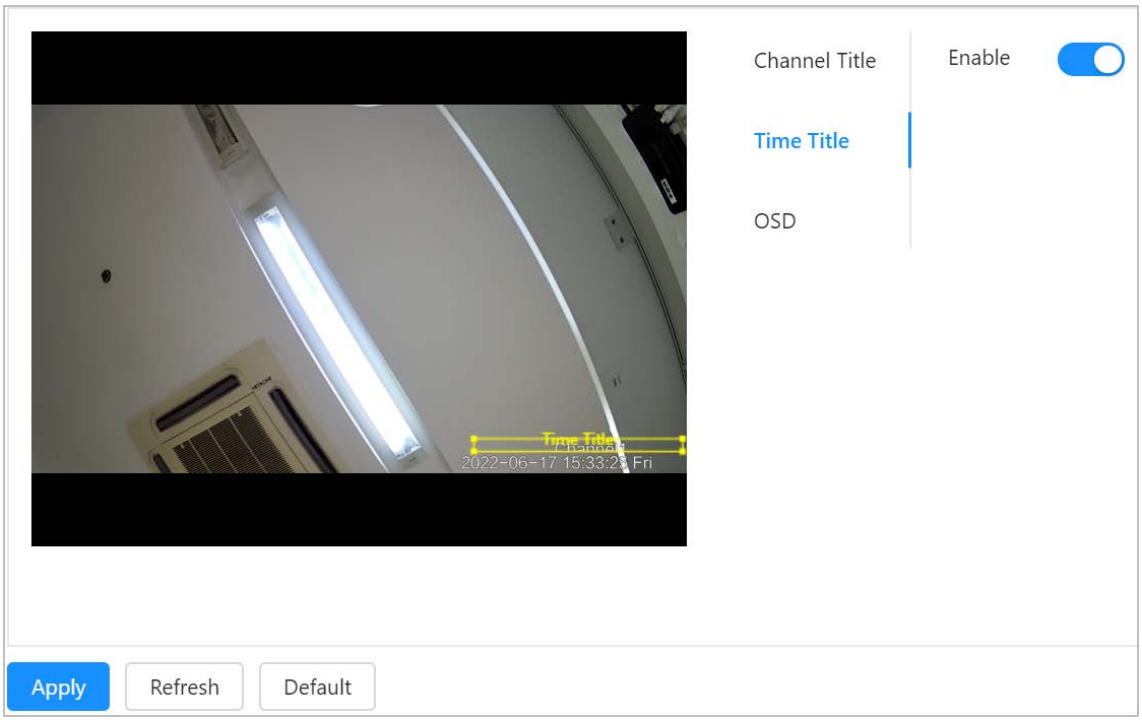
6.2.4.3.2 Configuring Time Title

You can enable this function if you need to display time on the video image.

Step 1 Select **General** > **Video** > **Overlay** > **Time Title**.

Step 2 Click to enable time title function.

Figure 6-10 Configure time title



Step 3 Move the title box to the position that you want in the image.

Step 4 Click **Apply**.

6.2.4.3.3 Configuring Image Information

Set the OSD information content and overlay location of the captured images.

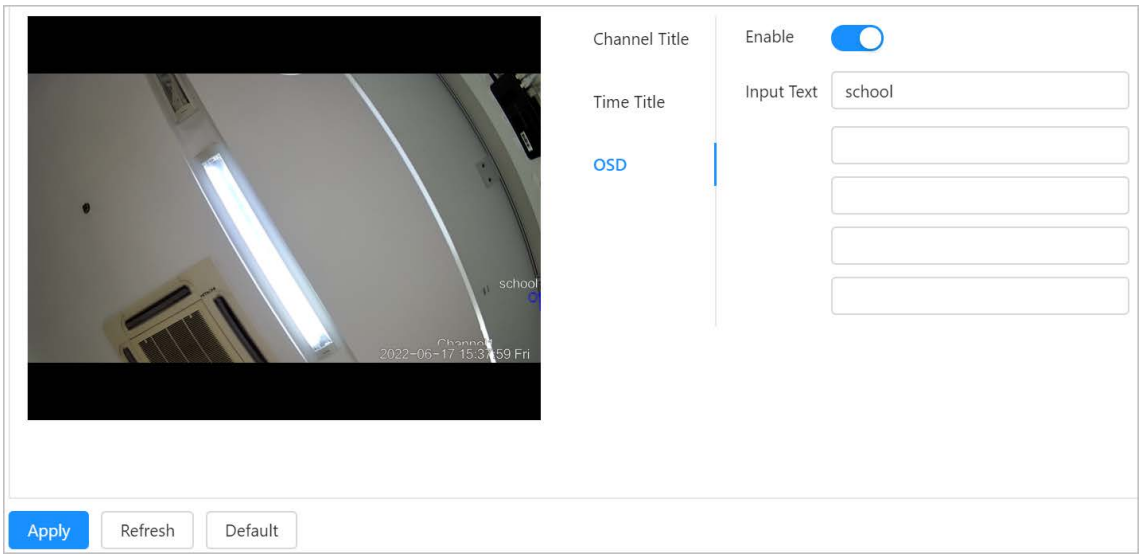
Step 1 Select **General** > **Video** > **Overlay** > **OSD**.

Step 2 Click to enable OSD function.

Step 3 Enter OSD content.

Step 4 Move the title box to the position that you want in the image.

Figure 6-11 Set OSD content



Step 5 Click **Apply**.

6.2.5 Audio

Select **General** > **Audio**, and then you can configure audio parameters and alarm audio.

Figure 6-12 Audio

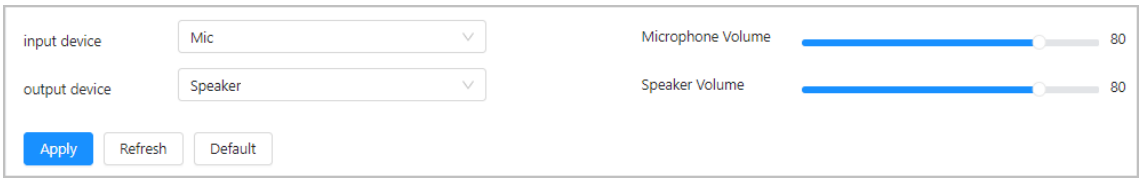


Table 6-6 Descriptions of audio parameters

Parameters	Description
Input device	You can select audio input type from: • **LineIn**: Requires external audio device. • **Mic**: Not require external audio device.
Output device	Connect to external speaker for audio enhancement.
Microphone Volume	Adjusts microphone volume.
Speaker Volume	Adjusts speaker volume.

6.2.6 Advertising

6.2.6.1 Configuring Advertising Resources

Built-in LCD display can show images and videos.

Step 1 Select **General** > **Advertising** > **Ad Resource**.

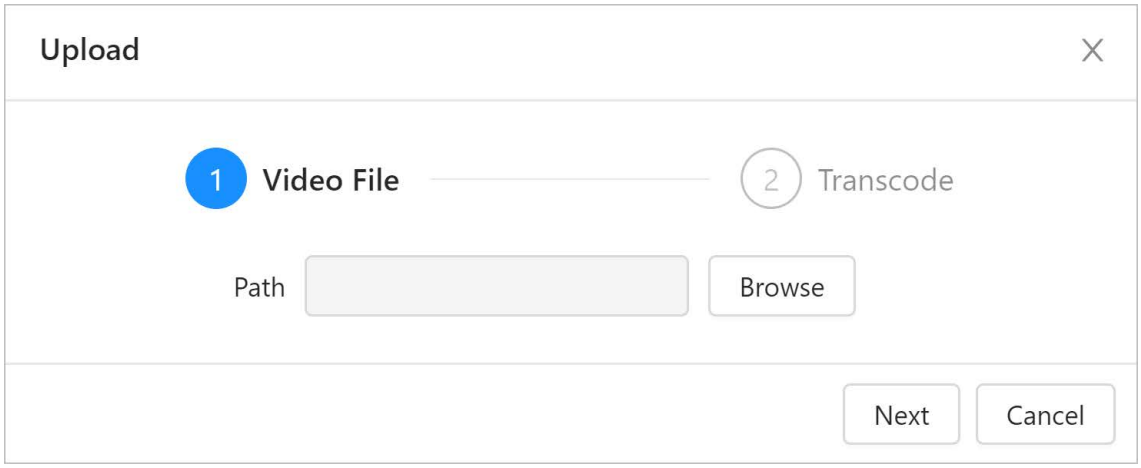
Step 2 On the **Video** area, click **Upload** to upload the video.

1) Click **Browse**, and then select the video file.

- You can upload video packages that are up to 20 M in size, in the avi, dav and mp4 format.
- You can upload up to 3 videos.
- Make sure that you have downloaded the plug-in to upload the video.

2) Click **Next**, the transcode is complete.

Figure 6-13 Upload video files



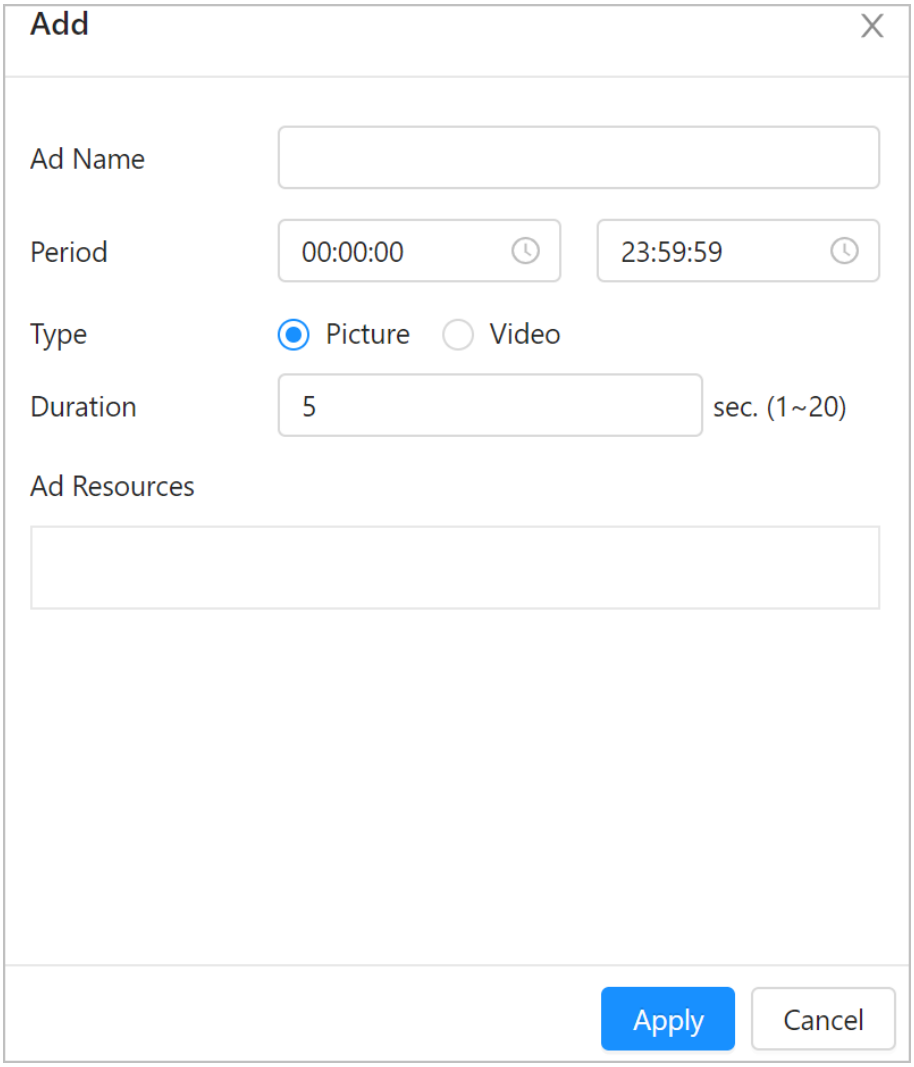
Step 3 On the **Picture** area, click **Upload** to upload the image.

- You can upload image packages that are up to 2 M in size, in the png, jpg and bmp format.
- You can upload up to 10 images.

Step 4 Set time plans for the advertising.

1) On the **Time Plan** area, click **Add** to add the advertising time plan.
2) Enter the advertising name.
3) Configure advertising periods.
4) Select advertising type: Picture or video.
5) Set the duration of each mage will be played.
6) Set advertising resources.
7) Click **Apply**.

Figure 6-14 Add time plans



Step 5 Click **Apply**.

6.2.6.2 Configuring Advertising Texts

Dot-matrix screen is connected to show advertising texts from the web.

Step 1 Select **General** > **Advertising** > **Dot-matrix Screen**.

Step 2 Configuring advertising texts.

Figure 6-15 Configure advertising texts

Step 3 Click **Apply**.

6.2.7 Lock

If the device is designed with electronic lock, you can go to **General** > **Lock** to remotely unlock the upper or lower compartment.

On the webpage, you can send commands to lock or unlock the compartment, but you cannot see whether the compartment was successfully locked.

Figure 6-16 Lock settings

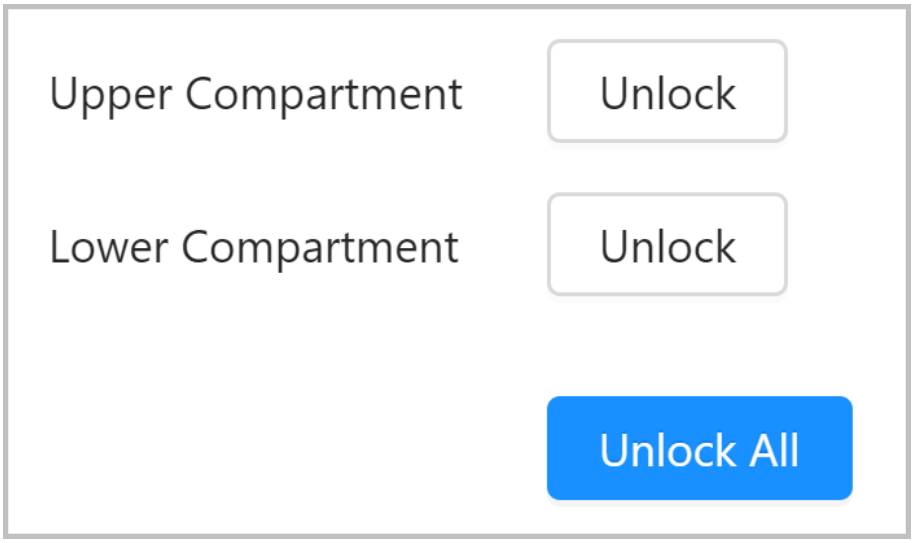


Table 6-7 Parameters

Parameters	Description
Upper Compartment	Click **Unlock** to unlock the upper or lower compartment.
Lower Compartment	
Open All	Click **Unlock All** to unlock the upper and lower compartment at the same time.

6.3 Network

This section introduces network configuration.

6.3.1 TCP/IP

Prerequisites

Make sure that the device is connected to the network properly.

You can configure the IP address, DNS (Domain Name System) server and more according to the network plan.

Procedure

Step 1 Select **Network** > **TCP/IP**.

Step 2 Configure the TCP/IP parameters.

Figure 6-17 TCP/IP parameters

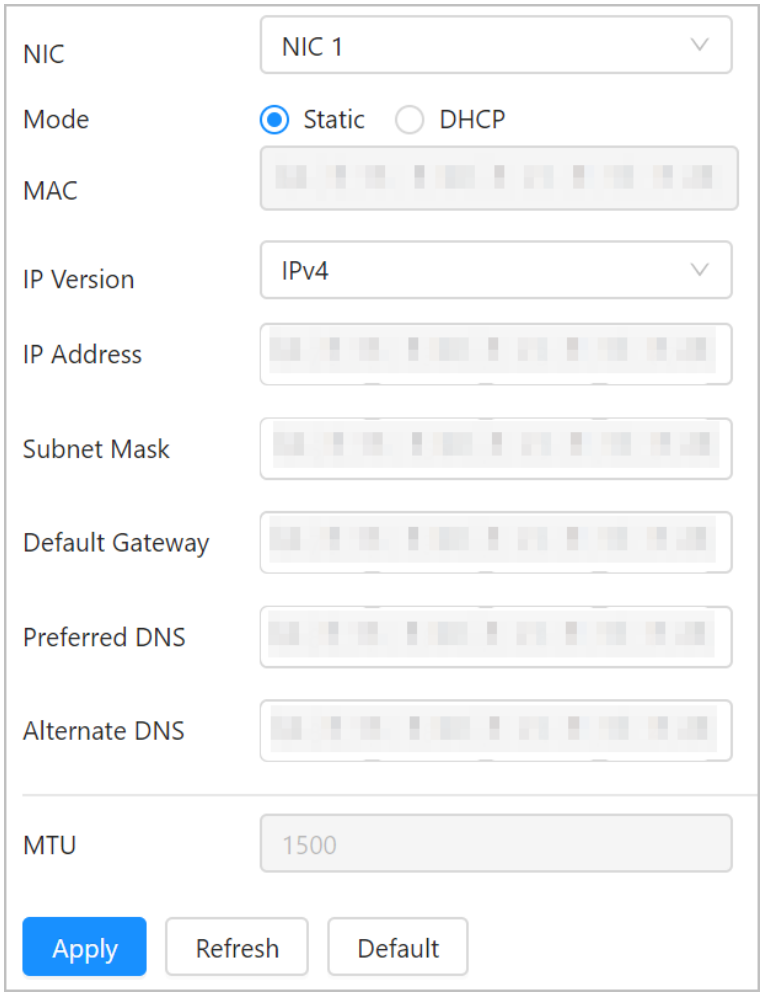


Table 6-8 Descriptions of TCP/IP parameters

Parameters	Description
NIC	Select **NIC1** or **NIC2** according to the actual needs.
Mode	The mode that the device gets IP: • **Static**: Configure **IP Address**, **Subnet Mask**, and **Default Gateway** manually, and then click **Save**, the login page with the configured IP address is displayed. • **DHCP** (Dynamic Host Configuration Protocol): When there is DHCP server in the network, select **DHCP**, and the device acquires IP address automatically.
MAC address	Displays host MAC address.
IP version	Select **IPv4** or **IPv6**.
IP Address	When you select **Static** in **Mode**, enter the IP address and subnet mask that you need. • IPv6 does not have subnet mask. • The default gateway must be in the same network segment with the IP address.
Subnet Mask	
Default Gateway	

Parameters	Description
Preferred DNS	IP address of the preferred and alternate DNS.
Alternate DNS	
MTU	The default value is 1500.

Step 3 Click **Apply**.

6.3.2 Port

Configure the port numbers and the maximum number of users (includes web, platform client, and mobile phone client) that can access the device simultaneously.

Step 1 Select **Network** > **Port**.

Step 2 Configure port parameters.

Figure 6-18 Port

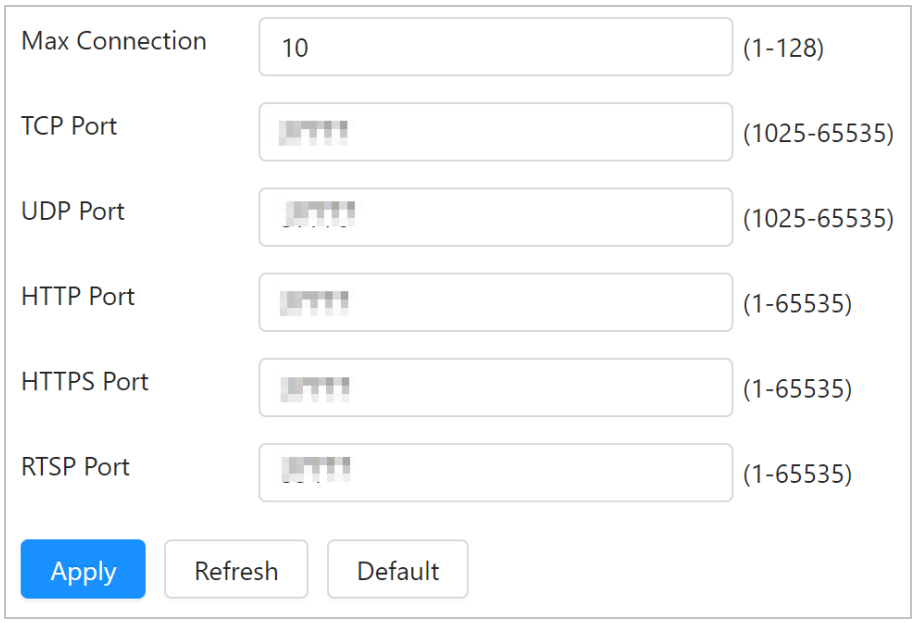


Table 6-9 Description of port parameters

Parameters	Description
Max connection	The max number of users (web client, platform client or mobile phone client) that can connect to the device simultaneously, the value is 10 by default.
TCP port	Transmission control protocol port. The value is 37777 by default.
UDP port	User data packet protocol port. The value is 37778 by default.
HTTP port	Hyper text transfer protocol port. The value is 80 by default.
HTTPS port	HTTPS communication port. It is 443 by default.

Parameters	Description
RTSP port	• Real time streaming protocol port, and the value is 554 by default. If you play live view with QuickTime, VLC or Blackberry smart phone, the following URL format is available. If you play live view with QuickTime of Safari or VLC, the following URL format is available. • When the URL format requiring RTSP, you need to specify channel number and bit stream type in the URL, and also user name and password if needed. • When playing live view with Blackberry smart phone, you need to turn off the audio, and then set the code mode to H.264B and resolution to CIF. URL format example: rtsp://username:@ IP Address:port/cam/realmonitor?channel=1&subtype=0 If username and password are not required for verification, the URL can be: rtsp://ip:port/cam/realmonitor?channel=1&subtype=0 • Username: admin, for example. • Password: Your password. For example, admin. • IP: Device IP. For example, 192.168.1.122. • Port: Leave it if the value is 554 by default. • Channel 1: Channel number, starts from 1. For example, if you are using channel 2, channel=2 • Subtype: The bit stream type; 0 means main stream (Subtype=0) and 1 means sub stream (Subtype=1). Example: If you require the sub stream of channel 2 from a certain device, then the URL should be: rtsp://admin:admin@192.168.1.123:554/cam/realmonitor?channel=2&subtype=1

Step 3 Click **Apply**.

6.3.3 2G/4G

Prerequisites

Make sure that 2G/4G module has been installed

Background Information

Connect the device to a 2G/4G network through the dial-up method of different operators. Then you can receive information on alarms and the status of devices on your mobile device.

Procedure

Step 1 Select **Network** > **2G/4G**.

Step 2 Click next to **Enable** and **Dial** to enable the 2G/4G and dial function.

Figure 6-19 2G/4G setting

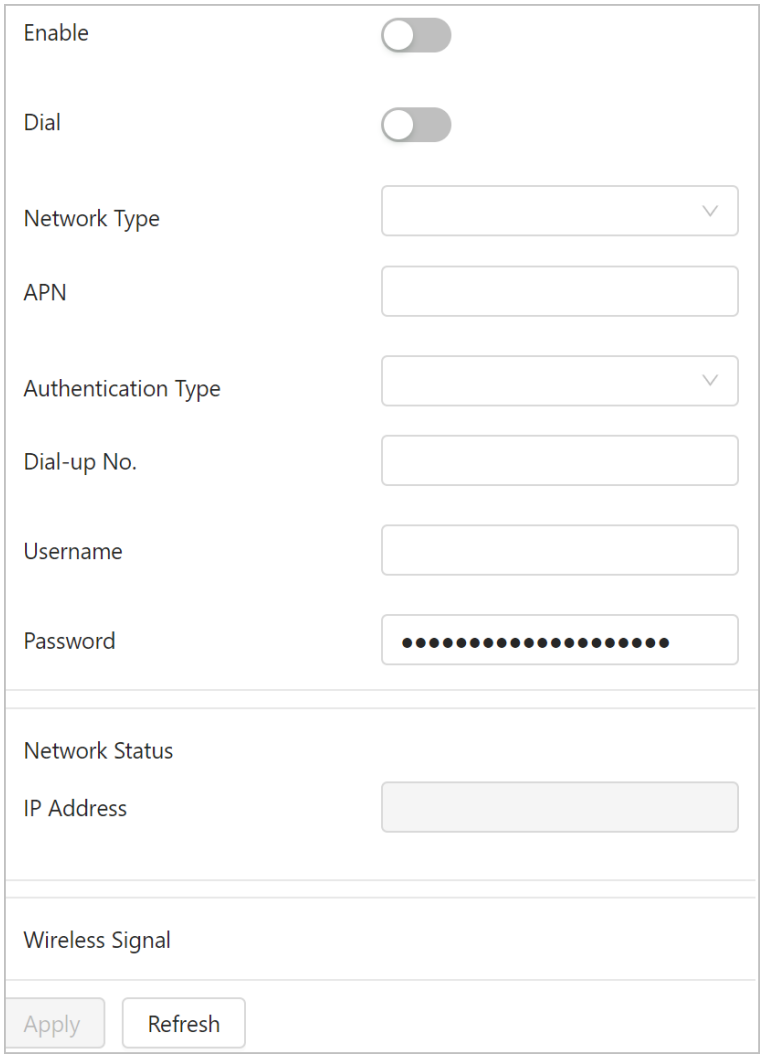


Table 6-10 Descriptions of 2G/4G parameters

Parameters	Description
Network Type	Select **WCDMA**, **Auto**, **EVDO**, **TD-SCDMA**, **TD-LTE** and **FDD-LTE**.
APN	Displays access point of communication operator.
Authentication Type	When enabled, the system automatically recognize the protocol, including **PAP**, **CHAP** and **NO**.
Dial-up number	Enter the dial number provided from the communication operator.
User name	The device fills in the dial information automatically after recognizing 2G/4G module.
Password	
Network status	Displays network connection status.
IP Address	After the network connection is successful, the device will obtain and show the IP address automatically.
Wireless Signal	The current signal strength of the device.

Step 3 Click **Apply**.

6.3.4 UPnP

Prerequisites

- Make sure the UPnP service is installed in the system.
- Log in to the router, and configure WAN IP address to set up internet connection.
- Enable UPnP in the router
- Connect your device to the LAN port of the router.
- Select **Network** > **TCP/IP**, enter the local area IP address of the router or select **DHCP** and acquires IP address automatically.

Background Information

UPnP (Universal Plug and Play) is a protocol that establishes mapping relation between local area and wide area networks. This function enables you to access local area device through wide area IP address.

Procedure

Step 1 Select **Network** > **UPnP**.

Step 2 Click to enable UPnP function.

Step 3 Select a service, and click to enable the service function.

Step 4 Click to modify the corresponding external port number, and then click **OK**.

Step 5 Click **Apply**.

6.3.5 Register

After you enable this function, when the device is connected into internet, it will report the current location to the specified server which acts as the transit to make it easier for the client software to access the device.

Step 1 Select **Network** > **Register**.

Step 2 Click to enable the register function.

Step 3 Enter server address, port and sub-device ID.

Figure 6-20 Register

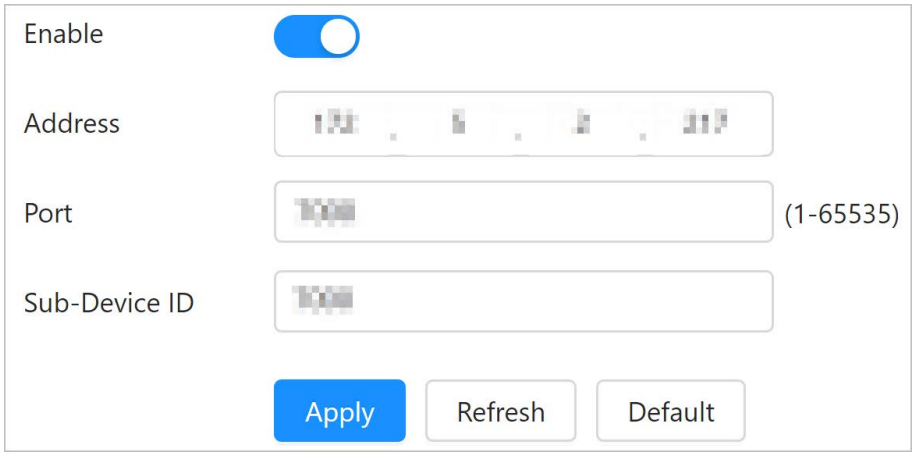


Table 6-11 Register parameters

Parameters	Description
Address	The IP address or domain name of the server to be registered.
Port	The port for registration.
Sub-device ID	The custom ID for the device.

Step 4 Click **Apply**.

6.3.6 SIP Server

With SIP (Session Initiation Protocol), the device can be registered to the platform. When you press the alarm button, you can have a voice talk and video to the platform.

Step 1 Select **Network** > **SIP Server**.

Step 2 Enter server IP address, port, username, password, SIP domain, and device call ID.

Figure 6-21 Configure SIP Server

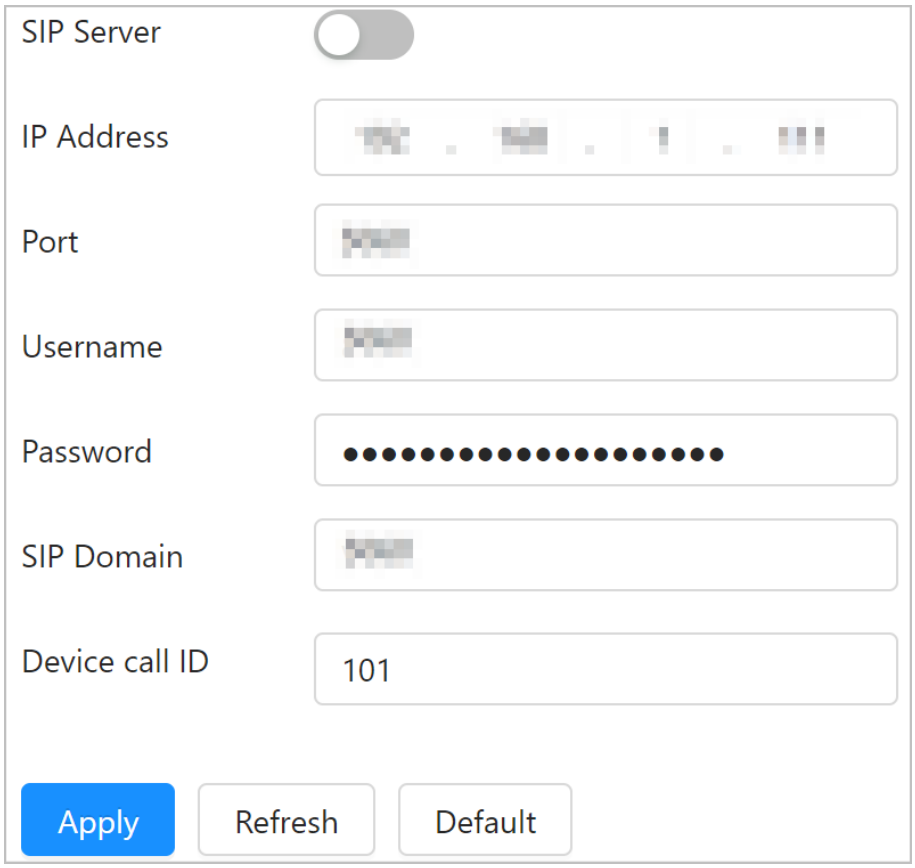


Table 6-12 Descriptions of SIP server parameters

Parameters	Description
SIP Server	If the platform works as the SIP server, enter the IP address of the platform.
IP Address	
Port	If the platform works as the SIP server, enter 5080 in the SIP Sever Port.
User name	User name to access the SIP server.
Password	The password to access the SIP server.
SIP Domain	If the platform works as the SIP server, keep the value null.
Device call ID	The ID number of the device that is called.

Step 3 Click to enable the SIP server function.

Step 4 Click **Apply**.

6.3.7 FTP

You can store and view the recorded videos and snapshots on the FTP server.

Select **System** > **Storage**, and then set Storage Method to **FTP**, after which you can store the recorded videos and snapshots

Step 1 Select **Network** > **FTP**.

Step 2 Configure the parameters.

Figure 6-22 FTP

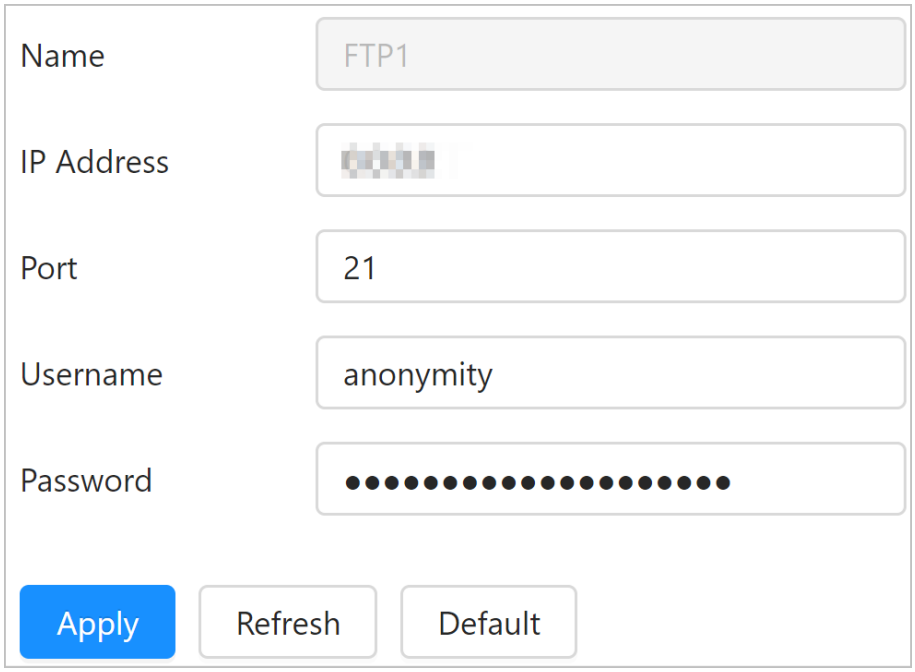


Table 6-13 Descriptions of FTP parameters

Parameters	Description
IP Address	IP address of the PC that is installed with FTP server.
Port	The port number of the FTP server.
User name	User name and password to access FTP server.
Password	

Step 3 Click **Apply**.

6.3.8 Basic Services

Configure the IP hosts (devices with IP address) that are allowed to visit the device. Only the hosts in the trusted sites list can Log in to the webpagepage. This is to enhance network and data security.

Step 1 Select **Network** > **Basic Services**.

Step 2 Click to enable the basic service according to the actual needs.

Figure 6-23 Basic services

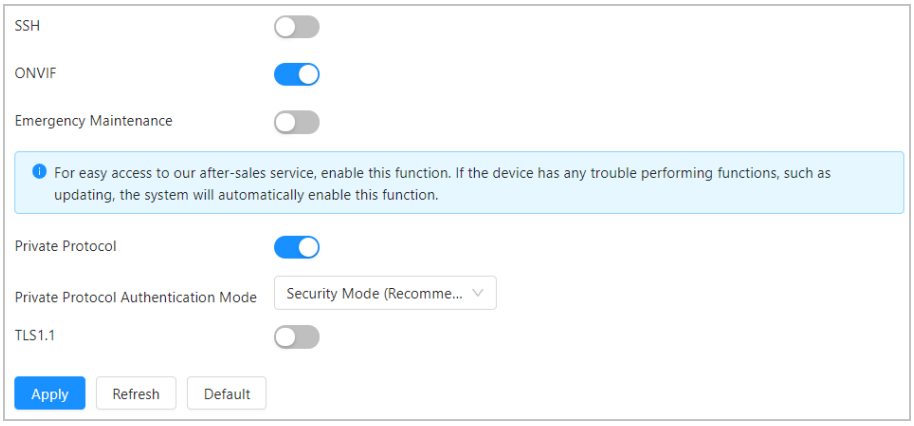


Table 6-14 Descriptions of basic service parameters

Parameters	Description
SSH	You can enable SSH (Secure Shell) authentication to perform safety management. The function is disabled by default.
ONVIF	Enabled by default. The device can connect with other network video products through this protocol.
Emergency Maintenance	For easy access to our after-sales service, enable the emergency maintenance function. If the device has any trouble performing functions, such as updating, the system will automatically enable this function.
Private Protocol	Enabled by default. Select the authentication mode from **Security Mode** and **Compatible Mode**. **Security Mode** is recommended.
Private Protocol Authentication Mode	
TSL1.1	If enabled, **TLS1.1** and **TLS1.2** are supported. If disabled, only **TLS1.2** is supported.

Step 3 Click **Apply**.

6.4 System

This section introduces system configurations, including general, date & time, user management, maintenance and more.

6.4.1 Account

You can manage users, such as add, delete, or edit them. Users include admin, added users and ONVIF users.

Only administrators can manage users and groups.

- Up to 64 users (admin user is not included) can be added, and up to 20 user groups can be added (the group with admin user is not included).
- You can manage users through users or user groups, same user name or group name are not allowed. A user must belong to 1 group at 1 time, and users in a group only have defined

authorities associated with the group.

- Online users cannot modify their own authorities.
- There is one admin by default which has the highest authorities.

6.4.1.1 Adding User

You are admin user by default. You can add users, and configure different permissions.

Procedure

Step 1 Select **System** > **Account** > **User**.

Step 2 Click **Add**.

Step 3 Configure user parameters.

Figure 6-24 Add users

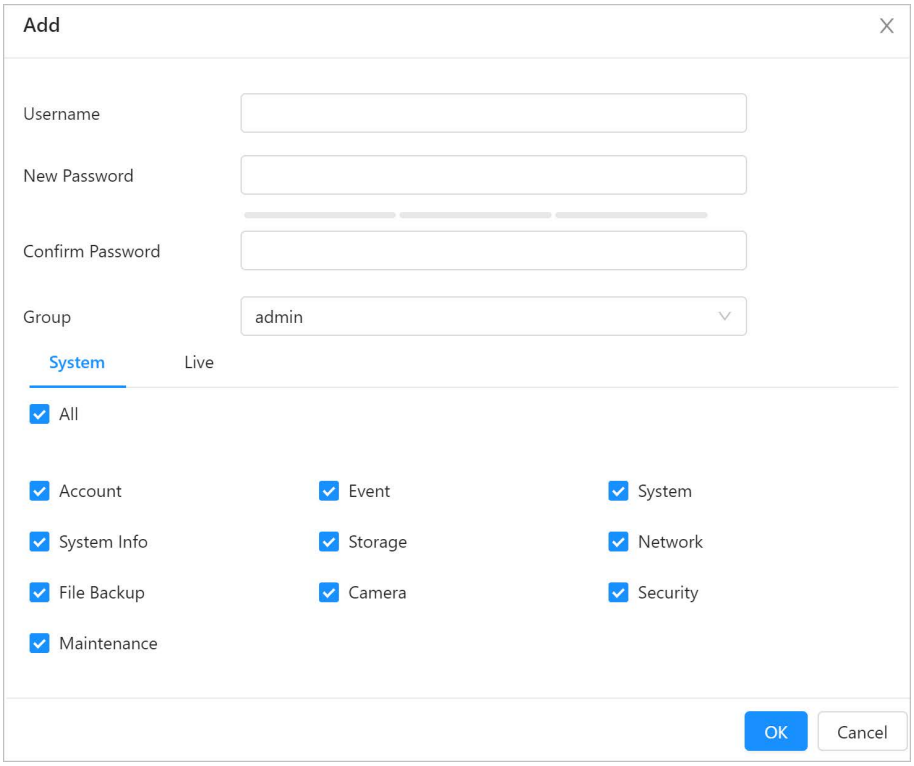


Table 6-15 Descriptions of user parameters

Parameters	Description
Username	User's unique identification. You cannot use an existing user name. The username can contain 31 characters, including numbers, letters, underlines, dashes, dots, and @.
New Password	Enter password and confirm it again. The password must consist of 8 to 32 non-blank characters and contain at least two types of characters among upper case, lower case, number, and special character (excluding ' " ; : &).
Confirm password	
Group	The group that users belong to. Each group has different authorities.

Parameters	Description
MAC	Enter MAC address. When enter the MAC address, only the computer of the MAC address can access the device.
System	Select authorities as needed. We recommend giving fewer permissions to normal users than premium users.
Live	Select the live view authority for the user to be added.

Step 4 Click **OK**.

The newly added users are displayed in the user list.

Related Operations

- Modifying User Information

  Click to edit password, group, memo or authorities.

  For admin account, you can only change the password.

- Deleting User

  Click to delete the added users.

  Admin user cannot be deleted.

6.4.1.2 Adding User Group

You have two groups named admin and user by default, and you can add new group, delete added group or edit group authority and memo.

Procedure

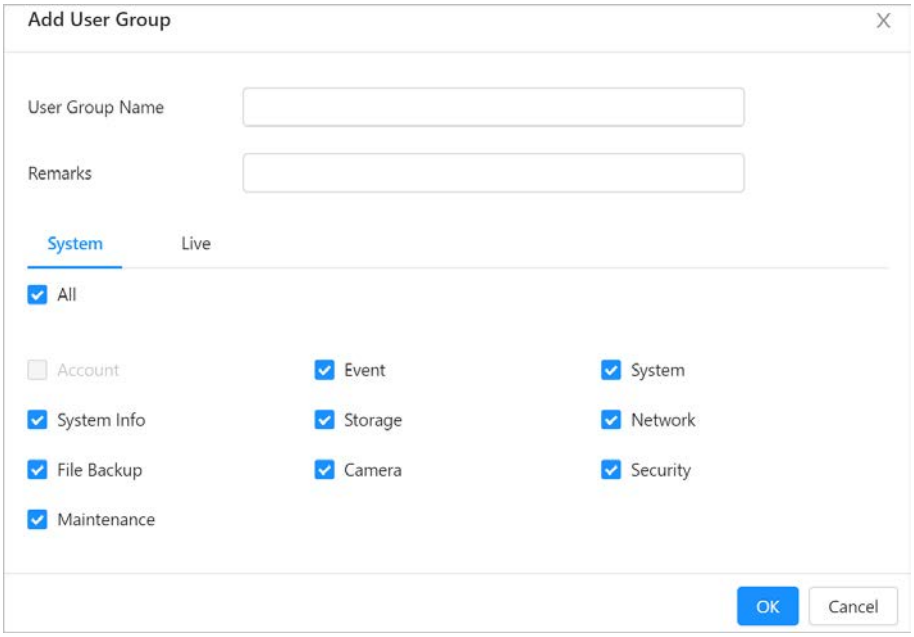
Step 1 Select **System** > **Account** > **Group**.

Step 2 Click **Add Group**.

Step 3 Enter the group name and remarks, and then select group authorities.

The username can contain 31 characters, including numbers, letters, underlines, dashes, dots, and @.

Figure 6-25 Add user groups



Step 4 Click **OK**.

The newly added group is displayed in the group list.

Related Operations

- Modifying User Group Information

  Click to edit password, group, remarks or authorities.
- Deleting User Group

  Click to delete the added user groups.

  The admin group and user group cannot be deleted.

6.4.1.3 ONVIF User

You can add, delete ONVIF user, and modify their passwords.

Procedure

Step 1 Select **System** > **Account** > **ONVIF User**.

Step 2 Click **Add**.

Step 3 Configure parameters.

Figure 6-26 Add ONVIF users

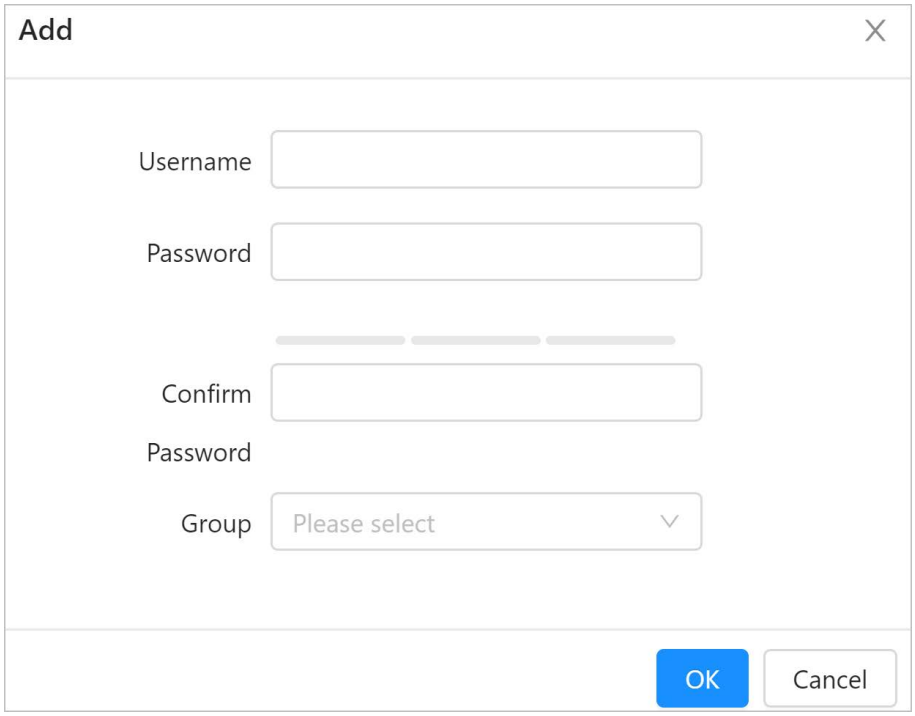


Table 6-16 Descriptions of ONVIF user parameters

Parameters	Description
Username	User's unique identification. You cannot use an existing user name. The username can contain 31 characters, including numbers, letters, underlines, dashes, dots, and @.
Password	Enter password and confirm it again. The password must consist of 8 to 32 non-blank characters and contain at least two types of characters among upper case, lower case, number, and special character (excluding ' " ; : &).
Confirm password	
Group	The group that users belong to. Each group has different authorities.

Step 4 Click **OK**.

The newly added user is displayed in the user list.

Related Operations

- Modifying User Information

  Click to edit password, group, remarks or authorities.

  For admin account, you can only change the password.

- Deleting User

  Click to delete the added users.

  The admin account cannot be deleted.

6.4.2 Time

Configure the date and time zone, DST and other parameters of the device.

Step 1 Select **System** > **Time**.

Step 2 Configure date and time parameters.

Figure 6-27 Time settings

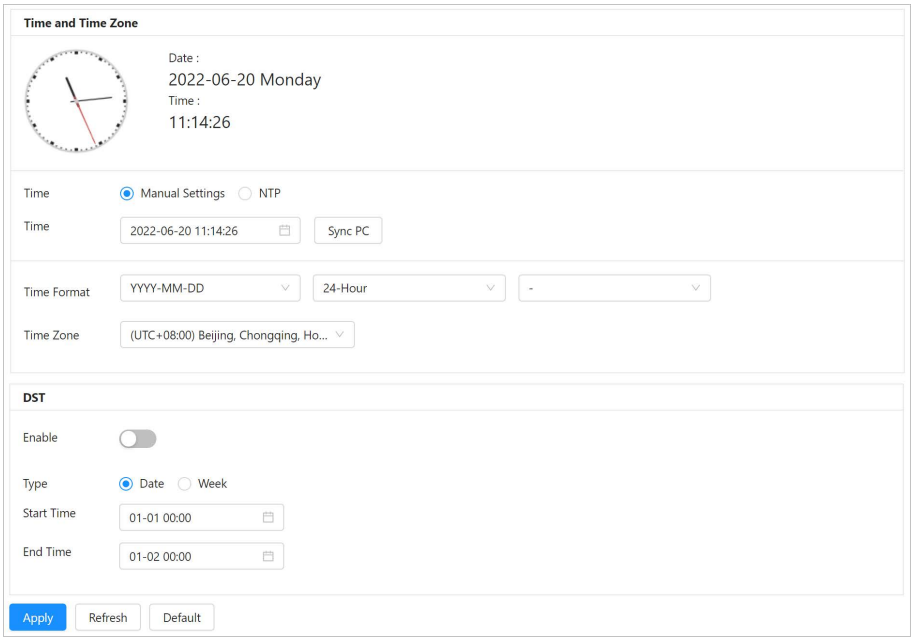


Table 6-17 Descriptions of date and time parameters

Parameters	Description
Time	Select **Manual Settings** or **NTP**. ● **Manually Setting**: Configure the parameters manually. Click **Sync PC** to sync with the time of computer. ● **NTP**: When selecting NTP, the system then syncs time with the internet server in real time. You can also enter the IP address, time zone, port, and interval of a PC which installed NTP server to use NTP. ◇ **Server**: Click **Manual Update** to sync time with the internet server in real time. ◇ **Port**: The system supports TCP protocol only and the default setting is 123 (1–65535). ◇ **Interval**: Enter the interval that you want the device to sync time from the NTP server. The maximum value is 65535 minutes.
Time Format	● Select a date format, including **YYYY-MM-DD**, **MM-DD-YYYY**, and **DD-MM-YYYY**. ● Select **24-Hour** or **12-Hour**.
Time Zone	Select according to the location of the device.

Parameters	Description
DST	Some countries or regions implement daylight saving time. Select whether to enable the daylight saving time of the device according to actual needs. 1. Click to enable the DST function. 2. Select **Type** from **Date** or **Week**. 3. Set DST start time and end time.

Step 3 Click **Apply**.

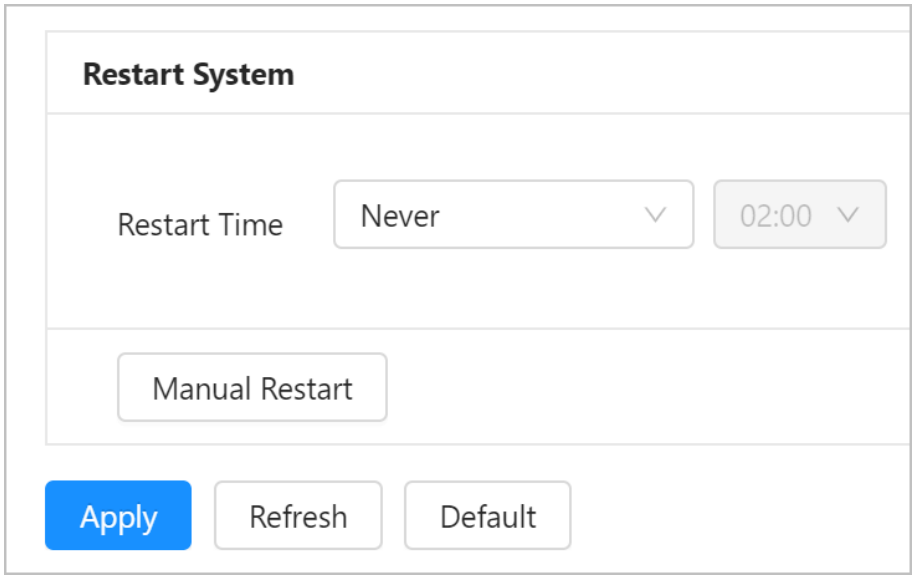
6.4.3 Maintenance

6.4.3.1 Auto Maintenance

You can restart the system manually, and set the time of auto restart.

Step 1 Select **System** > **Maintenance** > **Auto Maintain**.

Figure 6-28 Auto maintain



Step 2 Restart the device.

- In the **Restart System** area, set the restart time, and then the system will automatically restart at the defined time every week.
- Click **Manual Restart**, and then the device restarts immediately.

Step 3 Click **Apply**.

6.4.3.2 Configuring Backup Settings

Import or export system configuration files, and back them up when the configuration files are used by multiple devices.

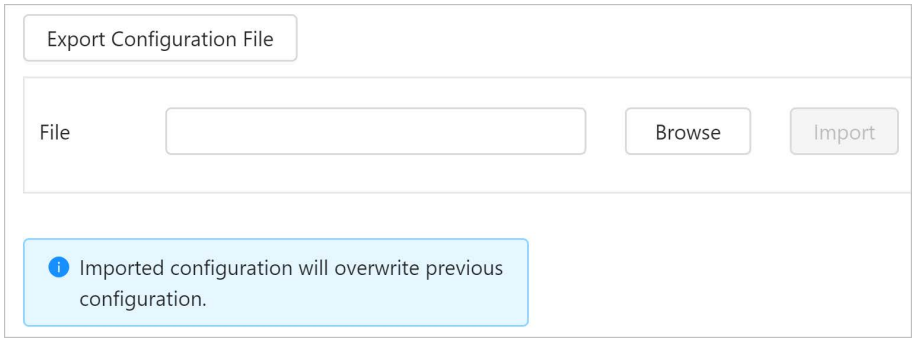
Step 1 Select **System** > **Maintenance** > **Config Backup**.

Step 2 Import or export the file.

- Export configuration information.
  Click **Export Configuration File** to export the system configuration file to local storage.

- Import configuration file
  Click **Browse**, select local configuration file, and click **Import File** to import the local system configuration file to the system.

Figure 6-29 Backup



6.4.3.3 Default

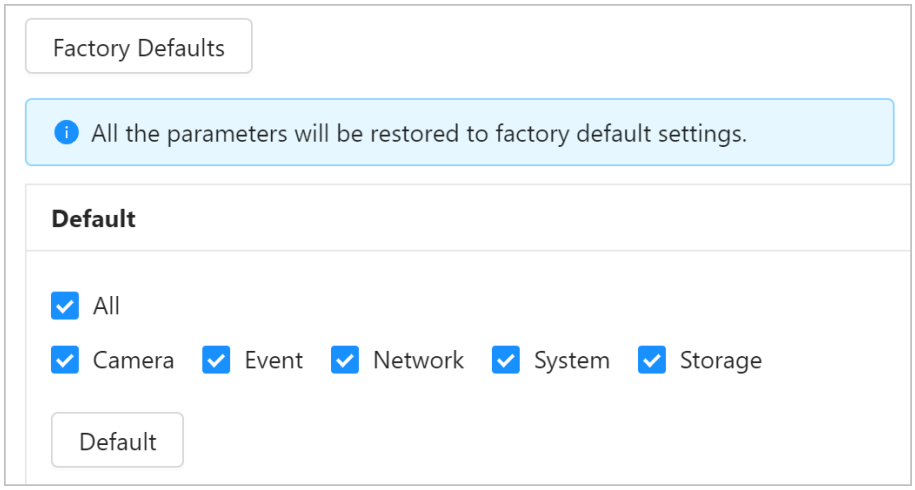
Restore the device to default configuration or factory settings.

⚠

The operation will clear the device data. Be cautious.

- Click **Factory Defaults**, and then all the configurations except IP address and account are reset to default.
- Click **Default**, and all the configurations are reset to factory settings.

Figure 6-30 Default



6.4.4 Update

⚠

- During update, do not disconnect the power supply, network, and do not restart or shut down the device.
- Select correct upgrade files; otherwise some functions might not work properly.

Step 1 Select **System** > **Update**.

Step 2 Configure parameters.

Step 3 Click **Browse**, and then select the upgrade file (.bin file) to be imported.

Step 4 Click **Update** to update the system.
The device restarts after updating is complete.

6.4.5 Storage

Select **System** > **Storage**, and then view information of the local SD card, format SD card, and set storage method for the recorded videos.
For storage methods, you can select **SD** or **FTP**.

- **SD**: Save the recorded videos in the internal SD card.
- **FTP**: Save the recorded videos in the FTP server.

6.5 System information

6.5.1 Version

Select **System Info** > **Version** to view device information such as hardware, system version, and web version.

6.5.2 Legal Information

Select **System Info** > **Legal Info** to view software license agreement, privacy policy and open source software notice.

6.6 Logs

6.6.1 Viewing Call History

Select **Log** > **Call History** to view the call history, including call types and phone number.

6.6.2 Viewing Logs

The log type includes All, System, User, Config, Event, Operation, and Security.

- **System**: Includes program start, abnormal close, close, program reboot, device close down, device reboot, system reboot, and system upgrade.
- **User**: Includes login, logout, adding user, deleting user, editing user, adding group, deleting group, and editing group.
- **Config**: Includes saving configuration, deleting configuration file, file access, file access error, and file search.
- **Event** (records events such as video detection, smart plan, alarm and abnormality): includes event start and event end.
- **Operation**: Includes configuring disk type, clearing data, hot swap, FTP state, and record mode.

- **Security**: Includes password resetting and IP filter.

Step 1 Select **Log** > **Log**.

Step 2 Set the start time and end time, and then select the log types.

Step 3 Click **Search**.

- Click or click a certain log, and then you can view the detailed information.
- Click **Backup**, and then you can back up all searching logs to local PC.

If you want to encrypt the logs, you can select **Encrypt Log Backup**, enter password, and then click **Backup**.

6.6.3 Viewing Remote Logs

Configure remote log, and you can get the related log by accessing the set address.

Step 1 Select **Log** > **Remote Log**.

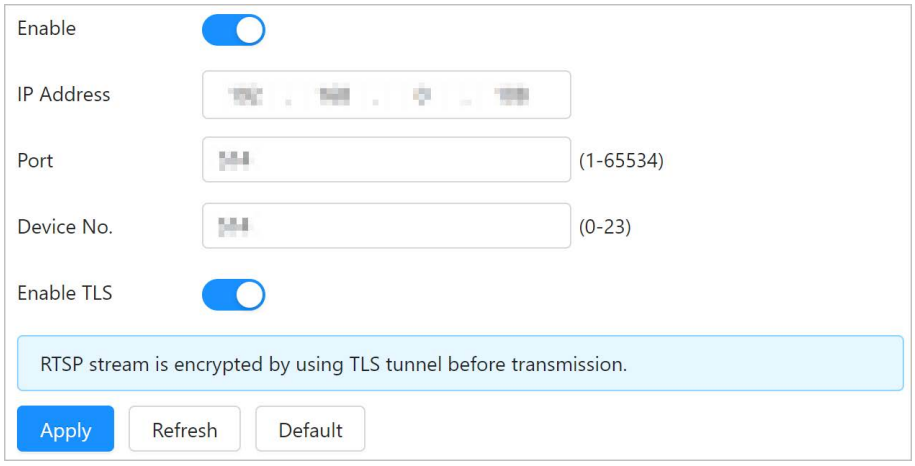
Step 2 Click to enable **Remote Log** function.

Step 3 Set IP address, port and device No. of the remote server.

Step 4 Click to enable **TLS** function.

Step 5 Click **Apply**.

Figure 6-31 Remote Log



6.7 Security

6.7.1 Security Status

Background Information

Detect the user and service, and scan the security modules to check the security status of the camera, so that when abnormality appears, you can process it timely.

- User and service detection: Detect login authentication, user status, and configuration security to check whether the current configuration conforms to recommendation.
- Security modules scanning: Scan the running status of security modules, such as audio/video transmission, trusted protection, securing warning and attack defense, not detect whether they

are enabled.

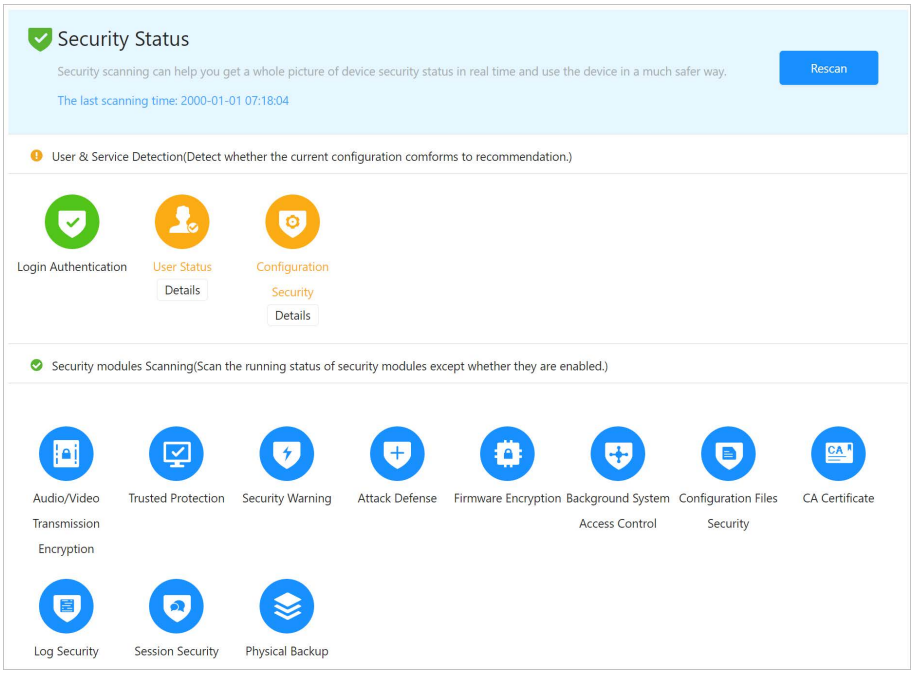
Procedure

Step 1 Select **Security** > **Security Status**.

Step 2 Click **Rescan** to scan the security status of the device.

During scanning, the icon becomes grey. When scanning is complete, the icon becomes blue.

Figure 12-1 Security status



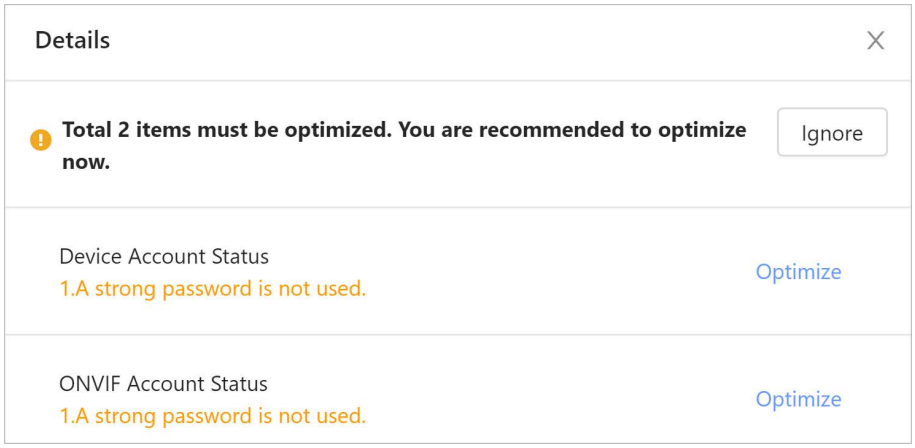
Related Operations

After scanning, different results will be displayed with different colors. Yellow indicates that the security modules are abnormal, and green indicates that the security modules are normal.

- Click **Details** to view the details of the scanning result.
- Click **Ignore** to ignore the exception, and it will not be scanned in next scanning.

  Click **Joint Detection**, and the exception will be scanned in next scanning.
- Click **Optimize**, and the corresponding page is displayed, and you can edit the configuration to clear the exception

Figure 12-1 View details



6.7.2 System Service

Only when the system service function is enabled can you use the corresponding function.

6.7.2.1 802.1x

Device can connect to LAN after passing 802.1x authentication. Both switch and device need to pass 802.1x authentication, otherwise you cannot access the device through the network.

Step 1 Select **Security** > **System Service** > **802.1x**.

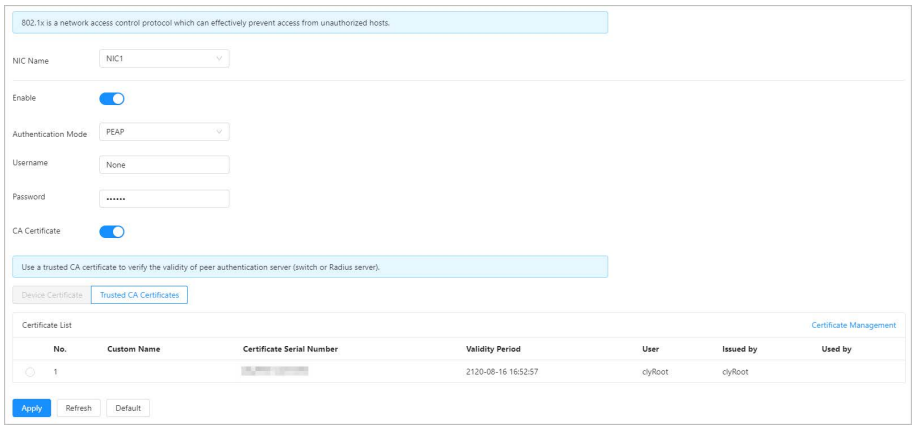
Step 2 Select the NIC name as needed, and click to enable it.

Step 3 Select the authentication mode, and then configure parameters.

- **PEAP**: Protected EAP protocol.
  1. Select **PEAP** as the authentication mode.
  2. Enter the username and password that has been authenticated on the server.
  3. Click next to CA certificate, and select the trusted CA certificate in list.

     If there is no certificate in the list, click **Certificate Management** at the left navigation bar. For details, see "6.7.4.2 Installing Trusted CA Certificate".

Figure 12-1 802.1x（PEAP）

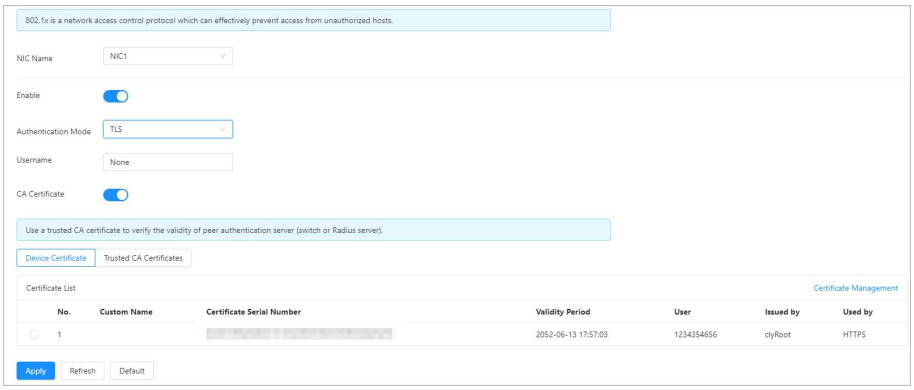


- **TLS**: TLS: Transport Layer Security. It is applied in two communication application programs to guarantee the security and integrity of the data.

1. Select **TLS** as the authentication mode.
2. Enter the username.
3. Click next to CA certificate, and select the trusted CA certificate in list.

If there is no certificate in the list, click **Certificate Management** at the left navigation bar. For details, see "6.7.4.2 Installing Trusted CA Certificate".

Figure 12-1 802.1x (TLS)



Step 4 Click **Apply**.

6.7.2.2 HTTPS

Create a certificate or upload an authenticated certificate, and then you can log in through HTTPS with your PC. The HTTPS can protect page authenticity on all types of websites, secure accounts, and keep user communications, identity, and web browsing private.

We recommend you enabling HTTPS service. If this service is disabled, there might be risks of communication data leakage.

Procedure

Step 1 Select **Security** > **System Service** > **HTTPS**.

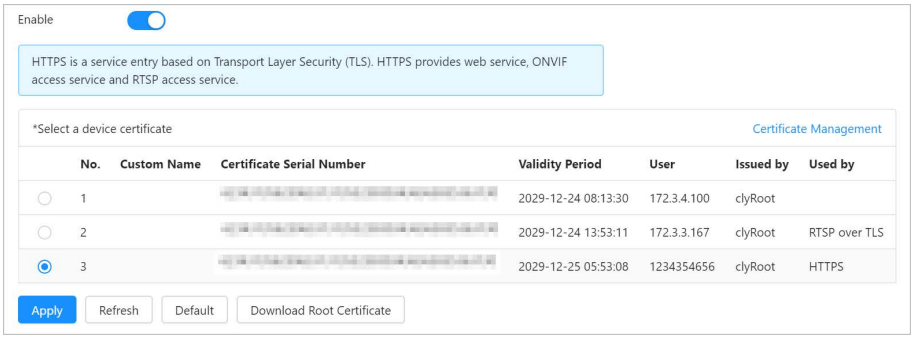
Step 2 Click to enable HTTPS function.

After enabling HTTPS, TLSv1.1 and earlier versions are selected by default. But there is a safety risk to enable the earlier versions of TLSv1.1. Be cautious.

Step 3 Select device certificate.

If there is no certificate in the list, click **Certificate Management** at the left navigation bar. For details, see "6.7.4.2 Installing Trusted CA Certificate".

Figure 12-1 HTTPS



Step 4 Click **Apply**.

Result

Enter http://(IP address) in the browser address bar to log in.

- If the certificate was successfully installed, the login page will be displayed.
- If the certificate has not been installed, the system prompts certificate errors.

6.7.3 Attack Defense

6.7.3.1 Firewall

Configure firewall to limit access to the device.

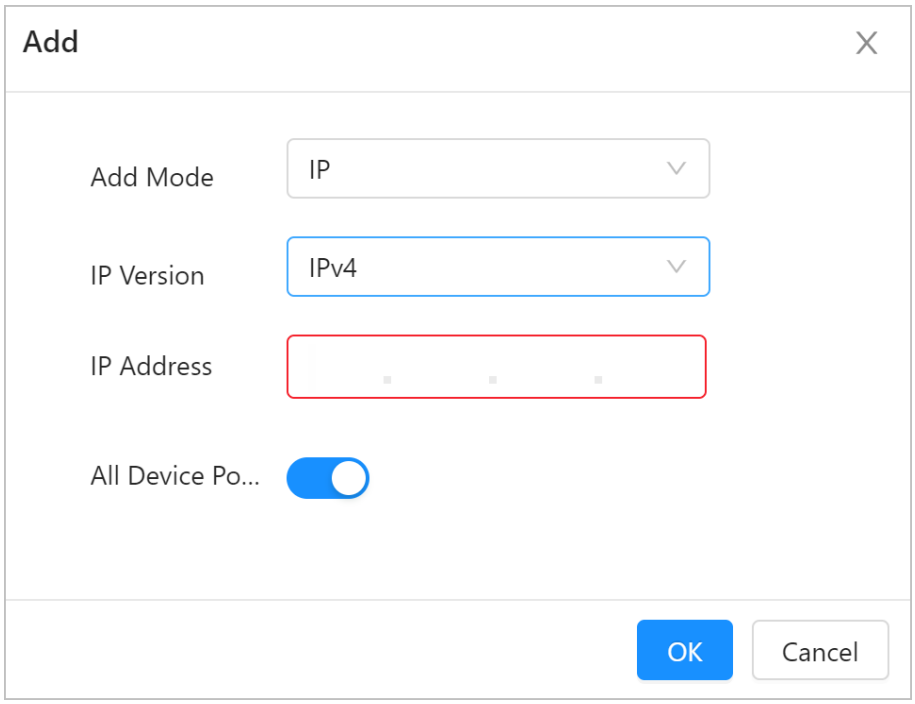
Step 1 Select **Security** > **Attack Defense** > **Firewall**.

Step 2 Click to enable the firewall function.

Step 3 Select the mode: **Allowlist** and **Blocklist**.

Step 4 Click **Add**.

Figure 12-1 Firewall



- **Allowlist**: Only when the IP/MAC of your computer in the allow list, can you access the device. Ports are the same.
- **Blocklist**: When the IP/MAC of your computer is in the block list, you cannot access the device. Ports are the same.

- IP and MAC of the device cannot be set in the allow list or block list.
- When adding MAC address, you cannot set the port.
- MAC address verification takes effect only when the IP address of the terminal and PC of the user are in the same LAN.
- When the terminal is accessed through WAN, the system can only verify the MAC address of the router.

Step 5 Configure the parameters.

Table 12-1 Descriptions of firewall parameters

Parameter	Description
Add Mode	Select IP Address, IP Segment, MAC Address or All IP Addresses. • **IP**: Select the IP version and enter the IP address of the host. • **IP Segment**: Select the IP version, and then enter the **Start Address** and **End Address** of the segment. • **MAC**: Enter the MAC address to be added.
IP Address	Set as the IP address of the devices included in the white list or black list.
Start Port	Set the access port. Allow terminals in the allow list or block list to access its designated port.
End Port	

Step 6 Click **OK**.

The system goes back to the **Firewall** page.

Step 7 Click **Apply**.

6.7.3.2 Account Lockout

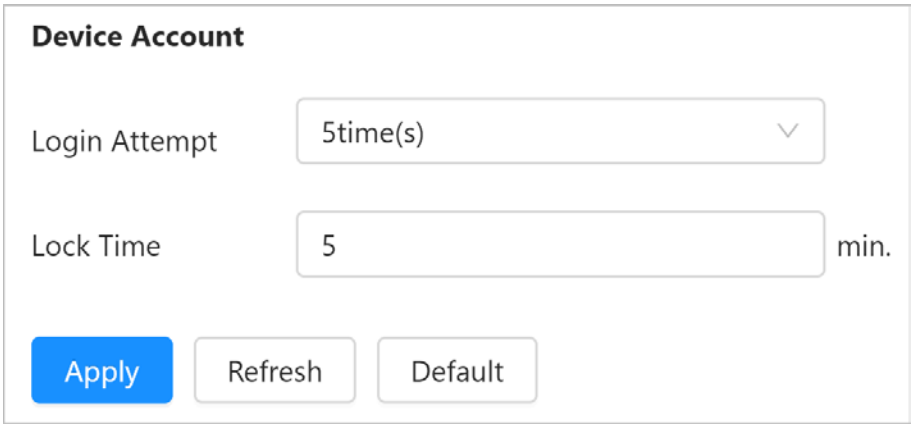
Set the allowed times of login attempts and lock time to improve security.

Step 1 Select **Security** > **Attack Defense** > **Account Lockout**.

Step 2 Configure the login attempt and lock time for device account.

- **Login Attempt**: Upper limit of login attempts. If you consecutively enter a wrong password more than the configured value, the account will be locked.
- **Lock Time**: The period during which you cannot login after the login attempts reaches upper limit.

Figure 12-1 Account lockout



Step 3 Click **Apply**.

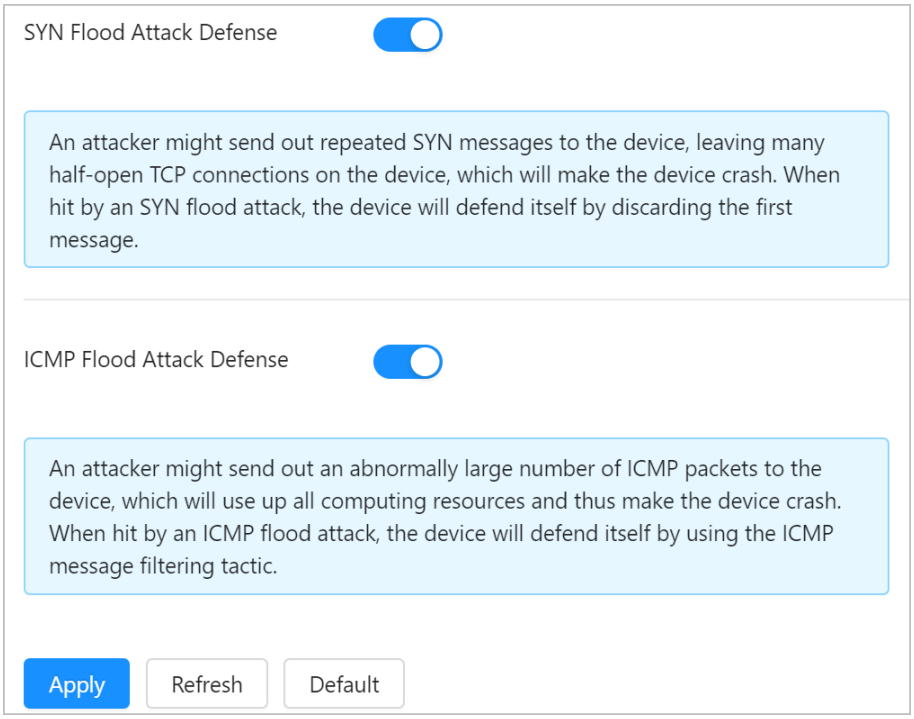
6.7.3.3 Anti-DoS Attack

You can enable **SYN Flood Attack Defense** and **ICMP Flood Attack Defense** to defend the device against Dos attack.

Step 1 Select **Security** > **Attack Defense** > **Anti-DoS Attack**.

Step 2 Click next to **SYN Flood Attack Defense** and **ICMP Flood Attack Defense** to defend the device against Dos attack.

Figure 12-1 Anti-DoS attack



Step 3 Click **Apply**.

6.7.4 CA Certificate

6.7.4.1 Installing Device Certificate

Create a certificate or upload an authenticated certificate, and then you can log in through HTTPS with your PC.

6.7.4.1.1 Creating Certificate

Create certificate in the device.

Procedure

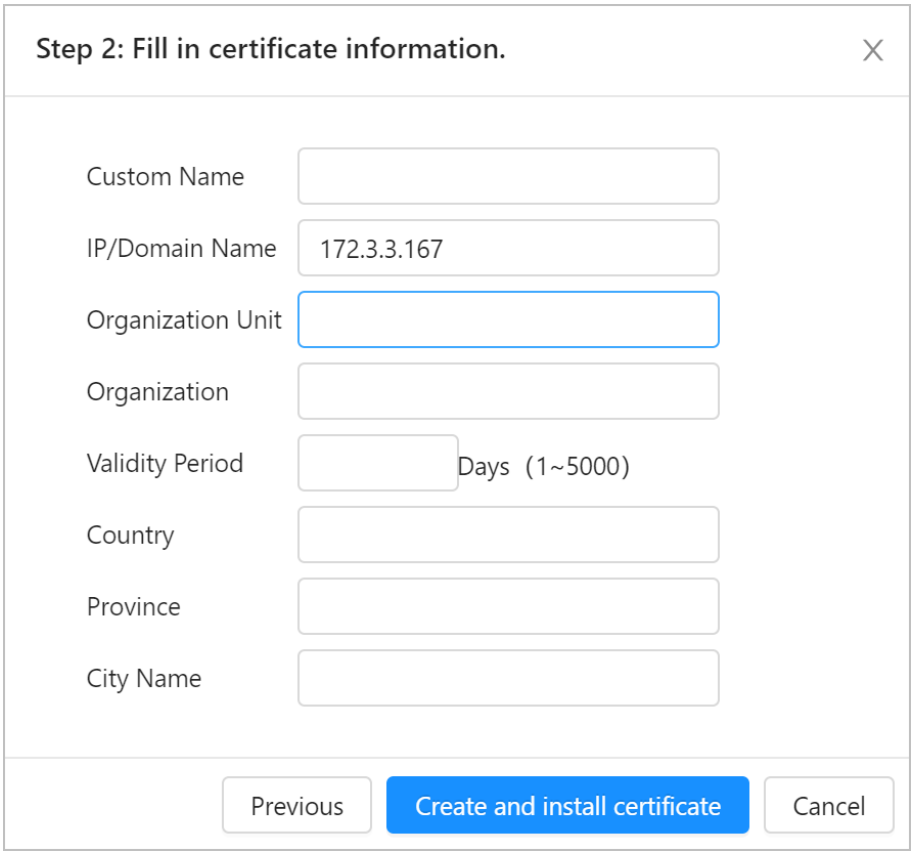
Step 1 Select **Security** > **CA Certificate** > **Device Certificate**.

Step 2 Click **Install Device Certificate**.

Step 3 Select **Create Certificate**, and then click **Next**.

Step 4 Enter the certificate information.

Figure 12-1 Certificate information (1)



Step 5 Click **Create and install certificate**.

After the certificate is created successfully, you can view the created certificate on the **Device Certificate** page.

Related Operations

- Editing the Custom Name of the Certificate

  Click **Enter Edit Mode**, you can edit the custom name of the certificate.
- Downloading Certificate

  Click to download the certificate.
- Deleting Certificate

  Click to delete the certificate.

6.7.4.1.2 Applying for and Importing CA Certificate

Import the third-party CA certificate to the device.

Procedure

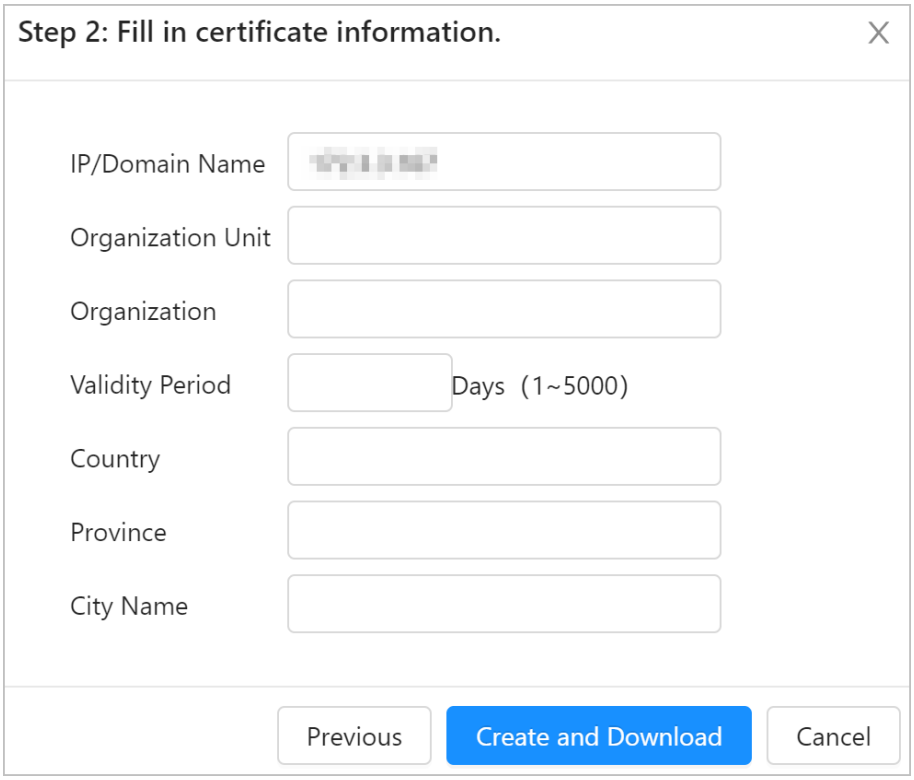
Step 1 Select **Security** > **CA Certificate** > **Device Certificate**.

Step 2 Click **Install Device Certificate**.

Step 3 Select **Apply for CA Certificate and Import (Recommended)**, and then click **Next**.

Step 4 Enter the certificate information.

Figure 12-1 Certificate information (2)



Step 5 Click **Create and Download**.

Save the request file to your PC.

Step 6 Apply the CA certificate from the third-party certificate authority.

Step 7 Import the signed CA certificate.

1) Save the CA certificate to the PC.
2) Do Step1 to Step3, and click **Browse** to select the signed CE certificate.
3) Click **Install and Import**.

   After the certificate is created successfully, you can view the created certificate on the **Device Certificate** page.

   - Click **Recreate** to create the request file again.
   - Click **Import Later** to import the certificate next time.

Related Operations

- Editing the Custom Name of the Certificate

  Click **Enter Edit Mode**, you can edit the custom name of the certificate.
- Downloading Certificate

  Click to download the certificate.
- Deleting Certificate

  Click to delete the certificate.

6.7.4.1.3 Installing Existing Certificate

Import the existing third-party certificate to the camera. When apply for the third-party certificate, you also need to apply for the private key file and private key password.

Procedure

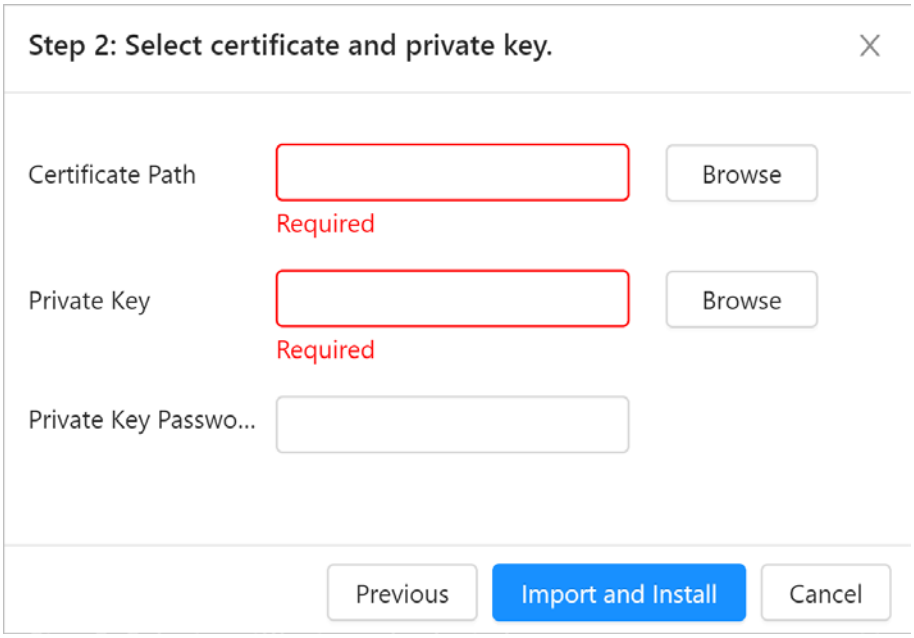
Step 1 Select **Security** > **CA Certificate** > **Device Certificate**.

Step 2 Click **Install Device Certificate**.

Step 3 Select **Install Existing Certificate**, and click **Next**.

Step 4 Click **Browse** to select the certificate and private key file, and enter the private key password.

Figure 12-1 Certificate and private key



Step 5 Click **Import and Install**.

After the certificate is created successfully, you can view the created certificate on the **Device Certificate** page.

Related Operations

- Editing the Custom Name of the Certificate
  Click **Enter Edit Mode**, you can edit the custom name of the certificate.
- Downloading Certificate
  Click to download the certificate.
- Deleting Certificate
  Click to delete the certificate.

6.7.4.2 Installing Trusted CA Certificate

CA certificate is a digital certificate for the legal identity of the device. For example, when the device accesses the LAN through 802.1x, the CA certificate is required.

Procedure

Step 1 Select **Security** > **CA Certificate** > **Trusted CA Certificates**.

Step 2 Select **Installing Trusted Certificate**.

Step 3 Click **Browse** to select the certificate.

After the certificate is created successfully, you can view the created certificate on the **Trusted CA Certificate** page.

Related Operations

- Editing the Custom Name of the Certificate
  Click **Enter Edit Mode**, you can edit the custom name of the certificate.
- Downloading Certificate
  Click to download the certificate.
- Deleting Certificate
  Click to delete the certificate.

6.7.5 Video Encryption

The device supports audio and video encryption during data transmission.

We recommend you enable video encryption function. There might be safety risk if this function is disabled.

Step 1 Select **Security** > **Video Encryption**.

Step 2 Configure the parameters.

Figure 12-1 Video encryption

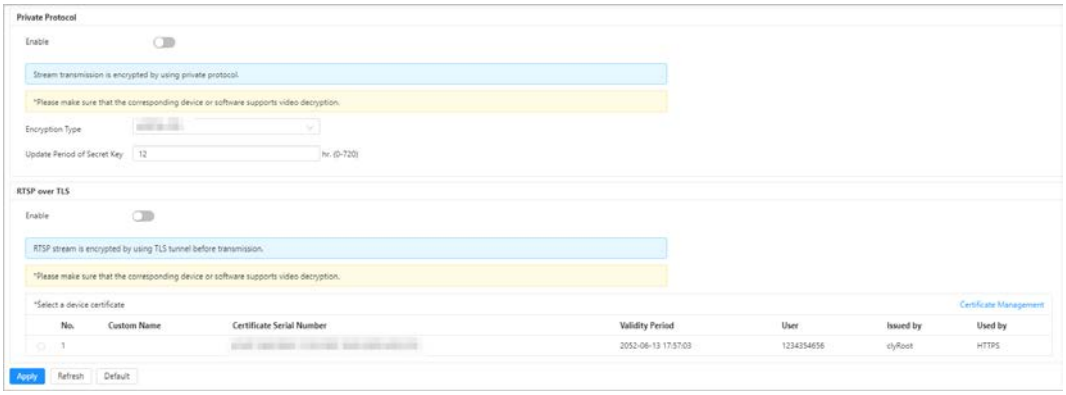


Table 12-1 Descriptions of video encryption parameters

Area	Parameter	Description
Private Protocol	Enable	Enables stream frame encryption by using private protocol. There might be safety risk if this service is disabled.
	Encryption Type	Use the default setting.
	Update Period of Secret Key	Secret key update period. Value range: 0–720 hours. 0 means never update the secret key. Default value: 12.
RTSP over TLS	Enable	Enables RTSP stream encryption by using TLS. There might be safety risk if this service is disabled.

Area	Parameter	Description
	Select a device certificate	Select a device certificate for RTSP over TLS.

Step 3 Click **Apply**.

6.8 Record

View and download the videos within the specified periods.

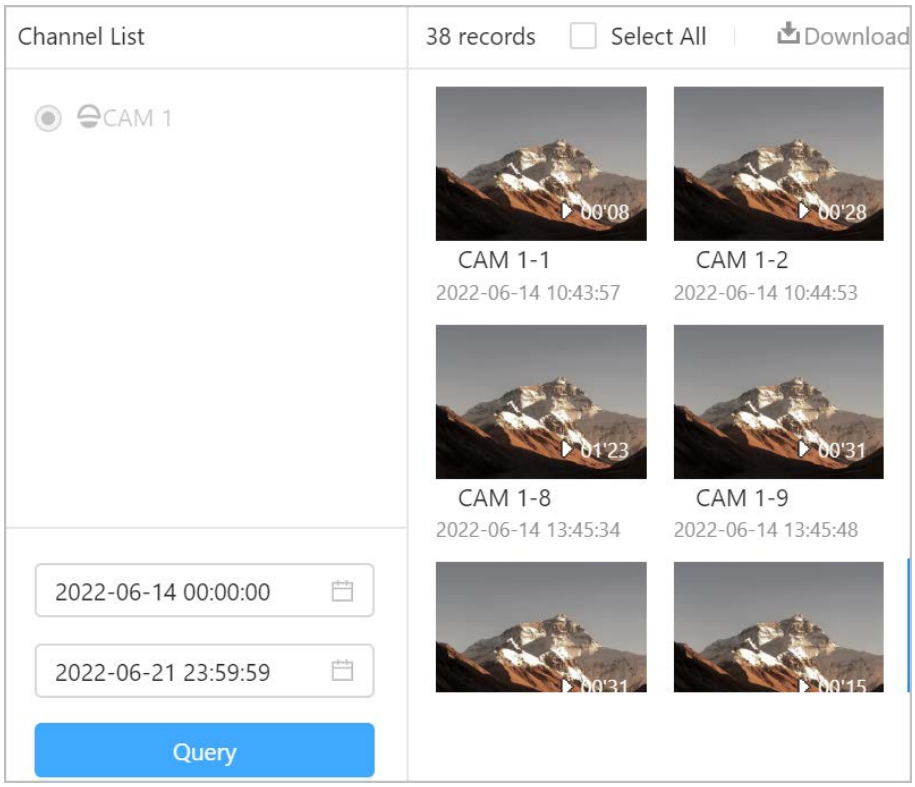
The device only has one channel.

Step 1 Log in to the webpage, click **Record**.

Step 2 Set the start and end time, and then click **Search** to view the recording videos.

Select one or several recording videos, and then click to download them.

Figure 6-44 View recording videos



6.9 Picture

View and download the pictures within the specified periods.

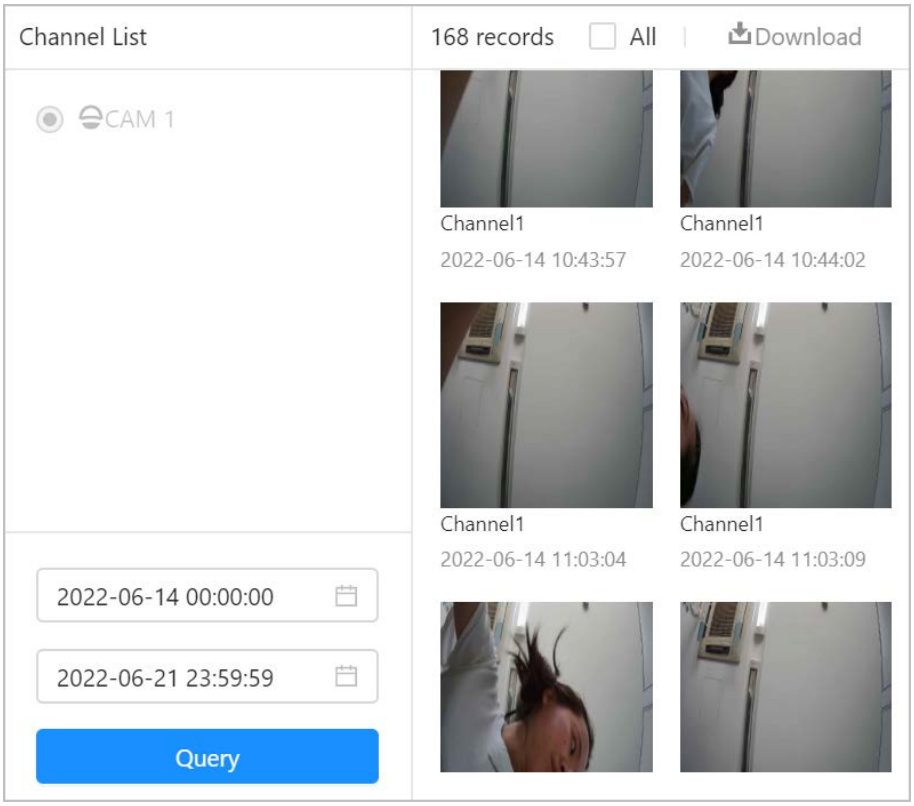
The device only has one channel.

Step 1 Log in to the webpage, click **Picture**.

Step 2 Set the start and end time, and then click **Search** to view the pictures.

Select one or several pictures, and then click to download them.

Figure 6-45 View pictures



Appendix 1 Cybersecurity Recommendations

Cybersecurity is more than just a buzzword: it's something that pertains to every device that is connected to the internet. IP video surveillance is not immune to cyber risks, but taking basic steps toward protecting and strengthening networks and networked appliances will make them less susceptible to attacks. Below are some tips and recommendations from Dahua on how to create a more secured security system.

Mandatory actions to be taken for basic device network security:

1. **Use Strong Passwords**

   Please refer to the following suggestions to set passwords:

   - The length should not be less than 8 characters.
   - Include at least two types of characters; character types include upper and lower case letters, numbers and symbols.
   - Do not contain the account name or the account name in reverse order.
   - Do not use continuous characters, such as 123, abc, etc.
   - Do not use overlapped characters, such as 111, aaa, etc.

2. **Update Firmware and Client Software in Time**

   - According to the standard procedure in Tech-industry, we recommend to keep your device (such as NVR, DVR, IP camera, etc.) firmware up-to-date to ensure the system is equipped with the latest security patches and fixes. When the device is connected to the public network, it is recommended to enable the "auto-check for updates" function to obtain timely information of firmware updates released by the manufacturer.
   - We suggest that you download and use the latest version of client software.

"Nice to have" recommendations to improve your device network security:

1. **Physical Protection**

   We suggest that you perform physical protection to device, especially storage devices. For example, place the device in a special computer room and cabinet, and implement well-done access control permission and key management to prevent unauthorized personnel from carrying out physical contacts such as damaging hardware, unauthorized connection of removable device (such as USB flash disk, serial port), etc.

2. **Change Passwords Regularly**

   We suggest that you change passwords regularly to reduce the risk of being guessed or cracked.

3. **Set and Update Passwords Reset Information Timely**

   The device supports password reset function. Please set up related information for password reset in time, including the end user's mailbox and password protection questions. If the information changes, please modify it in time. When setting password protection questions, it is suggested not to use those that can be easily guessed.

4. **Enable Account Lock**

   The account lock feature is enabled by default, and we recommend you to keep it on to guarantee the account security. If an attacker attempts to log in with the wrong password several times, the corresponding account and the source IP address will be locked.

5. **Change Default HTTP and Other Service Ports**

   We suggest you to change default HTTP and other service ports into any set of numbers between

1024–65535, reducing the risk of outsiders being able to guess which ports you are using.

6. **Enable HTTPS**
   We suggest you to enable HTTPS, so that you visit Web service through a secure communication channel.
7. **MAC Address Binding**
   We recommend you to bind the IP and MAC address of the gateway to the device, thus reducing the risk of ARP spoofing.
8. **Assign Accounts and Privileges Reasonably**
   According to business and management requirements, reasonably add users and assign a minimum set of permissions to them.
9. **Disable Unnecessary Services and Choose Secure Modes**
   If not needed, it is recommended to turn off some services such as SNMP, SMTP, UPnP, etc., to reduce risks.
   If necessary, it is highly recommended that you use safe modes, including but not limited to the following services:
   - SNMP: Choose SNMP v3, and set up strong encryption passwords and authentication passwords.
   - SMTP: Choose TLS to access mailbox server.
   - FTP: Choose SFTP, and set up strong passwords.
   - AP hotspot: Choose WPA2-PSK encryption mode, and set up strong passwords.
10. **Audio and Video Encrypted Transmission**
    If your audio and video data contents are very important or sensitive, we recommend that you use encrypted transmission function, to reduce the risk of audio and video data being stolen during transmission.
    Reminder: encrypted transmission will cause some loss in transmission efficiency.
11. **Secure Auditing**
    - Check online users: we suggest that you check online users regularly to see if the device is logged in without authorization.
    - Check device log: By viewing the logs, you can know the IP addresses that were used to log in to your devices and their key operations.
12. **Network Log**
    Due to the limited storage capacity of the device, the stored log is limited. If you need to save the log for a long time, it is recommended that you enable the network log function to ensure that the critical logs are synchronized to the network log server for tracing.
13. **Construct a Safe Network Environment**
    In order to better ensure the safety of device and reduce potential cyber risks, we recommend:
    - Disable the port mapping function of the router to avoid direct access to the intranet devices from external network.
    - The network should be partitioned and isolated according to the actual network needs. If there are no communication requirements between two sub networks, it is suggested to use VLAN, network GAP and other technologies to partition the network, so as to achieve the network isolation effect.
    - Establish the 802.1x access authentication system to reduce the risk of unauthorized access to private networks.
    - Enable IP/MAC address filtering function to limit the range of hosts allowed to access the

device.

More information

Please visit Dahua official website security emergency response center for security announcements and the latest security recommendations.

ENABLING A SAFER SOCIETY AND SMARTER LIVING

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