



Video Intercom Station

User Manual

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Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
 Danger	Indicates a hazardous situation which, if not avoided, will or could result in death or serious injury.
 Caution	Indicates a potentially hazardous situation which, if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
 Note	Provides additional information to emphasize or supplement important points of the main text.

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Chapter 1 Activation and Login

1.1 Activation

For the first-time access, you need to activate the device by setting an admin password. No operation is allowed before activation. The device supports multiple activation methods, such as activation via HiTools Delivery, web browser, and iVMS-4200 Client.



Note

Refer to the user manual of iVMS-4200 Client for the activation via client software.

1.1.1 Default Information

The device default information is shown as below.

- Default IP address: 192.168.1.64
- Default user name: admin

1.1.2 Activate via HiTools Delivery

HiTools Delivery aims to streamline and enhance the activation, networking, and batch configuration for various devices. You can use the software to detect, activate, and modify the IP addresses of multiple devices over the LAN.

Before You Start

- Set the device and the computer that runs the software to the same network segment.
- Access the official website (<https://www.hikvision.com/en>) and enter **Support** → **Download** → **Software** → **HiTools** → **HiTools Delivery** to download HiTools Delivery and install it according to the prompts.

Steps

1. Run the software.
2. Click **Home Page** → **Search** → **Current Subnet**. Click **Refresh**, and the list will display all the online devices in the same network segment.
3. Select the inactive device(s) in the list. Set a new password according to the popup requirements and confirm the password.
4. Click **Activation**. The device activation status will change to **Activated** after successful activation.

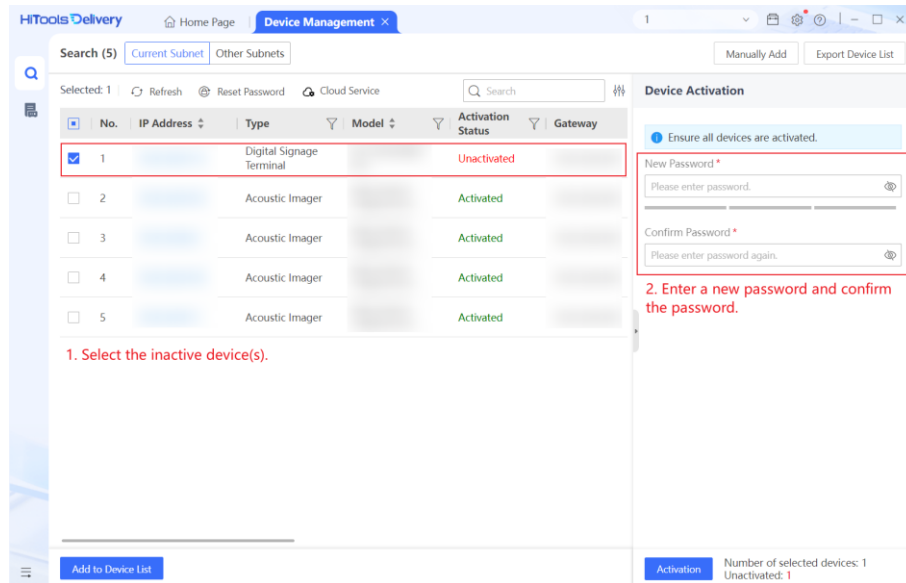


Figure 1-1 Activation

5. Optional: Change the IP address of the device.

- 1) On **Current Subnet** interface, select multiple devices that need to change the IP addresses.
- 2) On the right **Network Parameter** window, set the start IP address, port No., IPv4 subnet mask, IPv4 gateway, etc., and the selected devices will be automatically assigned to increasing IP addresses. Or check **Enable DHCP** to assign dynamic IP addresses.
- 3) Enter the admin password and click **OK**.

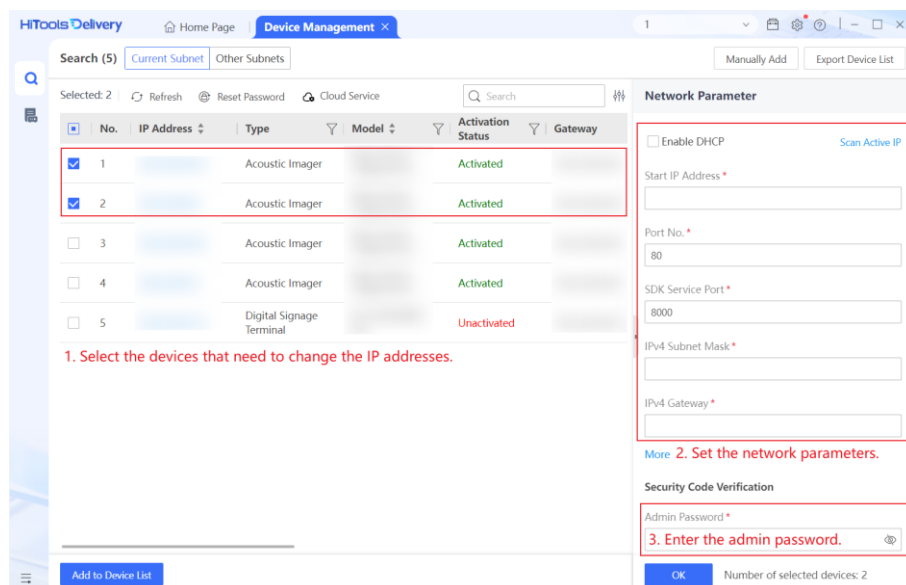


Figure 1-2 Modify Network Parameters

Note

- Set the device IP address to the same network segment with that of your computer.
- You can click **Scan Active IP** to detect and view the available IP addresses. Refer to the help of

HiTools Delivery for details.

- You can also click **Home Page** → **Maintenance** → **Change IP** to change the IP addresses in batch by exporting and importing the template. Refer to the help of HiTools Delivery for details.
-

1.1.3 Activate via Web Browser

Use web browser to activate the device. For the device with the DHCP enabled by default, use SADP software or client software to activate the device.

Before You Start

Ensure the device and the computer are in the LAN with the same network segment.

Steps

1. Change the IP address of your computer to the same network segment as the device.
 2. Open the web browser, and enter the default IP address of the device to enter the activation interface.
 3. Create and confirm the admin password.
-



Caution

STRONG PASSWORD RECOMMENDED-We highly recommend you create a strong password of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

4. Click **OK** to complete activation.
5. Go to the network settings interface to modify IP address of the device.

1.2 Login

You can log in to the device via web browser for further operations such as live view and local configuration.

Before You Start

Connect the device to the network directly, or via a switch or a router.

Steps

1. Open the web browser, and enter the IP address of the device to enter the login interface.
 2. Optional: Select the language.
 3. Enter **User Name** and **Password**.
 4. Click **Login**.
-

Note

- If live view failed, click  on the upper right corner of the interface to download the plug-in and install it.
 - Close the web browser to install the plug-in, or the installation may fail. If you still cannot realize live view after installing the plug-in, try to uninstall the plug-in and reinstall.
-

5. Reopen the web browser after the installation of the plug-in and repeat steps 1 to 4 to login.
6. Optional: Click  on the upper right corner of the interface to log out of the device.

1.3 Download Plug-in

No plug-in mode is enabled by default. In no-plug in mode, "No Plug-in Mode" prompt will appear on the upper right corner of the interface. You can click  to download the plug-in. Close the browser to install the plug-in to the computer. Then access to the IP address of the device again, and the "No Plug-in Mode" prompt will disappear from the upper right corner of the interface.



Figure 1-3 Download Plug-in

Chapter 2 Network Configuration

2.1 Set IP Address

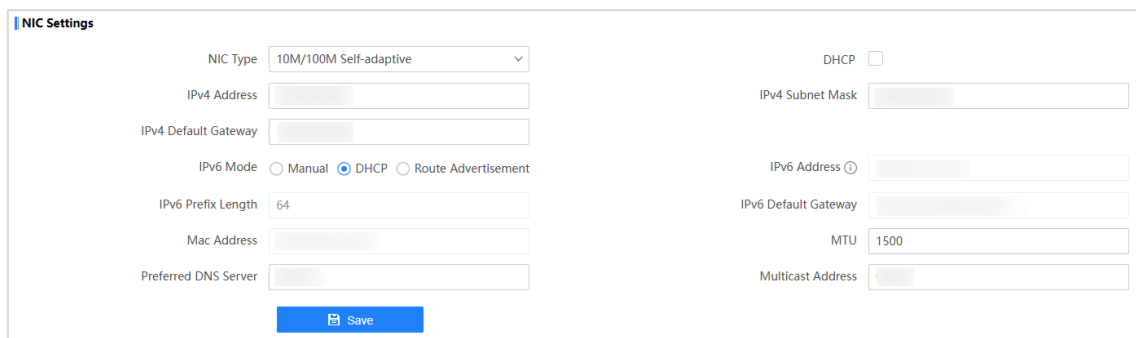
IP address must be properly configured before you operate the device over network. IPv4 and IPv6 are both supported. Both versions can be configured simultaneously without conflicting to each other.

Steps

Note

The supported parameters vary with different models. The actual device prevails.

1. Go to **Configuration** → **Network** → **Network Parameters** → **Network Interface**.



The image shows a 'NIC Settings' configuration window. It contains two columns of settings. The left column includes: 'NIC Type' (a dropdown menu showing '10M/100M Self-adaptive'), 'IPv4 Address' (a text input field), 'IPv4 Default Gateway' (a text input field), 'IPv6 Mode' (radio buttons for 'Manual', 'DHCP' (which is selected), and 'Route Advertisement'), 'IPv6 Prefix Length' (a text input field showing '64'), 'Mac Address' (a text input field), and 'Preferred DNS Server' (a text input field). The right column includes: 'DHCP' (a checkbox), 'IPv4 Subnet Mask' (a text input field), 'IPv6 Address' (a text input field with a circular icon to its left), 'IPv6 Default Gateway' (a text input field), 'MTU' (a text input field showing '1500'), and 'Multicast Address' (a text input field). At the bottom center is a blue 'Save' button with a floppy disk icon.

Figure 2-1 Set IP Address

2. Set network parameters.

NIC Type

Select a NIC (Network Interface Card) type according to your network condition.

IPv4

Two modes are available.

DHCP

The device automatically gets the IP parameters from the network if you check **DHCP**. The device IP address is changed after enabling the function. You can use SADP to get the device IP address.

Note

The network that the device is connected to should support DHCP (Dynamic Host Configuration Protocol).

Manual

You can set the device IP parameters manually. Enter **IPv4 Address**, **IPv4 Subnet Mask**, and **IPv4 Default Gateway**.

IPv6

Three IPv6 modes are available.

Route Advertisement

The IPv6 address is generated by combining the route advertisement and the device Mac address.



Note

Route advertisement mode requires the support from the router that the device is connected to.

DHCP

The IPv6 address is assigned by the server, router, or gateway.

Manual

Enter **IPv6 Address**, **IPv6 Prefix Length**, and **IPv6 Default Gateway**. Consult the network administrator for required information.

MTU

It stands for maximum transmission unit. It is the size of the largest protocol data unit that can be communicated in a single network layer transaction.

The valid value range of MTU is 1280 to 1500.

Multicast Address

Multicast is group communication where data transmission is addressed to a group of destination devices simultaneously. After setting the IP address of the multicast host, you can send the source data efficiently to multiple receivers.

DNS

It stands for domain name server. It is required if you need to visit the device with domain name. And it is also required for some applications (e.g., sending email). Set **Preferred DNS Address** properly if needed.

3. Click **Save**.

2.2 Set Port

The device port can be modified when the device cannot access the network due to port conflicts. Go to **Configuration** → **Network** → **Network Parameters** → **Port** for port settings.

☒ Enable HTTP Port	80
☒ Enable HTTPS Port	443
☒ Enable RTSP Port	554
☐ Enable SDK Port	8000
☒ Enable SADP Port	V3.0

Save

Figure 2-2 Set Port

Enable HTTP Port

It refers to the port through which the browser accesses the device. For example, when the HTTP port is modified to 81, you need to enter ***http://192.168.1.64:81*** in the browser address bar for login.

Enable HTTPS Port

It refers to the port through which the browser accesses the device, but certificate verification is needed.

Enable RTSP Port

RTSP (Real-Time Streaming Protocol) is a communication protocol used to control servers that stream media content over the Internet. It helps in setting up and managing connections between devices for streaming audio or video. RTSP ensures that media players and servers can communicate smoothly, allowing users to play, pause, adjust volume, and perform other actions while streaming content.

Enable SDK Port

It refers to the port through which the client adds the device.

Enable SADP Port

It refers to the port through which the SADP software searches the device. Select the SADP version.

Note

- After editing the port, access to the device via the new port.
 - Reboot the device to bring the new settings into effect.
 - The supported ports vary with different models. The actual device prevails.
-

2.3 Set DDNS

You can use the Dynamic DNS (DDNS) for network access. The dynamic IP address of the device can be mapped to a domain name resolution server to realize the network access via domain

name.

Before You Start

- Register the domain name on the DDNS server.
- Set the LAN IP address, subnet mask, gateway, and DNS server parameters. Refer to [**Set IP Address**](#) for details.
- Complete port mapping. The default ports are 80, 8000, and 554.

Steps

1. Go to **Configuration** → **Network** → **Network Parameters** → **DDNS**.
2. Enable DDNS.

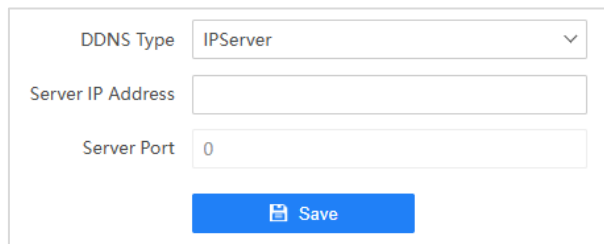


Figure 2-3 Set DDNS

3. Enter the server address and other information.

Note

You can select **IPServer**, **DynDNS**, and **NO-IP** for the DDNS type.

4. Click **Save**.
5. Access the device.

By Browsers

Enter the domain name in the browser address bar to access the device.

By Client Software

Add domain name to the client software. Refer to the client software manual for specific adding methods.

2.4 Set QoS

QoS (Quality of Service) can help improve the network delay and network congestion by setting the priority of data sending.

Note

QoS needs support from network devices such as routers and switches.

Steps

1. Go to **Configuration** → **Network** → **Network Parameters** → **QoS**.
2. Enable DSCP according to the actual needs and set the value.

Note

Network can identify the priority of data transmission. The bigger the DSCP value is, the higher the priority is. Same settings need to be set in the router for configuration.

3. Click **Save**.

2.5 Data Connection

2.5.1 Set ISAPI Listening

ISAPI listening and SDK listening are mutually exclusive protocols. If you enable the picture uploading listening, the device will transmit images via the SDK listening. If not, the device will upload images via ISAPI protocol after the ISAPI parameters are set.

Before You Start

The listening service has been enabled for the ISAPI host, and the network communication with the device is normal.

Steps

1. Go to **Configuration** → **Network** → **Data Connection** → **ISAPI Listening**.
2. Enable **ISAPI**.

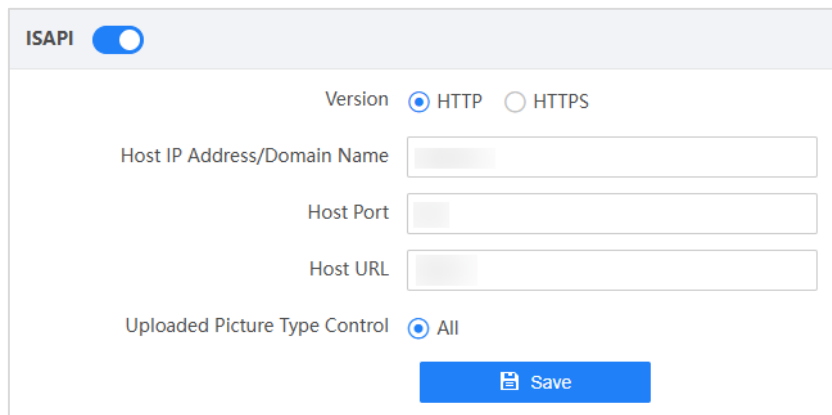


Figure 2-4 Set ISAPI Listening

3. Select **Version**.
4. Set **Host IP Address/Domain Name**, **Host Port**, and **Host URL**.
5. Select **Uploaded Picture Type Control**. Select **All** to upload all the picture types, or do not select to not upload pictures.

6. Click **Save**.

2.5.2 Set Arming Upload

Go to **Configuration** → **Network** → **Data Connection** → **Arm Upload**. The other platforms can arm and connect the device via the SDK protocol.

2.5.3 Set SDK Listening

The SDK listening can be used to receive the uploaded information and pictures of the device arming alarm.

Before You Start

The listening service has been enabled for the SDK listening, and the network communication with the device is normal.

Steps

1. Go to **Configuration** → **Network** → **Data Connection** → **SDK Listening**.
2. Enable SDK listening.

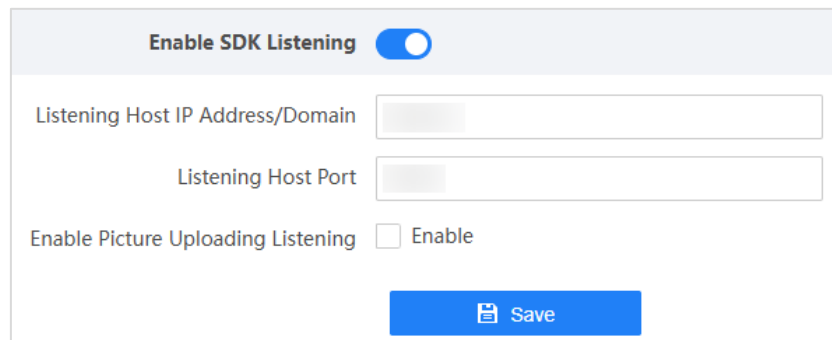


Figure 2-5 Set SDK Listening

3. Set **Listening Host IP Address/Domain** and **Listening Host Port** if you need to upload the alarm information and pictures.
4. Optional: Enable the picture uploading listening if you need to upload picture information.
5. Click **Save**.

2.5.4 Connect to ISUP Platform

ISUP is a platform access protocol. The device can be remotely accessed via this platform.

Before You Start

- Create the device ID on ISUP platform.
- Ensure the device can communicate with the platform normally.

Steps

1. Go to **Configuration** → **Network** → **Data Connection** → **ISUP**.

2. Enable **ISUP Platform Index**.

ISUP Platform Index

Protocol Version

v5.0

Address Type

IP Address

Server Port

Device ID

Encryption Key

.....

8 to 32 letters or digits, case sensitive. You are recommended to use a combination of letters or digits.

Registration Status

Offline

Platform Status

Server Type	Server IP Address	Server Port	Upload Type
Alarm Ser...		1	Upload D
Picture Se...		1	Upload D

Save

Figure 2-6 Connect to ISUP Platform

3. Select **Protocol Version**.
4. Select **Address Type** and enter IP address or domain name of the platform.
5. Enter **Server Port**, **Device ID**, and **Encryption Key**.

 Note

The device ID should be the same with the added one on the platform.

6. Click **Save**.

What to do next

When the registration status shows online, you can add or manage the device via the platform software.

2.5.5 Connect to OTAP

The device can be accessed to the maintenance platform via OTAP protocol, in order to search and acquire device information.

Before You Start

- Set the network parameters including device IP address, gateway, DNS, etc. to get access to the network.

- Disable the other platform accesses conflicting with OTAP.

Steps

1. Go to **Configuration** → **Network** → **Data Connection** → **OTAP**.
2. Select **Platform Access Mode** as **Private Deployment**.
3. Enable **OTAP Server**.

OTAP Server ☒

Address Type: Domain Name

Server Port:

Device ID:

Key:

Key Rules:

1. 8 to 16 characters allowed.
2. At least 2 types of the following characters should be contained: uppercase letters, lowercase letters, numbers, and special characters.
3. The password cannot contain the user name itself, 123, or admin.
4. The password cannot contain continuous increasing or descending numbers of 4 characters or above, or the same symbols.
5. The password cannot contain the following phrases connected by letters: hik, hkws, hikvision (case-insensitive).

Registration Status: Offline

Figure 2-7 Connect to OTAP

4. Set corresponding parameters.

Address Type

Select the address type of the connected platform or server, and enter the IP address or domain name.

Server Port

The port of the connected platform or server.

Device ID

The device ID should be the same with the added one on the OTAP platform.

Key

Set a custom key to encrypt the data connection between the device and the platform or server.

5. Click **Save**.

What to do next

When the registration status is online, you can add or manage the device via the platform software.

2.5.6 Connect to Hik-Connect

The device can be remotely accessed via Hik-Connect.

Before You Start

- Set the network parameters including device IP address, gateway, DNS, etc. to get access to the network.
- OTAP connection is disabled.

Steps

1. Enable Hik-Connect in two ways.
 - Get access to Hik-Connect V2.0. Go to **Configuration** → **Network** → **Data Connection** → **OTAP**, and select **Platform Access Mode** as **Hik-Connect**. Enable the function.

Enable ☒

Server Domain Name ☐ Custom

Registration Status Offline

Offline Reason Unknown

Offline Code 0

Binding Status Unknown

Verification Code

Enable Video Encryption ☒

Video Encryption Password

8 to 32 letters or digits, case sensitive. You are recommended to use a combination of letters or digits.

Confirm Video Encryption Password

Figure 2-8 Connect to Hik-Connect (V2.0)

- Get access to Hik-Connect V3.0. Go to **Configuration** → **Network** → **Data Connection** → **Hik-Connect Platform**. Enable **Hik-Connect Platform**.

Server Domain Name ☐ Custom

Registration Status **Offline**

Offline Reason Unknown

Offline Code 0

Binding Status Unknown

Verification Code

Enable Video Encryption ☒

Video Encryption Password

Confirm Video Encryption Password

! 8 to 32 letters or digits, case sensitive. You are recommended to use a combination of letters or digits.

! You need to set the network parameters including device IP address, gateway, DNS, etc. to get access to the network.

Figure 2-9 Connect to Hik-Connect (V3.0)

- Optional: If you have allocated a custom server, check **Custom** and enter the custom **Server Domain Name**.
- Enter a custom **Verification Code** used to add the device via **Hik-Connect**.

 Caution

The verification code should be 6 letters or digits, case sensitive. You are recommended to use a combination of letters or digits.

- Optional: Check **Enable Video Encryption** and set **Video Encryption Password** to encrypt the videos transmission. Confirm the password.
- Click **Save**.
- Add the device to Hik-Connect.
 - Get and install Hik-Connect application by the following ways.
 - Visit <https://appstore.hikvision.com> to download the application according to your mobile phone system.
 - Visit the official site of our company. Then go to **Support** → **Tools** → **Installation & Maintenance Tools** → **Hikvision APP Store**.
 - Scan the QR code below to download the application.



Figure 2-10 Hik-Connect

 Note

If errors like "Unknown app" occur during the installation, solve the problem in two ways.

- Visit <https://appstore.hikvision.com/static/help/index.html> to refer to the troubleshooting.
- Visit <https://appstore.hikvision.com/>, and click **Installation Help** at the upper right corner of the interface to refer to the troubleshooting.

-
- 2) Start the application and register a user account to log in.
 - 3) Add device by the serial No. on the device body and the verification code.

 Note

Refer to the user manual of Hik-Connect application for details.

2.5.7 Set Integration Protocol

You can connect the device via ONVIF protocol.

Steps

1. Go to **Configuration** → **Network** → **Data Connection** → **Integration Protocol**.
2. Enable **ONVIF**.
3. Select **Authentication Mode**, and click **Save**.
4. Add a user.
 - 1) Click **Add**.
 - 2) Set user name, password, and user type, and confirm the password.
 - 3) Click **OK**.
 - 4) Optional: You can select the added user and click  to edit the user information, or click  to delete the user.

Result

Only the added users can access the device via ONVIF protocol.

2.5.8 Connect to SIP Platform

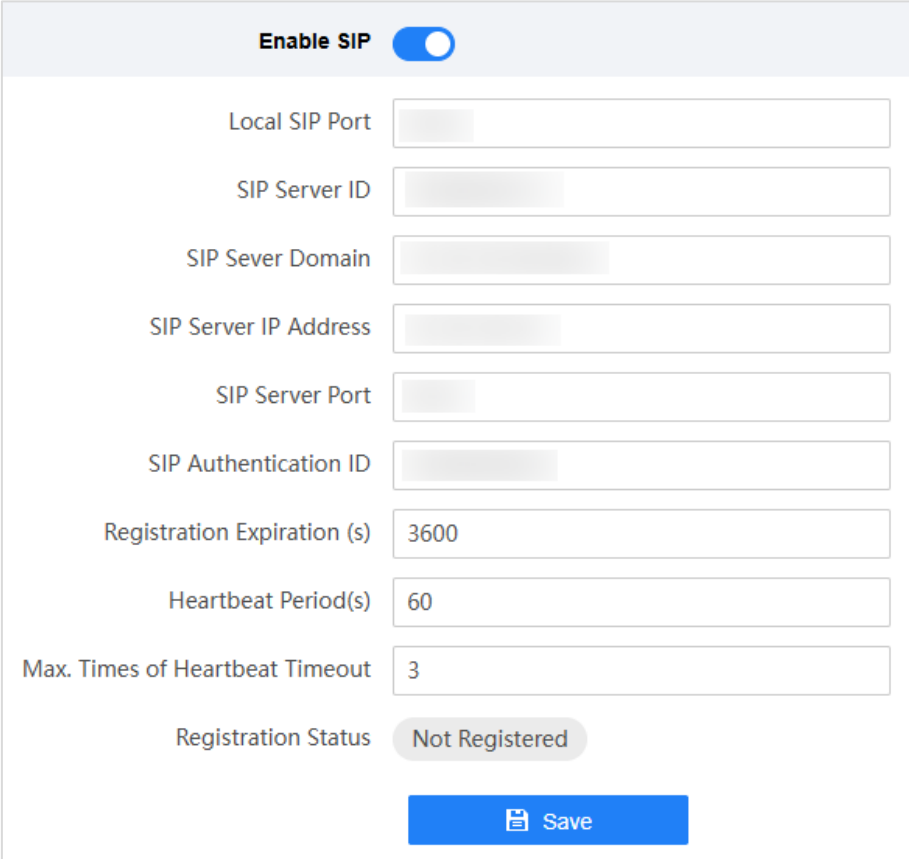
You can connect the device to SIP platform to realize intercom.

Before You Start

Ensure the device can communicate normally with the platform.

Steps

1. Go to **Configuration** → **Network** → **Data Connection** → **SIP**.
2. Enable **SIP**.



The screenshot displays the SIP configuration interface. At the top, there is a header bar with the text "Enable SIP" and a blue toggle switch that is turned on. Below this, the interface contains several input fields for configuration: "Local SIP Port", "SIP Server ID", "SIP Server Domain", "SIP Server IP Address", "SIP Server Port", "SIP Authentication ID", "Registration Expiration (s)" (with a value of 3600), "Heartbeat Period(s)" (with a value of 60), and "Max. Times of Heartbeat Timeout" (with a value of 3). At the bottom, the "Registration Status" is shown as "Not Registered" in a grey pill-shaped button. A blue "Save" button with a floppy disk icon is located at the bottom right of the form.

Figure 2-11 Connect to SIP Platform

3. Set SIP server parameters according to the SIP protocol.
4. Click **Save**.

Chapter 3 Capture Configuration

3.1 Set Barrier Gate Parameters

Set the barrier gate control mode, alarm output, linked I/O, linked Wiegand, and time period of keeping the barrier gate open.

Steps

1. Go to **Configuration → Capture → Entrance and Exit → Barrier Gate**.

The screenshot shows the 'Barrier Gate' configuration page. At the top, there are three radio buttons for 'Control Mode': 'Device Control Mode' (unselected), 'Platform Control Mode' (selected), and 'Device Control Mode' (unselected). Below this is the 'Barrier Gate Remote Control' section with four 'Alarm Output' dropdown menus (all set to 'None') and three buttons: 'Rise', 'Lock Barrier', and 'Unlock Barrier'. The 'Barrier Gate Linked I/O' section has four dropdown menus for 'Barrier Gate Linked I/O No.1' through 'No.4', all set to 'None'. The 'Barrier Gate Linked Wiegand' section includes a 'Filter Invalid Card' checkbox (unchecked), a 'Filter Time(s)' input field (set to 3), a 'Remote Card Wiegand Access Mode' dropdown (set to 'Wiegand 34'), a 'Card No. Filter Mode' dropdown (set to 'Card Reader Filter Mode'), a 'Card Mode (Hexadecimal and Decimal)' dropdown (set to 'Decimal'), and a 'Write card encryption enable' checkbox (unchecked). The 'Barrier Setting' section at the bottom has a 'Barrier Period' label and a 'Set Time Period' button.

Figure 3-1 Set Barrier Gate Parameters

2. Select **Control Mode**.

Device Control Mode

Vehicle passing is controlled by the device.

Platform Control Mode

All the cards read by the card reader will be reported to the platform.

3. Set **Barrier Gate Remote Control**.

- 1) Select the barrier gate control mode from the drop-down list according to the actual wiring of the device's alarm output interfaces and barrier gates.
 - 2) Click the buttons behind the drop-down boxes to control the barrier gates.
 - If the control signal is **Rise**, you can rise, lock, or unlock the barrier gate.
- Lock Barrier:** The barrier gate remains open, and cannot be closed.

Unlock Barrier: The barrier gate is unlocked, and can be closed.

- If the control signal is **Fall**, you can only fall the barrier gate.

4. Select **Barrier Gate Linked I/O** from the drop-down list according to the actual wiring of the device's alarm input interfaces.
5. Set **Barrier Gate Linked Wiegand** parameters.

Filter Invalid Card

In device control mode, check it to filter invalid cards.

Card No. Filter Mode

Select the mode for filtering the same card No. within the set **Filter Time**. **Card Reader Filter Mode** filters the same card No. by the connected card reader, while **Control Station Filter Mode** filters the same card No. of all card readers.

Card Mode:

Decimal and Hexadecimal are selectable.

Remote Card Wiegand Access Mode

Wiegand 26 and Wiegand 34 are selectable.

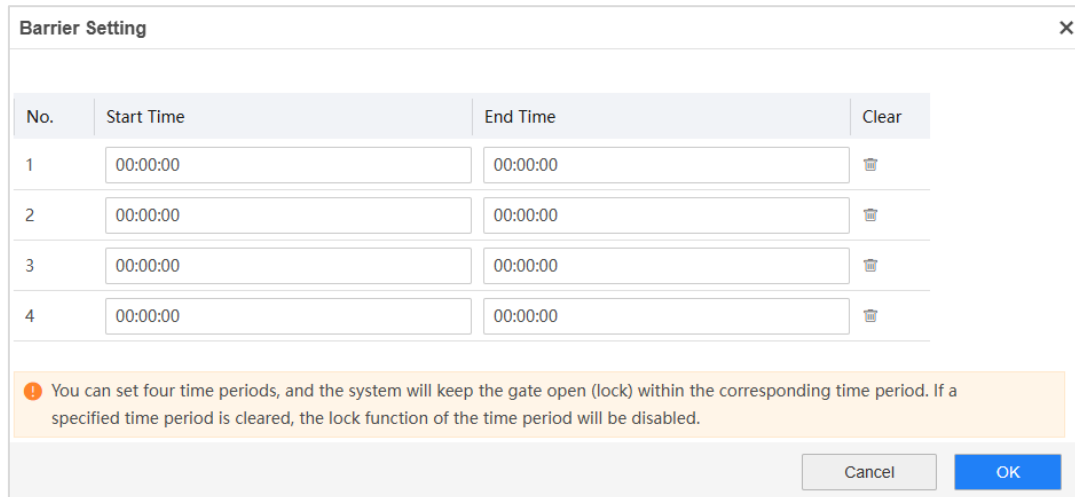
Note

- In decimal card mode, if Wiegand 26 is selected, the card No. should be an 8-digit decimal number. If Wiegand 34 is selected, the card No. should be a 10-digit decimal number.
 - In hexadecimal card mode, if Wiegand 26 is selected, the card No. should be a 6-digit hexadecimal number. If Wiegand 34 is selected, the card No. should be an 8-digit hexadecimal number.
 - The Wiegand access mode settings take effect after you reboot the device.
-

Write card encryption enable

Enable the function and set the key to write encrypted card numbers.

6. Click **Set Time Period** to set time periods to control barrier gate.



Barrier Setting

No.	Start Time	End Time	Clear
1	00:00:00	00:00:00	
2	00:00:00	00:00:00	
3	00:00:00	00:00:00	
4	00:00:00	00:00:00	

You can set four time periods, and the system will keep the gate open (lock) within the corresponding time period. If a specified time period is cleared, the lock function of the time period will be disabled.

Cancel OK

Figure 3-2 Set Time Periods to Control Barrier Gate

- 1) Set the start time and end time, and the system will keep the barrier gate open within the set time period.
- 2) (Optional) Click to clear the specified time period, and the barrier gate lock function of the time period will be disabled.

Note

- Up to four time periods are allowed.
- The set time periods are effective for all the connected barrier gates.

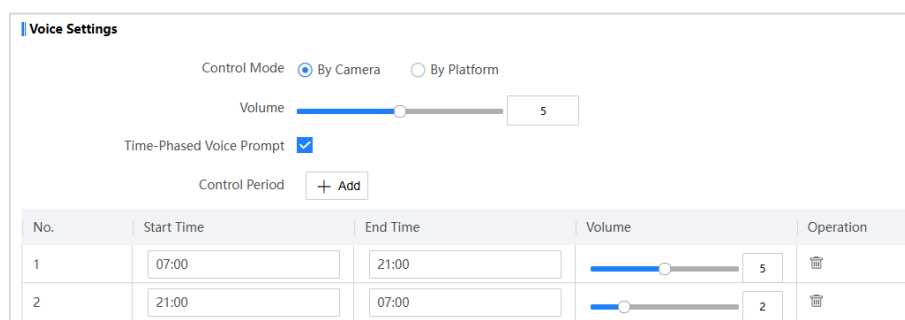
7. Click **Save**.

3.2 Set Voice Prompt

The device is equipped with the loudspeaker. You can set the voice prompt.

Steps

1. Go to **Configuration** → **Capture** → **Entrance and Exit** → **Voice Prompt**.
2. Set voice prompt parameters.



Voice Settings

Control Mode ☒ By Camera ☐ By Platform

Volume 5

Time-Phased Voice Prompt ☒

Control Period Add

No.	Start Time	End Time	Volume	Operation
1	07:00	21:00	5	
2	21:00	07:00	2	

Figure 3-3 Set Voice Prompt Parameters

Control Mode

- **By Platform:** Select this mode in the scene in which the entry permissions are controlled by the software.
- **By Camera:** Select this mode in standalone scene (no control software) and allowlist scene in which the device controls the barrier gate.

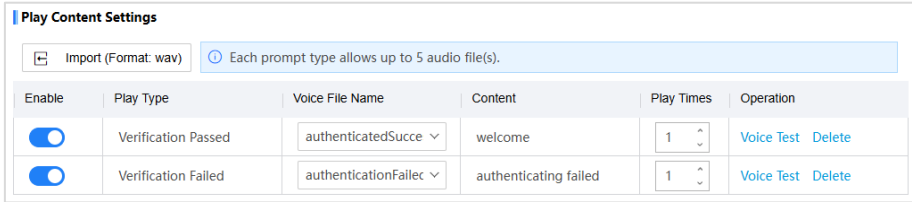
Volume

Adjust the voice volume.

Time-Phased Voice Prompt

Enable the function to play the voice prompt at fixed time period. Click **Add** to add a time period. Set **Start Time** and **End Time** of the time period, and adjust **Volume**. You can click  to delete the time period.

3. Import the voice prompt files.



Enable	Play Type	Voice File Name	Content	Play Times	Operation
☒	Verification Passed	authenticatedSucce	welcome	1	Voice Test Delete
☒	Verification Failed	authenticationFallec	authenticating failed	1	Voice Test Delete

Figure 3-4 Import Voice Prompt Files

- 1) Click **Import**.
- 2) Enter **Content**.
- 3) Select **Play Type** for the play content.
- 4) Click **Browse** to select the voice prompt file from the computer, and click **Import** to import it to the device.
- 5) Repeat the steps above to import more voice prompt files.
- 6) Enable the voice prompt(s).
- 7) Optional: Click **Voice Test** to test the actual voice prompt effect. Click **Delete** to delete it.

Note

- Each prompt type allows up to 5 audio file(s).
- Mono audio files in .wav format with 16-bit depth and 8 kHz sampling rate allowed.

4. Click **Save**.

3.3 Set Card Reader Event

Set the card reader event to control barrier gates via card readers or platform.

Steps

1. Go to **Configuration** → **Capture** → **Entrance and Exit** → **Card Reader Event**.

Reader1

Reader2

Reader3

Reader4

Card Reader Name

Reader1

Enable Card Reader

☒

Alarm Input Linkage

NO	1	2	3	4
Alarm Input Control	None	None	None	None
Enable	☐	☐	☐	☐

Linkage Target

Registered Card

Temporary Card

Invalid Card

Unregistered Card

NO	1	2	3	4
Card Status	Rise	None	None	None
Normal	☐	☐	☐	☐
Expired	☐	☐	☐	☐
Report Card Loss	☐	☐	☐	☐
Logout	☐	☐	☐	☐

Platform Management

Alarm Output No.	1	2	3	4
Alarm Output	Rise Lock Unlock	None	None	None
Enable	☒	☐	☐	☐

Figure 3-5 Card Reader Event

- Click the corresponding card reader No, set **Card Reader Name**, and check **Enable Card Reader**.
- Select the function of the corresponding alarm input No. Enable corresponding alarm input No. to trigger card reading. If the corresponding alarm input linked I/O is detected, the card reader can be triggered to read cards. For example, if you enable alarm input No. 2 and its linked I/O is closing limit, the card reader can read cards only when the barrier gate is in closing limit.
- Click corresponding card type and enable the card status for the corresponding alarm output No. For example, if you select registered card type and normal card status for alarm output No.1, and the barrier gate remote control for alarm output No. 1 is **Rise**, the barrier gate will be triggered to rise when normal registered cards are read.
- To control the barrier gates from the platform, enable corresponding Alarm Output No. for Platform Management. You can also select **Lock** or **Unlock** if the barrier gate remote control for the corresponding alarm output No. is **Rise**. For example, if you enable alarm output No. 1 and its barrier gate remote control is **Rise**, and select **Lock** and **Unlock** next to **Rise**, and then you can rise, lock, and unlock the barrier gate via the platform.
- Click **Save**.

Note

- The alarm input No. for each card reader cannot conflict.
- Up to four card readers are supported.
- The settings take effect after you reboot the device.

3.4 View Alarm Input Status

View the device name and device status of the corresponding alarm input No.

Steps

1. Go to **Configuration** → **Capture** → **Entrance and Exit** → **AlarmIn Status**.
2. View the device name and device status of the corresponding alarm input No.

Note

The device name refers to the selected function for each alarm input No. in **Configuration** → **Capture** → **Entrance and Exit** → **Card Reader Event** → **Alarm Input Linkage**. Refer to step 3 of **3.3 Set Card Reader Event** for details.

Alarm Input	Device Name	Device Status
1	NONE	NONE
2	NONE	NONE
3	NONE	NONE
4	NONE	NONE

Figure 3-6 Alarm Input Status

3.5 Set Capture Parameters

3.5.1 Set Supplement Light Parameters

The device is equipped with supplement light. You can set the enable mode and brightness of the supplement light.

Steps

1. Go to **Configuration** → **Capture** → **Capture Parameters** → **Supplement Light Parameters**.

Output Mode: Constant Light Mode

Enable Mode: ☐ Default ☒ Time Schedule

Time Range: 00:00 - 00:00

Constant Light Brightness: 5

Save

Figure 3-7 Set Supplement Light Parameters

- Set the supplement light parameters according to actual conditions.

Enable Mode

Default

Disable supplement light.

Time Schedule

Select it when you want the constant light to be enabled during fixed time period. Set **Time Range** to enable supplement light.

Constant Light Brightness

Drag the slider to adjust the brightness, or enter the value in the text field. The higher the brightness is, the more the light will be supplemented.

- Click **Save**.

3.5.2 Set Capture Overlay

If you want to overlay information on the captured pictures, set capture overlay.

Steps

- Go to **Configuration** → **Capture** → **Capture Parameters** → **Capture Overlay Configuration**.
- Enable text overlay.

Enable Text Overlay: ☒

Overlay Position: ☒ On the Picture ☐ Above the Picture ☐ Below the Picture

Date Format: YYYY-MM-DD ☐ 12-hour ☒ 24-hour

Font Size: 16 x 32 OSD Color:

Figure 3-8 Set Overlay Style

- Select **Overlay Position**.

4. Set **Date Format**, **Font Size**, and **ODS Color**.

5. Set overlay content.

+ Add Overlay Item					
Default Type	Type	Overlay Information	Space	Line B...	Operation
Location	Location:	Please enter overlay information.	0	0	↑ ↓ ↺ 🗑
Intersection No.	Intersection No.:	Please enter overlay information.	0	0	↑ ↓ ↺ 🗑
Device No.	Device No.:	Please enter overlay information.	0	0	↑ ↓ ↺ 🗑
Direction No.	Direction No.:	Please enter overlay information.	0	0	↑ ↓ ↺ 🗑
Direction	Direction:	Please enter overlay information.	0	0	↑ ↓ ↺ 🗑
Checkpoint Information	Checkpoint Information:	Camera Location 1	0	0	↑ ↓ ↺ 🗑
		Please enter overlay information.			
		Camera Location 2			
		Please enter overlay information.			
Capture Time	Capture Time:	☐ Accurate to Millisecond	0	0	↑ ↓ ↺ 🗑
Capture No.	Capture No.:		0	0	↑ ↓ ↺ 🗑
Security Code	Anti-counterfeiting Code:		0	0	↑ ↓ ↺ 🗑

Figure 3-9 Set Single Picture Overlay Content

1) Click **Add Overlay Item** to select the information to overlay, and click **OK**.

Note

The overlay information varies with different models. The actual device prevails.

2) Set the parameters below.

- **Default Type:** You can view the default overlay information name. If you have edited the name, you can refer to the default name for the definition.
- **Type:** You can edit a custom overlay information name.
- **Overlay Information:** For some information types, you can edit the detailed information.
- **Space:** Edit the number of space between the current information and the next one from 0 to 255. 0 means there is no space.
- **Line Break Characters:** Edit the number of characters from 0 to 100 between the current information line and the previous information line. 0 means no line break.
- **Operation:** You can click ↑/↓ to adjust the display sequence of the overlay information, or click 🗑 to delete the item.

6. Click **Capture Test** to test the information overlay effect.

7. Click **Save**.

3.5.3 Set Image Encoding Parameters

If the captured pictures are not clear, set the resolution of the captured pictures and the picture

size.

Steps

1. Go to **Configuration** → **Capture** → **Capture Parameters** → **Image Encoding and Composition**.

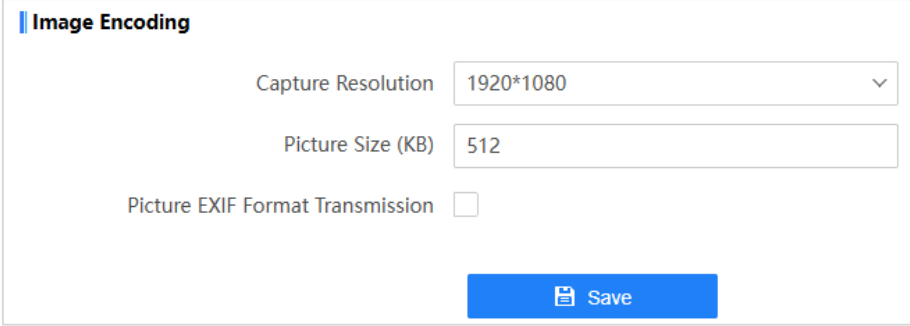


Figure 3-10 Set Image Encoding Parameters

2. Set the parameters below.

Capture Resolution

Select the resolution of the captured scene picture. When the picture size keeps the same, the higher the resolution, the more the picture will be compressed, and the slower the picture will be handled.

Picture Size

The size of the compressed captured picture. The actual size is related to the scene complexity.

Picture EXIF Format Transmission

The captured pictures will be transmitted in the EXIF format.

3. Click **Save**.

3.6 Advanced Configuration

Note

The advanced configurations below are only provided to debug the device by the professionals.

3.6.1 System Service

The onsite technicians can enter debug commands to debug device.

Steps

1. Go to **Configuration** → **Capture** → **Advanced** → **System Service**.
2. Enter **cmdIndex** and **cmdValue**.
3. Click **Save**.

Chapter 4 Data

4.1 Manage Card No. List

You can add, import, export, and delete cards.

Steps

1. Go to **Data** → **Card No. List**.
2. Click **Add**.

The screenshot shows a software window titled "Add" with a close button (X) in the top right corner. Inside the window, there is a section labeled "Basic Information". This section contains several input fields and buttons:

- Card No.:** A text input field.
- Card Type:** A dropdown menu currently showing "Registered Card".
- Card Status:** A dropdown menu currently showing "Normal".
- Effective Date:** A date and time input field showing "2026-03-24 00:00:00".
- Expiry Date:** A date and time input field showing "2027-03-24 23:59:59".
- Action Buttons:** Two buttons are located to the right of the Card No. field: "Read Card No. and Sto..." and "Write to Card and Store...".
- Validity Period Buttons:** Four buttons are located below the Expiry Date field: "One Month", "Three Months", "Half a Year", and "One Year".
- Footer Buttons:** At the bottom right of the window are "Cancel" and "OK" buttons.

Figure 4-1 Add Card

3. Set the basic information for the card.

Card No.

Enter the card No. manually, or click **Write to Card and Store Card** to write a card No. automatically. You can also swipe the card on the card reader and then click **Read Card No. and Store Card**.

Card Type

Registered Card, Temporary Card, and Invalid Card are selectable.

Card Status

Normal, Expired, Report Card Loss, and Logout are selectable. Logout means that the card No. has been cancelled.

Card Type

Registered Card, Temporary Card, and Invalid Card are selectable.

Effective Date

Set the start time of the effective date.

Expiry Date

Set the expiry date, or select the validity period.

Note

- To write card No., connect a card enrollment station to your computer first, and then click  on the upper right corner of the interface to download the plug-in of the card reader.
- When writing card No. automatically, the card No. cannot be modified.
- It is recommended to enable write card encryption in **Configuration** → **Capture** → **Entrance and Exit** → **Barrier Gate**, otherwise the card No. will be generated in ascending order.

- Click **OK** to add the card.
- (Optional) Other operations.
 - Click  under the **Operation** column to edit the card information.
 - Click  under the **Operation** column to delete the corresponding card.
 - Select the card(s) to be deleted, and click **Delete** to delete in batch.
 - Set the search conditions and click **Search** to search the cards. The cards satisfying the search conditions will be listed below.

Card No.

Card Type

ALL

Card Status

ALL

Search

Add

Import

Export

Delete

☐	No.	Card No.	Card Type	Card Status	Effective Date	Expiry Date	Operation
☐	1		Registered Card	Expired	2026-01-08 00:00:00	2026-02-07 23:59:59	 
☐	2		Registered Card	Expired	2026-01-13 00:00:00	2026-02-12 23:59:59	 
☐	3		Registered Card	Normal	2026-01-13 00:00:00	2026-03-28 00:00:00	 
☐	4		Registered Card	Expired	2026-01-13 00:00:00	2026-02-12 23:59:59	 
☐	5		Registered Card	Normal	2024-06-15 10:00:00	2027-07-15 10:00:00	 
☐	6		Temporary Card	Report Card Loss	2024-06-15 10:00:00	2027-07-15 10:00:00	 
☐	7		Registered Card	Normal	2024-06-15 10:00:00	2027-07-15 10:00:00	 
☐	8		Registered Card	Normal	2024-06-15 10:00:00	2027-07-15 10:00:00	 
☐	9		Temporary Card	Report Card Loss	2024-06-15 10:00:00	2027-07-15 10:00:00	 
☐	10		Registered Card	Normal	2024-06-15 10:00:00	2027-07-15 10:00:00	 
☐	11		Registered Card	Normal	2024-06-15 10:00:00	2027-07-15 10:00:00	 
☐	12		Temporary Card	Report Card Loss	2024-06-15 10:00:00	2027-07-15 10:00:00	 
☐	13		Registered Card	Normal	2024-06-15 10:00:00	2027-07-15 10:00:00	 
☐	14		Registered Card	Normal	2024-06-15 10:00:00	2027-07-15 10:00:00	 

100

Total 50000 Items

<<

>>

1/500

Figure 4-2 Card No. List

- Click **Import** to import the cards in batch. Click **Download Template** to download the template, and then edit and save the template file. Click **Browse** to select the file from the computer. Click **Import** to import the selected file to the device.

Note

Up to 50,000 items can be imported one time.

- Click **Export** to export the searched card No. List in batch. Click **Export**. Click **Export** on the pop-up window. The card No. list will be downloaded to your computer.

4.2 Search Card Records

You can search card swiping records by searching conditions.

- Go to **Data** → **Card No. Record**.

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- Set the start time and end time, and the other search conditions.
- Click **Search** to search the card records. The search results will be listed below.

Start Time2026-03-01 00:00:00End Time2026-03-24 23:59:59Card No.Card Type

ALL

Card Status

ALL

Card Reader

ALL

Local Release by Device

ALL

Platform Report Result

ALL

Search

Export

☐	No.	Swiping Card Time	Card No.	Card Type	Card Status	Card Reader	Local Release by Device	Platform Report Time	Platform Report Result
☐	1	2026-03-19 14:36:41		Unregistered Card	Normal	Wiegand1	Not Released		Reporting failed.
☐	2	2026-03-19 14:36:41		Unregistered Card	Normal	Wiegand4	Not Released		Reporting failed.
☐	3	2026-03-19 14:36:41		Unregistered Card	Normal	Wiegand2	Not Released		Reporting failed.
☐	4	2026-03-19 14:36:41		Unregistered Card	Normal	Wiegand3	Not Released		Reporting failed.
☐	5	2026-03-19 14:36:38		Unregistered Card	Normal	Wiegand3	Not Released		Reporting failed.
☐	6	2026-03-19 14:36:38		Unregistered Card	Normal	Wiegand2	Not Released		Reporting failed.
☐	7	2026-03-19 14:36:38		Unregistered Card	Normal	Wiegand1	Not Released		Reporting failed.
☐	8	2026-03-19 14:36:38		Unregistered Card	Normal	Wiegand4	Not Released		Reporting failed.
☐	9	2026-03-19 14:36:34		Unregistered Card	Normal	Wiegand1	Not Released		Reporting failed.
☐	10	2026-03-19 14:36:34		Unregistered Card	Normal	Wiegand3	Not Released		Reporting failed.
☐	11	2026-03-19 14:36:34		Unregistered Card	Normal	Wiegand4	Not Released		Reporting failed.
☐	12	2026-03-19 14:36:34		Unregistered Card	Normal	Wiegand2	Not Released		Reporting failed.
☐	13	2026-03-19 14:36:31		Unregistered Card	Normal	Wiegand1	Not Released		Reporting failed.

100Total 49976 Items

1/500

Figure 4-3 Card No. Record

- (Optional) To export the card records to your computer, select the records and click **Export**.

Chapter 5 View Real-Time Picture

You can view the real-time captured pictures and license plate information.

Steps

1. Click **Live View**.
3. Click **Arming** on the right **Real-Time Capture** window.
4. Select an item from the list, and you can view the capture scene picture and recognized license plate information.

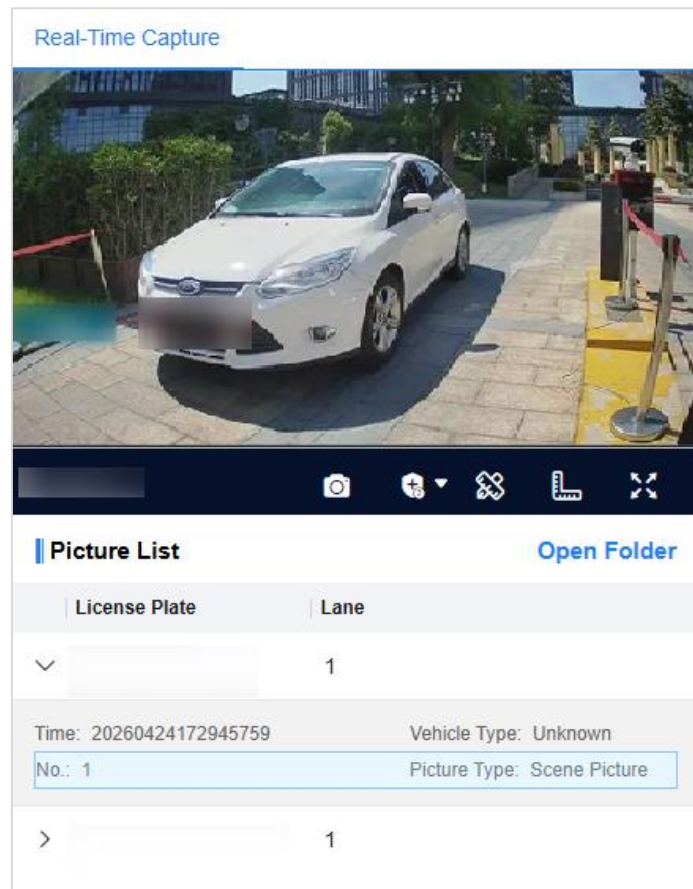


Figure 5-1 Real-Time Picture

5. Optional: Other operations.



- **Level 1 Arming:** Only the current computer can arm the device and receive the captured pictures in real time. The pictures will not be stored in the storage card. The pictures in the storage card will be uploaded to the level 1 arming terminal.
- **Level 2 Arming:** Up to 3 computers can arm the device and receive the captured pictures in real time. The pictures will be uploaded to level 2 arming terminal, and stored in the storage card.

- **Disarming:** Disable the real-time capture function.



Click it to capture a picture manually.



The function is only available in plug-in mode. Click it to measure the license plate pixel of the captured picture. Drag to draw a rectangle, and then drag the rectangle to move it, and adjust corners to resize it.



The function is only available in plug-in mode. Click it to enable the ruler and adjust the ruler to measure the vehicle pixel.



Click it to display the captured picture in full screen mode. Press **Esc** on the keyboard to exit from the full screen mode.

Open Folder

If the plug-in has been installed, the button will display on the interface. You can click it to open the saving path of captured pictures.

Chapter 6 Live View and Local Configuration

6.1 Live View

6.1.1 Start/Stop Live View

Click  to start live view. Click  to stop live view.

6.1.2 Select Image Display Mode

Click  to select an image display mode.

6.1.3 Select Window Division Mode

Click  to select a window division mode.

6.1.4 Select Stream Type

Click  to select the stream type. It is recommended to select the main stream to get the high-quality image when the network condition is good, and select the sub-stream to get the fluent image when the network condition is not good enough.



Note

The supported stream types vary with different models. The actual device prevails.

6.1.5 Capture Picture Manually

You can capture pictures manually on the live view image and save them to the computer.

Steps

1. Click  to capture a picture.
2. Optional: Click **Configuration** → **Local** → **Picture and Clip Settings** to view the saving path of snapshots in live view.

6.1.6 Record Manually

You can record videos manually on the live view image and save them to the computer.

Steps

1. Click  to start live view.
2. Click  to start recording.
3. Click  to stop recording.
4. Optional: Click **Configuration** → **Local** → **Record File Settings** to view the saving path of record files.

6.1.7 Enable Digital Zoom

You can enable digital zoom to zoom in a certain part of the live view image.

Steps

1. Click  to start live view.
2. Click  to enable digital zoom.
3. Place the cursor on the live view image position which needs to be zoomed in. Drag the mouse rightwards and downwards to draw an area.
The area will be zoomed in.
4. Click any position of the image to restore to normal image.
5. Click  to disable digital zoom.

6.1.8 Start/Stop Two-Way Audio

The device supports two-way audio with terminals, such as computers.

Before You Start

The device is equipped with an audio input interface and audio output interface, which support connecting with the corresponding devices, such as microphones and loudspeakers.

Steps

Note

The function varies with different models. The actual device prevails.

1. Select a window to start two-way audio.
2. Click  to start live view.
3. Click  to start two-way audio.
When speaking at the PC end, you can hear the voice at the device end and vice versa.
4. Click  to stop two-way audio.

6.1.9 Enable/Disable Audio

Enable the audio if necessary after connecting an audio input device under the audio & video stream. Click  to enable and adjust it. Click again to disable this function.

Note

The function varies with different models. The actual device prevails.

6.1.10 Select Video Mode

Set the video mode when adjusting the device focus during construction.

Click  to select the normal mode when the device is running normally.

6.2 Set Snapshot Mode

Click **Live View**, and you can enable or disable snapshot mode on the upper right corner of the interface.

- : The snapshot mode is enabled. In this mode, only the image in the live view interface is in real-time streaming, and the live view images in other interfaces are just pictures. You can refresh the interfaces to refresh the pictures. For the conditions that the network is unstable, or the computer performance is not that good, you're recommended to enable snapshot mode to raise the operation efficiency.
- : The snapshot mode is disabled. All the live view images are in real-time streaming.

Note

Disable snapshot mode before drawing areas for cropping capture pictures, ROI, privacy mask, and regional exposure.

6.3 Local Configuration

Go to **Configuration** → **Local** to set the live view parameters and change the saving paths of videos, captured pictures, scene pictures, etc.

Note

The interfaces in no plug-in mode and plug-in mode are different.

Local Configuration in Plug-in Mode

Live View Parameters

Protocol Type

☒ TCP☐ UDP☐ HTTP☐ HTTPS

Stream Type

☒ Main Stream☐ Sub-Stream

Live View Performance

☐ Shortest Delay☒ Balanced☐ Fluency

Decoding Type

☒ Software Decoding☐ Hardware Decoding

Rules Information

☐ Enable☒ Disable

Algorithm Information

☐ Enable☒ Disable

Image Size

☒ Auto-Fill☐ 4:3☐ 16:9

Image Format

☒ JPEG☐ BMP

Rendering Engine

☐ D3D9☒ D3D11

Record File Settings

Record File Size

☐ 256M☒ 512M☐ 1G

Save record files to

C:\Users\ \GuardingVisionPluginWeb\RecordFiles

Browse

Save downloaded files to

C:\Users\ \GuardingVisionPluginWeb\DownloadFiles

Browse

Picture and Clip Settings

Save snapshots in live view to

C:\Users\ \GuardingVisionPluginWeb\CaptureFiles

Browse

Save downloaded pictures to

C:\Users\ \GuardingVisionPluginWeb\ViewPics

Browse

Save scene pictures to

C:\Users\ \GuardingVisionPluginWeb\ScenePics

Browse

Save snapshots when playback to

C:\Users\ \GuardingVisionPluginWeb\PlaybackPics

Browse

Save clips when playback to

C:\Users\ \GuardingVisionPluginWeb\PlaybackFiles

Browse

Save

Figure 6-2 Local Configuration in Plug-in Mode

Protocol Type

Select the network transmission protocol according to the actual needs.

TCP

Ensures complete delivery of streaming data and better video quality, but the real-time transmission will be affected.

UDP

Provides real-time audio and video streams.

HTTP

Gets streams from the device by a third party client.

HTTPS

Gets streams in https format.

Stream Type

Main Stream

Select it to get the high-quality image when the network condition is good.

Sub-Stream

Select it to get the fluent image when the network condition is not good enough.

Live View Performance

Shortest Delay

The video is real-time, but its fluency may be affected.

Balanced

Balanced mode considers both the real time and fluency of the video.

Fluency

When the network condition is good, the video is fluent.

Decoding Type

Software Decoding

Decode via software. It takes up more CPU resources but provides images with better quality when it compares to the hardware decoding.

Hardware Decoding

Decode via GPU. It takes up less CPU resources but provides images with worse quality when it compares to the software decoding.

Rules Information

If you enable this function, tracking frames will be displayed on the live view interface when there are vehicles passing.

Algorithm Information

Enable it to display feature information of the target on the live view image.

Image Size

The display ratio of the live view image.

Image Format

The saving format of manually captured images.

Rendering Engine

Select the rendering API of the browser. D3D9 uses fixed rendering pipeline. D3D11 uses programmable graphics pipeline, in which the shader replaces the traditional fixed rendering pipeline to improve visual effects and enhance the picture quality.

Record File Size

Select the packed size of the manually recorded video files. After the selection, the max. record file size is the value you selected.

Save record files to

Set the saving path of the manually recorded video files.

Save downloaded files to

Set the saving path of the download files.

Save snapshots in live view to

Set the saving path of the manually captured pictures in live view mode.

Save downloaded pictures to

Set the saving path of the downloaded pictures.

Save scene picture to

Set the saving path of the captured pictures in **Live View** → **Real-Time Capture**.

Save snapshots when playback to

Set the saving path of the manually captured pictures in playback mode.

Save clips when playback to

Set the saving path of the clips in playback mode.

Local Configuration in No Plug-in Mode

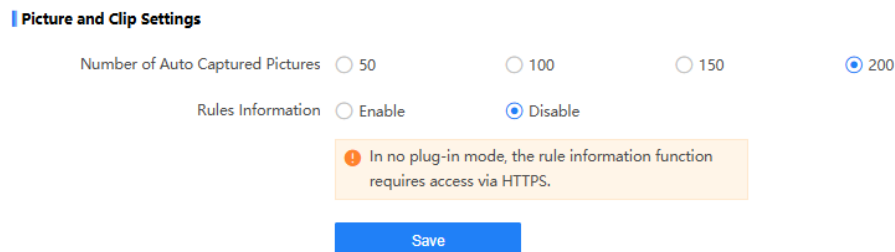


Figure 13-3 Local Configuration in No Plug-in Mode

Number of Auto Captured Pictures

Select the max. number of auto downloaded pictures in one compressed file in **Live View** → **Real-Time Capture** in no plug-in mode.

Rules Information

If you enable this function, tracking frames will be displayed on the live view interface when there are vehicles passing.



Note

In no plug-in mode, the rule information function requires access via HTTPS.

Chapter 7 Encoding and Display

7.1 Set Camera Parameters

You can adjust the camera parameters to get clear image.

Steps



Note

The supported parameters may vary with different models. The actual device prevails.

1. Go to **Configuration** → **Video** → **Camera Parameters** → **Camera Parameters**.

▼ Picture Adjustment Default

Saturation 50

Sharpness 50

Contrast 50

White Balance AWB1 ▼

White Balance Level 50

Hue Range ☒ 0-255 ☐ 16-235

Gamma Correction ☐ Enable

Lens Type Manual ▼

> Exposure Parameters Default

> Image Enhancement Default

Figure 7-1 Set Camera Parameters

2. Set the camera parameters.



Note

Click **Default** to reset parameters.

Picture Adjustment

Saturation

It refers to the colorfulness of the image color.

Sharpness

It refers to the edge contrast of the image.

Contrast

It refers to the contrast of the image. Set it to adjust the levels and permeability of the image.

White Balance

It is the white rendition function of the device used to adjust the color temperature according to the environment.

Hue Range

Select the range to adapt to the display.

Gamma Correction

The higher the gamma correction level is, the stronger the correction strength is.

Lens Type

Select the lens type according to the actual needs.

Exposure Parameters

Brightness

It refers to the brightness the image.

Shutter

If the shutter speed is quick, the details of the moving objects can be displayed better. If the shutter speed is slow, the outline of the moving objects will be fuzzy and trailing will appear.

Gain

It refers to the upper limit value of limiting image signal amplification. It is recommended to set a high gain if the illumination is not enough, and set a low gain if the illumination is enough.

Slow Shutter

This function can be used in underexposure condition. It lengthens the shutter time to ensure full exposure. The higher **Slow Shutter Level** is, the slower the shutter speed is.

Video Standard

Select the video standard according to the actual power supply frequency.

Image Enhancement

Brightness Enhancement at Night

The scene brightness will be enhanced at night automatically.

3D DNR

Digital Noise Reduction (DNR) reduces the noise in the video stream.

In **Normal Mode**, the higher the **3D DNR Level** is, the stronger the noise will be reduced. But if it is too high, the image may become fuzzy.

In **Expert Mode**, set **Spatial Intensity** and **Time Intensity**. If the space domain intensity is too high, the outline of the image may become fuzzy and the details may lose. If the time domain intensity is too high, trailing may appear.

2D DNR

The higher the **2D DNR Level** is, the stronger the noise will be reduced. But if it is too high, the image may become fuzzy.

Defog

Enable defog to get a clear image in foggy days.

3. Optional: Click **Capture Test** to check the image.

7.2 Set OSD

You can customize OSD information on the live view.

Steps

1. Go to **Configuration** → **Video** → **Text Overlay on Video**.

Text Overlay on Video

Alignment

Custom

Font Size

32 × 32

OSD Property

Not Transparent & Not Flashing

OSD Color

Custom

ffffff

Overlay Information

Camera Name

☒ Enable

Camera 01

Display Date

☒ Enable

Date Format

MM-DD-YYYY

Time Format

☐ 12-hour
 ☒ 24-hour

More

☒ Display Week

Millisecond

Figure 7-2 Set OSD

2. Set display properties (font, color, etc.).

Alignment

If you select **Align Left** or **Align Right**, set **Min. Horizontal Margin** and **Min. Vertical Margin**.

3. Set display contents.

- 1) Enable **Camera Name**, and enter the camera name.
- 2) Enable **Display Date**, and set the time and date format.
- 3) Enable **Display Week** or **Millisecond** according to your needs.

4. Drag the red frames on the live view image to adjust the OSD positions.

5. Click **Save**.

Result

The set OSD will be displayed in live view image and recorded videos.

7.3 Set Video Encoding Parameters

Set video encoding parameters to adjust the live view and recording effect.

- When the network signal is good and the speed is fast, you can set high resolution and bitrate to raise the image quality.
- When the network signal is bad and the speed is slow, you can set low resolution, bitrate, and frame rate to guarantee the image fluency.
- When the network signal is bad, but the resolution should be guaranteed, you can set low bitrate and frame rate to guarantee the image fluency.
- Main stream stands for the best stream performance the device supports. It usually offers the best resolution and frame rate the device can do. But high resolution and frame rate usually means larger storage space and higher bandwidth requirements in transmission. Sub-stream usually offers comparatively low resolution options, which consumes less bandwidth and storage space. Third stream is offered for customized usage.

Steps



The supported parameters vary with different models. The actual device prevails.

1. Go to **Configuration** → **Video** → **Video Encoding** → **Video Encoding**.
2. Set the parameters for different streams.

Stream Type

Select the stream type according to your needs.

Bitrate

Select relatively large bitrate if you need good image quality and effect, but more storage spaces will be consumed. Select relatively small bitrate if storage requirement is in priority.

Frame Rate

It is to describe the frequency at which the video stream is updated and it is measured by frames per second (fps). A higher frame rate is advantageous when there is movement in the video stream, as it maintains image quality throughout.

Resolution

The higher the resolution is, the clearer the image will be. Meanwhile, the network bandwidth requirement is higher.

SVC

Scalable Video Coding (SVC) is an extension of the H.264/AVC and H.265 standard. Enable the function and the device will automatically extract frames from the original video when the network bandwidth is insufficient.

Bitrate Type

Select the bitrate type to constant or variable.

Video Quality

When bitrate type is variable, 6 levels of video quality are selectable. The higher the video quality is, the higher requirements of the network bandwidth.

Profile

When you select H.264 or H.265 as video encoding, you can set the profile. Selectable profiles vary according to device models.

I Frame Interval

It refers to the number of frames between two key frames. The larger the I frame interval is, the smaller the stream fluctuation is, but the image quality is not that good.

Video Encoding

The device supports multiple video encoding types, such as H.264, H.265, and MJPEG. Supported encoding types for different stream types may differ. H.265 is a new encoding technology. Compared with H.264, it reduces the transmission bitrate under the same resolution, frame rate, and image quality.

3. Click **Save**.

7.4 Set ROI

ROI (Region of Interest) encoding helps to assign more encoding resources to the region of interest, thus to increase the quality of the ROI whereas the background information is less focused.

Before You Start

Please check the video encoding type. ROI is supported when the video encoding type is H.264 or H.265.

Steps

1. Go to **Configuration** → **Video** → **Video Encoding** → **ROI**.

Stream Type
Stream Type ☒ Main Stream(Normal)

Fixed Area

Area No.	ROI Level	Area Name	Enable	Operation
1	1		☐	Draw Area Clear
2	1		☐	
3	1		☐	
4	1		☐	
5	1		☐	
6	1		☐	
7	1		☐	
8	1		☐	

Save

Figure 7-3 Set ROI

2. Select **Stream Type**.
3. Set ROI area.
 - 1) Enable the corresponding area.
 - 2) Select **ROI Level**.

Note

The higher the ROI level is, the clearer the image of the detected area is.

- 3) Enter **Area Name**.
- 4) Click **Draw Area**.
- 5) Drag the mouse on the live view image to draw the fixed area.
- 6) Select the fixed area that needs to be adjusted and drag the mouse to adjust its position.
- 7) Click **Stop Drawing**.
- 8) Repeat the steps above to set more areas. Up to 8 areas are supported.
- 9) Optional: If you want to delete the area, click **Clear** to delete.
4. Click **Save**.

Chapter 8 Exception Alarm

Set exception alarm when the network is disconnected, the IP address is conflicted, etc.

Steps



The supported exception types vary with different models. The actual device prevails.

1. Go to **Configuration** → **Event** → **Alarm Linkage** → **Exception**.
2. Select the exception type(s) and the linkage method.
3. Click **Save**.

Chapter 9 Safety Management

9.1 Manage User

The administrator can add, modify, or delete other accounts, and grant different permissions to different user levels.

Steps

1. Go to **Configuration** → **System** → **User Management** → **User List**.
2. Add a user.

Figure 9-1 Add User

- 1) Click **Add**.
- 2) Enter **User Name** and select **User Type**.
- 3) Select **Password Level**. The password level of the added user should conform to the selected level.
- 4) Enter **Admin Password**, **New Password**, and confirm the password.

Caution

To increase security of using the device on the network, please change the password of your account regularly. Changing the password every 3 months is recommended. If the device is used in high-risk environment, it is recommended that the password should be changed every month or week.

5) Assign remote permissions to users based on needs.

User

Users can be assigned permissions of remote log search/interrogate working status and changing their own passwords, but no permissions for other operations.

Operator

Operators can be assigned all permissions except for operations on the administrator and creating accounts.

6) Click **OK**.

3. Optional: You can do the following operations.

Edit the user information Click  to edit the user information.

Delete the user Click  to delete the user.

9.2 Enable User Lock

To raise the data security, you are recommended to lock the current IP address.

Steps

1. Go to **Configuration** → **System** → **Security** → **Security Service** → **Software**.
2. Enable user lock.
3. Click **Save**.

Result

When the times you entered incorrect passwords have reached the limit, the current IP address will be locked automatically.

9.3 Set SSH

To raise network security, you are recommended to disable SSH service. The configuration is only used to debug the device for the professionals.

Steps

1. Go to **Configuration** → **System** → **Security** → **Security Service** → **Software**.

2. Enable or disable **SSH Service**, and set **SSH Port** if you enable the function.
3. Click **Save**.

9.4 Prohibit PING

You can prohibit the external devices to operate network connection volume test to the current device.

Steps

1. Go to **Configuration** → **System** → **Security** → **Security Service** → **Software**.
2. Enable **Prohibit PING**.
3. Click **Save**.

9.5 Set RTSP Authentication

You can improve network access security by setting RTSP authentication.

Steps

1. Go to **Configuration** → **System** → **Security** → **Security Service** → **Software**.
2. Select **RTSP Authentication**.

digest

The device only supports digest authentication.

3. Click **Save**.

9.6 Set Timeout Logout

You can improve network access security by setting timeout logout.

Steps

1. Go to **Configuration** → **System** → **Security** → **Security Service** → **Login Management**.
2. Enable timeout logout for static page.
3. Set **Max. Timeout**.
4. Click **Save**.

Result

When the page static time exceeds the set time, the device will automatically log out.

9.7 Set Password Validity Period

You can improve network access security by setting password validity period.

Steps

1. Go to **Configuration** → **System** → **Security** → **Security Service** → **Login Management**.
2. Select **Password Validity Period**.
 - Select **Permanent**. The password will be permanently valid.
 - Select **Daily** and set **Password Expiry Time**. It will prompt you that the password is expired according to the set password expiry time, and you need to set the new password.
3. Click **Save**.

9.8 Set IP Address Filtering

You can set the IP addresses allowable and not allowable to access the device.

Steps

1. Go to **Configuration** → **System** → **Security** → **Security Settings**.
2. Enable IP address filtering.
3. Set **Filtering Mode**.

Blocklist Mode

The added IP addresses are not allowed to access the device.

Allowlist Mode

The added IP addresses are allowed to access the device.

4. Click **Add**, enter the IP address, and click **OK**.



The IP address only refers to the IPv4 address.

5. Optional: Edit, delete, or clear the added IP addresses.
6. Click **Save**.

9.9 Set HTTPS

9.9.1 Create and Install Self-signed Certificate

HTTPS is a network protocol that enables encrypted transmission and identity authentication, which improves the security of remote access.

Steps

1. Go to **Configuration** → **Network** → **Network Parameters** → **HTTPS**.

2. Select **Create Self-signed Certificate**.
3. Click **Create**.
4. Follow the prompt to enter **Country/Region, Domain/IP, Validity**, and other parameters.
5. Click **OK**.

Result

The device will install the self-signed certificate by default.

9.9.2 Install Authorized Certificate

If the demand for external access security is high, you can create and install authorized certificate via HTTPS protocol to ensure the data transmission security.

Steps

1. Go to **Configuration → Network → Network Parameters → HTTPS**.
2. Select **Create certificate request first and continue the installation**.
3. Click **Create**.
4. Follow the prompt to enter **Country/Region, Domain/IP, Validity**, and other parameters.
5. Click **Download** to download the certificate request and submit it to the trusted authority for signature.
6. Import certificate to the device.
 - Select **Signed certificate is available, start the installation directly**. Click **Browse** and **Install** to import the certificate to the device.
 - Select **Create the certificate request first and continue the installation**. Click **Browse** and **Install** to import the certificate to the device.
7. Click **Save**.

Chapter 10 Maintenance

10.1 View Device Information

Basic Information and Algorithms Library Version

Go to **Configuration** → **System** → **System Settings** → **Basic Information** to view the basic information and algorithms version of the device.

You can edit **Device Name** and **Device No.** The device No. is used to control the device. It is recommended to reserve the default value.

Device Status

Go to **Configuration** → **System** → **System Settings** → **Device Status** to view the device status and data upload monitoring.

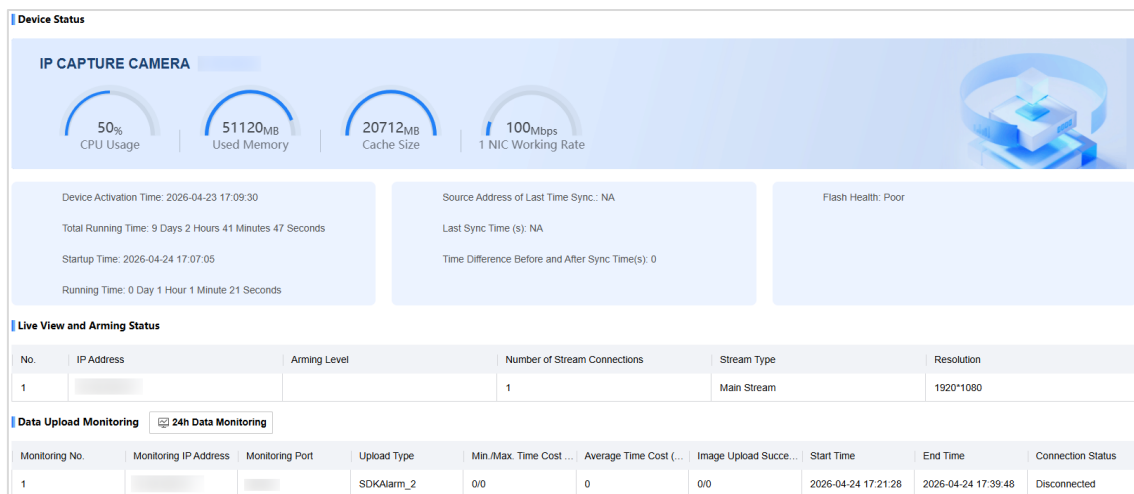


Figure 10-1 Device Status

You can click **24h Data Monitoring**, and select the IP address of the picture upload server to view the data upload statistics in 24 hours. The statistics data will be cleared if the device is rebooted by default. You can enable **Flash Storage** and set **Flash Storage Days** to keep the statistics data not to be cleared when the device is rebooted within the set time.

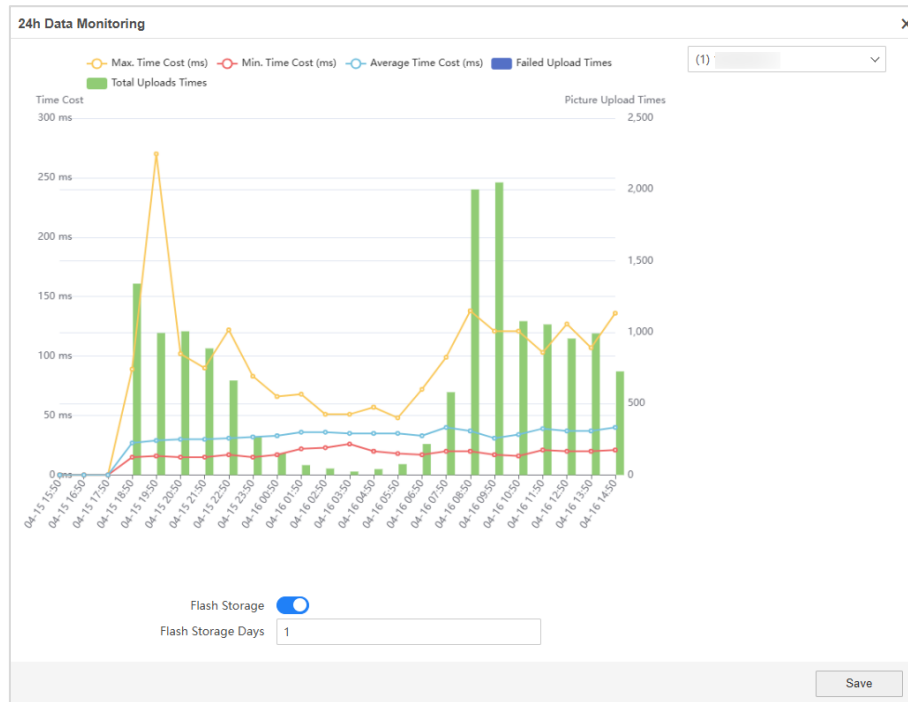


Figure 10-2 24h Data Monitoring

10.2 Synchronize Time

Synchronize the device time when it is inconsistent with the actual time.

Steps

1. Go to **Configuration** → **System** → **System Settings** → **Time Settings**.
2. Select **Time Zone**.
3. Select **Sync Mode**.

NTP Time Sync.

Select it to synchronize the device time with that of the NTP server. Set **Server IP**, **NTP Port**, and **Interval**. Click **NTP Test** to test if the connection between the device and the server is normal.

Manual Time Sync.

Select it to synchronize the device time with that of the computer. Set time manually, or check **Sync. with computer time**.

SDK

If the remote host has been set for the device, select it to synchronize time via the remote host.

ONVIF

Select it to synchronize time via the third-party device.

No

Select it to disable time synchronization.

All

Select it, and you can select any mode above.

4. Click **Save**.

10.3 Set DST

If the region where the device is located adopts Daylight Saving Time (DST), you can set this function.

Steps

1. Go to **Configuration** → **System** → **System Settings** → **DST**.
2. Enable **DST**.
3. Set **Start Time**, **End Time**, and **DST Bias**.
4. Click **Save**.

10.4 Set RS-232

Set RS-232 parameters if you need to debug the device via RS-232 serial port.

Before You Start

The debugging device has been connected via the RS-232 serial port.

Steps

1. Go to **Configuration** → **System** → **System Settings** → **Serial Port** → **RS-232**.
2. Set **Baud Rate**, **Data Bit**, **Stop Bit**, etc.



The parameters should be same with those of the connected device.

3. Select **Work Mode**.



- The supported work modes vary with different models. The actual device prevails.
 - You need to reboot the device after editing the work mode to take effect.
-

Console

Select it when you need to debug the device via RS-232 serial port.

Transparent Channel

Select it, and the network command can be transmitted to RS-232 control command via the

RS-232 serial port.

Narrow Bandwidth Transmission

Reserved.

4. Click **Save**.

10.5 Download Debug Data

You can search and download the diagnostics information of the device to debug the device.

Steps

1. Go to **Configuration → System → Maintenance → Debug Data Download**.

Data Type		Data List		
Diagnostics Information				
		Search	Download	Delete
☐	No.	File Name	Time	Downloading Progress
☐	1	otapDbg.bin		Not downloaded.
☐	2	diagnosedData.txt		Not downloaded.

Figure 7-3 Download Debug Data

2. Select **Data Type**.

Diagnostics Information

The diagnostics information includes kernel, status, version information, etc.

3. Click **Search** to search the data list.

4. Select the file(s) to be downloaded, and click **Download** to download the file(s). You can view the downloading progress.

5. Optional: Select the file(s) to be deleted, and click **Delete** to delete the file(s).

10.6 Enable System Log Service

The security logs refer to the security operation logs. Enable system log service to analyze the security log files of the device so as to find out the illegal intrusion and troubleshoot the security events. You are recommended to save the logs on a log server.

Steps

1. Go to **Configuration → System → Maintenance → Log Search**.

2. Click **Configuration** to enable system log service.

3. Enter **IP Address** and **Port** of the log server.

4. Click **OK**.

Note

For the device not supporting TF card, other functions on this interface are not supported.

10.7 Reboot

When the device needs to be rebooted, reboot it via the software instead of cutting off the power directly.

Steps

1. Go to **Configuration** → **Upgrade** → **Device Maintenance**.
2. Click **Reboot**.
3. Click **OK** to reboot the device.

Note

You can also click  on the upper right corner of the interface to reboot the device.

10.8 Restore Parameters

When the device is abnormal caused by the incorrect set parameters, you can restore the parameters.

Steps

1. Go to **Configuration** → **Upgrade** → **Device Maintenance**.
2. Select the restoration mode.
 - Click **Restore** and click **OK**. Then the parameters except the IP parameters and user parameters will be restored to the default settings.
 - Click **Restore Factory Settings** and click **OK**. Enter the admin password to restore all the parameters to the factory settings.
3. Click **OK**.

10.9 Export Parameters

You can export the parameters of one device, and import them to another device to set the two devices with the same parameters.

Steps

1. Go to **Configuration** → **Upgrade** → **Backup and Import Parameters**.
2. Click **Export** after **Configuration Parameters**.
3. Set an encryption password, confirm the password, and click **OK**.

Note

The password is used for importing the configuration file of the current device to other devices.

4. Select the saving path, and enter the file name.
5. Click **Save**.

10.10 Import Configuration File

Import the configuration file of another device to the current device to set the same parameters.

Before You Start

Save the configuration file to the computer.

Steps

Caution

Importing configuration file is only available to the devices of the same model and same version.

1. Go to **Configuration** → **Upgrade** → **Backup and Import Parameters**.
2. Select **Importing Method**.
3. Click **Browse** to select the configuration file.
4. Click **Import**.
5. Enter the password which is set when the configuration file is exported, and click **OK**.
6. Click **OK** on the popup window.

Result

The parameters will be imported, and the device will reboot.

10.11 Upgrade

Upgrade the system when you need to update the device version.

Before You Start

- Update the plugin before upgrade.
- Prepare the upgrade file in .dav format.

Steps

1. Go to **Configuration** → **Upgrade** → **Import Upgrade File**.
2. Click **Browse** to select the upgrade file.
3. Click **Upgrade**.
4. Click **OK** in the popup window.

Note

The upgrading process will take minutes. Do not power off the device. The device will restart automatically after upgrading. If the network condition is poor, it may take more time.

Result

The device will reboot automatically after upgrade.



See Far, Go Further