



# Ultra High Definition (UHD) Decoder

User Manual

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# Preface

## Applicable Models

This manual is applicable to the DS-69XXUDI (C) series UHD decoders, including DS-6901UDI(C), DS-6904UDI(C), DS-6908UDI(C), DS-6910UDI(C), DS-6912UDI(C), and DS-6916UDI(C).

## Default Parameters

Type	Default Parameter
Device	<ul style="list-style-type: none"> <li>• Login user name: admin</li> </ul>
SSH connection	<ul style="list-style-type: none"> <li>• IP address: 192.0.0.64</li> </ul>






To improve system security, it is highly recommended to change password regularly. In order to protect your privacy and corporate data and avoid network security issues, it is recommended to set strong password that meets security requirements.

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## Symbol Conventions

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

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

## Safety Instructions

### **Caution**

In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region.

### **Note**

- Provide a surge suppressor at the inlet opening of the device under special conditions such as the mountain top, iron tower, and forest.
- + identifies the positive terminals of the device which is used with, or generates direct current, and - identifies the negative terminals of the device which is used with, or generates direct current.
- The serial port of the device is used for debugging only.
- The interface varies with the models. Please refer to the product datasheet for details.
- The USB port of the device is used for connecting to a mouse, a keyboard, or a USB flash drive only. The current for the connected device shall be not more than 0.1 A.

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# Chapter 1 Introduction

## 1.1 Overview

The DS-69XXUDI (C) ultra high definition (UHD) decoder (hereinafter referred as the device), is the latest generation decoder designed specifically for high-definition network cameras, making it suitable for various video security system projects. The device offers exceptional video processing capabilities and a seamless video decoding experience.

The device has the following core advantages:

- **Format Flexibility:** Supports various video encoding formats including H.265, H.264, MJPEG, Smart264, and Smart265 to meet diverse video source requirements.
- **Resolution Handling:** Decodes H.265 or H.264 video streams of up to 32 MP and lower resolution, ensuring real-time processing and output for high-definition video streams.
- **Output Compatibility:** Provides HDMI 1.4 and BNC ports for connection to various display devices.
- **Stunning UHD:** Supports 4K UHD decoding output, delivering enhanced image detail and improving the visual quality for both video security and video playback scenarios.

## 1.2 First-Time Configuration Process

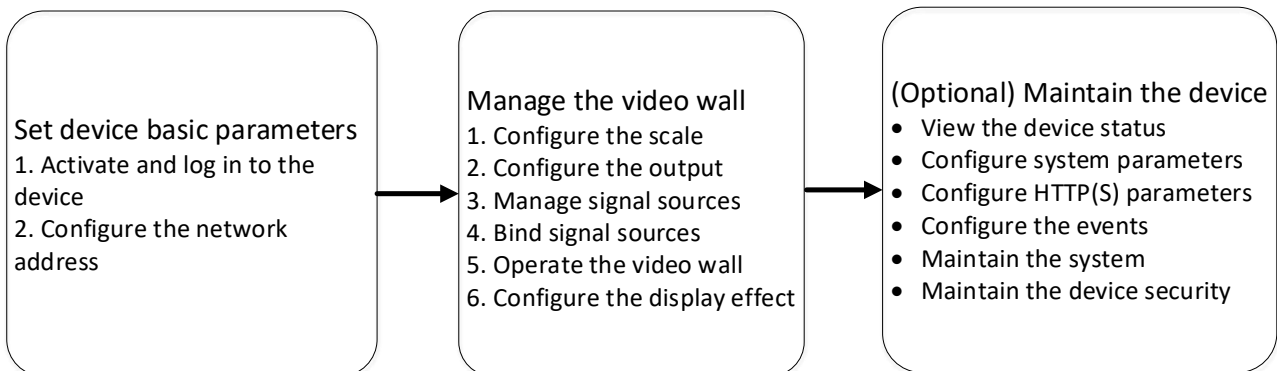


Figure 1-1 First-Time Configuration Process

## Chapter 2 Device Basic Settings

### 2.1 Activate and Log In to Device

You should activate the device before using the device for the first time. You can use the SADP client or the device web page to activate the device. When activating the device, obey the following requirements to set the password:

- To improve system security, it is highly recommended to change password regularly. In order to protect your privacy and corporate data and avoid network security issues, it is recommended to set strong password that meets security requirements.
- Password should contain 8 to 16 characters and at least 2 of the following types: digits, lowercase letters, uppercase letters, and special characters.
- Password cannot contain user name, 123, admin (case insensitive), 4 or more continuously ascending or descending digits, or 4 or more consecutive repeated characters.

#### Use SADP Client and Web Page

Step 1 Connect the device and computer to the same LAN. Make sure that the device and computer are in the same network segment.

Step 2 Download the [SADP client](#) from the Hikvision website and install it on the computer.

Step 3 Open the SADP client.

Step 4 Select the device that is not activated, enter the activation password and confirm it, and click **Activate**.

If the device cannot be found, you can restart the SADP client.

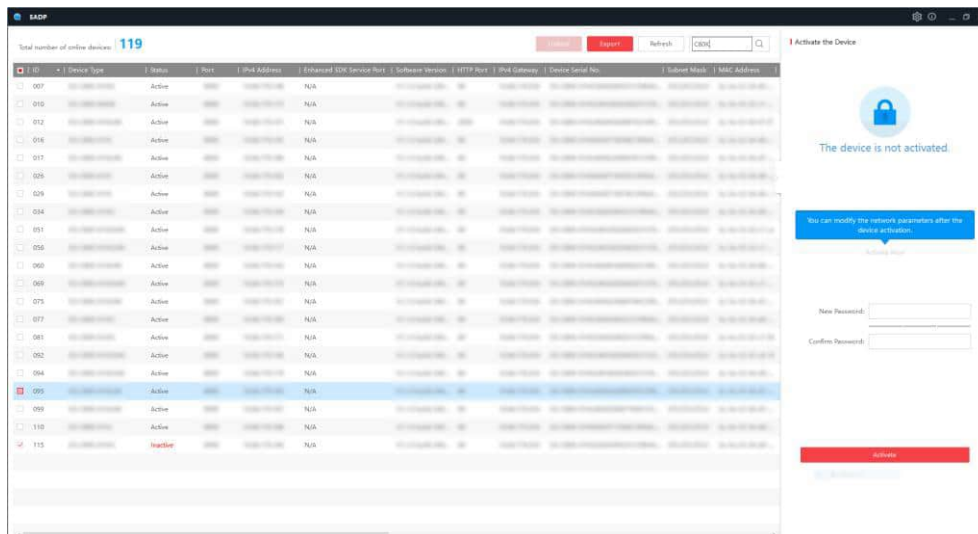


Figure 2-1 Activate the Device via SADP Client

Step 5 View the device IP address in the SADP client and enter the device IP address in the computer browser.

Step 6 Enter the user name and the set activation password, and then click **Log In**.

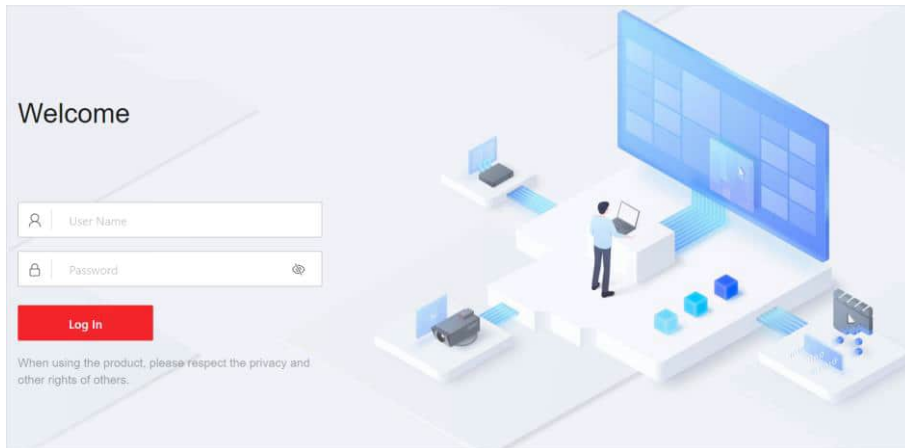


Figure 2-2 Login Page

Step 7 (Optional) To edit the password, you can click the user name in the upper right corner of the web page and then click **Change Password**.

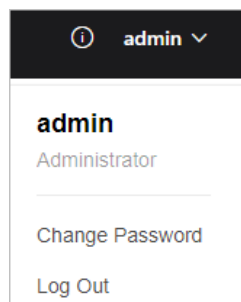


Figure 2-3 Change Password

## Use Web Page

Step 1 Use a network cable to connect a computer to the device.

Step 2 Set the computer IP address to any IP address in the range of 192.0.0.2 to 192.0.0.253 (excluding 192.0.0.64) and set the computer gateway address to 192.0.0.1.

By default, the device IP address is 192.0.0.64 and the gateway address is 192.0.0.1.

Step 3 Enter 192.0.0.64 in the computer browser to enter the device activation page.

Step 4 Set the activation password, and then click **Activate**.

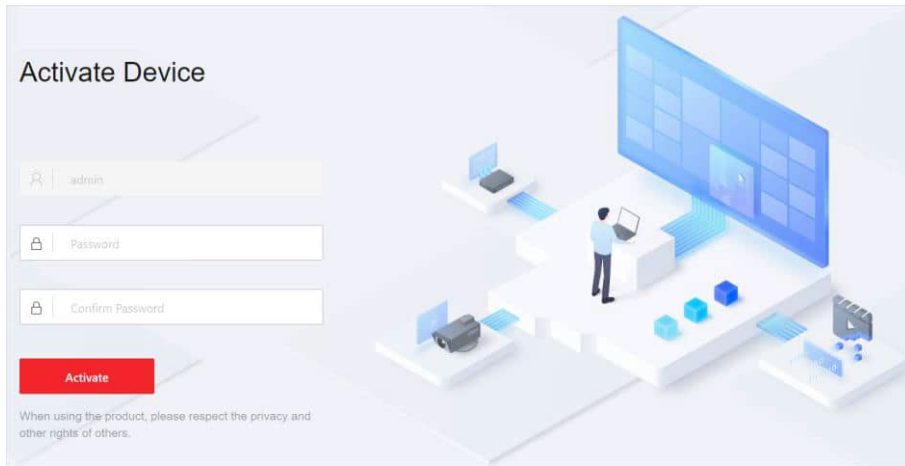


Figure 2-4 Activate the Device via Browser

Step 5 Enter the user name and the set activation password on the login page, and then click **Log In**.

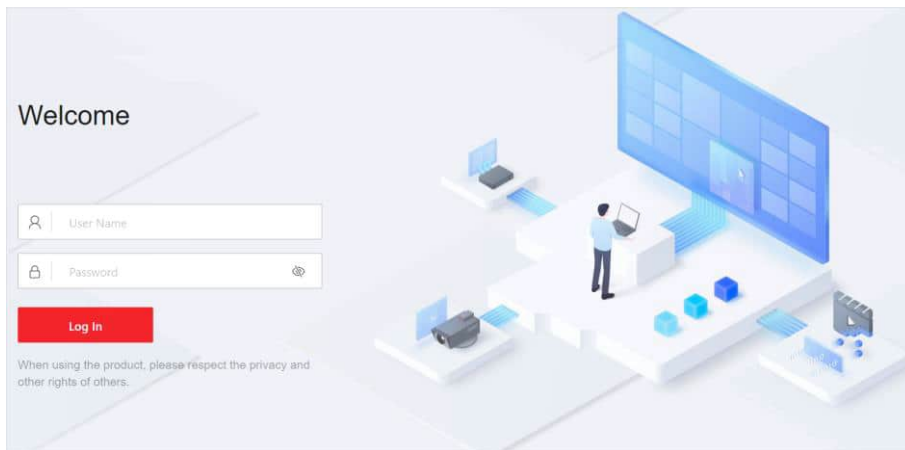


Figure 2-5 Login Page

Step 6 (Optional) To edit the password, you can click the user name in the upper right corner of the web page and then click **Change Password**.

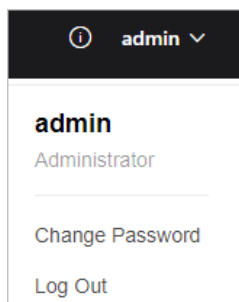


Figure 2-6 Change Password

## 2.2 Configure the Network Address

### 2.2.1 Configure TCP/IP

#### Before You Start

Make sure the device and the computer are in the same segment after the device connects to the on-site network.

#### Steps

Step 1 Go to **Configuration** → **Network** → **Network Configuration** → **TCP/IP**.

TCP/IP

NIC Type/NIC 10/100/1000 Mbps Self-Adaption

\*IPv4 Address

\*IPv4 Subnet Mask

\*IPv4 Default Gateway

IPv6 Mode  Manual  Auto Obtain

\*IPv6 Address

\*IPv6 Subnet Prefix Length

\*IPv6 Default Gateway

**DNS Server Settings**

\*Preferred DNS Server

\*Alternative DNS Server

Save

Figure 2-7 Configure TCP/IP Parameters

Step 2 Set the IPv4 address, subnet mask, and gateway.

Step 3 Set the IPv6 parameters:

- Select **Manual**, and then enter the IPv6 address, subnet prefix length, and gateway.
- Select **Auto Obtain**.

Step 4 Set the preferred and alternative DNS server.

Step 5 Click **Save**.

Step 6 Remove the network cable that connects the device and computer, and use the network cable to connect the device to the on-site network.

Step 7 Enter the configured device IP address in the web browser of the computer to log in to the web page of the device.

## Chapter 3 Video Wall Management

### 3.1 Configure the Video Wall

#### 3.1.1 Configure the Video Wall Scale

Step 1 Go to **Video Wall Configuration**, and then click **Edit Video Wall Scale**.

You can click **Edit Name** to change the video wall name.

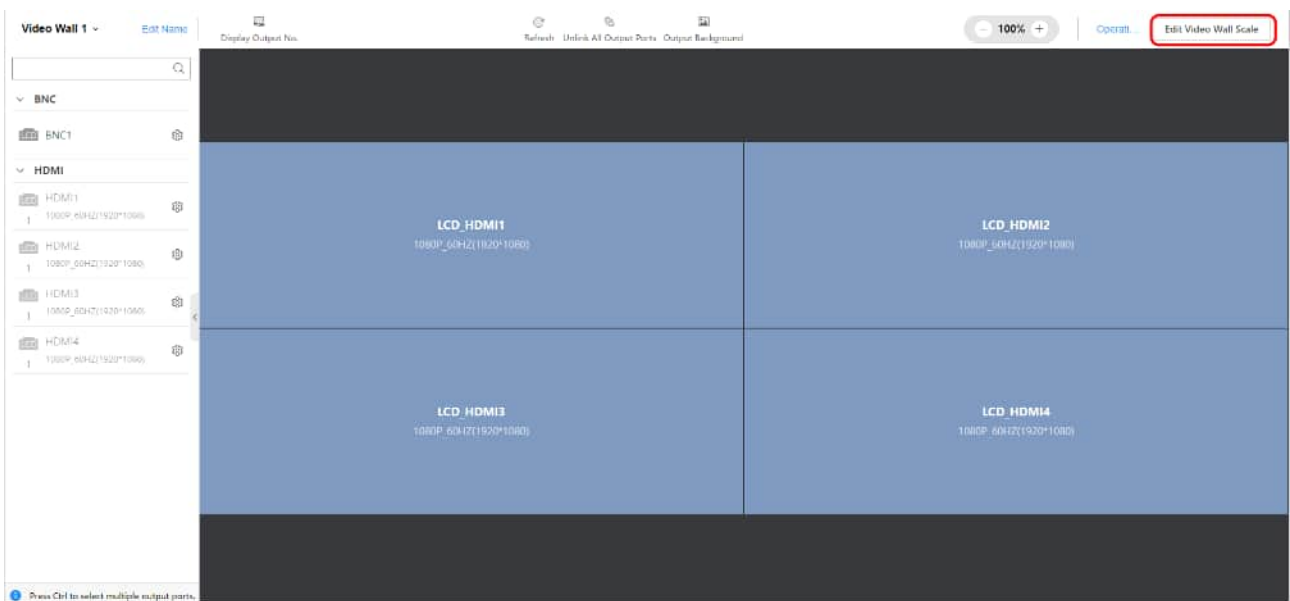


Figure 3-1 Video Wall Configuration Page

Step 2 According to the actual screen quantity, directly enter the number of rows and columns, or select the area with the mouse, and click **Save**.

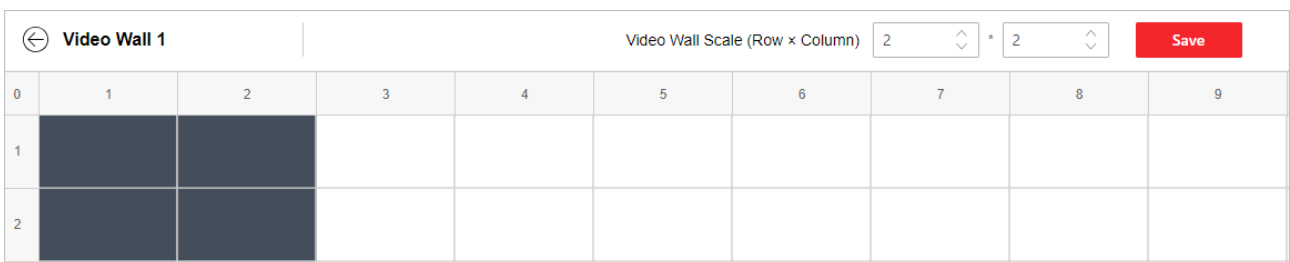




Figure 3-2 Set the Video Wall Scale

### 3.1.2 Configure the Output

#### Configure Output Port

On the **Video Wall Configuration** page, click  of an output port. According to the screen type, configure the output port and then click **Save**.

- Click  of a BNC port to select the video standard for the LCD screen.

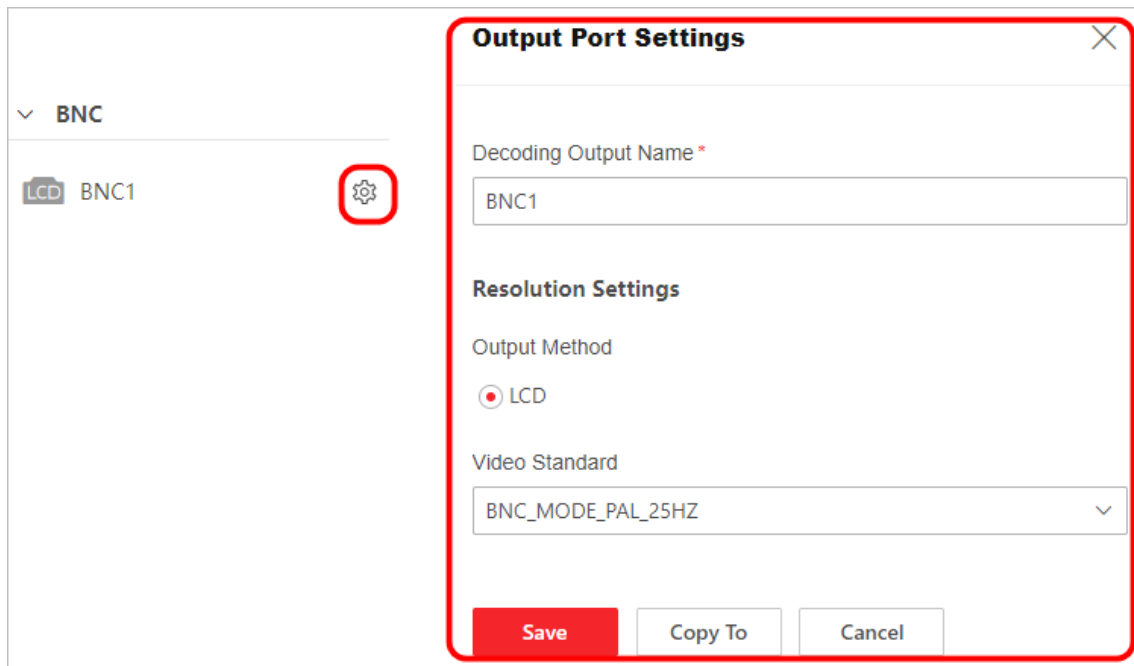



Figure 3-3 Configure a BNC port

- Click  of an HDMI port to configure its parameters:
  - The DVI mode has better compatibility and the HDMI mode supports embedded audio output. If you select AUTO, the output mode of the device output port will automatically adapt to the output mode supported by the screen.
  - If you select LCD output method, select the LCD screen resolution as required.
  - If you select LED output method, enter the width and height of the LED screen.
  - If you select the loading mode, make sure that the configured resolution (width × height) is smaller than 2.6 MP.
  - If you select the clipping mode, make sure that the configured resolution is smaller than the reference resolution that is shown when you select the LCD output method.

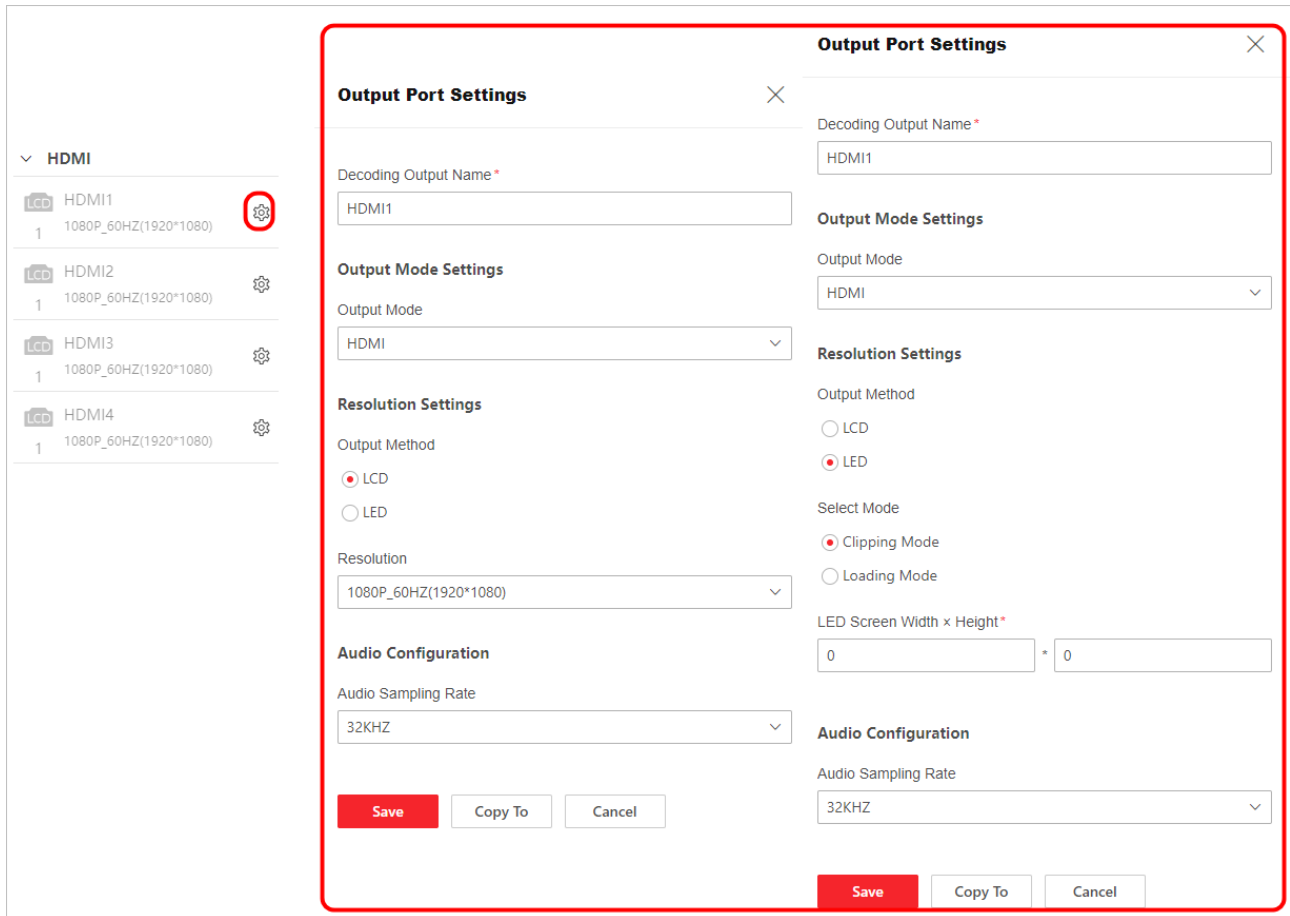



Figure 3-4 Configure an HDMI Port

- Click **Copy To** to copy the current output configuration to other output ports.

## Bind Output Ports with Video Wall

Step 1 Click **Display Output No..**

Step 2 According to the output number shown on the actual screen, drag the corresponding output ports to the screens of the video wall.

- To batch bind output ports with the video wall, press Ctrl to select multiple output ports and drag the output ports to the screens of the video wall.
- To cancel the linkage between a screen and an output port, click  in the upper right corner of the screen.
- To cancel the linkage between all screens and output ports, click **Unlink All Output Ports**.

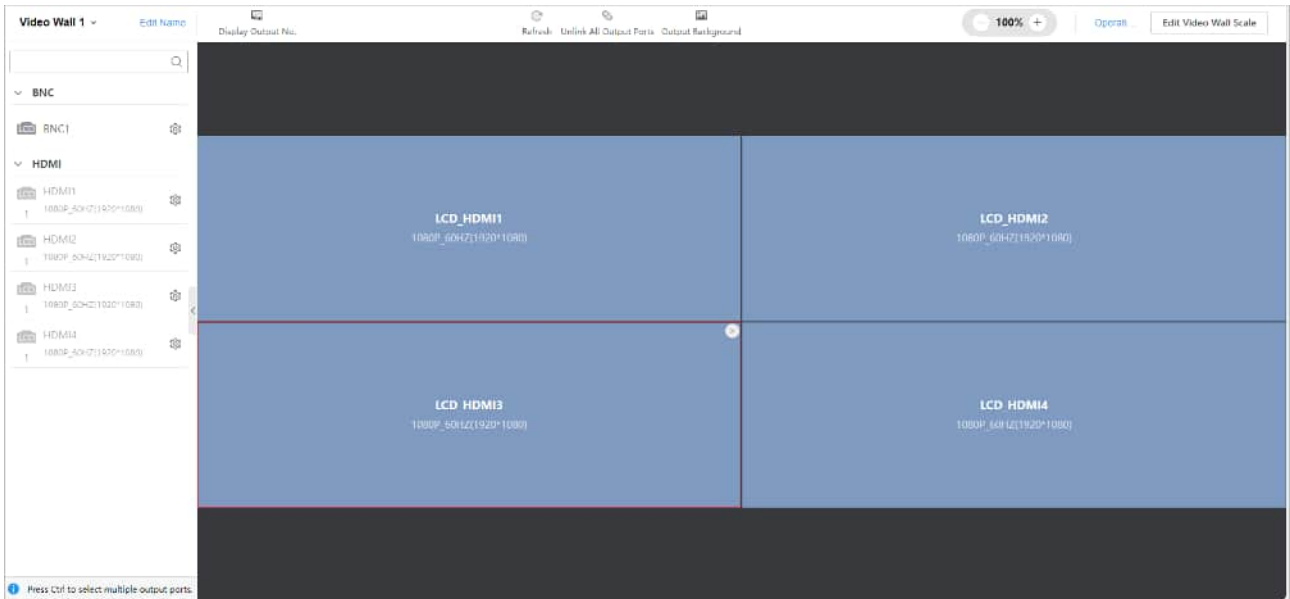


Figure 3-5 Bind Output Ports with Video Wall

Step 3 (Optional) If the screens that are used to configure the video wall support control linkage function, you can perform the following operations to automatically bind output ports to the screens of the video wall.

- 1) Make sure all screens are enabled with the control linkage function.
- 2) Use the remote control to set the location information for all actual screens.
- 3) Click **Edit Wall Scale** and select **Auto Configure**.

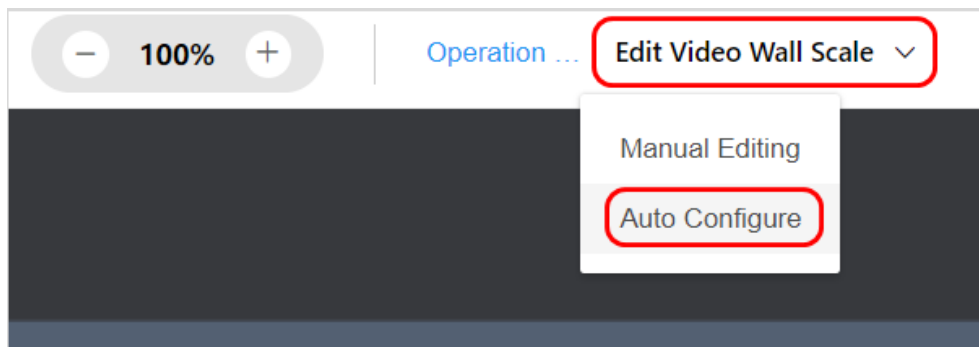


Figure 3-6 Auto Bind Output Ports with Screens

### Configure Output Background

At the top of the **Video Wall Configuration** page, click **Output Background** to edit the background color or import images.

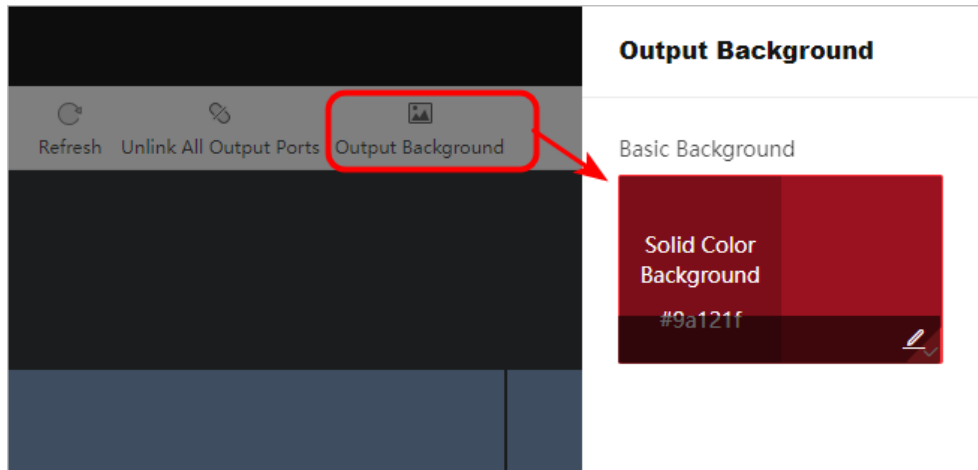


Figure 3-7 Edit Output Background

### 3.1.3 Manage Signal Sources

#### Add a Network Signal Source via IP Address

Step 1 Go to **Video Wall Operation** → **Source**, click , and select **IP Address**.

Step 2 Enter the signal source information and stream media information.

- (Optional) Enable **Encrypted Stream** and enter the secret key.
- Select an added group or click **Add Group** to create a new group.
- Click **More** to select the transmission protocol, stream type, encrypted stream, device manufacturer, and streaming media information.

After enabling **Get Stream via Streaming Server**, you can perform live view data forwarding through the streaming server to reduce network stress.

Step 3 Click **Save**.

Figure 3-8 Add a Network Signal Source via IP Address

## Add a Network Signal Source via DDNS

### Before you start

Before adding network signal sources via DDNS, you should configure DNS servers on the **TCP/IP** page.

### Steps

Step 1 Go to **Video Wall Operation** → **Signal Source**, click , and select **DDNS**.

Step 2 Enter the signal source information and stream media information.

- (Optional) Enable **Encrypted Stream** and enter the secret key.
- Select an added group or click **Add Group** to create a new group.
- Click **More** to select the transmission protocol, stream type, device manufacturer, and streaming media information.


After enabling **Get Stream via Streaming Server**, you can perform live view data forwarding through the streaming server to reduce network stress.

Step 3 Click **Save**.

The screenshot shows a configuration window titled "Add Signal Source" with a close button (X) in the top right. The window is divided into two main sections. The left section contains input fields for "Device Name\*", "Host IP Address\*", "Port No.\*", "User Name\*", and "Password\*" (with a copy icon). Below these is a "Group\*" section with a "+ Add Group" button and two input boxes containing "0" and "1". There are also two buttons labeled "onvif" and "test". The right section, under a "More" expandable header, contains several settings: "Transmission Protocol" (dropdown menu set to "TCP"), "Stream Type" (dropdown menu set to "Main Stream"), "Encrypted Stream" (toggle switch turned off), "Device Manufacturer" (dropdown menu set to "HIKVISION"), "Get Stream via Streaming Server" (toggle switch turned off), "Stream Media IP Address" (disabled input field), "Port No." (disabled input field), and another "Transmission Protocol" (dropdown menu set to "TCP"). At the bottom right, there are two buttons: a red "Save" button and a white "Cancel" button.

Figure 3-9 Add a Network Signal Source via DDNS

### Add a Network Signal Source via URL

Step 1 Go to **Video Wall Operation** → **Source**, click , and select **URL**.

Step 2 Enter the device name and the URL.

Step 3 (Optional) Enable **Encrypted Stream** and enter the secret key.


Step 4 Select an added group or click **Add Group** to create a new group.

Step 5 Click **Save**.

The screenshot shows a dialog box titled "Add Signal Source" with a close button (X) in the top right corner. It features three tabs: "IP Address", "DDNS", and "URL", with the "URL" tab selected and highlighted in red. Below the tabs are several input fields: "Device Name\*" (required), "URL\*" (required) with a copy icon, "Encrypted Stream" (a toggle switch currently turned off), and "Group\*" (required). The "Group\*" field contains a sub-dialog with a "+ Add Group" button, two input boxes containing "0" and "1", and two buttons labeled "onvif" and "test". At the bottom of the main dialog are "Save" and "Cancel" buttons.

Figure 3-10 Add a Network Signal Source via URL

### Batch Delete Network Signal Sources

To batch delete invalid network signal sources, you can select multiple network signal sources with Ctrl or Shift pressed and then click .

### 3.1.4 Bind Signal Sources with the Video Wall

#### Note

You can bind a maximum of 1-channel 4K local signal source to the video wall.

Go to **Video Wall Operation**, take either of the following methods to bind signal sources with the video wall:

- Select a signal source and then drag it rightward to the video wall.
  - If you bind a signal source to an LCD video wall, the signal source window fully covers a single screen by default.
  - If you bind a signal source to an LED video wall, the signal source window fully covers the LED video wall by default.

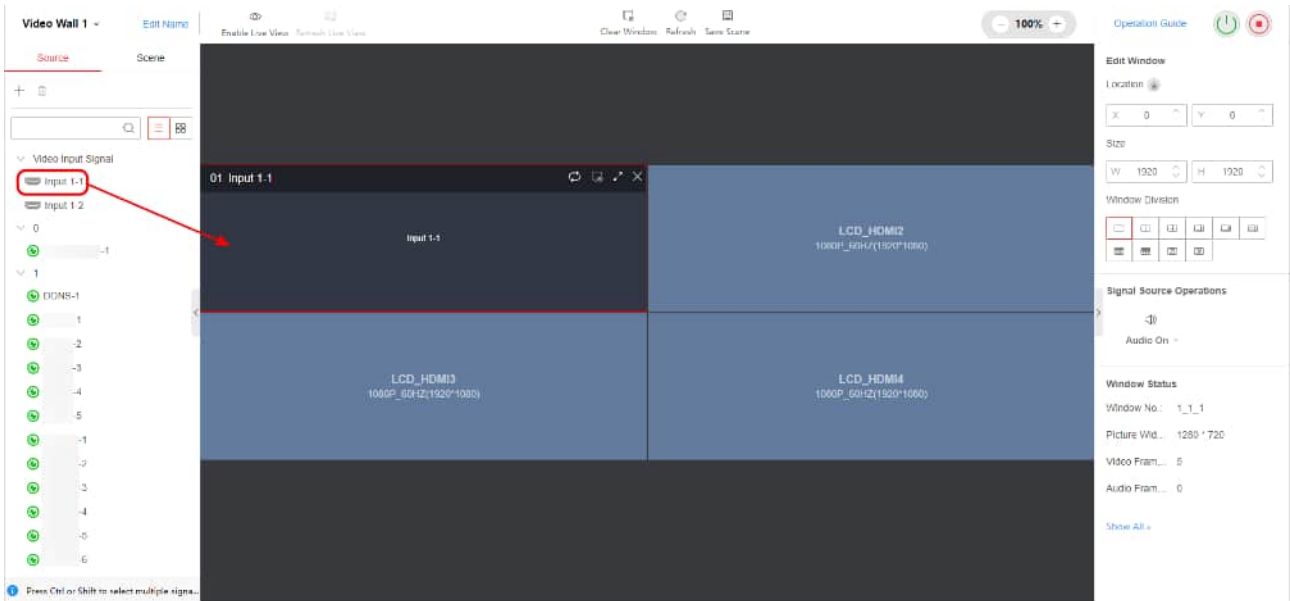


Figure 3-11 Bind a Signal Source to LCD Video Wall

- Choose either of the following methods to batch bind signal sources to the video wall:
  - Drag the video input signal group or a newly created network signal source group rightward to the video wall. The local signal sources join the video input signal group by default.
  - Press Ctrl to select multiple signal sources of the same group, and drag signal sources rightward to the video wall.

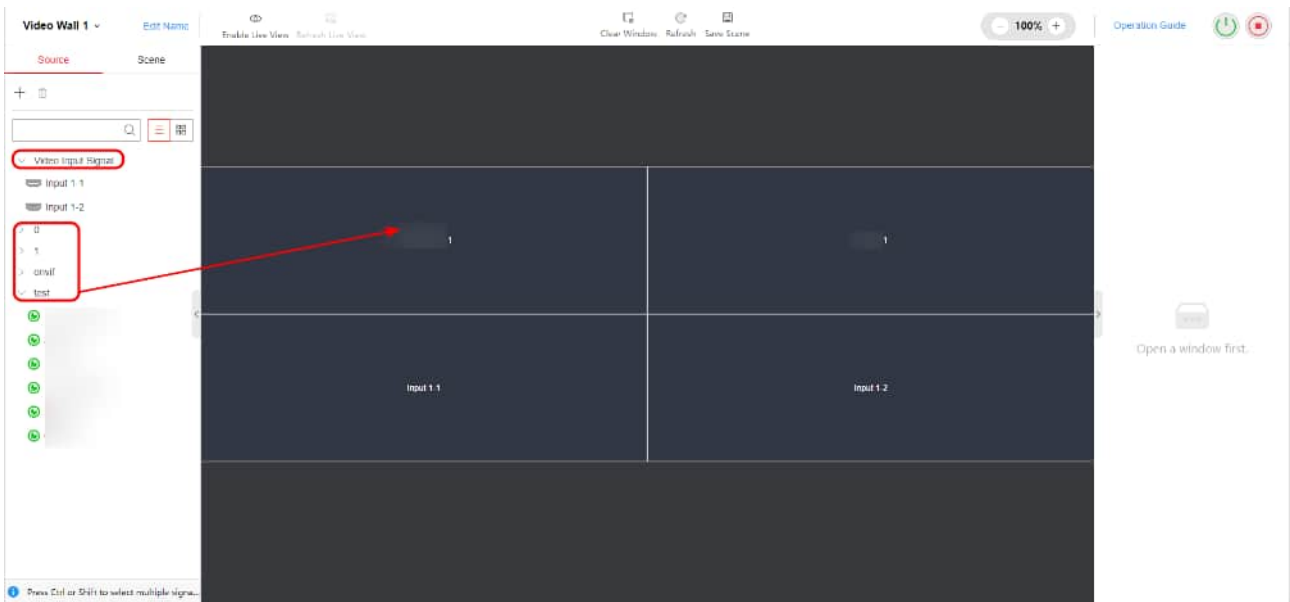





Figure 3-12 Batch Bind Signal Sources to Video Wall

## 3.2 Operate the Video Wall

### 3.2.1 Edit Signal Source Window Parameters

#### Edit a Signal Source Window

On the **Video Wall Operation** page, select a signal source window and perform the following operations as required:

- Adjust the window position: Move the window directly or enter the specific X and Y values.
- Divide the window: Click a window division icon.
- Adjust the window size:
  - Drag the window edge to adjust its size.
  - Enter W and H values.
  - Click  in the upper right corner of the window to make it fully cover the occupied output ports and click  to restore the original size.
- Set the window to the bottom: Click .

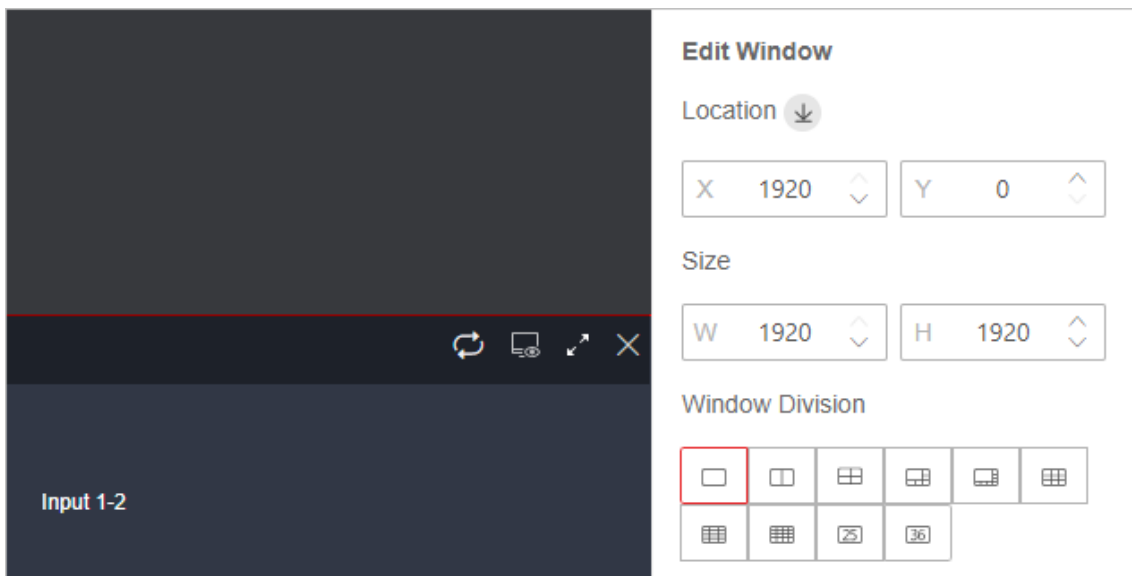


Figure 3-13 Adjust Position of a Signal Source Window

- Enable audio for a signal source window.
  - Select a local signal source, click **Audio On** and select an audio output port to enable the audio for the local signal source.

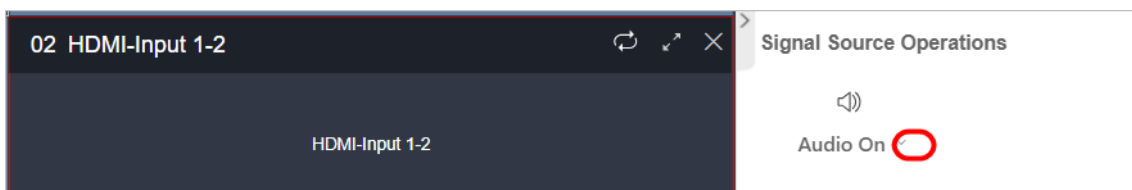


Figure 3-14 Configure Audio for Local Signal Source

- Select a network signal source to configure its decoding status, audio status, decoding delay, smart decoding, and stream exporting.
  - After you enable Websocket, you can export stream.
  - After you enable smart decoding, the device can decode the smart alarm events from the network cameras.

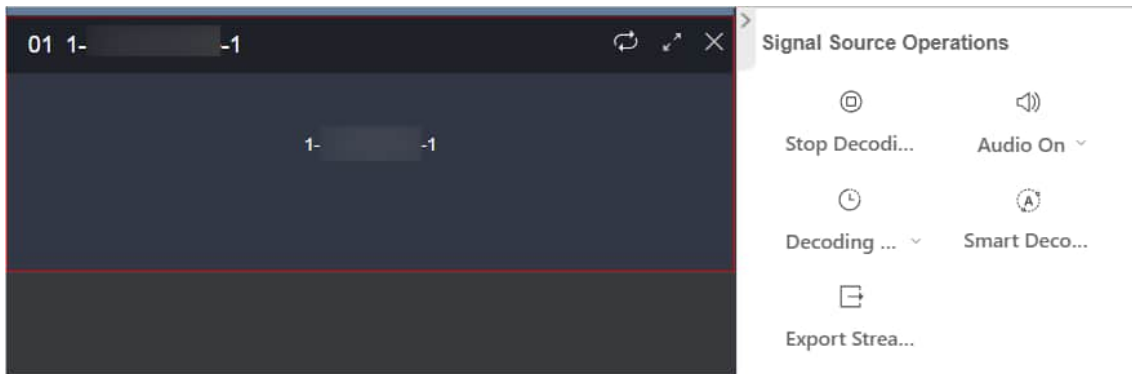



Figure 3-15 Configure Audio for Network Signal Source

- Set the signal source group auto-switching: Click  in the upper right corner of the signal source window, select a signal source group, set the image interval, and then click **Start Auto-Switch**.

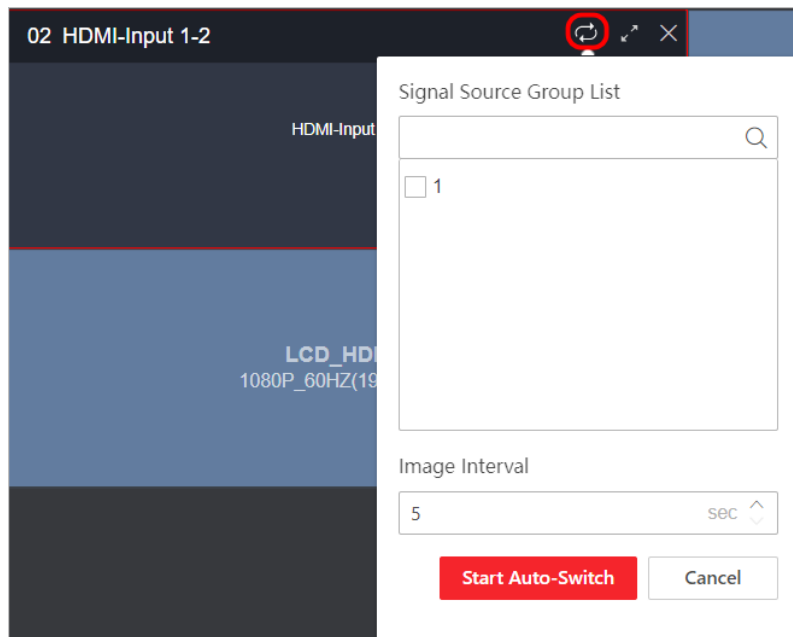




Figure 3-16 Set Signal Source Group Auto-Switching

- View the window status: You can click **Show All** to view the decoding status list.

### Edit Multiple Signal Source Windows

On the **Video Wall Operation** page, perform the following operations as required:

- Preview the signal sources:

- Click  in the upper right corner of a signal source window to preview the signal source. Click  to cancel the live view.
- Click **Enable Live View** at the top of the **Video Wall Operation** page to preview all signal sources on the video wall. Click **Close Live View** to stop previewing all signal sources on the video wall.
- Click **Refresh Live View** at the top of the **Video Wall Operation** page to refresh the live view of all signal sources.

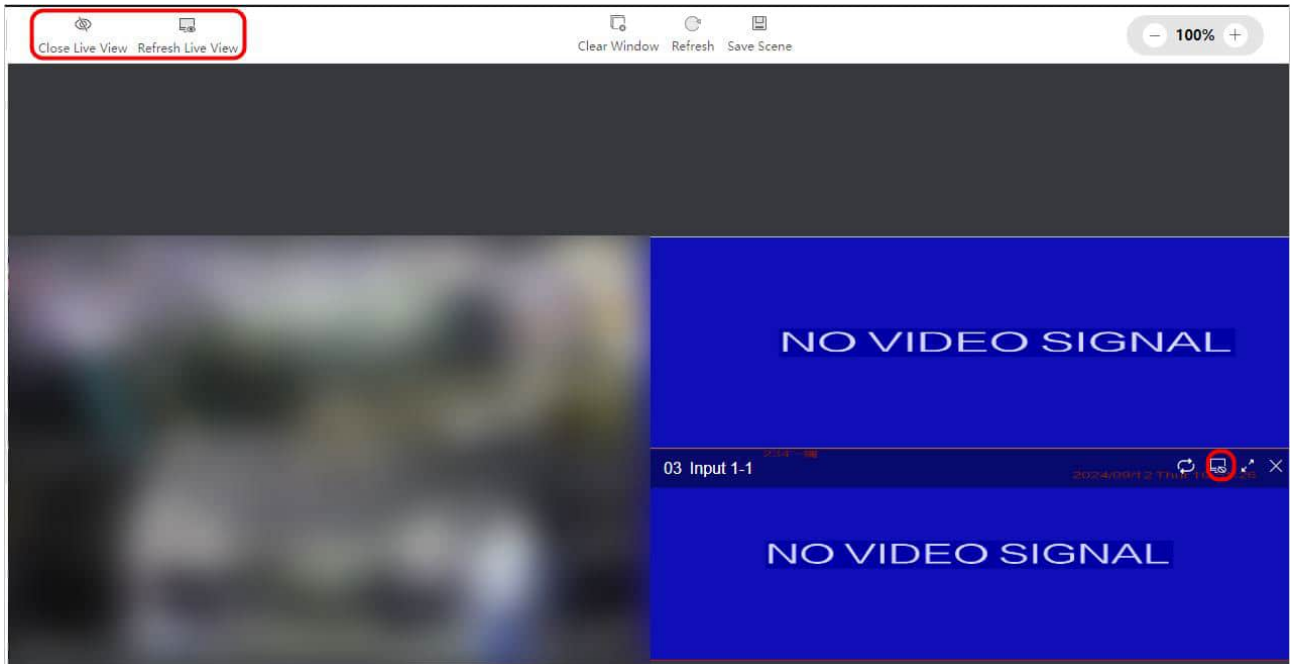




Figure 3-17 Preview Signal Source

- Power on or off all screens: Click  or .
- Clear all bound signal source windows: Click **Clear Window**.

### 3.2.2 Manage Scenes

Up to 64 scenes are supported. Go to **Video Wall Operation** to manage scenes.

- Click **Save Scene** to save the configuration as a new scene or overwrite the existing scene.

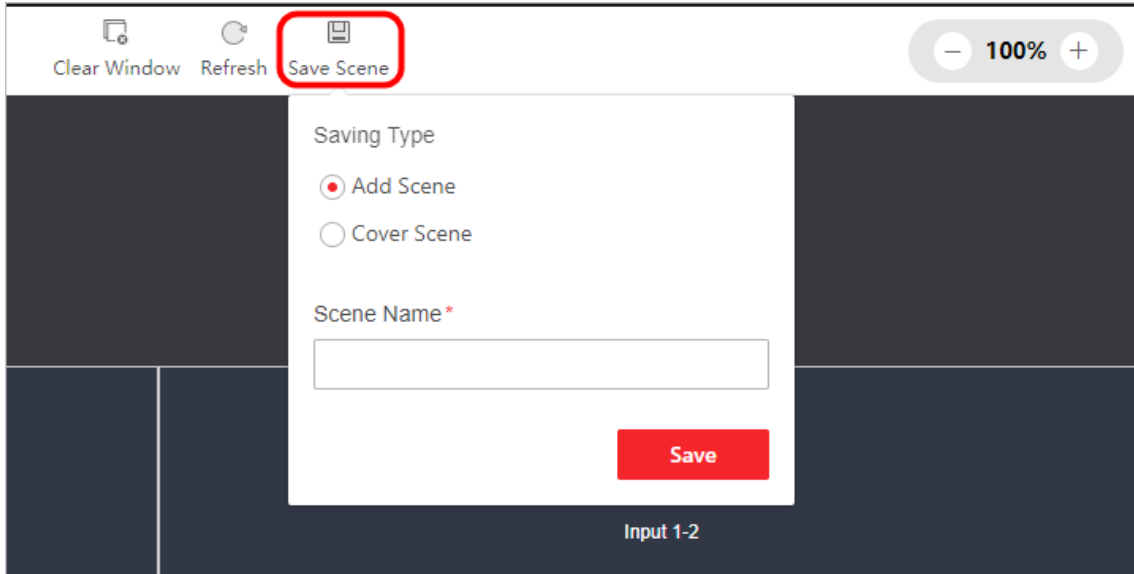





Figure 3-18 Save Scene

- Click **Scene** and hover over a scene name. Click  to call the scene.
- Click **Scene** and hover over a scene name. Click  to edit the scene name.
- Click **Scene** and hover over a scene name. Click  to delete the scene.

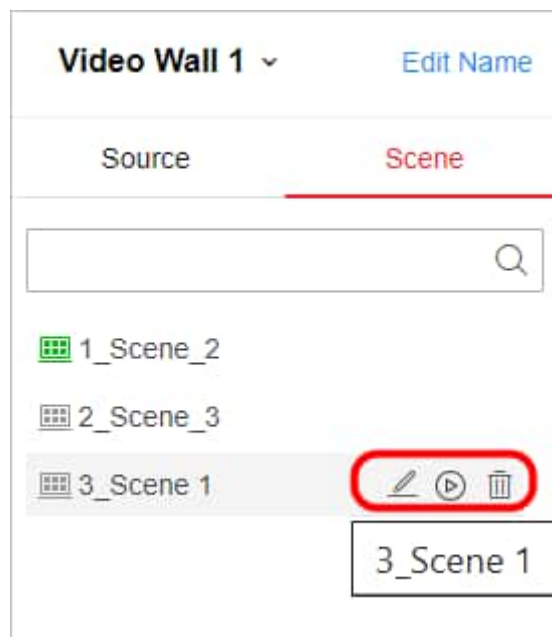
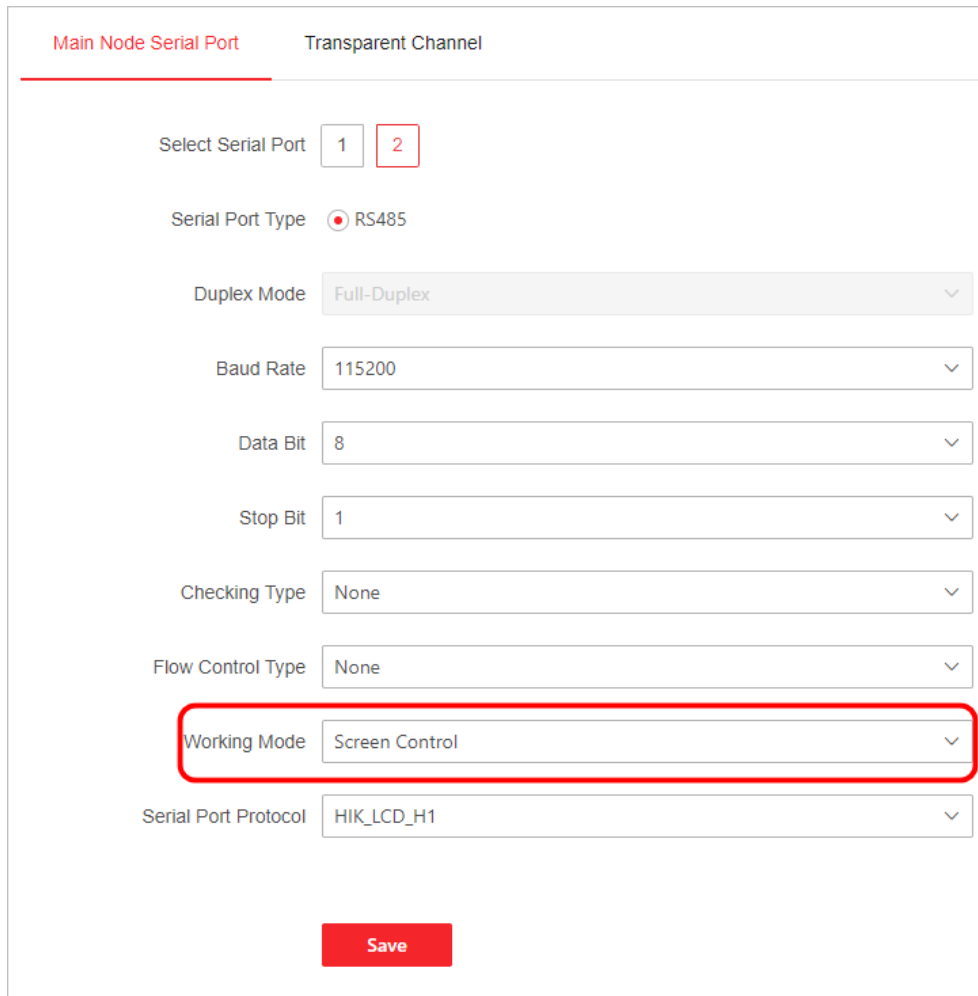


Figure 3-19 Manage Scene

### 3.2.3 Maintain Screens

#### Control Screen via Serial Port

Step 1 Go to **Configuration** → **System** → **Serial Port Settings** → **Main Node Serial Port**, select serial port 2, select **Screen Control** as the working mode, set the baud rate of the device same as the baud rate of the screen, and set other serial port parameters.



The screenshot shows the 'Main Node Serial Port' configuration page. The page has two tabs: 'Main Node Serial Port' (active) and 'Transparent Channel'. The configuration fields are as follows:

- Select Serial Port: 1 and 2 (2 is selected)
- Serial Port Type:  RS485
- Duplex Mode: Full-Duplex
- Baud Rate: 115200
- Data Bit: 8
- Stop Bit: 1
- Checking Type: None
- Flow Control Type: None
- Working Mode: Screen Control (highlighted with a red box)
- Serial Port Protocol: HIK\_LCD\_H1



A red 'Save' button is located at the bottom center of the form.

Figure 3-20 Configure Serial Port

Step 2 Use a serial port cable to connect a screen and the device RS-485 port.

Step 3 Go to **Screen Maintenance** and select the screen that is connected with the serial port cable.

Step 4 Select an image mode and adjust the backlight.

Step 5 (Optional) Click  to power on the screen or click  to power off the screen.

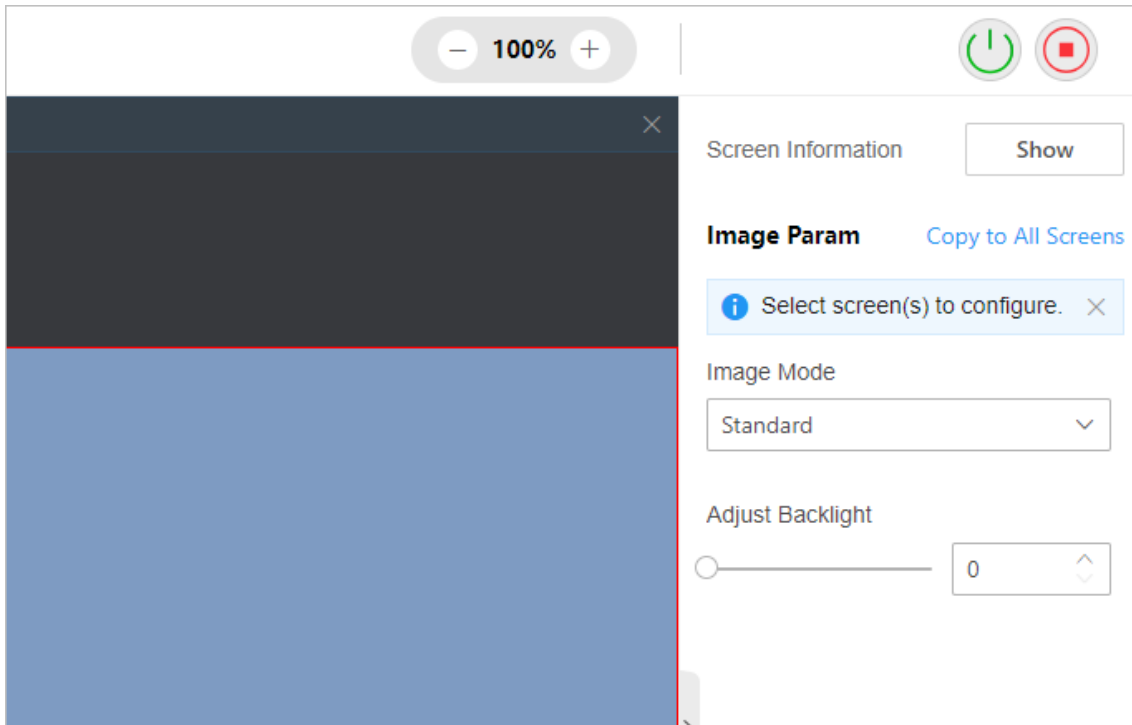


Figure 3-21 Control Screen via Serial Port



### Control Screens via HDMI Ports

Step 1 Use multiple HDMI cables to connect the multiple screens to the device. Make sure all connected screens support and are enabled with the control linkage function.

Step 2 Go to **Screen Maintenance** and select a screen.

Step 3 Select an image mode and adjust the backlight.

Step 4 (Optional) You can perform the following operations as required:

- Click **Show** to show the serial number, software version, work duration, and device temperature on all screens.
- Click  or  to power on or off all screens that are connected with the HDMI cables.
- Click **Copy to All Screens** to copy the image parameters of the current screen to all screens.

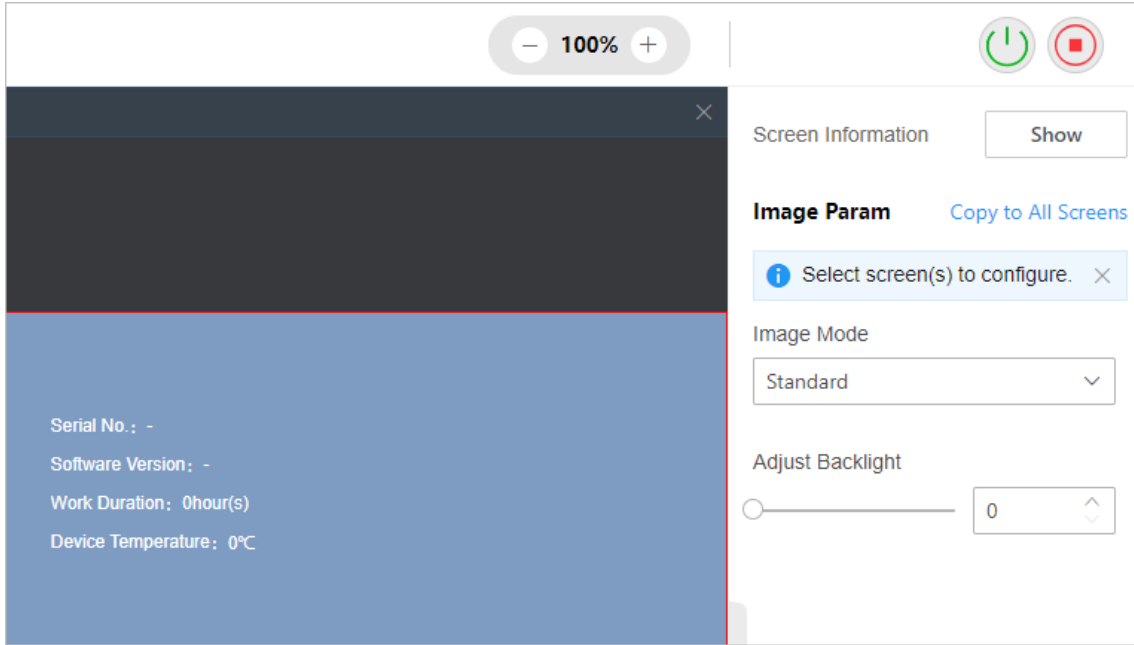


Figure 3-22 Show Screen Information

### 3.3 Configure Image Effect on Screen

#### 3.3.1 Edit a Signal Source

##### Edit a Local Signal Source


Go to **Video Wall Operation**, hover over a local signal source and then click  to edit its parameters:



Figure 3-23 Edit a Local Signal Source

- Edit the signal source name.
- Click **Source Clipping**, and set the clipping value at top, bottom, left, and right edges.  
The clipping value ranges from 0 to 200. The clipping value at the top and bottom edges should be a multiple of 2, and the clipping value at the left and right edges should be a multiple of 4.

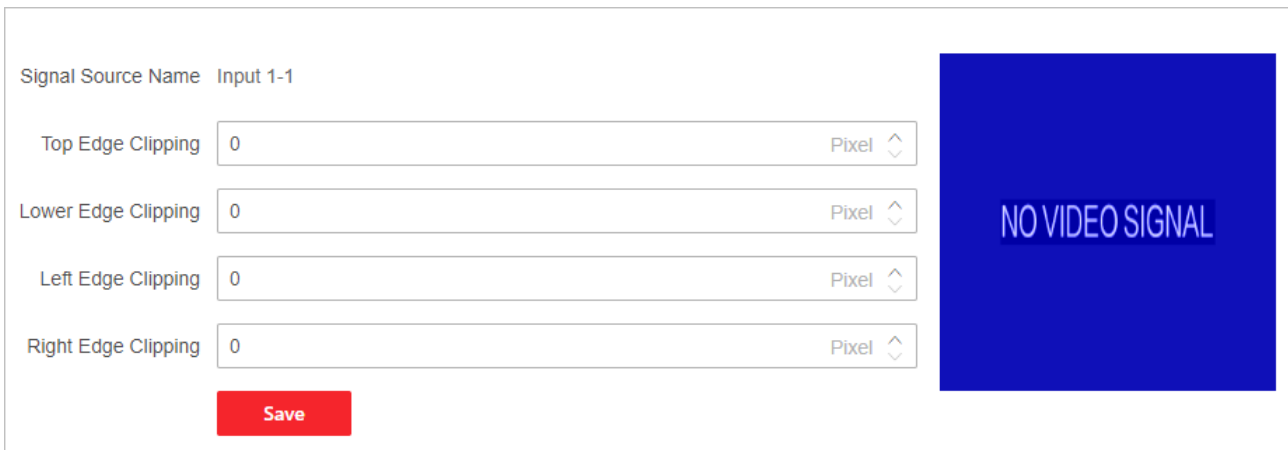


Figure 3-24 Clip a Signal Source

- If the resolution of a signal source does not match the resolution of the screen, you can customize the signal source resolution.
  - 1) Click **Custom Resolution**.
  - 2) Enable custom resolution and set the refresh rate and resolution. The width should be a multiple of 4 and the height should be a multiple of 2.
  - 3) (Optional) Click **Copy To** to copy the resolution configuration of the current signal source to other signal sources.
  - 4) Click **Save**.



Figure 3-25 Customize Resolution

- Click **OSD**, and then you can add channel name, date, time, character 1, or character 2 to the input signal image.
  - Set the font size, font color, and font direction.
  - Enter the position values or directly drag the character to adjust the position.
  - Customize the channel name and character content.

- Click **Copy To** to copy the OSD configuration of the current signal source to other signal sources.

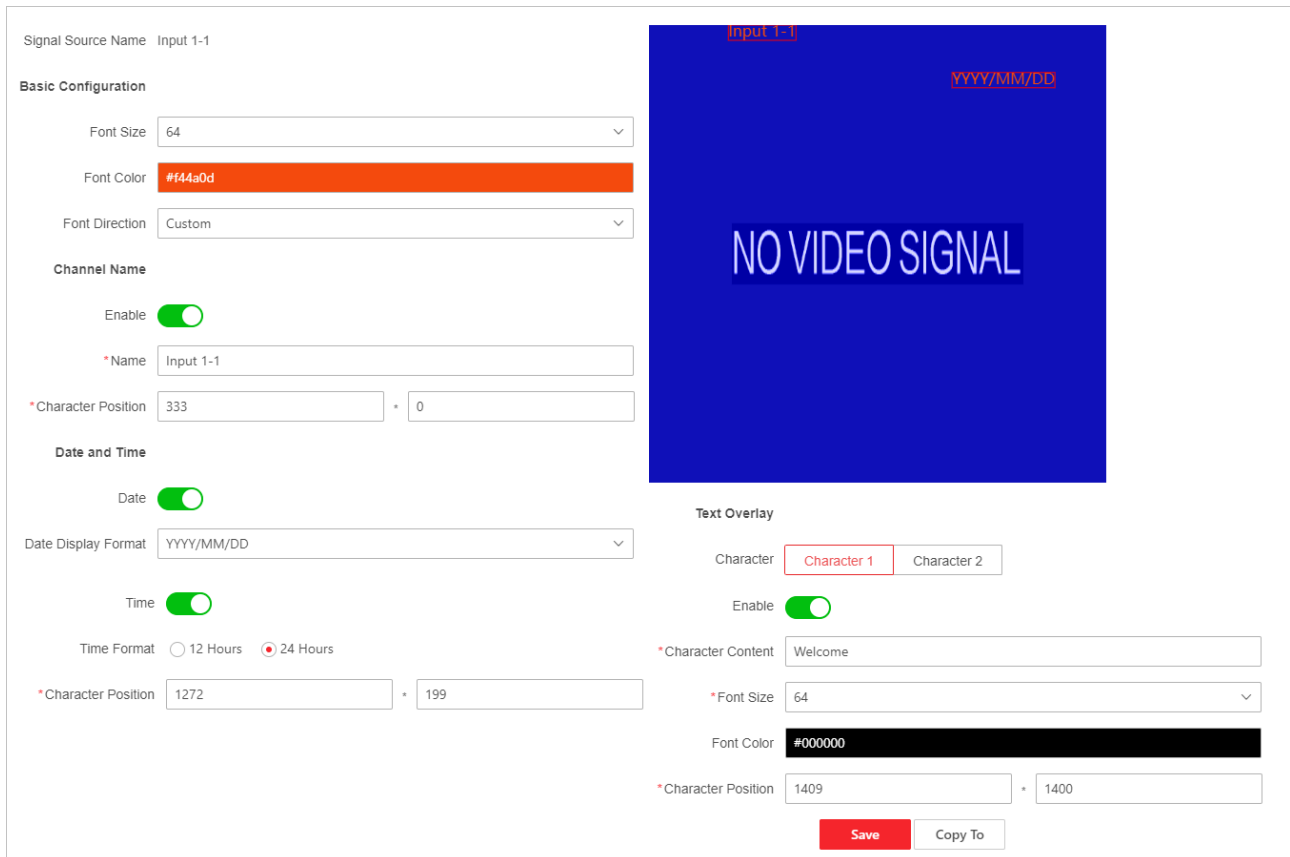


Figure 3-26 Add OSDs

## Edit a Network Signal Source



Go to **Video Wall Operation**, hover over a network signal source and then click  to edit its parameters.

Figure 3-27 Edit a Network Signal Source

### 3.3.2 Configure Encoding Parameters

Step 1 Go to **Video Wall Operation**, hover over a local signal source and then click .

Step 2 Click **Encoding Settings**.

Step 3 Set the video encoding parameters.

- Set the bit rate type and maximum bit rate.
  - If you select **Constant Bit Rate**, the device uses the average bit rate for transmission and uses fast compression speed. The video mosaic might occur.
  - If you select **Variable Bit Rate**, the device automatically adjusts the bit rate for transmission as long as the bit rate is within the limit and uses slow compression speed to ensure the image definition in complex scenarios.

- If you select **Variable Bit Rate**, you should select a video quality. The higher video quality, the higher the bandwidth requirement.
- Enter an I-frame interval. The larger the I-frame interval, the smaller the stream fluctuation, and the lower the image quality.
- Select a resolution. The higher resolution, the higher the bandwidth requirement.
- Select an encoding type and video type.

Step 4 Select an audio encoding type.

Step 5 Click **Save**.

Signal Source Name Input 1-1

**Video Encoding**

Stream Type  Main Stream (Scheduled)  Sub-stream

Bit Rate Type  Variable Bit Rate  Constant Bit Rate

Video Quality

\*I-Frame Interval

\*Custom Max. Bit Rate  kbps

Resolution

Frame Rate  fps

Encoding Type  H.264  H.265

Video Type  Video Stream  Video and Audio Stream

**Audio Encoding**

Encoding Type

**Save**

Figure 3-28 Configure Encoding Parameters

### 3.3.3 Set Other Parameters

Go to **Configuration** → **Other Settings** to set the following parameters:

- Enable **Sub-Stream Auto-Switch** and set the window division threshold.

If the window division reaches the window division threshold, the device will automatically use sub-stream to get the images. In low bandwidth networks, you can use sub-stream to get relatively smooth images with a small bandwidth footprint.

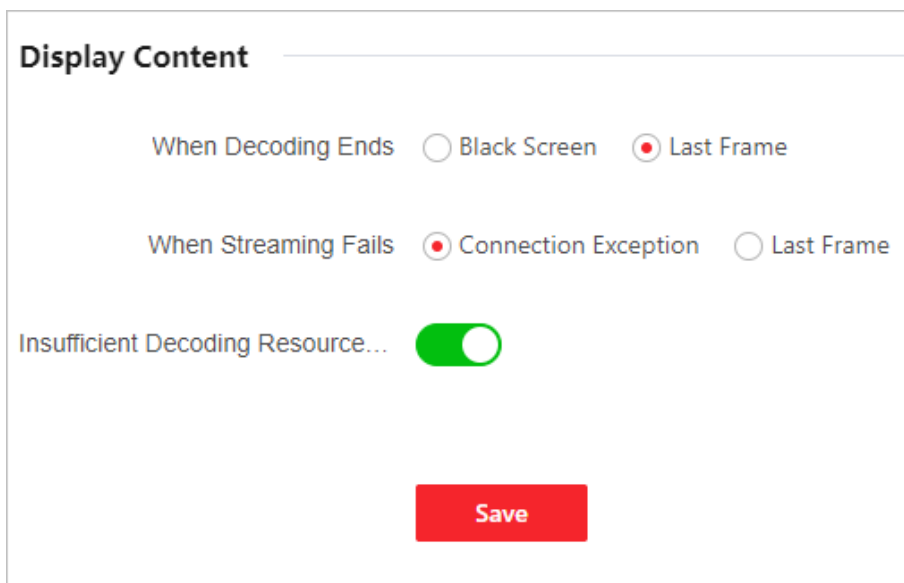


The screenshot shows a settings panel for 'Sub-Stream Auto-Switch'. At the top, there is a toggle switch labeled 'Enable' which is turned on (green). Below it is a dropdown menu labeled 'Division Threshold' with the value '25' selected. At the bottom of the panel is a red 'Save' button.

Figure 3-29 Set Sub-Stream Auto-Switch

- Click **Display Settings** to configure the content displayed when decoding ends, when streaming fails, and when the decoding resource is insufficient.

If you select **Connection Exception**, the specific streaming failure reason will be displayed on the screen.



The screenshot shows the 'Display Content' settings panel. It has three sections: 'When Decoding Ends' with radio buttons for 'Black Screen' and 'Last Frame' (selected); 'When Streaming Fails' with radio buttons for 'Connection Exception' (selected) and 'Last Frame'; and 'Insufficient Decoding Resource...' with a toggle switch that is turned on (green). A red 'Save' button is at the bottom.

Figure 3-30 Set Display Content

- Click **Decoding Delay** and select a default decoding delay level of the device.

## Chapter 4 Device Maintenance

### 4.1 View Device Status

Click **Overview** to view the decoding resource status, network status, device status, and subsystem status.



Figure 4-1 View Device Status

### 4.2 Configure System Parameters

Go to **Configuration** → **System** to configure the following parameters:

- Go to **System Settings** → **Basic Information** to view the device information and edit the device name as required. You can click **Upgrade** to go to the upgrade page for device upgrade.

The screenshot shows the 'Basic Information' configuration page with the following fields and controls:

- Device Name:** Input field containing 'Decoder'.
- MAC Address:** Input field (disabled).
- Model:** Input field (disabled).
- Device Serial No.:** Input field (disabled).
- Main Control:** Input field (disabled) with an **Upgrade** button.
- Decoder Version:** Input field (disabled).
- Web Version:** Input field (disabled).
- Save:** A red button at the bottom.

Figure 4-2 View Basic Information

- Go to **System Settings** → **Time Settings**, if you select **NTP Sync**, the device clock synchronizes with the clock of the NTP server at the specified interval.
  - Set the address and port number of the NTP server.
  - Set the synchronization interval.

The screenshot shows the 'Time Settings' interface. At the top, it displays 'Device Time' as 2024-03-28 15:39:36. Below this is a 'Time Zone' dropdown menu set to '(GMT+08:00) Beijing, Urumqi, Singapore, Perth'. The 'Time Sync Mode' section has two radio buttons: 'NTP Sync' (which is selected) and 'Manual Time Sync'. Below the radio buttons are three input fields: '\* Server Address' (blurred), '\* NTP Port' (set to 123), and '\* Time Sync Interval' (set to 1 min).

Figure 4-3 Select NTP Sync

- On the **Time Settings** page, if you select **Manual Time Sync**, you can click **Sync with Computer** to make the device time same as the computer time.

The screenshot shows the 'Time Settings' interface with 'Manual Time Sync' selected. The 'Device Time' is 2024-04-01 14:47:25. The 'Time Zone' dropdown is set to '(GMT+08:00) Beijing, Urumqi, Singapore, Perth'. In the 'Time Sync Mode' section, 'Manual Time Sync' is selected. Below this, there is a 'Set Time' field showing '2024-04-01 14:47:06' with a calendar icon, and a 'Sync With Computer' button.

Figure 4-4 Select Manual Time Sync

- On the **Time Settings** page, if you enable DST (Daylight Saving Time), the device clock is set forward a specified time during the summer months.
  - Set the start time and end time.
  - Set the bias time.

The screenshot shows the 'DST' settings page. At the top, there is a title 'DST' and an 'Enable' toggle switch that is turned on. Below the toggle are three rows of settings: 'Start Time' (Apr., First, Sun., 02:00), 'End Time' (Oct., Last, Sun., 02:00), and 'Bias Time' (30min). At the bottom of the form is a red 'Save' button.

Figure 4-5 Enable DST

- Go to **User Management** → **User Management** to add users, edit the user name or password, or delete the users. When the user type is administrator, you cannot edit or delete it.

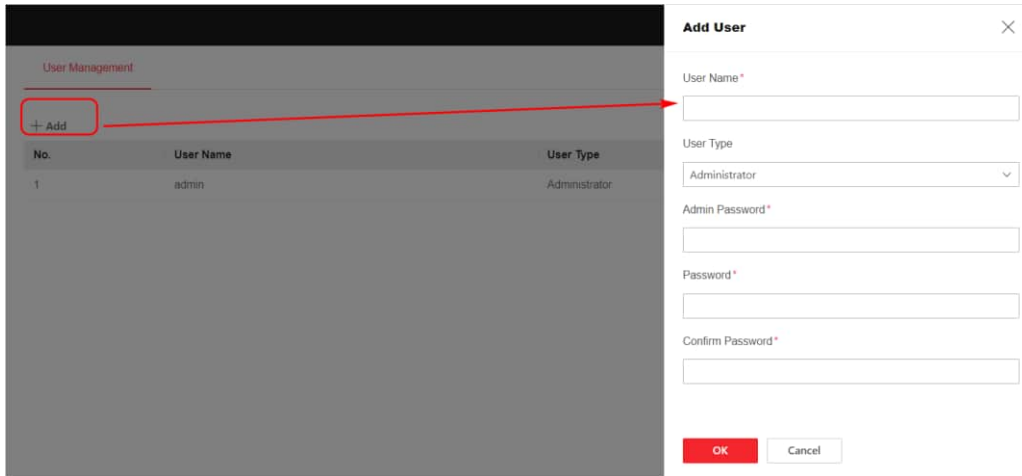


Figure 4-6 Manage Users

### Control the Device via Keyboard

- Step 1 Go to **Configuration** → **System** → **Serial Port Settings** → **Main Node Serial Port**, select serial port 2, select **Keyboard Control** as the working mode, set the baud rate of the device same as the baud rate of the keyboard, and set other serial port parameters.

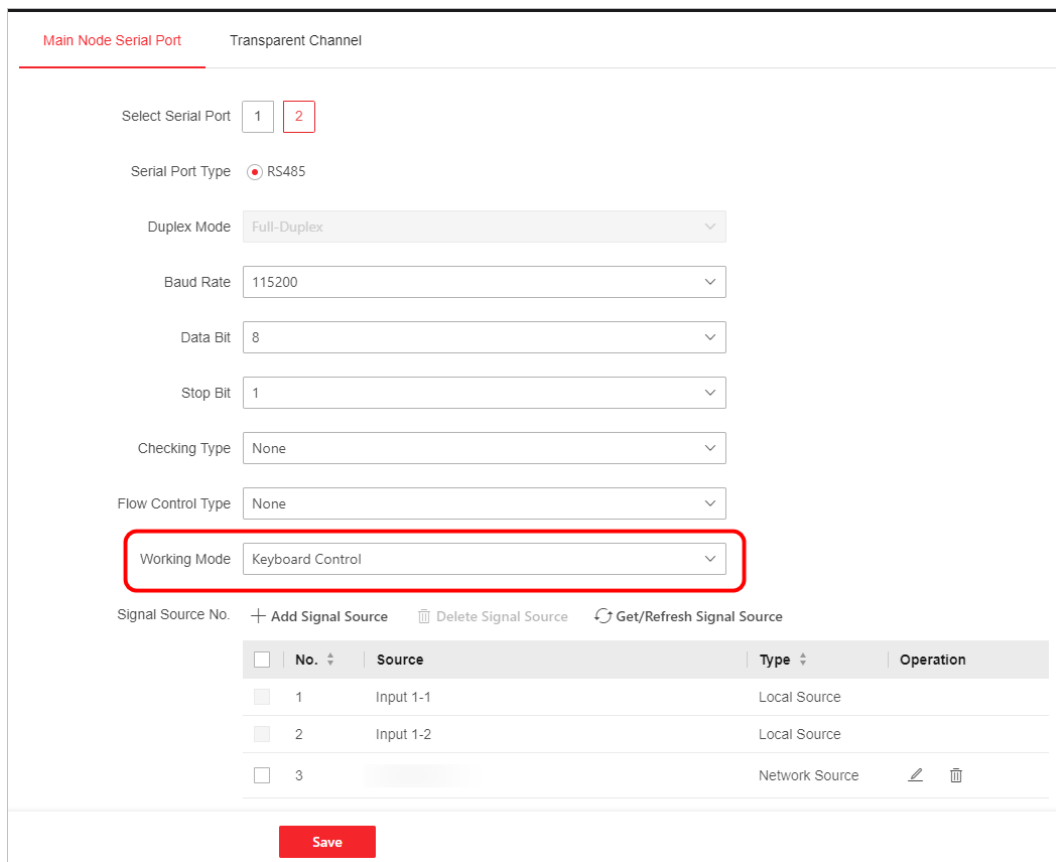


Figure 4-7 Control the Device via Keyboard

Step 2 (Optional) For a serial keyboard, click **Get/Refresh Signal Source** to obtain the local signal sources and click **Add Signal Source** to add the network signal source.

Step 3 Use a serial port cable to connect the keyboard and device.

Step 4 Use the serial keyboard to control the device.

### Configure Transparent Channel

To directly transmit the signals obtained by the decoder without any compression or modification to the receiving device, configure a transparent channel.

Step 1 Go to **Configuration** → **System** → **Serial Port Settings** → **Main Node Serial Port**, select serial port 2, and select **Transparent Control** as the working mode.

Step 2 Set the baud rate of the device same as the baud rate of the receiving device, set other serial port parameters, and click **Save**.


The screenshot shows the 'Main Node Serial Port' configuration interface. At the top, there are two tabs: 'Main Node Serial Port' (active) and 'Transparent Channel'. Below the tabs, the following settings are visible:

- Select Serial Port: 1 and 2 (both are selected, with 2 highlighted by a red box).
- Serial Port Type:  RS485
- Duplex Mode: Full-Duplex (dropdown menu)
- Baud Rate: 115200 (dropdown menu)
- Data Bit: 8 (dropdown menu)
- Stop Bit: 1 (dropdown menu)
- Checking Type: None (dropdown menu)
- Flow Control Type: None (dropdown menu)
- Working Mode: Transparent Channel (dropdown menu, highlighted with a red box)

At the bottom of the form is a red 'Save' button.

Figure 4-8 Select Transparent Channel

Step 3 Click **Transparent Channel**.

Step 4 Click  of a transparent channel to edit its remote serial port, IP address, port number, user name and password of the receiving device, and click **Save**.

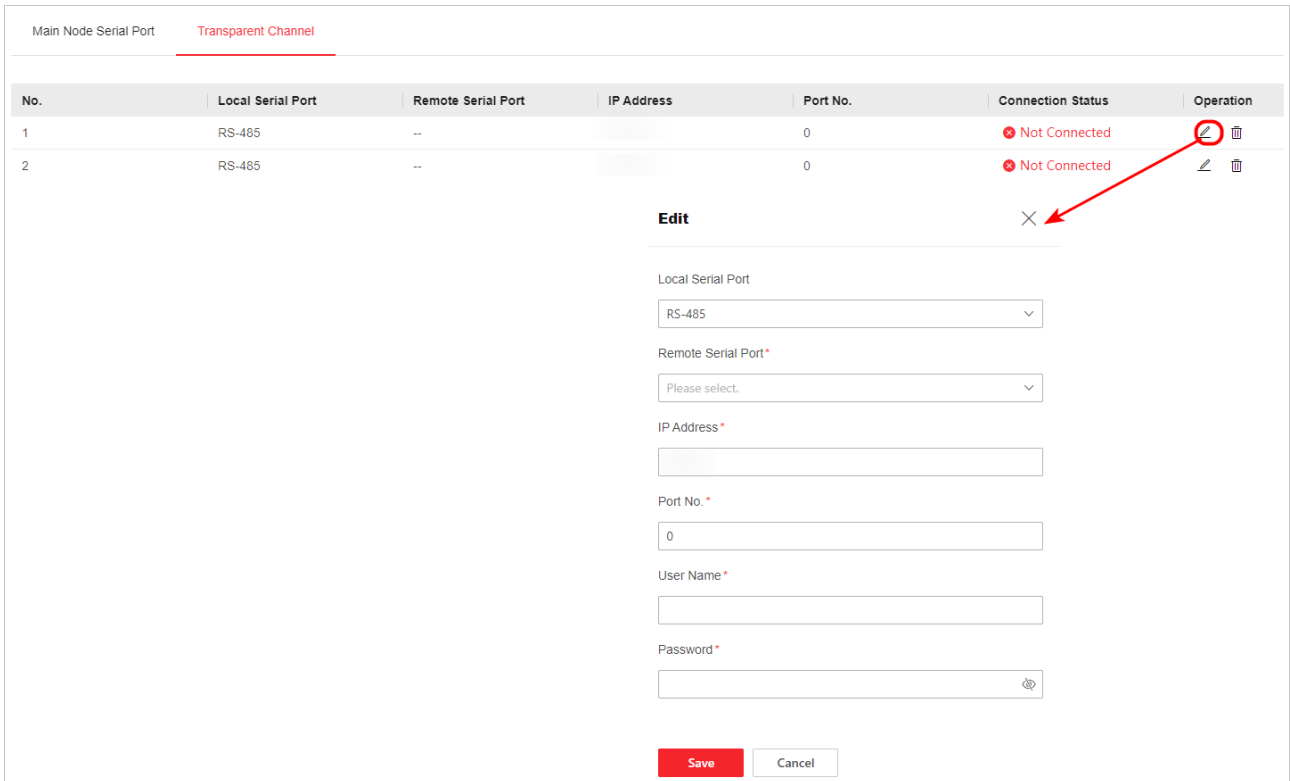


Figure 4-9 Edit a Transparent Channel

### 4.3 Configure HTTP(S) Parameters

Step 1 Go to **Configuration** → **Network** → **Network Service** → **HTTP(S)**.

Step 2 Set the HTTP port number.

The port number can be either 80 or any value from 2000 to 65535. After editing the HTTP port, you need to enter HTTP://Device IP Address: Port in the browser to access the device.

Step 3 Enable HTTPS and then set the HTTPS port.

The default port number is 443. After editing the HTTPS port, you need to enter HTTPS://Device IP Address: Port in the browser to access the device.

Step 4 (Optional) Enable **Redirect to HTTPS Automatically**. Thus, accessing the device via HTTPS is used by default.

Step 5 Click **Save**.

Figure 4-10 Configure HTTP (S) Parameters


## 4.4 Configure Event

Go to **Configuration** → **Event**, set the highest and lowest temperature thresholds for the device, and set the audible warning and alarm reporting to the platform when the exceptional events occur.

Figure 4-11 Set Device Exception Alarm

## 4.5 Maintain the System

Go to **Maintenance and Security** → **System Maintenance** to configure the following parameters:

- On the **Restart** page, click **Restart** to restart the device.
- On the **Upgrade** page, click  to select an upgrade file, and click **Upgrade**. You need to get the upgrade file in advance and save it locally.

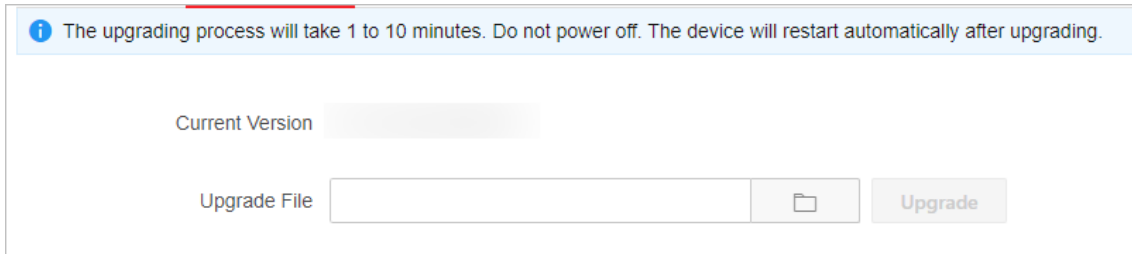




Figure 4-12 Upgrade the System

- On the **Backup and Reset** page, back up the device parameters and scene parameters.
- On the **Backup and Reset** page, reset the device:
  - Click **Restore Default** to restore the parameters except for user information and network parameters, and scene parameters to the default settings. Please use this function with caution.
  - Click **Restore Factory** to restore all functions and parameters of the device to the factory settings. Please use this function with caution.
  - Click  to select a parameter file saved locally, and click **Import** to import device parameters.
  - Click  to select a parameter file saved locally, and click **Import** to import scene parameters.

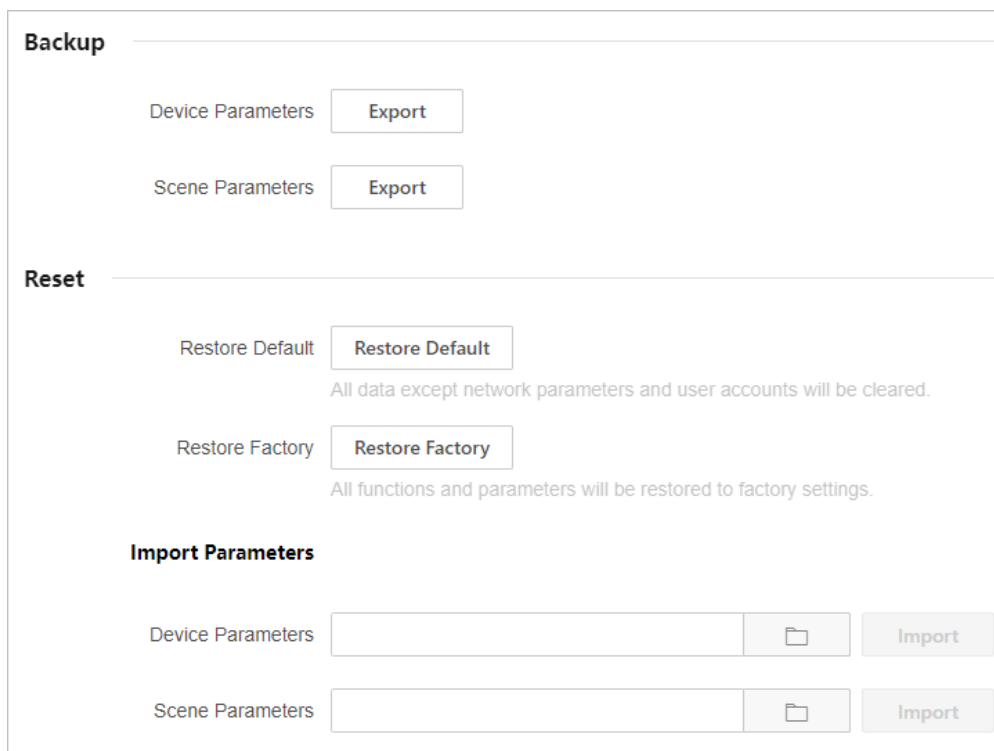


Figure 4-13 Backup and Reset Device Parameters

- On the **Log** page, set the search condition and click **Search**. You can view the searched logs in the list below. You can click **Export CSV File** to export the found logs.

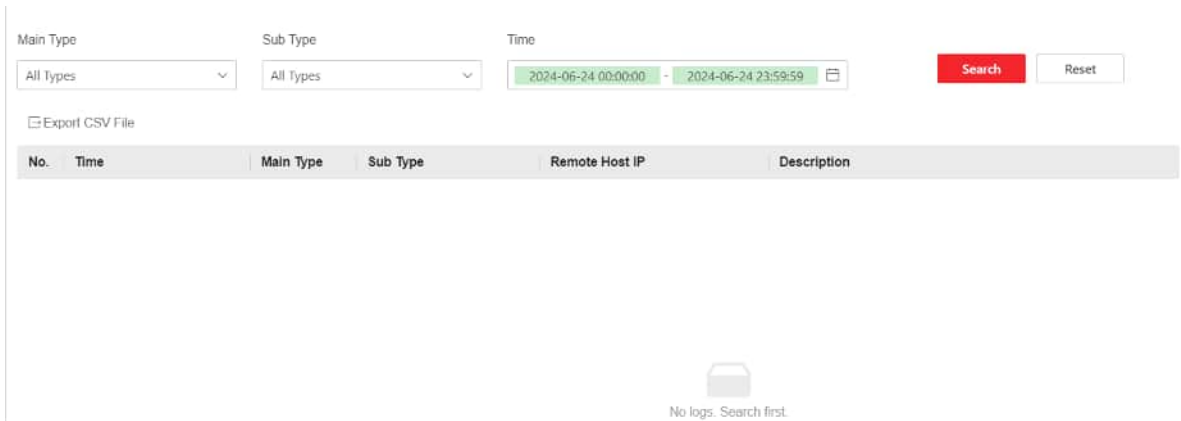


Figure 4-14 Search Logs

- On the **Device Debugging** page, configure the following parameters:
  - Enable SSH (Secure Shell) as required. After enable SSH, you need to set the port number. With SSH enabled, you can use a computer installed with the SSH client to access the device.
  - Format the USB flash drive before inserting into the device. Only the USB flash drives in FAT32 format are supported. Insert a USB flash drive into the device, and click **Start Exporting** to export the logs to the USB flash drive.
  - Select a subsystem, click **Start Capturing** and then you can download the obtained packet capture file.
  - Send a shell command and then check the response message.

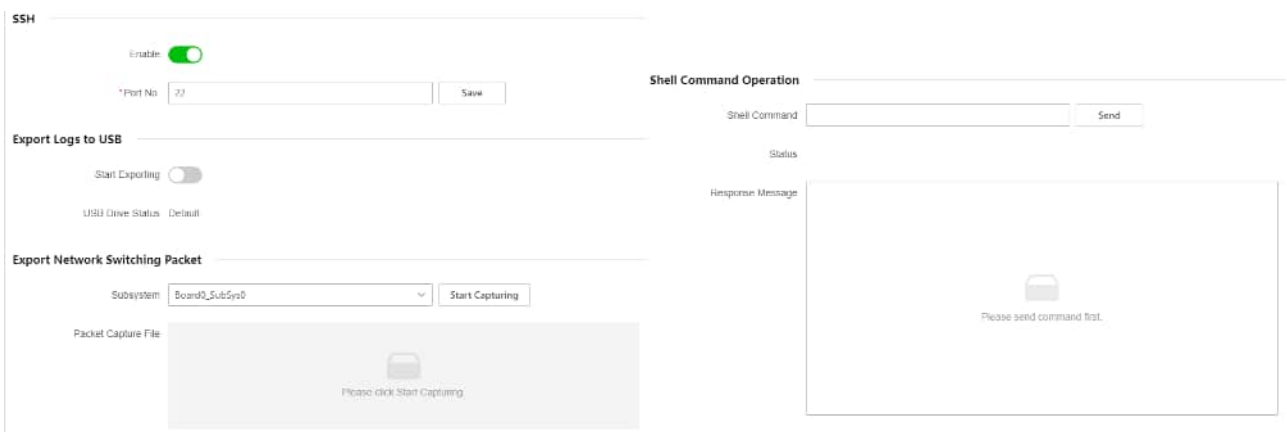


Figure 4-15 Debug the Device

## 4.6 Maintain the Device Security

Go to **Maintenance and Security** → **Security Management** to configure the following parameters:

- Enable IP filtering control and configure the IP addresses that are allowed to or forbidden to access the device.

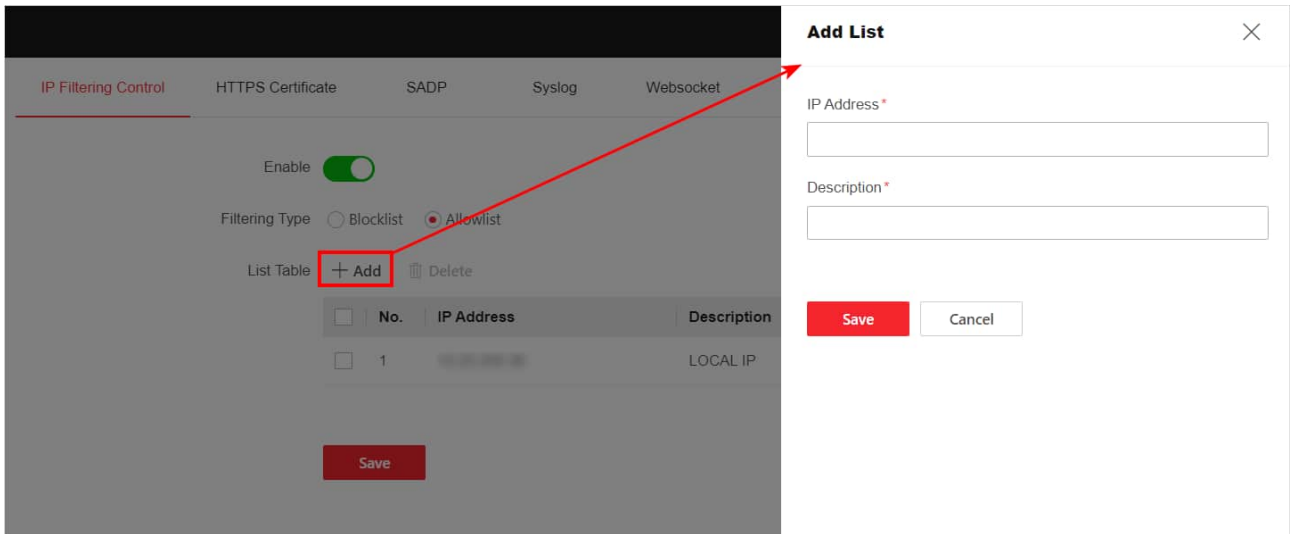


Figure 4-16 Configure IP Address Filter

- Import the locally saved HTTPS certificate and secret key.

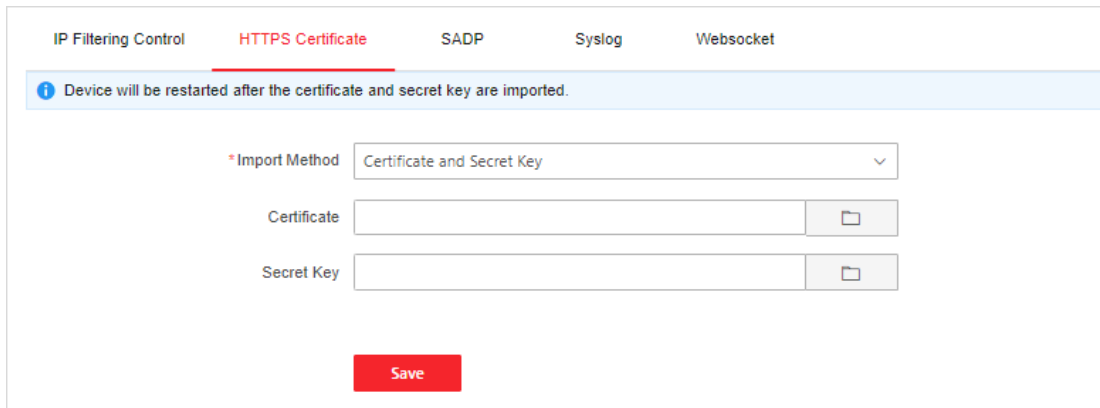


Figure 4-17 Import HTTPS Certificate and Secret Key

- Enable SADP as required. With SADP enabled, you can use the SADP software to search the device when it is in the same network segment with the computer.
- Enable Syslog as required. With Syslog enabled, the device logs can be uploaded to the Syslog server.

Enable

\* Server IP Address

\* Port No.

\* Uploading Period  h

\* Protocol Type

Figure 4-18 Enable Syslog

- Enable Websocket as required. With Websocket enabled, you can export the stream of network signal sources.



See Far, Go Further