



Ultra-High Definition (UHD) Decoder Sever

User Manual

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Preface

Applicable Models

This manual is applicable to the DS-69XXUDI-U(D) series UHD decoder servers, including DS-6920UDI-U(D), DS-6924UDI-U(D), and DS-6932UDI-U(D).

Default Parameters

Type	Default Parameter
Device	• Login user name: admin • IP address: 192.0.0.64
SSH connection	



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.

Symbol Conventions

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

Symbol	Description
 Note	Provides additional information to emphasize or supplement important points of the main text.
 Caution	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
 Danger	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-U(D) ultra-high definition (UHD) decoder server (hereinafter referred to 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, ensuring real-time processing and output for high-definition video streams.
- **Output compatibility:** Provides HDMI 1.4 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

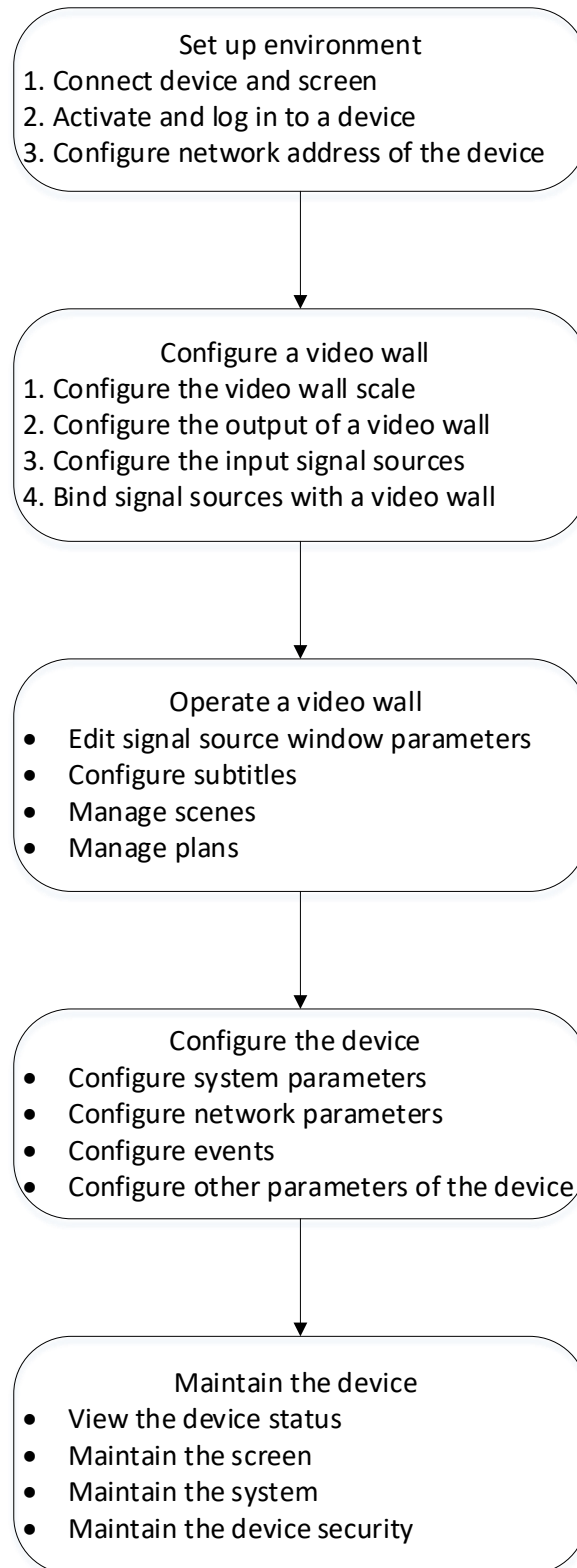


Figure 1-1 First-Time Configuration Process

Chapter 2 Device Basic Settings

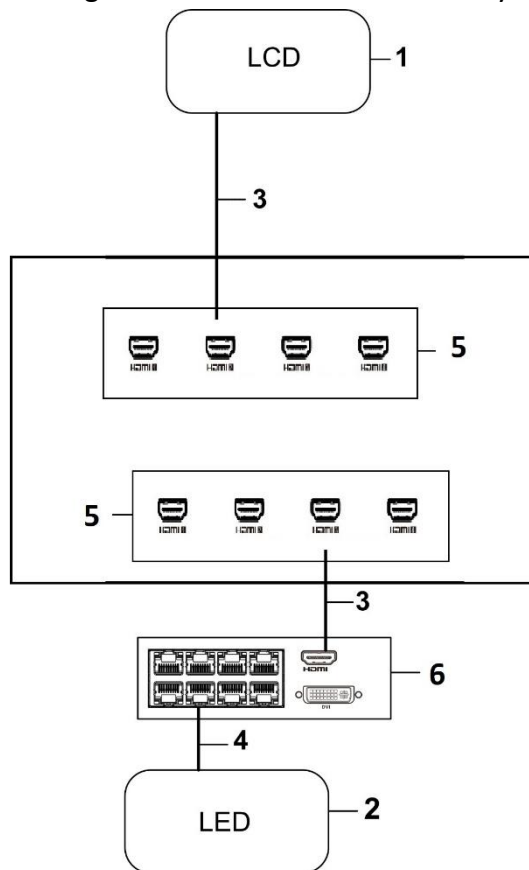
2.1 Connect Device and Screen

- Connect an LCD screen and the device: Use a video cable to connect a video output port of the device to a video input port of the LCD screen.
- Connect an LED screen and the device: One LED screen consists of multiple LED cabinets. Use multiple network cables to connect multiple LED cabinets to one LED controller, and then use a video cable to connect a video output port of the device to a video input port of the LED controller.



Note

The figure below is for illustration only.



1. LCD screen	2. LED screen	3. HDMI cable
4. Network cable	5. Device	6. LED controller

2.2 Activate and Log In to Device

You should activate the device before using the device for the first time. 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 (or the reverse), 123, admin, 4 or more continuously ascending or descending digits (i.e., 1234, 54321), or 4 or more consecutive repeated characters (i.e., 1111, aaaa).
- Password cannot contain common risk characters (i.e., 1qaz2wsx, 1qaz@WSX, !@#\$QWER, p@ssword, passw0rd, p@ssw0rd).

2.2.1 Activate the Device via HiTools Delivery Client

Step 1 Connect all devices and the computer to the same LAN, ensuring they are on the same IP subnet.

Step 2 Install and launch the [HiTools Delivery client](#) on the computer.

Step 3 Go to **Device Management** → **Current Subnet**, and click **Refresh**.

Step 4 Select the inactive devices, set the activation password, confirm the password, and click **Activation**.

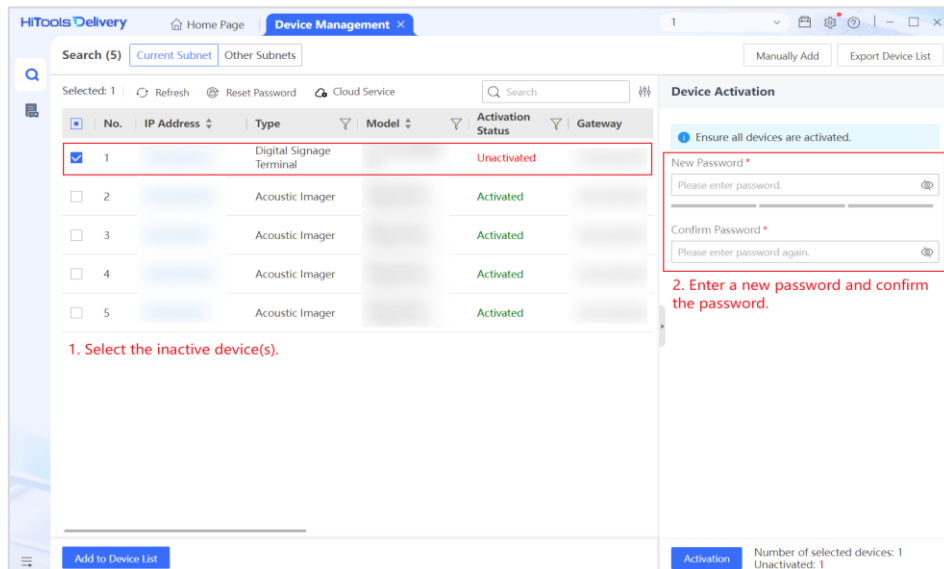


Figure 2-1 Batch Activate Devices

Note

To activate a single device, you can also log in to its web interface for activation.

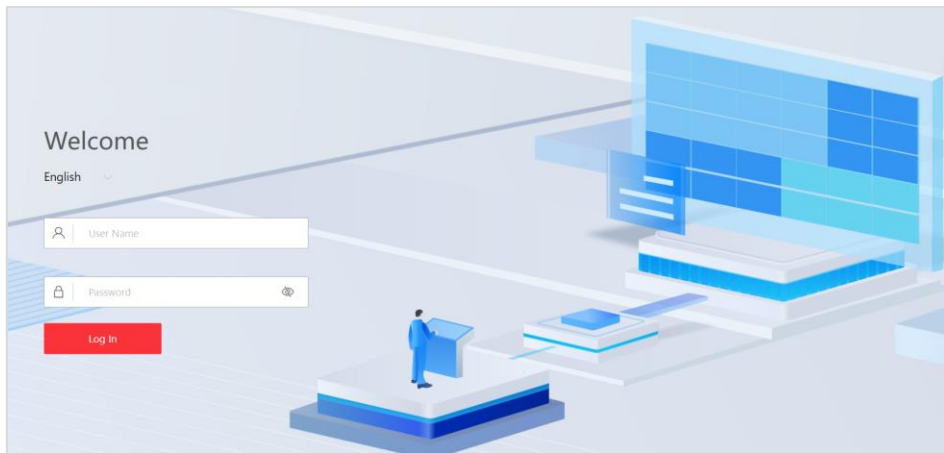


Figure 2-2 Login Page

Step 5 Edit device IP addresses in bulk:

- 1) Check multiple activated devices.
- 2) 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.
- 3) Enter the admin password and click **OK**.

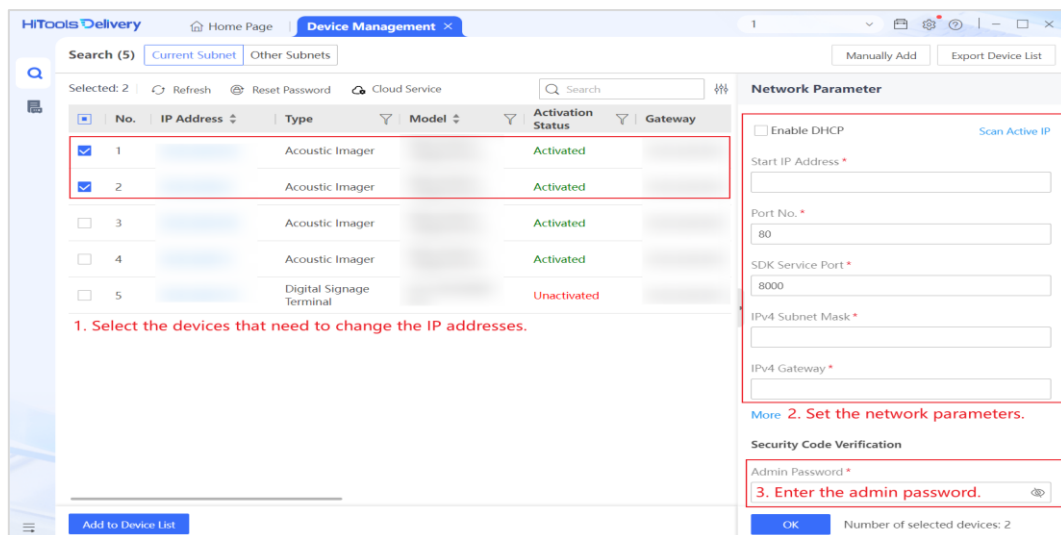


Figure 2-3 Batch Edit Device IP Addresses

2.2.2 Activate the Device via SADP Client

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

Step 2 Download and install the [SADP client](#) 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.

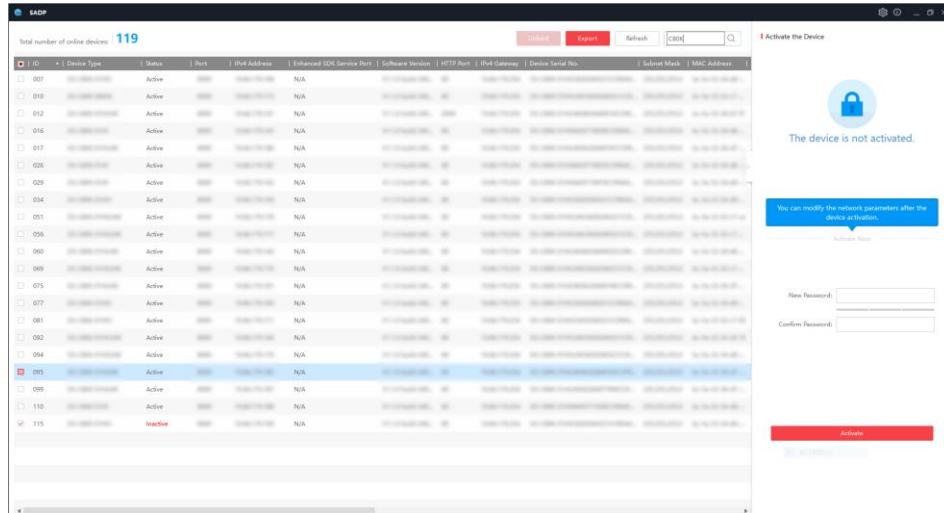


Figure 2-4 Activate the Device via SADP Client

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**.

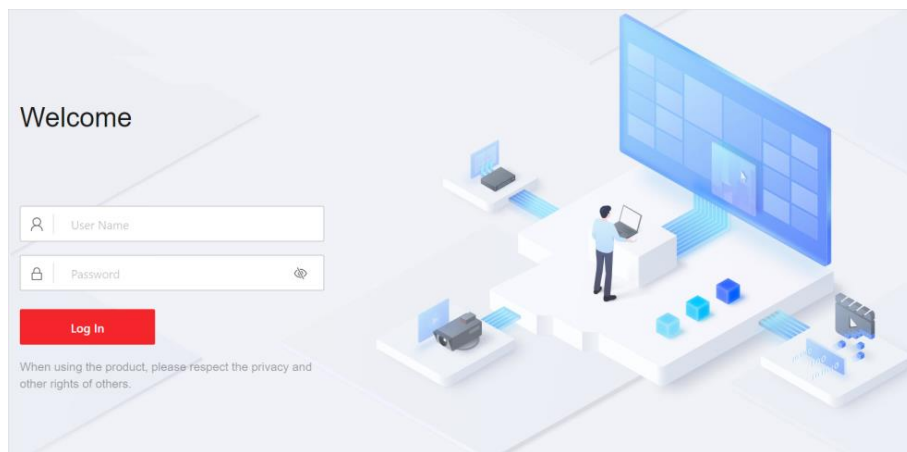


Figure 2-5 Login Page

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

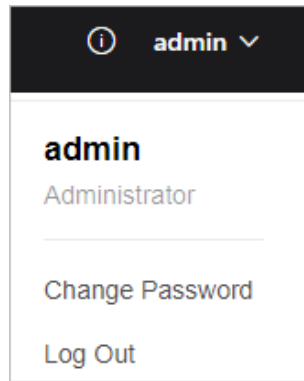


Figure 2-6 Change Password

2.2.3 Activate the Device via Web Browser

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**.

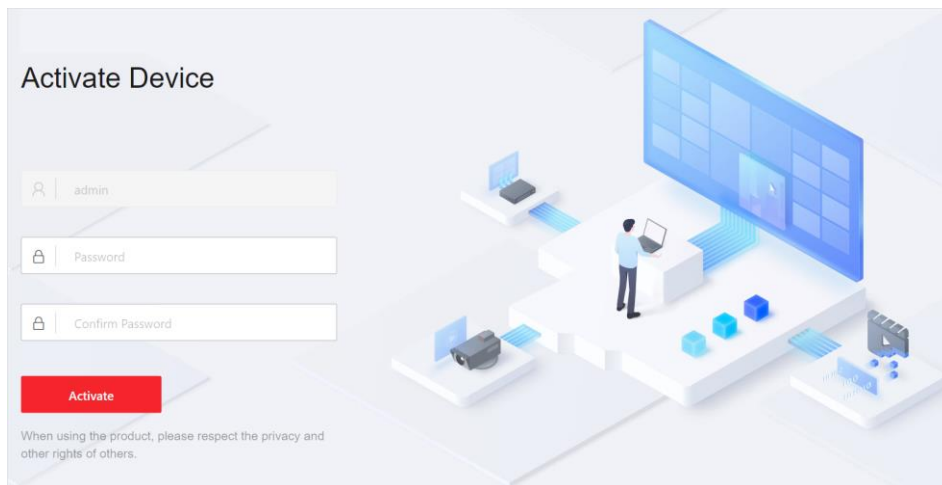


Figure 2-7 Activate the Device via Browser

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

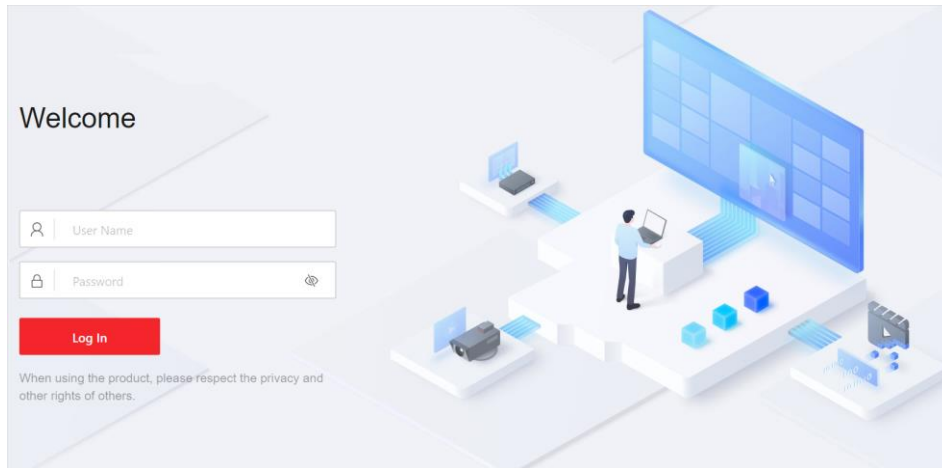


Figure 2-8 Login Page

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

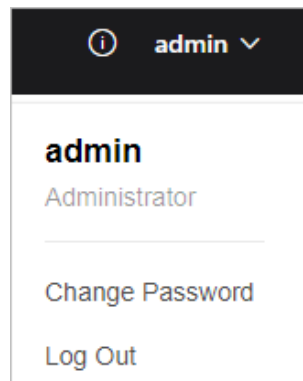
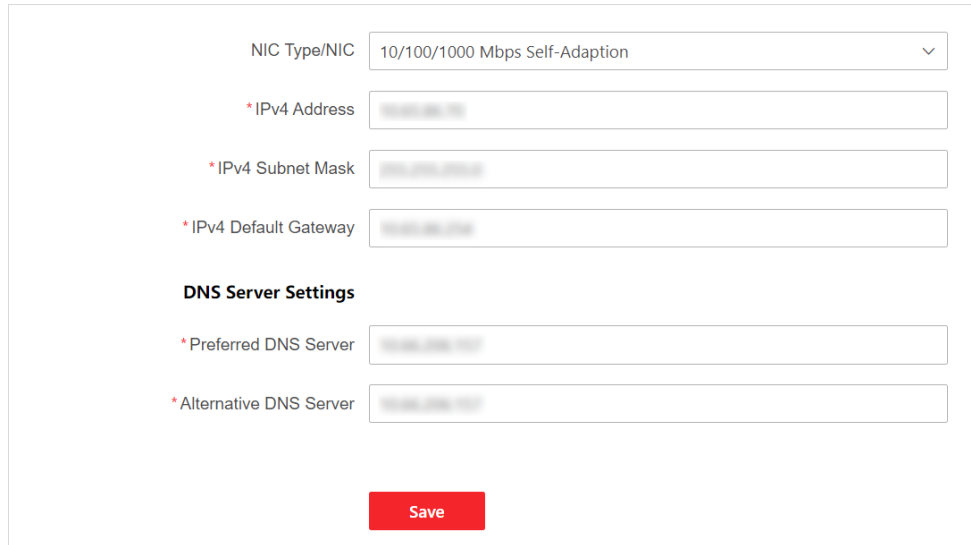


Figure 2-9 Change Password

2.3 Configure the Network Address

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



The screenshot shows a web-based configuration form for the UHD Decoder Server. At the top, there is a dropdown menu for 'NIC Type/NIC' with the selected value '10/100/1000 Mbps Self-Adaption'. Below this are three required fields, each marked with a red asterisk: '* IPv4 Address', '* IPv4 Subnet Mask', and '* IPv4 Default Gateway'. Each field contains a placeholder IP address (192.168.1.10, 255.255.255.0, and 192.168.1.1 respectively). Under these fields is a section header 'DNS Server Settings'. Below this header are two more required fields, also marked with a red asterisk: '* Preferred DNS Server' and '* Alternative DNS Server', both containing placeholder IP addresses (192.168.1.1 and 192.168.1.1). At the bottom center of the form is a red button labeled 'Save'.

Figure 2-10 Configure the Device IPv4 Address

Step 2 Select the NIC type.

Step 3 Set the IPv4 address, IPv4 subnet mask, and IPv4 gateway.

Step 4 If you use the domain name to access the device, 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 same network as the computer.

Make sure that the computer and device in the same network segment.

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 Video Wall Scale

Step 1 Go to **Video Wall Configuration**, select a video wall in the upper left corner, and click **Configure**.

- Up to 8 video walls are supported.
- Click  to edit the video wall name.

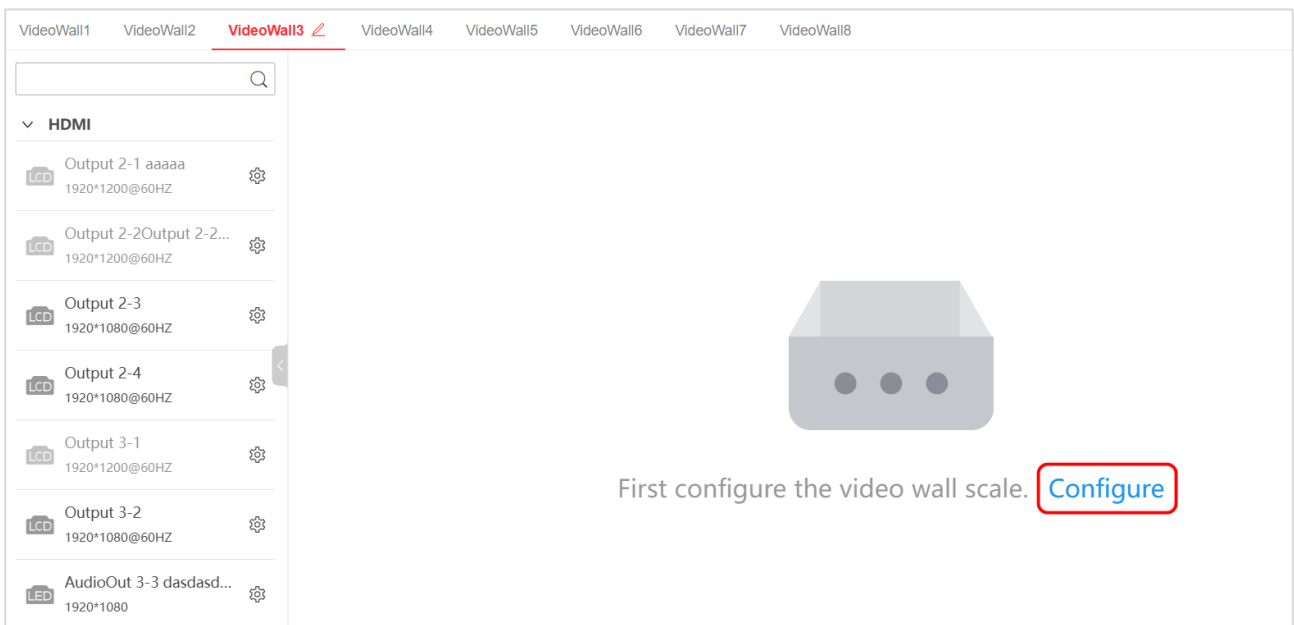


Figure 3-1 Video Wall Configuration Page

Step 2 Set the video wall name.

Step 3 According to the actual screen type, select the video wall type. You can select LCD or LED.

Step 4 Choose either of the following methods to set the video wall scale:

- Directly enter the row number and column number.
- Move the mouse and click the left button to select the screen area.
- To edit the video wall scale, directly enter a new row number and a new column number.
- To edit the video wall scale, click **Clear**, move the mouse, and then click the left button to select the screen area.

Step 5 Select a decoding output resolution, and click **Save**.

- For an LCD video wall, select a defined resolution. Thus, all LCD screens of the current video wall use the selected resolution.

- For an LED video wall, select a defined resolution or select **Custom**, and then enter the row height and column width. If you select a defined resolution, the entered row height and column width cannot exceed the selected defined resolution. After entering the row height and column width, the height of the same row and width of the same column are the same.

The screenshot shows a configuration window for 'VideoWall1'. The 'Video Wall Type' is set to 'LED'. The 'Row(s) × Column(s)' is set to '2 × 2'. The 'Decoding Output Resolution' dropdown is set to 'Custom'. Below this, the 'Whole Screen Width and Height' is '128*128'. A grid of 4 squares is shown, with the first two columns highlighted in blue. Each square has a '64' label next to it. A 'Save' button is at the bottom.

Figure 3-2 Select a Decoding Output Resolution

Step 6 (Optional) After setting the video wall scale, you can click **Edit Video Wall Scale** to change the video wall scale.

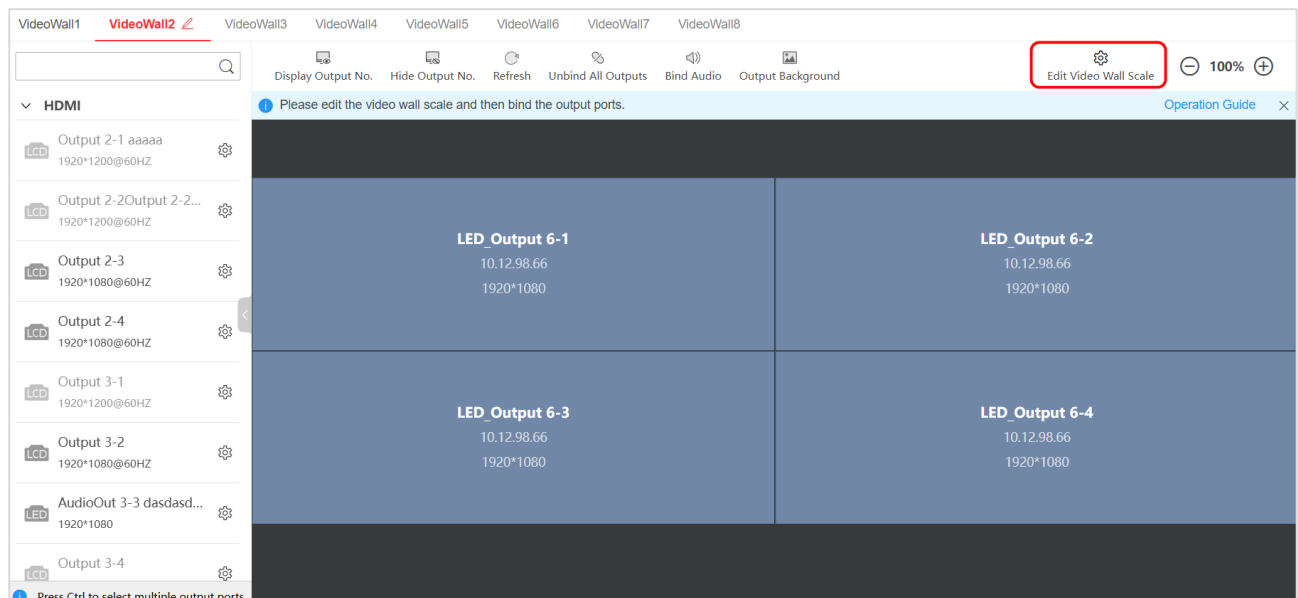


Figure 3-3 Edit the Video Wall Scale

3.2 Configure the Output of a Video Wall

3.2.1 Edit the Output Port Parameters

Go to **Video Wall Configuration** page, click  of an output port of an output board to configure the following items:

- Customize the name.
- Edit the output mode of an HDMI output port: HDMI, DVI, and AUTO are available.
 - The DVI mode has better compatibility and the HDMI mode supports embedded audio output.
- If you select AUTO mode, the device will automatically use the output mode that is supported by the screen.
- Copy the current HDMI output configuration to other output ports: Click **Copy To** and then select the output ports.

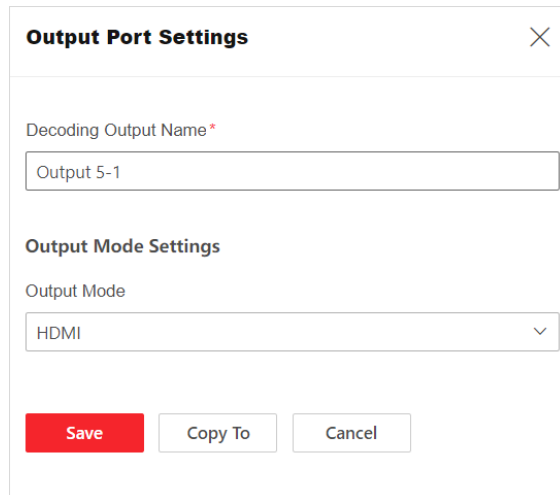


Figure 3-4 Configure HDMI Output Port

3.2.2 Bind Output Ports with Video Wall

A video wall can contain one screen or multiple screens. At a time, one screen can join only one video wall, and one output port can be bound with only one screen.

Step 1 Go to **Video Wall Configuration**, click **Display Output No.** to display the output port number on the actual screen.

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 Outputs**.

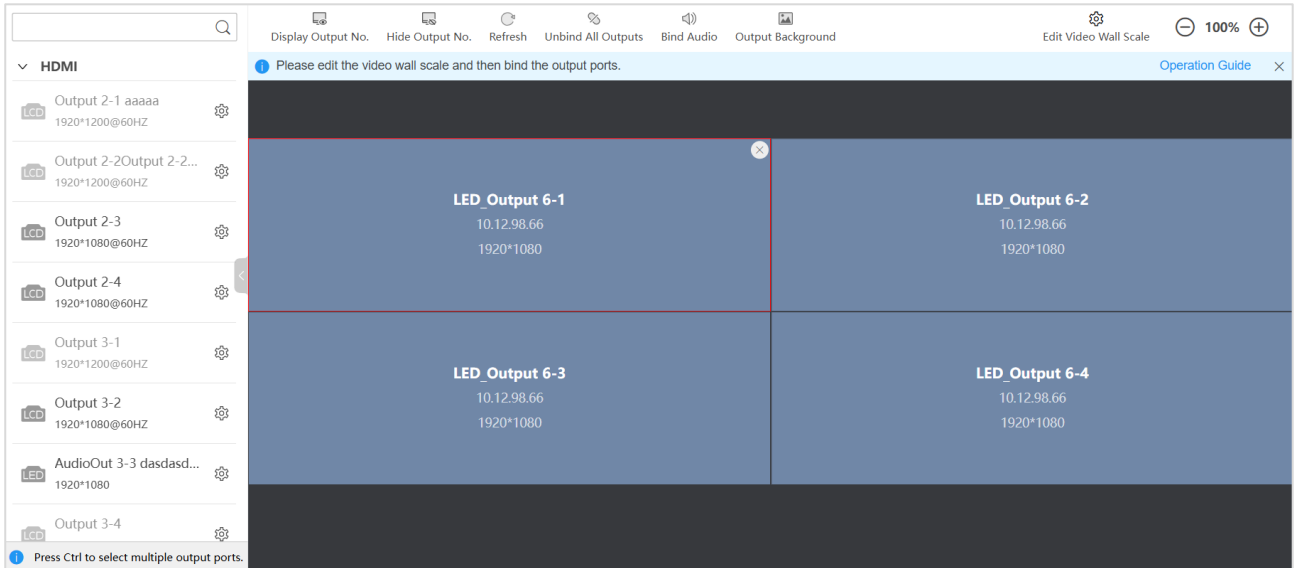


Figure 3-5 Bind Output Ports with Video Wall

Step 3 (Optional) If the screens support control linkage function, you can perform the following operations to auto 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) Bind an output port to any screen.
- 4) Click **Refresh** and then click **Auto Bind Output**.

3.2.3 Configure an Audio Output

Configure Audio Matrix

If you need to configure multiple audio outputs for a video wall, configure the audio matrix.

Step 1 Go to **Configuration** → **Audio Matrix**.

Step 2 Double click to link the audio input channel and audio output channel.

Double click again or click  to unlink.

OUT \ IN	MCU-Line in 1	MCU-Line in 2	Audioln 5-1Audioln 5-1...	jkfdlsjflkjflks	Audioln 5-3 aaaa	Audioln 5-4		
MCU-Line out 1aa...								
MCU-Line out 2dd...								
Output 2-1 aaaaa								
Output 2-2Output 2...								
Output 2-3								
Output 2-4			Already bound.					
Output 3-1					Double-Click to Bind			
Output 3-2								
AudioOut 3-3 dasd...								
Output 3-4								
Output 4-1								

Figure 3-6 Configure Audio Matrix

Step 3 (Optional) You can perform the following operations as required:

- Click  besides an audio input/output port name to edit the name of an audio input or audio output channel.
- Click **Edit Table** to customize the audio channel name and configure the displaying of the audio channel in the table.

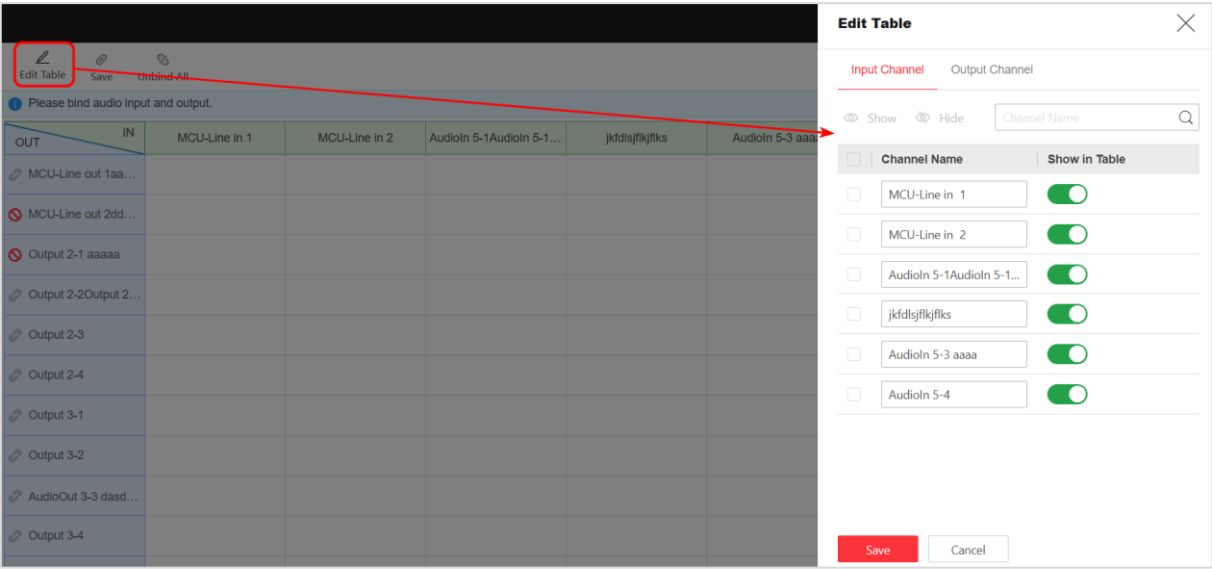


Figure 3-7 Edit Audio Channel Table

- Click **Unbind All** to unlink all audio linkage.

Step 4 Click **Save**.

Configure an Audio Output

On the **Video Wall Configuration** page, click **Bind Audio**. Click  at the upper right corner of an audio output to set it as the audio output of the video wall.

- After setting the audio output of a video wall, you need to go to the **Video Wall Operation** page to enable audio to allow the audio output.
- One video wall can be linked with only one audio output.

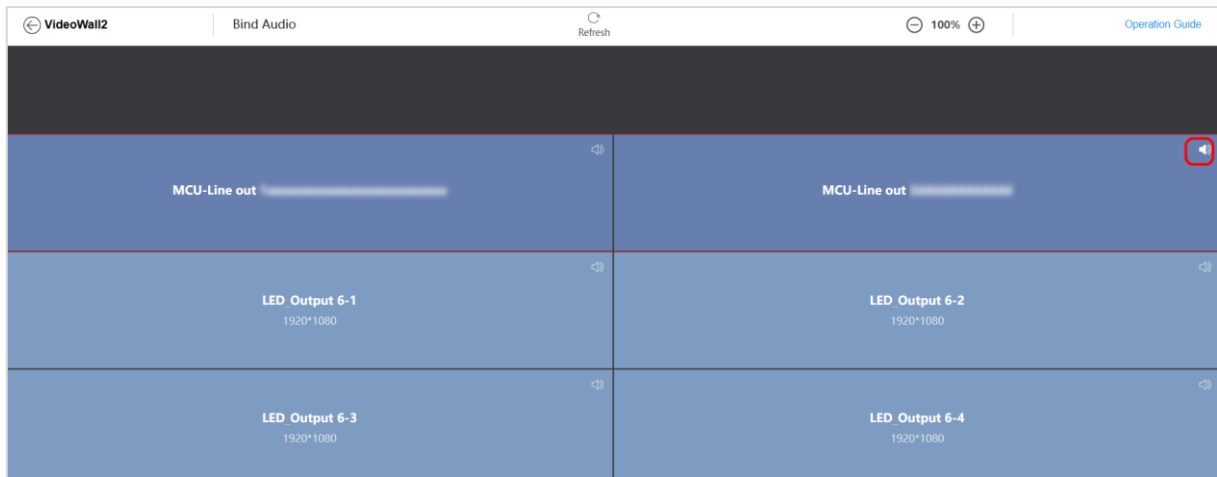


Figure 3-8 Set Output Audio

3.2.4 Configure Other Output Parameters

At the top of the **Video Wall Configuration** page, you can perform the following operations as required:

- The device uses the default background. To change the background, click **Output Background**. You can select a solid color or import an image as the background.

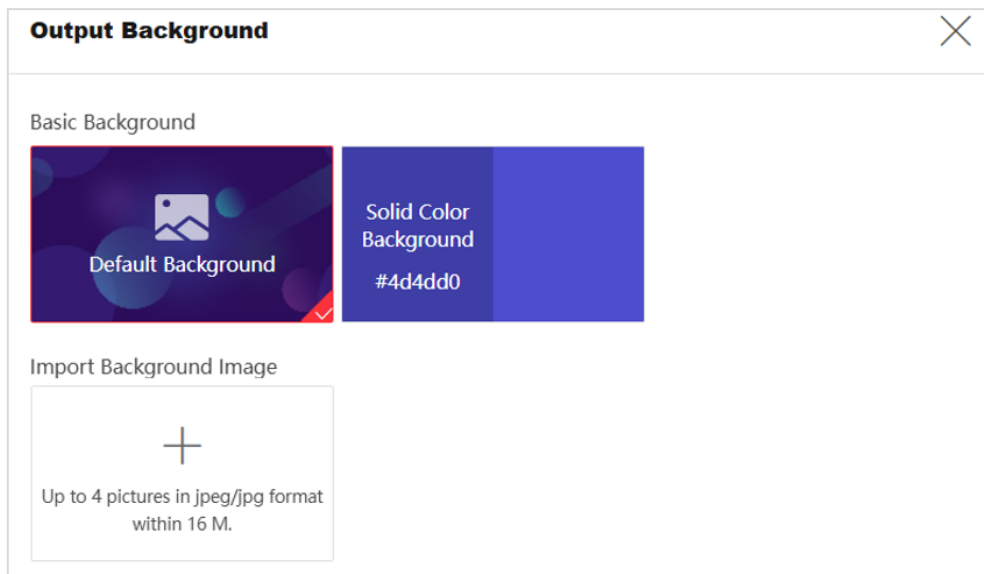


Figure 3-9 Edit Output Background

- Click **Unbind All Outputs** to unlink all output ports bound to the selected video wall.
- Click **Refresh** to refresh the information of all output ports.

3.3 Configure the Input of a Video Wall

3.3.1 Add a Network Signal Source

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.

- If you select a conventional network source as the channel type, enter the number of channels accordingly, and select the channel(s) that need to be added.
- 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.

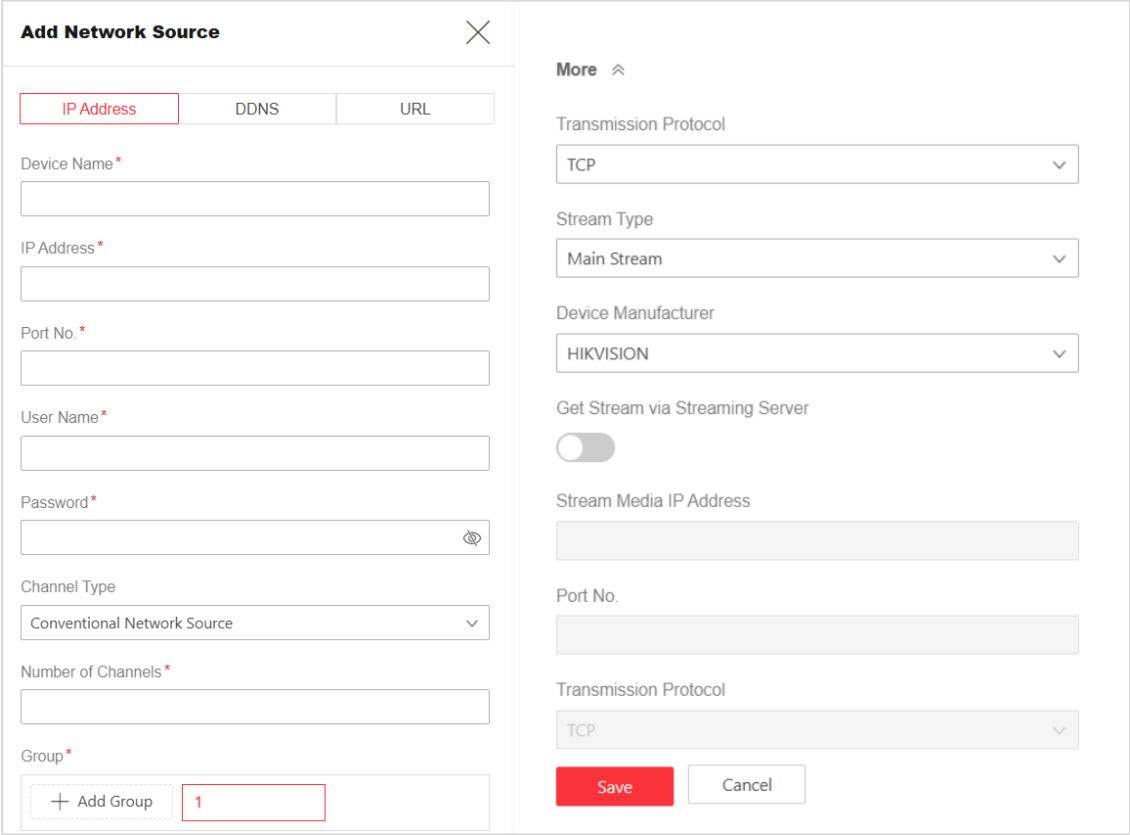


Figure 3-10 Add a Network Signal Source via IP Address

Step 3 Click **Save**.

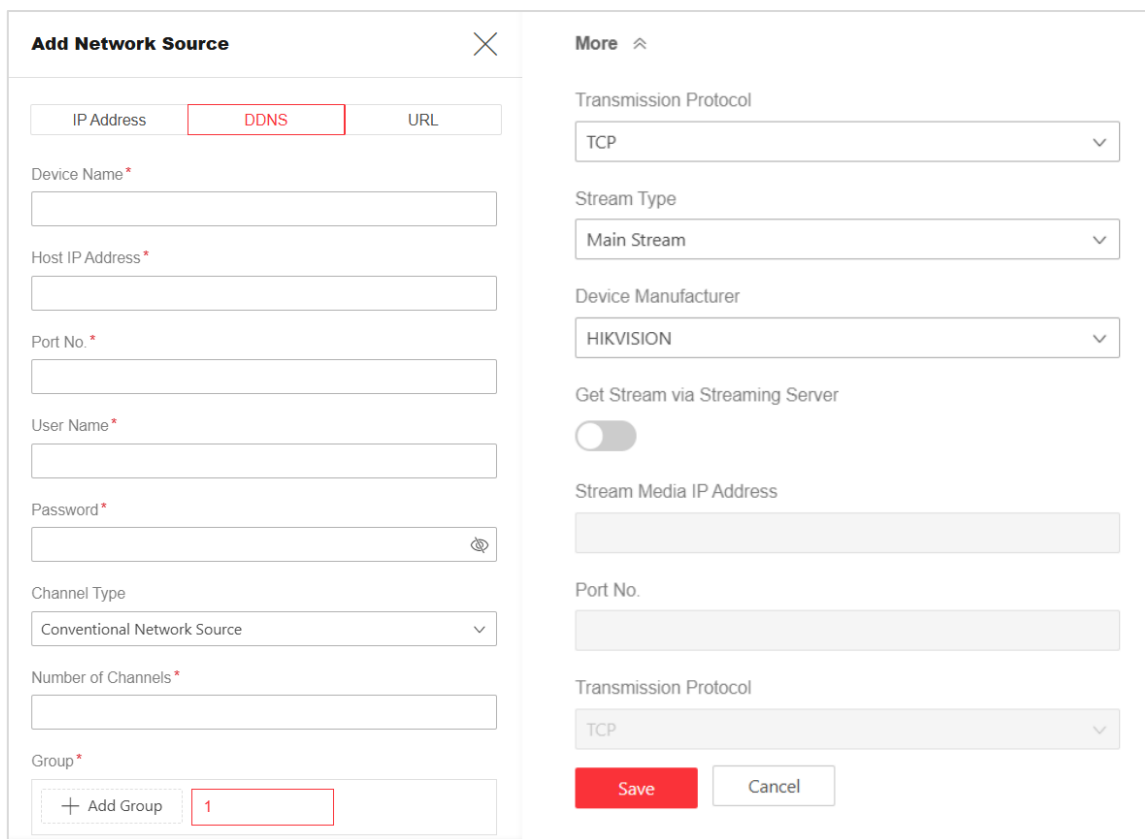
Add a Network Signal Source via DDNS

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

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

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

- If you select a conventional network source as the channel type, enter the number of channels accordingly, and select the channel(s) that need to be added.
- 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.



Add Network Source

IP Address **DDNS** URL

Device Name *

Host IP Address *

Port No. *

User Name *

Password *

Channel Type
Conventional Network Source

Number of Channels *

Group *
+ Add Group 1

More

Transmission Protocol
TCP

Stream Type
Main Stream

Device Manufacturer
HIKVISION

Get Stream via Streaming Server
☐

Stream Media IP Address

Port No.

Transmission Protocol
TCP

Save Cancel

Figure 3-11 Add a Network Signal Source via DDNS

Step 3 Click **Save**.

Add a Network Signal Source via URL Address

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

Step 2 Enter the device name and the URL address.

Step 3 Select an added group or click **Add Group** to create a new group.

Step 4 Click **Save**.

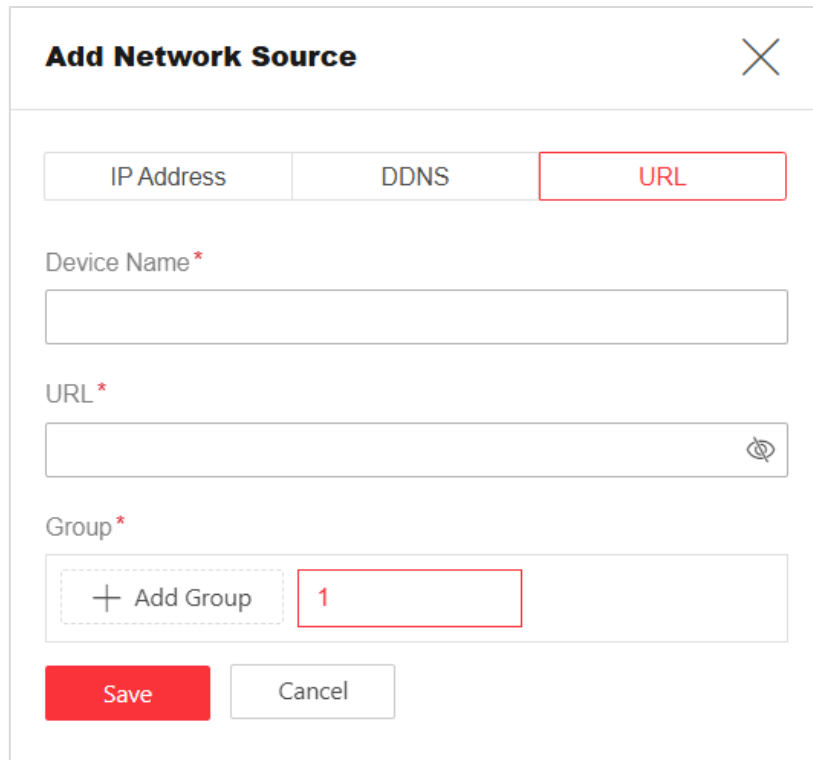


Figure 3-12 Add a Network Signal Source via URL Address

3.3.2 Manage Signal Sources

Edit a Local Signal Source

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

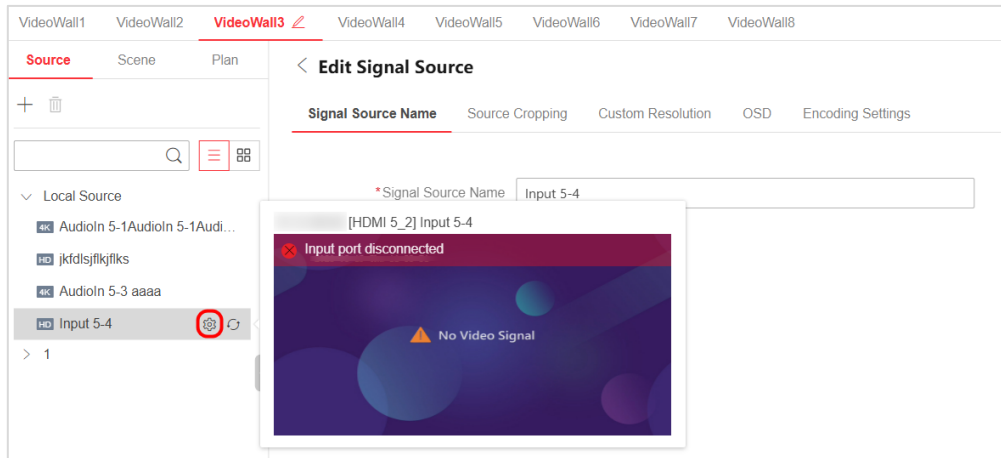


Figure 3-13 Edit a Local Signal Source

- 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 4, and the clipping value at the left and right edges should be a multiple of 16.

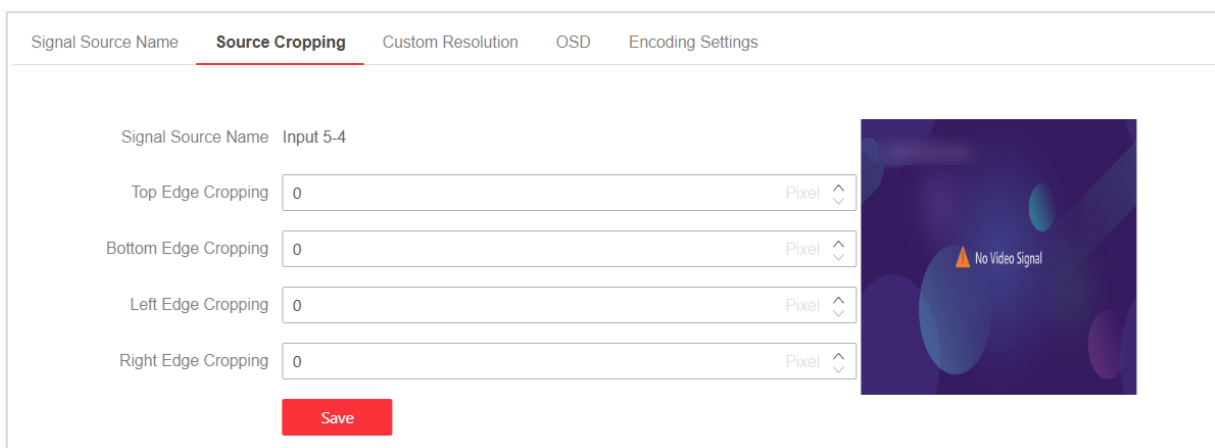
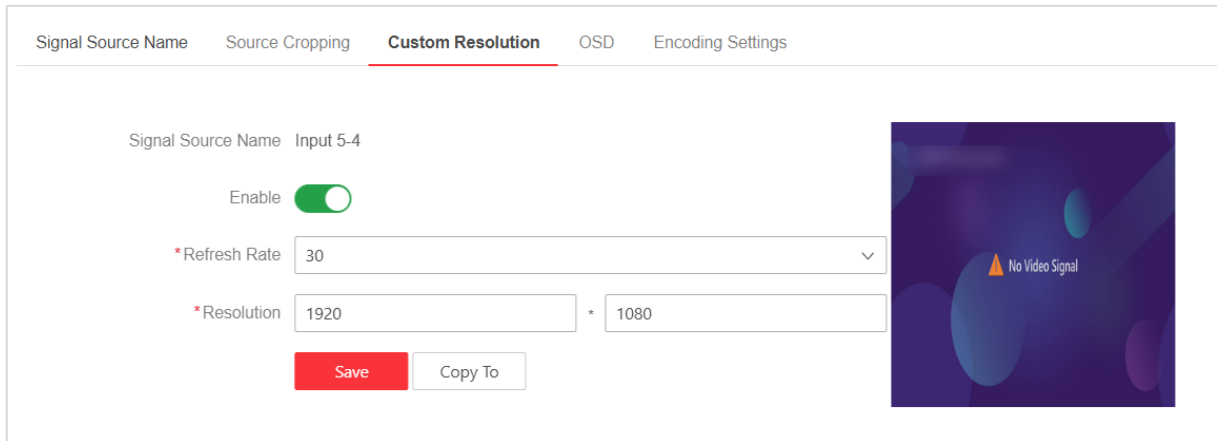


Figure 3-14 Clip a Signal Source

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



Signal Source Name Source Cropping **Custom Resolution** OSD Encoding Settings

Signal Source Name Input 5-4

Enable ☒

*Refresh Rate 30

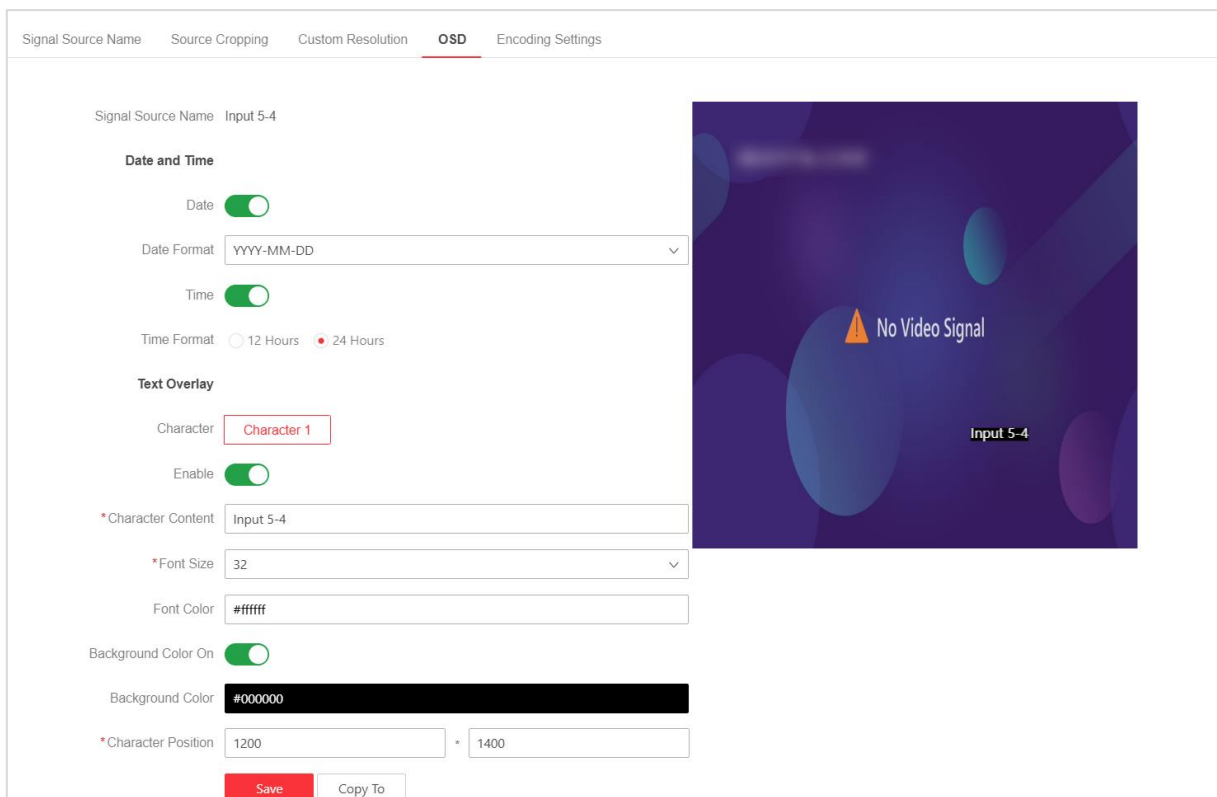
*Resolution 1920 * 1080

Save Copy To

No Video Signal

Figure 3-15 Customize Resolution

- Click **OSD**, and then you can add multiple OSDs (On-Screen Displays) to the input signal image.
- Overlay date and time to the input signal image: Enable **Date** and **Time**, and select the format.
- Overlay text to the input signal image: Switch on **Enable**, enter content, select font size, font color, background color, and adjust the character position.
- Click **Copy To** to copy the OSD configuration of the current signal source to other signal sources.



Signal Source Name Source Cropping Custom Resolution **OSD** Encoding Settings

Signal Source Name Input 5-4

Date and Time

Date ☒

Date Format YYYY-MM-DD

Time ☒

Time Format ☐ 12 Hours ☒ 24 Hours

Text Overlay

Character Character 1

Enable ☒

*Character Content Input 5-4

*Font Size 32

Font Color #ffffff

Background Color On ☒

Background Color #000000

*Character Position 1200 * 1400

Save Copy To

No Video Signal

Input 5-4

Figure 3-16 Add OSDs

- Edit the encoding parameters:

- 1) Click **Encoding Settings**.
- 2) 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, video type, and deep compression rate.
- 3) Select an audio encoding type and an input audio mode.
- 4) Click **Save**.

Signal Source Name Source Cropping Custom Resolution OSD **Encoding Settings**

Signal Source Name Input 5-4

Video Encoding

Stream Type ☐ Main Stream (Scheduled) ☒ Sub-Stream

Bit Rate Type ☒ Variable Bit Rate ☐ Constant Bit Rate

Video Quality Medium 

* I-Frame Interval 60

* Custom Max. Bit Rate 1024 kbps

Resolution 704*576 

Frame Rate 30  fps

Encoding Type ☐ H.264 ☒ H.265

Video Type ☐ Video Stream ☒ Video and Audio Stream

Deep Compression Rate ☐ Weak ☒ Medium ☐ High

Audio Encoding

Encoding Type G.711ulaw 

Save

Figure 3-17 Set Encoding Parameters

Edit a Network Signal Source

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

Figure 3-18 Edit a Network Signal Source

Splice Signal Sources

This function allows you to splice multiple signal source images into one signal source image. After the signal source splicing, the spliced signal sources will disappear from the signal source list.

Note

- Only UHD signal sources (4K DP input channels) support splicing.
- All spliced signal sources should use the same resolution and frame rate to avoid affecting the display effect.
- The joint signal source will be displayed in one signal source window on the video wall.
- When the joint signal source window is floating or zooming on the video wall, the spliced signal source windows also float and zoom on the video wall.

Step 1 Go to **Configuration** → **Signal Source Splicing**, click .

Step 2 Customize the joint signal source name and splicing scale.

Step 3 Drag the signal source in the signal source list to the splicing window.

Note

The signal sources that are dragged to the splicing window will be spliced to one-way signal source.

Step 4 (Optional) Click **Cancel All Bindings** to cancel the previous signal source splicing and splice the signal sources again.

Step 5 Click **Save**.

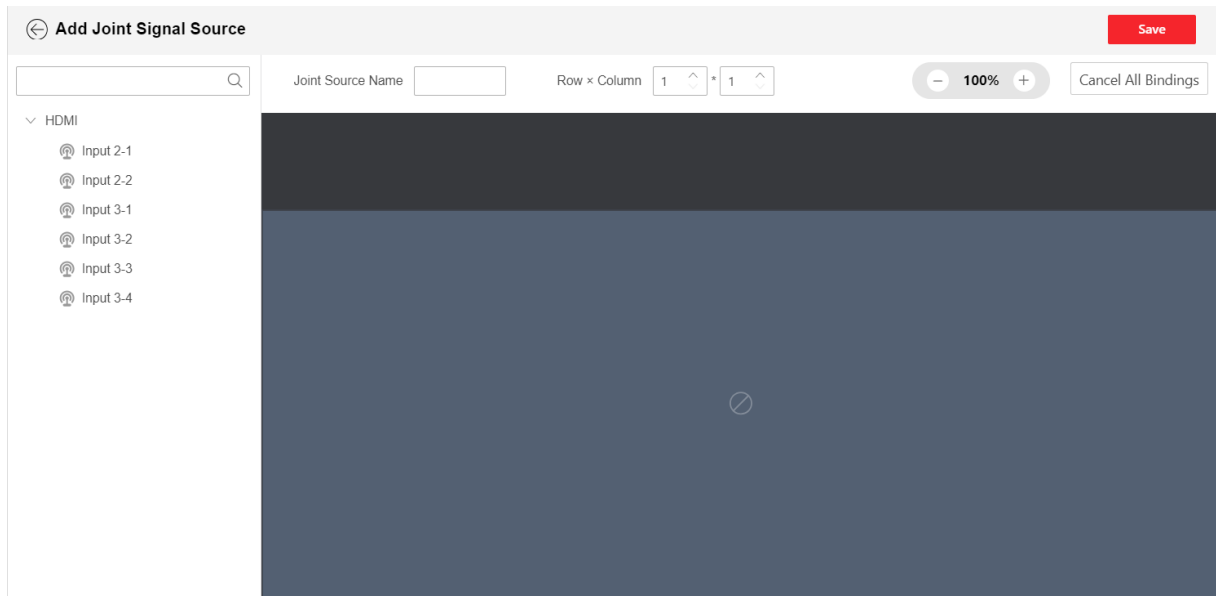


Figure 3-19 Add a Joint Signal Source

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 .

3.3.3 Bind Signal Sources with Video Wall

Go to **Video Wall Operation** and then select a video wall. 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.
- Drag a default signal source group or a newly created signal source group rightwards to the video wall.
 - By default, the local signal sources join the video input signal group.

- Before dragging a network signal source to the video wall, make sure that the decoding board is in the device.
- Batch bind multiple signal sources:
 - Press **Ctrl** or **Shift** to select multiple network signal sources of the same signal source group, and drag signal sources rightward to the video wall.
 - Press **Ctrl** to select multiple local signal sources of the same signal source group, and drag signal sources rightward to the video wall.

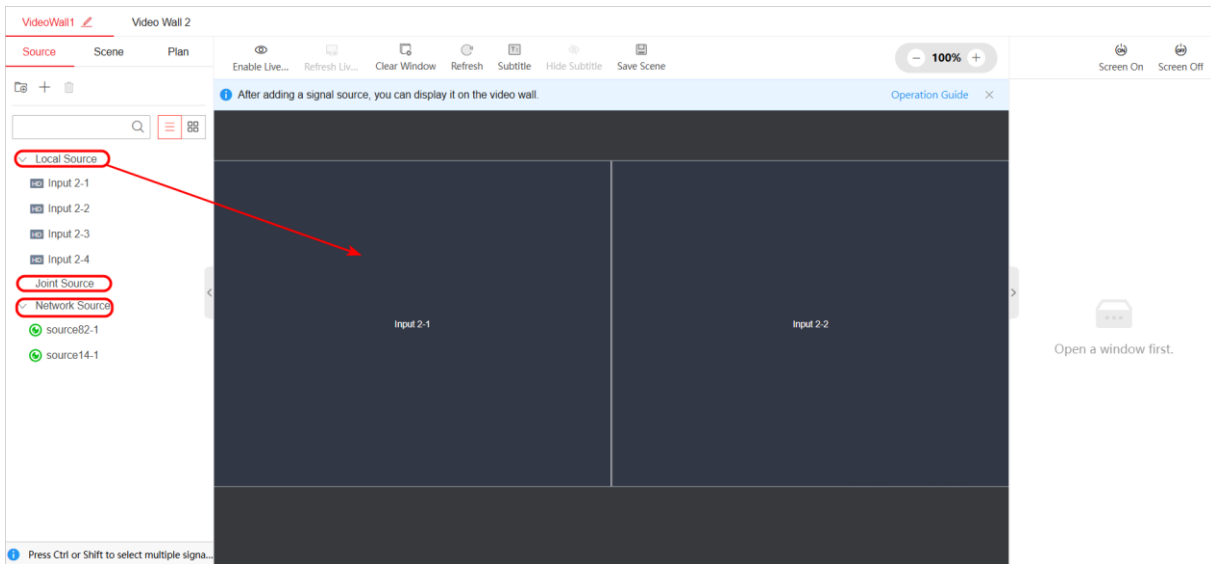


Figure 3-20 Batch Bind Signal Sources to Video Wall

3.4 Operate a Video Wall

3.4.1 Edit Signal Source Window Parameters

Edit a Signal Source Window

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

- Set the window to the bottom: Click .
- Adjust the window position: Move the window directly or enter the specific X and Y values.
- 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.
 - Double click the window to make it fully cover the occupied output ports and double click the window again to restore the original size.

- Divide the window: Click a window split icon.

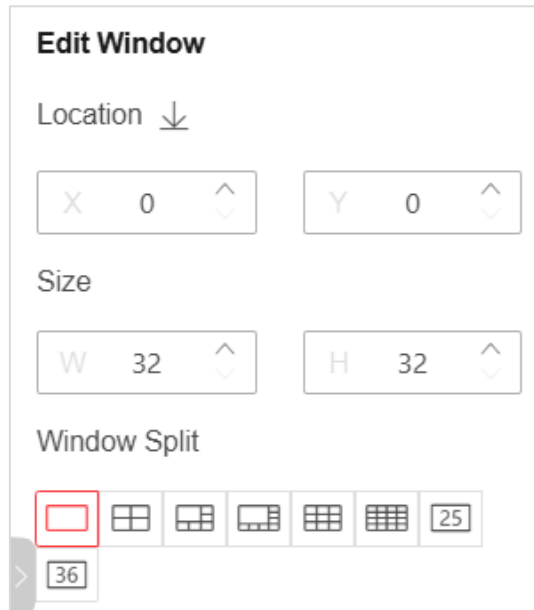


Figure 3-21 Adjust Position of a Signal Source Window

- Enable audio:
 - 1) Go to **Video Wall Configuration** → **Bind Audio**, configure the audio output for the video wall.
 - 2) Click a signal source window and click **Audio On**.

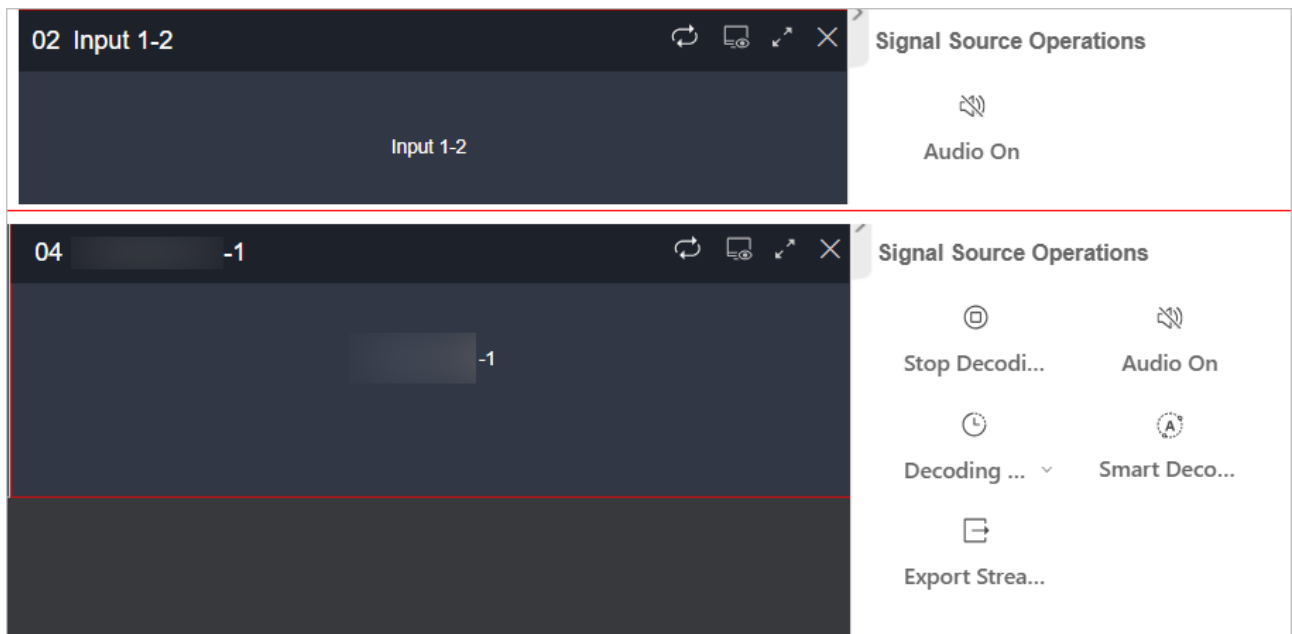


Figure 3-22 Enable Audio

- Set the decoding delay level of the device:
 - Click a network signal source window of any video wall, and then click **Decoding Delay** to set the decoding delay level.

- Go to **Configuration** → **Other Settings** → **Decoding Delay**, and select a decoding delay level.
- Decode the network camera information: Click a network signal source window and click **Smart Decoding On**.
- Export stream:
 - 1) Go to **Maintenance and Security** → **Security Management** → **Websocket**, enable Websocket.
 - 2) Click a network signal source window and click **Export Stream**.

Note

Once Websocket is enabled, the network signal source windows with decoding exceptions on the **Video Wall Operation** page will be displayed in red. Click the red window to view the detailed decoding exception information.

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

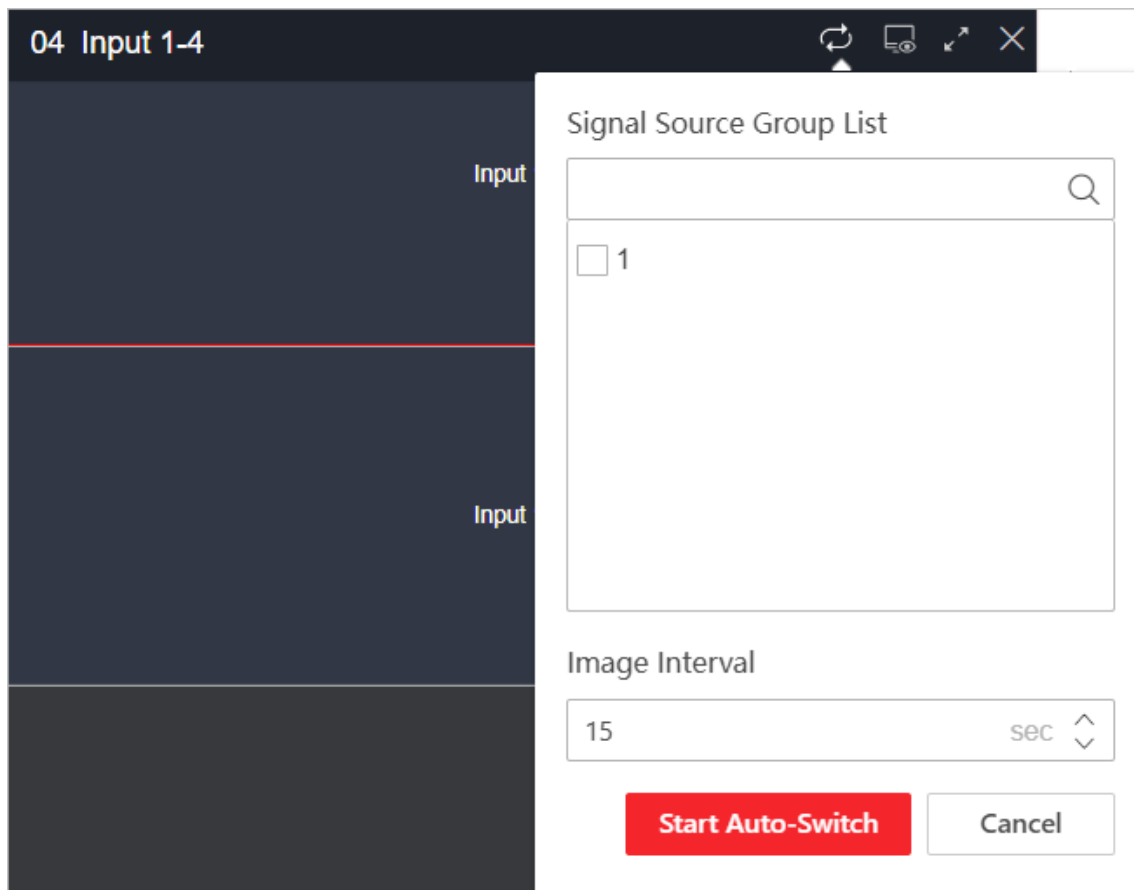


Figure 3-23 Set Signal Source Group Auto-Switching

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

Edit Multiple Signal Source Windows

On the **Video Wall Operation** page, select a video wall and perform the following operations as required:

- Choose one of the following ways to 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.

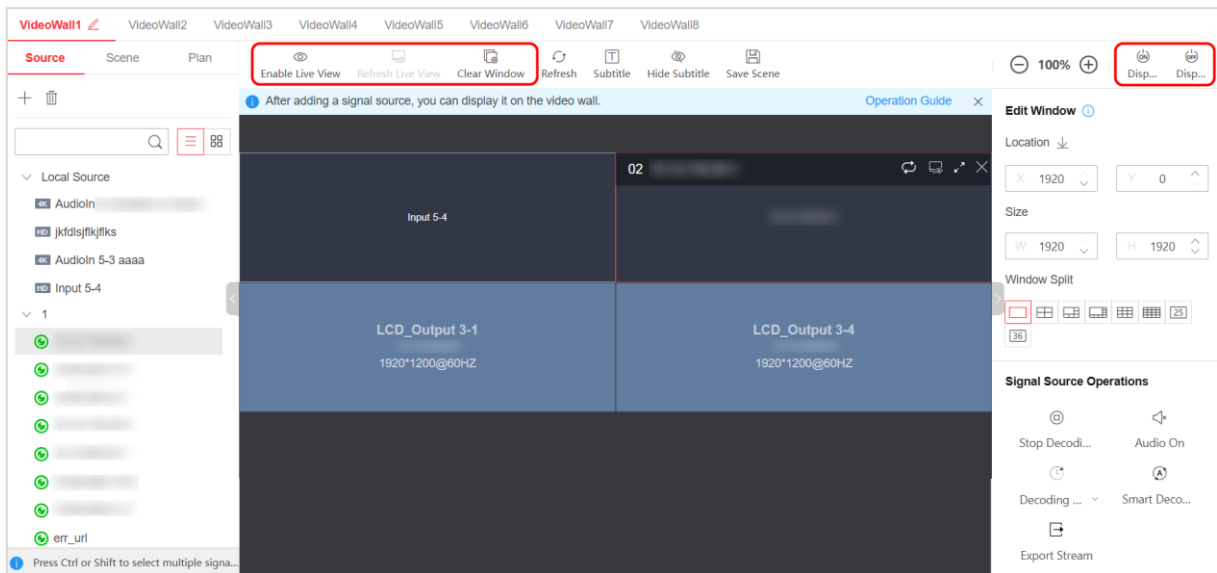


Figure 3-24 Preview Signal Source

Note

Before previewing the network signal sources, make sure that the decoding board is in the device.

- Control all LCD screens of the selected LCD video wall. Make sure that you have configured the serial port. For details, see “5.2.2 Control Screens via HDMI Ports”.
 - Click **Display On** to power on all LCD screens.
 - Click **Display Off** to power off all LCD screens.
- Control all LED screens of the selected LED video wall:
 - Click **Display On** to wake the LED screens from sleep mode.
 - Click **Display Off** to put the LED screens into sleep mode.
- Clear all bound signal source windows: Click **Clear Window**.

3.4.2 Configure Subtitles

Up to 4 subtitles are supported on a video wall, including a maximum of 1 time subtitle. The time subtitle displays the device's local time.

Go to **Video Wall Operation**, click **Subtitle**, and drag subtitles to the video wall. To add multiple subtitles, you can drag the remaining subtitles.

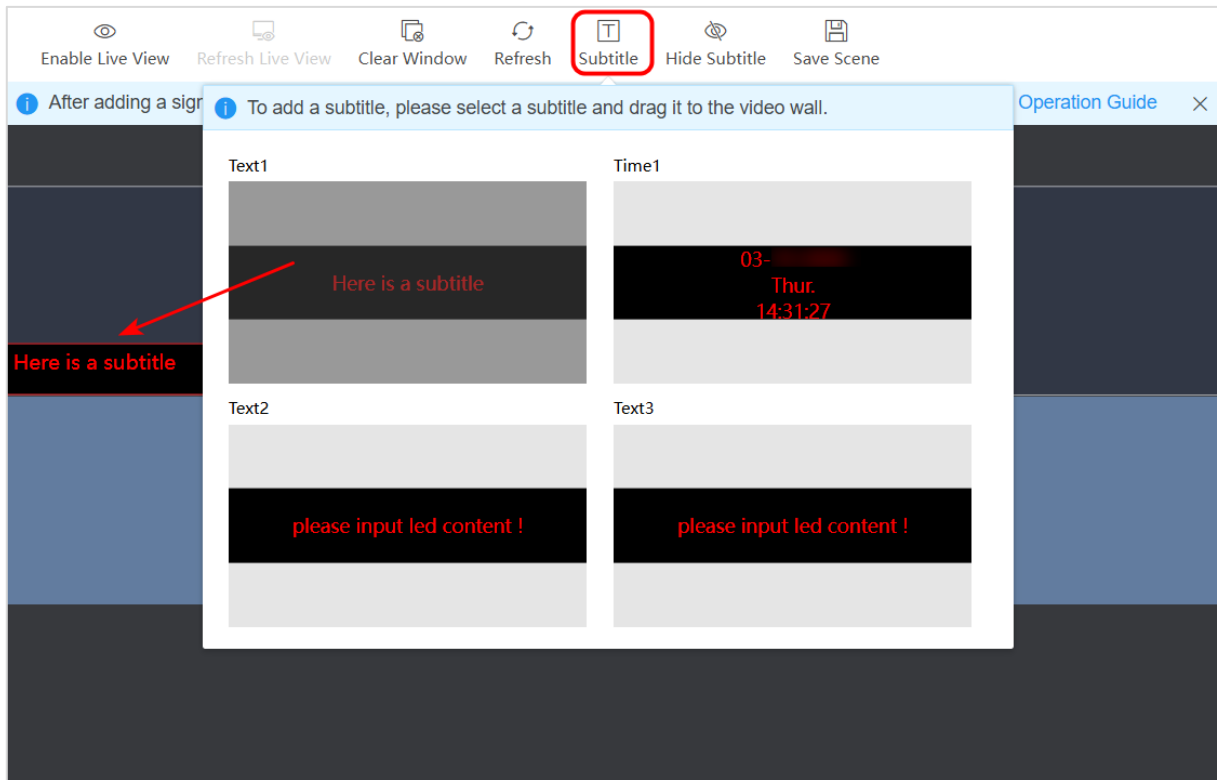


Figure 3-25 Add a Subtitle

- Add a text subtitle:
 - 1) Select **Text** for the subtitle type.
 - 2) Enter the subtitle content, adjust the subtitle position and size, and set the text and background.
 - 3) (Optional) Enable **Move** to set the movement speed.

Figure 3-26 Add a Text Subtitle

- Add a time subtitle:
 - 1) Select **Time** as the subtitle type.
 - 2) Adjust the subtitle position and size, adjust the time format, and set the text and background.

Figure 3-27 Add a Time Subtitle

3.4.3 Manage Scenes

Up to 128 scenes are supported. Go to **Video Wall Operation** to manage scenes.

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

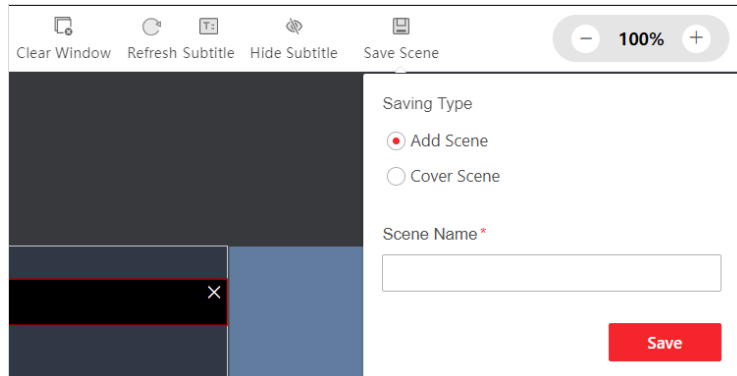


Figure 3-28 Save Scene

- Click **Scene**. Hover over a scene and then click to call the scene.
- Click **Scene**. Hover over a scene and then click to edit the scene name.
- Click **Scene**. Hover over a scene and then click to delete the scene.

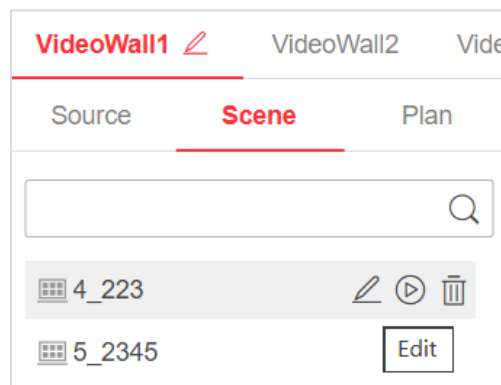


Figure 3-29 Manage Scene

3.4.4 Manage Plans

You can add multiple scenes and set the scene schedule in a plan. Go to **Video Wall Operation** and click **Plan** to manage plans.

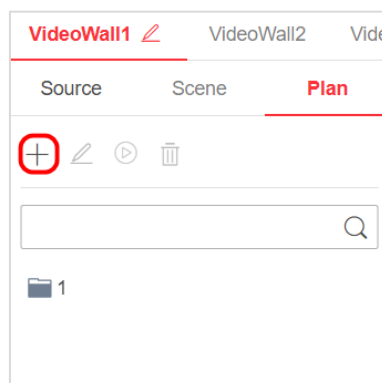
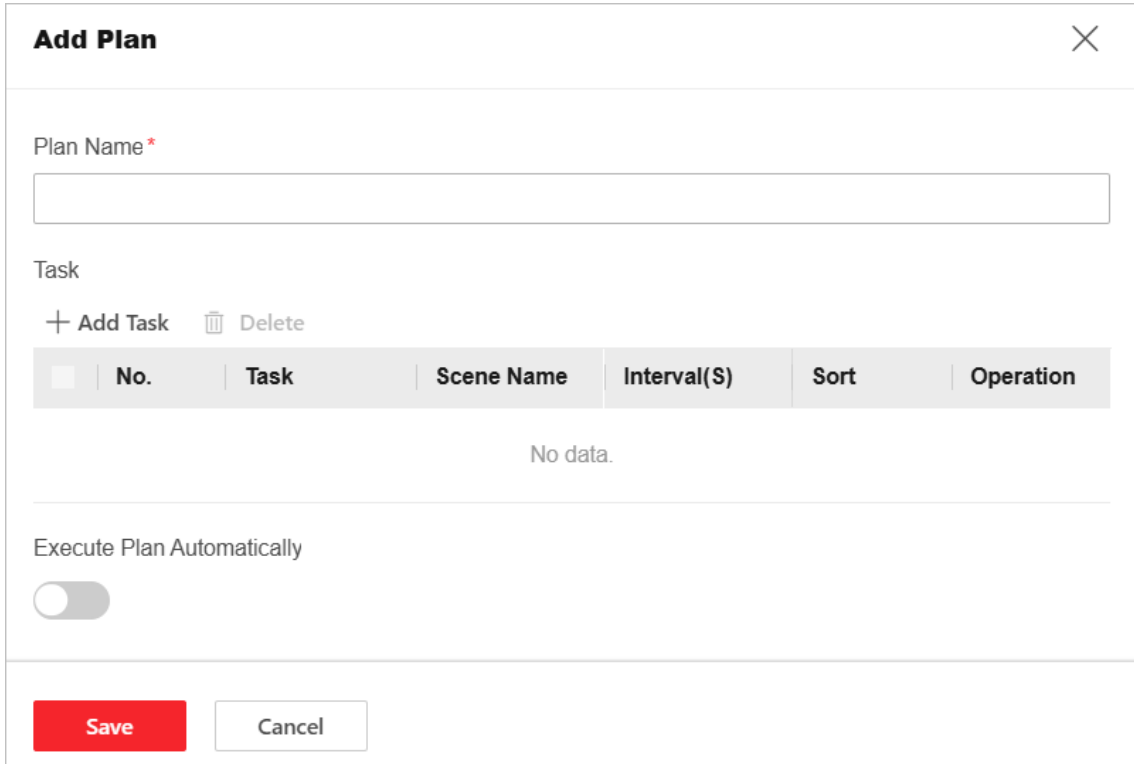


Figure 3-30 Manage Plan

- Click  to add a plan:
 - 1) Set the plan name.
 - 2) Add tasks.
 - 3) (Optional) Execute the plan automatically and set the schedule.
 - 4) Click **Save**.



Add Plan ✕

Plan Name *

Task

+ Add Task  Delete

	No.	Task	Scene Name	Interval(S)	Sort	Operation
No data.						

Execute Plan Automatically

☐

Save **Cancel**

Figure 3-31 Add a Plan

- Click a plan and then click  to edit the plan.
- Click a plan and then click  to call the plan.

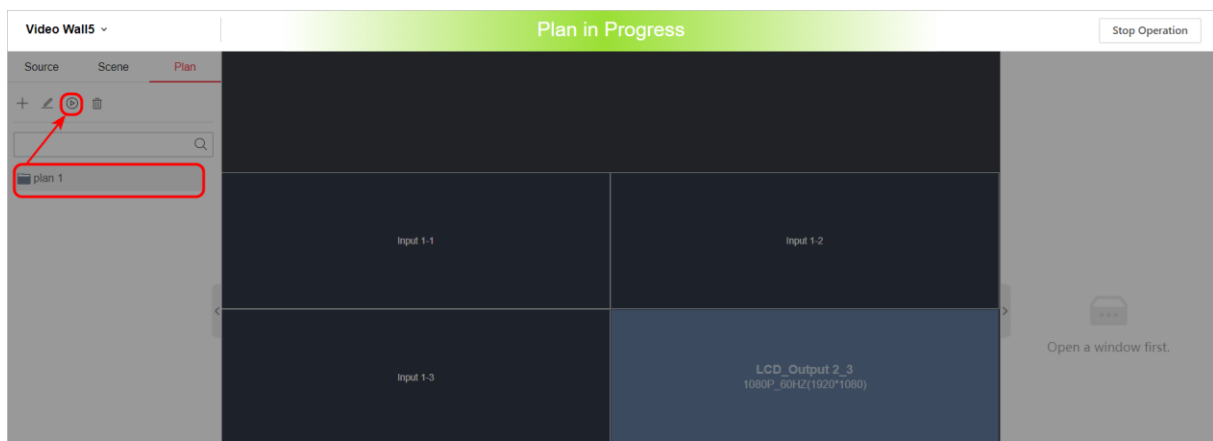


Figure 3-32 Call a Plan

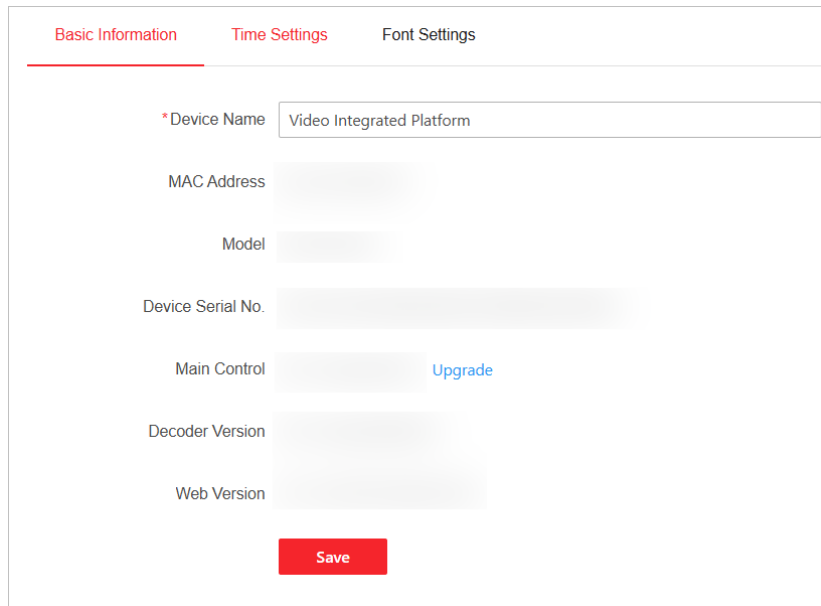
- Click a plan and then click  to delete the plan.

Chapter 4 Configure General Parameters

4.1 Configure System Parameters

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

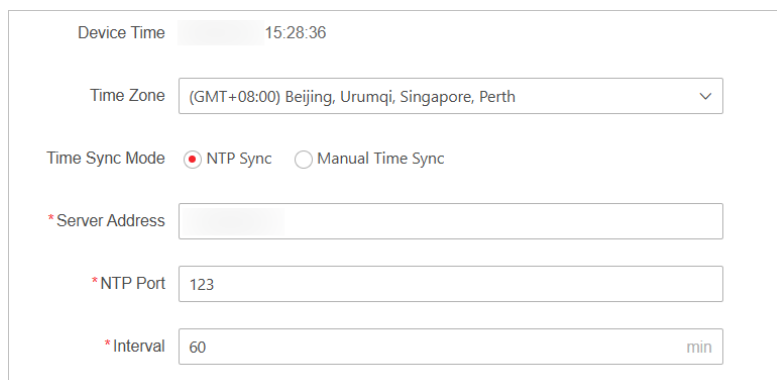
- Go to **System Settings** → **Basic Information** to view the device information and edit the device name as required. You can click **Upgrade** to go to the **Upgrade** page.



The screenshot shows the 'Basic Information' tab selected in the 'System Settings' section. The page displays several input fields for device information: 'Device Name' (containing 'Video Integrated Platform'), 'MAC Address', 'Model', 'Device Serial No.', 'Main Control', 'Decoder Version', and 'Web Version'. A blue 'Upgrade' button is located next to the 'Main Control' field. A red 'Save' button is positioned at the bottom center of the form.

Figure 4-1 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' page. At the top, it displays the 'Device Time' as 15:28:36. 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' (selected) and 'Manual Time Sync'. Below the radio buttons are three input fields: '* Server Address', '* NTP Port' (set to 123), and '* Interval' (set to 60 min).

Figure 4-2 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. At the top, 'Device Time' is displayed as 15:29:14. Below it, the 'Time Zone' is set to '(GMT+08:00) Beijing, Urumqi, Singapore, Perth'. The 'Time Sync Mode' has two options: 'NTP Sync' (unselected) and 'Manual Time Sync' (selected with a red dot). At the bottom, the 'Set Time' field shows 15:28:28 with a calendar icon, and a 'Sync With Computer' button is visible to its right.

Figure 4-3 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. The 'Enable' toggle switch is turned on (green). Below it, the 'Start Time' is configured with dropdowns for 'Apr.', 'First', 'Sun.', and '02:00'. The 'End Time' is configured with dropdowns for 'Oct.', 'Last', 'Sun.', and '02:00'. The 'Bias Time' is set to '30min'. A red 'Save' button is located at the bottom center.

Figure 4-4 Enable DST

- Go to **System Settings** → **Font Settings** to set the font of OSDs and subtitles. You can use the default font, or click **Add** to import a new font.

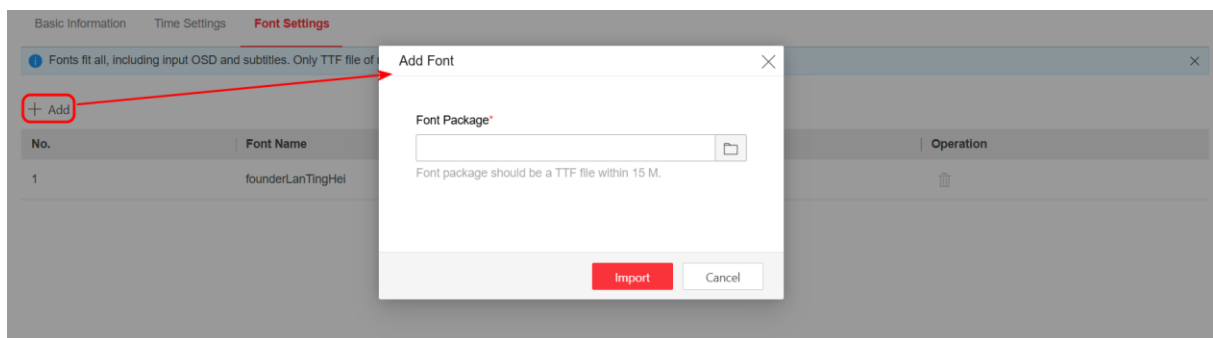
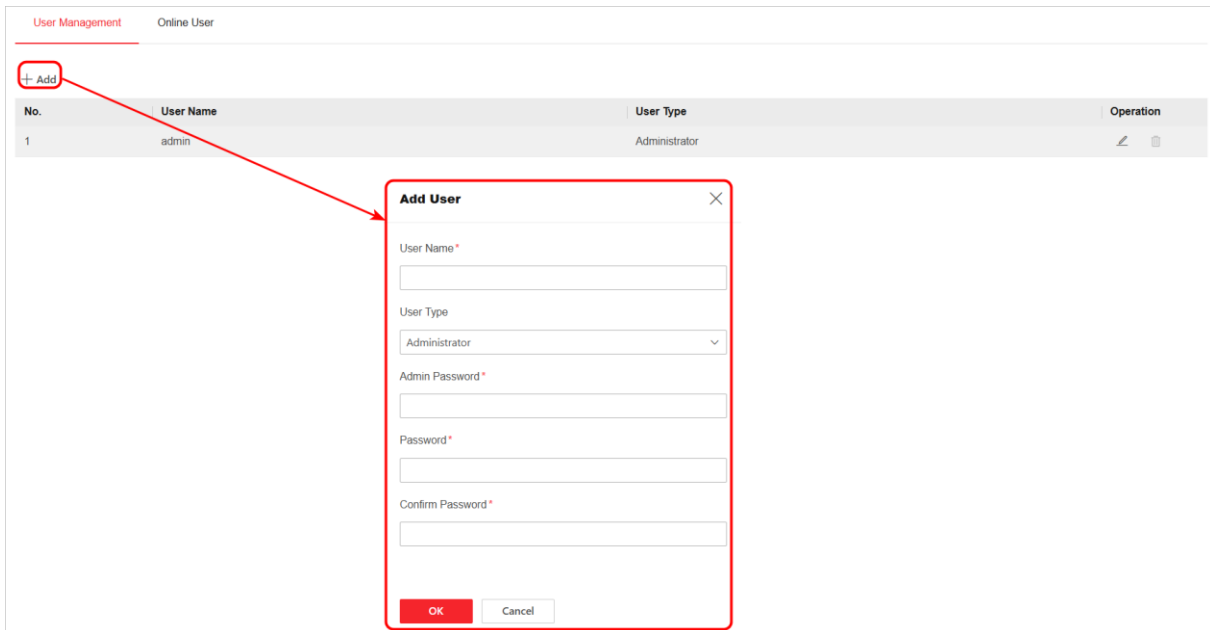


Figure 4-5 Set Font

- Go to **User Management** → **User Management** to add, edit, or delete the users.
You can only edit the password of the admin user and you cannot edit its user name or delete it.

- To add a new user, click **Add**, and enter user name, admin password, password, and confirm password.
- To edit the name or password of a user, click  of the user.
- To delete a user, click  of a user, click **OK**, and enter the password of the admin user.



The screenshot shows the 'User Management' interface with the 'Online User' tab selected. A table lists the current users, with one user named 'admin' of type 'Administrator'. A red box highlights the '+ Add' button in the top left of the table. A red arrow points from this button to an 'Add User' dialog box that is open in the center of the screen. The dialog box contains the following fields:

- User Name *
- User Type (dropdown menu, currently set to Administrator)
- Admin Password *
- Password *
- Confirm Password *

At the bottom of the dialog box are 'OK' and 'Cancel' buttons.

Figure 4-6 Manage Users

- Go to **User Management** → **Online User** to view the information of online users. To refresh the information, click **Refresh**.



The screenshot shows the 'User Management' interface with the 'Online User' tab selected. A 'Refresh' button is located above the table. The table lists the current users, with one user named 'admin' of type 'Administrator'.

No.	User Name	User Type	IP Address	User Login Time
1	admin	Administrator		11:08:08

Figure 4-7 View Online Users

4.2 Configure Network Parameters

4.2.1 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) You can perform the following operations as required:

- Enable auto HTTPS redirection to access the device via HTTPS by default.
- Select a digest algorithm type.



Note

Only the admin user can select a digest algorithm type.

Step 5 Click **Save**.

The screenshot shows the configuration page for HTTP(S) parameters. It includes input fields for HTTP and HTTPS ports, a toggle for enabling HTTPS, a toggle for automatic redirection to HTTPS, and dropdown menus for authentication mode and digest algorithm type. A red 'Save' button is located at the bottom of the form.

Figure 4-8 Configure HTTP (S) Parameters

4.2.2 Configure Central Control Port

When the LAN port on the main control board is connected to the central control device, the central control port function needs to be configured.

Step 1 Go to **Configuration** → **Network** → **Network Service** → **Central Control Port**.

Step 2 Enable the central control port, set the port number, and click **Save**.

Step 3 Use the configured port to send the specified protocol content to control the central control device.

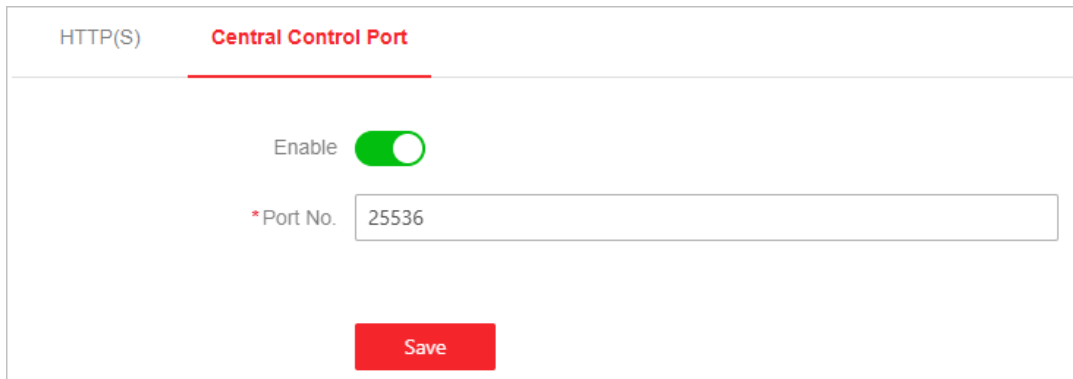


Figure 4-9 Configure Central Control Port

4.3 Configure Events

Go to **Configuration** → **Event** to configure the audible warning and alarm reporting to the platform when the following exceptional events occur:

- The IP address of the device is the same as that of other devices in the network.
- Incorrect user name or password.
- Network is disconnected.
- The device temperature is too high or too low.
- The fan status is abnormal.

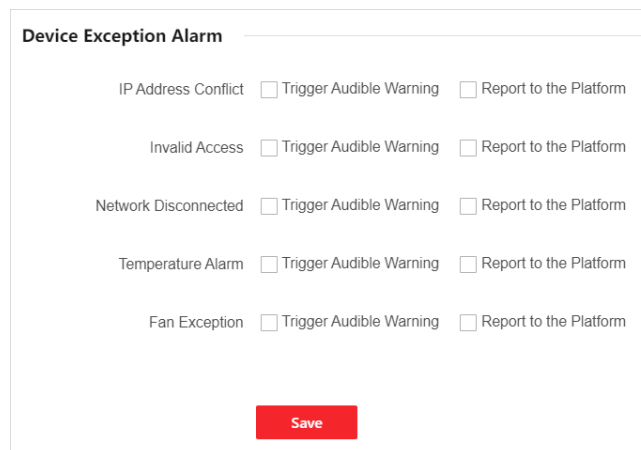


Figure 4-10 Set Device Exception Alarm

4.4 Configure 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 number of split windows reaches the set 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.

Figure 4-11 Set Sub-Stream Auto-Switch

- Click **Display Settings** to configure the content displayed when streaming fails, and enable the device exception OSD display function as needed. If you enable **Device Exception**, the specific streaming failure reason will be shown on the screen.

Figure 4-12 Set Display Content

- Click **Scene Change** to enable **Change Subtitle as Scene Changes**, **Change Background Image with Scene**, and **Scene Change Timeout** as needed.

Figure 4-13 Set Scene Change Parameters

- Click **Roaming Window Switch** to enable the function and set the timeout interval.

Sub-Stream Auto-Switch Display Settings Scene Change **Roaming Window Switch** Decoding Delay Network Preview No Signal Image

Floating Window Switching Timeout ☒

Interval SEC

Save

Figure 4-14 Enable Roaming Window Switch

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

Sub-Stream Auto-Switch Display Settings Scene Change Roaming Window Switch **Decoding Delay** Network Preview No Signal Image

Default Decoding Delay Level

- Default
- Real Time
- Fair Real Time
- Medium Real-time & Medium Fluency
- Fair Fluency
- Good Fluency
- Auto Adjust

Save

Figure 4-15 Set Decoding Delay Level

- Click **Network Preview** to set the default video resolution to preview on the mobile client.

Sub-Stream Auto-Switch Display Settings Scene Change Roaming Window Switch Decoding Delay **Network Preview** No Signal Image

Resolution

Save

Figure 4-16 Set Network Preview Resolution

- Click **No Signal Image** to use the default image or select to return the last frame when there is no input signal.

Sub-Stream Auto-Switch Display Settings Scene Change Roaming Window Switch Decoding Delay Network Preview **No Signal Image**

No Input Signal Protection Pattern ☒ Default ☐ Retain Last Frame

Save

Figure 4-17 Configure No Signal Image

Chapter 5 Device Maintenance

5.1 View Device Status

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

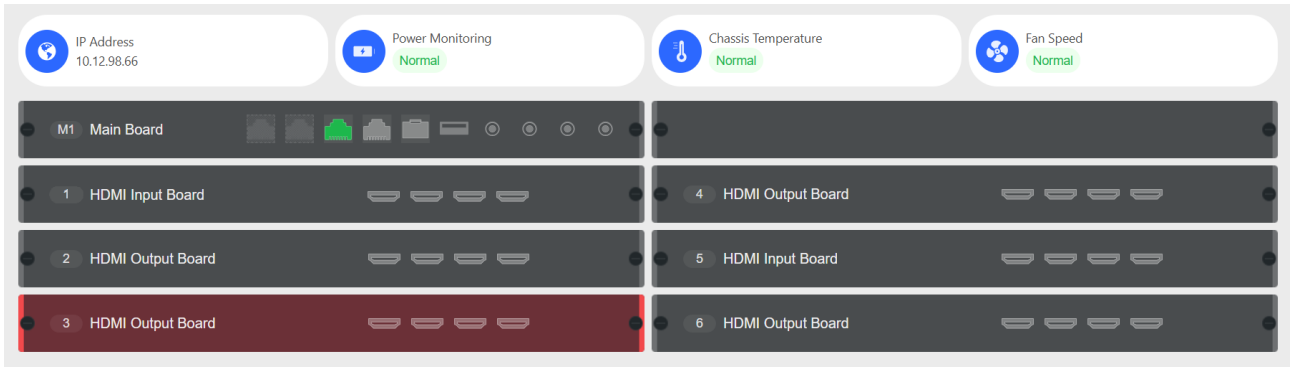


Figure 5-1 View Device Status

5.2 Maintain Screens

5.2.1 Maintain Screen via Serial Port

When the RS-232/485 serial port on the main control board is connected to a screen, the screen can be controlled through the RS-232/485 serial port.

Step 1 Go to **Configuration** → **System** → **Serial Port Settings** → **Main Node Serial Port**, select **Display 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.

Main Node Serial Port

Select Serial Port 1

Serial Port Type ☐ RS485 ☒ RS232

Duplex Mode Full-Duplex ▾

Baud Rate 115200 ▾

Data Bit 8 ▾

Stop Bit 1 ▾

Checking Type None ▾

Flow Control Type None ▾

Working Mode Display Control ▾

Serial Port Protocol HIK_LCD_H1 ▾

Save

Figure 5-2 Configure Serial Port

 Note

- If you select **Keyboard Control** working mode, connect the keyboard to the device and set the baud rate of the device same as the baud rate of the keyboard.
- If you use a serial keyboard, click **Get/Refresh Signal Source** to obtain the local signal sources, and click **Add Signal Source** to add network signal sources. After you change the input board of the device, you need to click **Get/Refresh Signal Source** to refresh the local signal sources.

Main Node Serial Port

Select Serial Port: 1

Serial Port Type: ☐ RS485 ☒ RS232

Duplex Mode: Full-Duplex

Baud Rate: 115200

Data Bit: 8

Stop Bit: 1

Checking Type: None

Flow Control Type: None

Working Mode: Keyboard Control

Signal Source No. + Add Signal Source Delete Signal Source Get/Refresh Signal Source

No.	Source	Type	Operation
1	Input 6-1	Local Source	
2	Input 6-2	Local Source	
3	Input 6-3	Local Source	
4	Input 6-4	Local Source	
5	1	Local Source	

AddSource

Device Name *

IP Address *

Port No. *

User Name *

Password *

Number of Channels *

Transmission Protocol: TCP

Stream Type: Main Stream

Device Manufacturer: Private Protocol

Get Stream via Streaming Server: ☐

Save Cancel

Figure 5-3 Control Serial Keyboard

Step 2 Use a serial port cable to connect a screen and the device's RS-485/RS-232 port.

Step 3 Go to **Display Maintenance** → **Target Video Wall** and select the screen that is connected with the serial port cable.

Step 4 Select an input source type.

Step 5 Adjust the image position.

Step 6 (Optional) You can perform the following operations as required:

- Click **Display On** to power on the connected LCD screen.
- Click **Display Off** to power off the connected LCD screen.

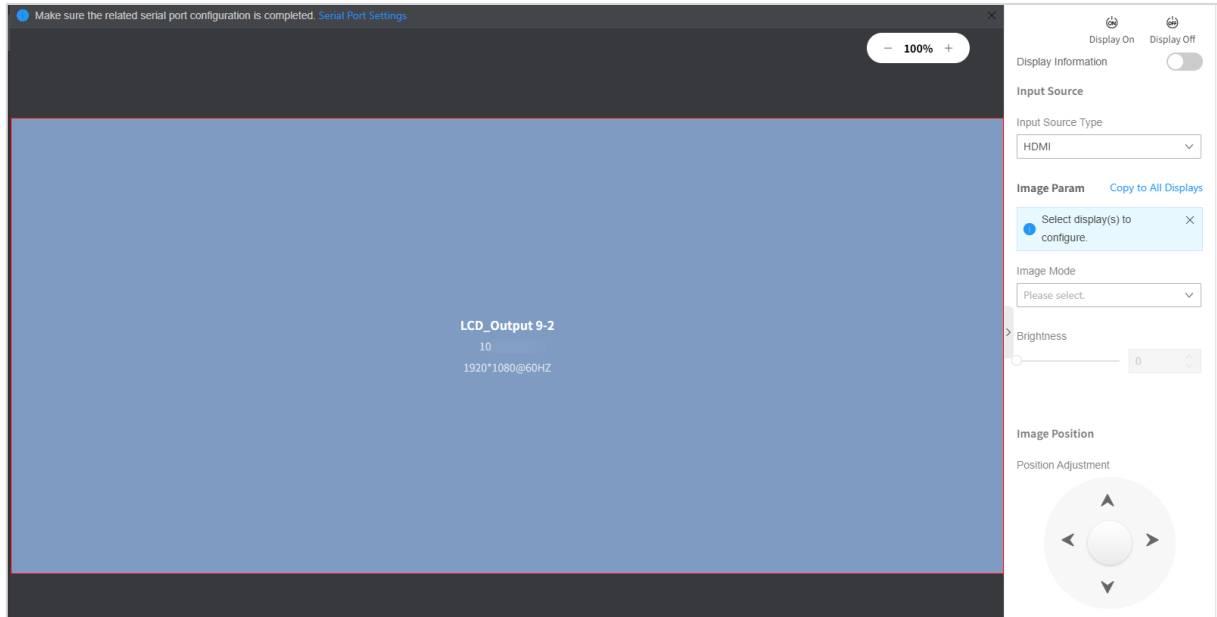


Figure 5-4 Control LCD Screen via Serial Port

5.2.2 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 **Display Maintenance** → **Target Video Wall** 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:

- Enable display information to show the software version, work duration and device temperature on all screens.
- Power on the connected screens through the HDMI cables:
 - The LCD screens are powered on after you click **Display On**.
 - The LED screens exit the sleep mode after you click **Display On**.
- Power off the connected screens through the HDMI cables:
 - The LCD screens are powered off after you click **Display Off**.
 - The LED screens enter the sleep mode after you click **Display Off**.
- Click **Copy to All Displays** to copy the image parameters of the current screen to all screens.

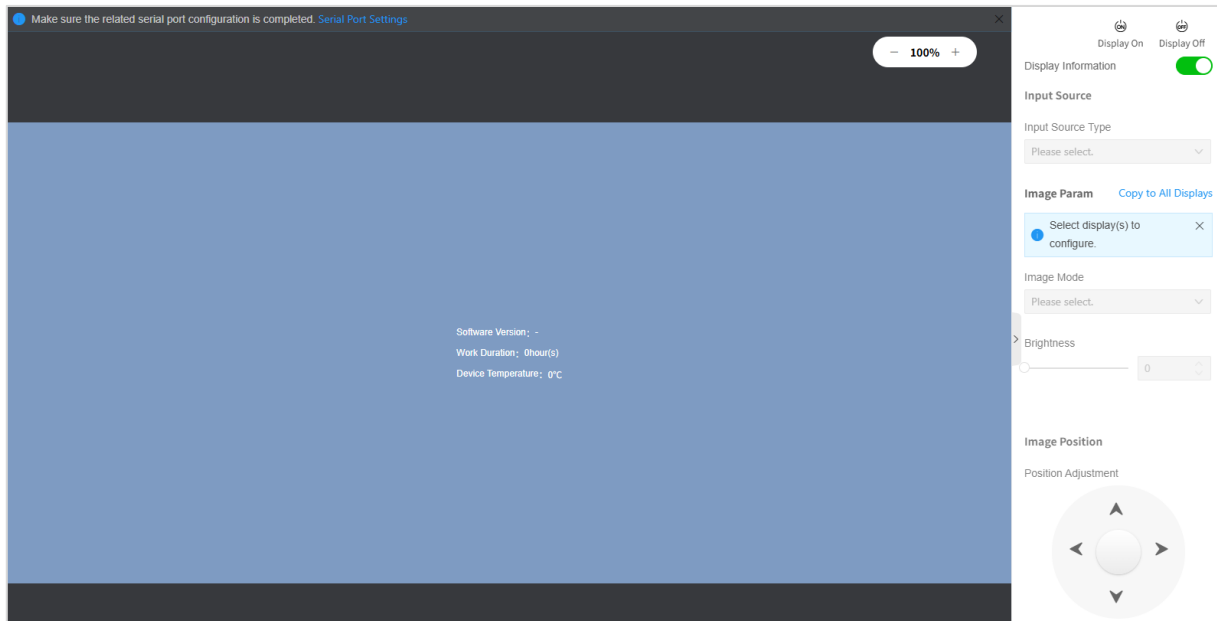


Figure 5-5 Show Screen Information

5.3 Maintain the System

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

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

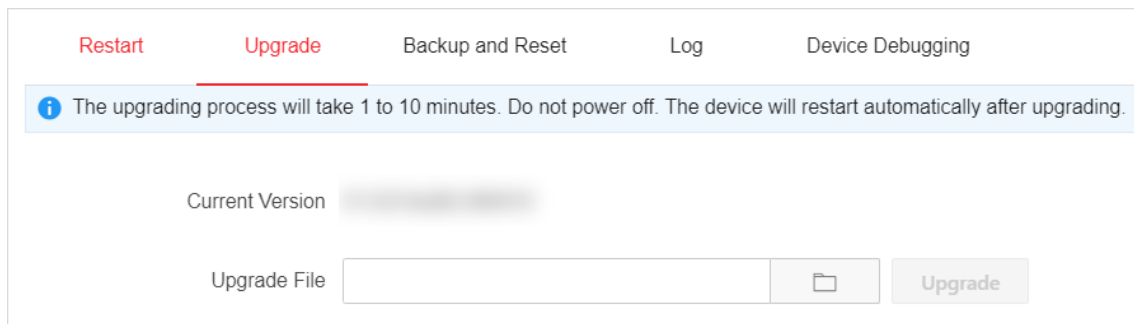


Figure 5-6 Upgrade the System

- In **Backup and Reset** tab, back up or reset device parameters.
 - Click **Export** to back up the device parameters.
 - Click **Restore Default** to restore the parameters except for user information and network 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 device parameter file saved locally, and click **Import** to import device parameters.

Restart

Upgrade

Backup and Reset

Log

Device Debugging

Backup

Device Parameters

Export

Import Parameters

Import Device Parameters

Import

Reset

Restore Default

Restore Default

All data except network parameters and user accounts will be cleared.

Restore Factory

Restore Factory

All functions and parameters will be restored to factory settings.

Figure 5-7 Backup and Reset Device Parameters

- In **Log** tab, set the search conditions and click **Search** to search for logs. The searched logs will be displayed in the list below. You can click **Export CSV File** to export the searched logs.

Main Type

Sub Type

Time

All Types

All Types

2024-06-24 00:00:00 - 2024-06-24 23:59:59

Search

Reset

Export CSV File

No.	Time	Main Type	Sub Type	Remote Host IP	Description
-----	------	-----------	----------	----------------	-------------

No logs. Search first.

Figure 5-8 Search Logs

- Click **Device Debugging** to configure the following parameters:
 - Enable SSH (Secure Shell), enter the port number and click **Save**. With SSH enabled, you can use a computer installed with the SSH client to access the device.
 - Click **Start** to start device self-check.
 - Click **Export** to export debugging logs.
 - Select a sub-system, click **Start Capturing** and then you can download the obtained packet capture file, or select to recapture packets.
 - Send a shell command and then check the response message.

SSH

Enable ☒

*Port No.

Device Self-Check

Device Self-Check

Export Debugging Log

Debug Log

Export Network Switching Packet

Subsystem

Packet Capture File



Please click Start Capturing.

Shell Command Operation

Terminal

Figure 5-9 Debug the Device

5.4 Maintain the Device Security

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

- Configure the IP addresses that are allowed to or forbidden to access the device.

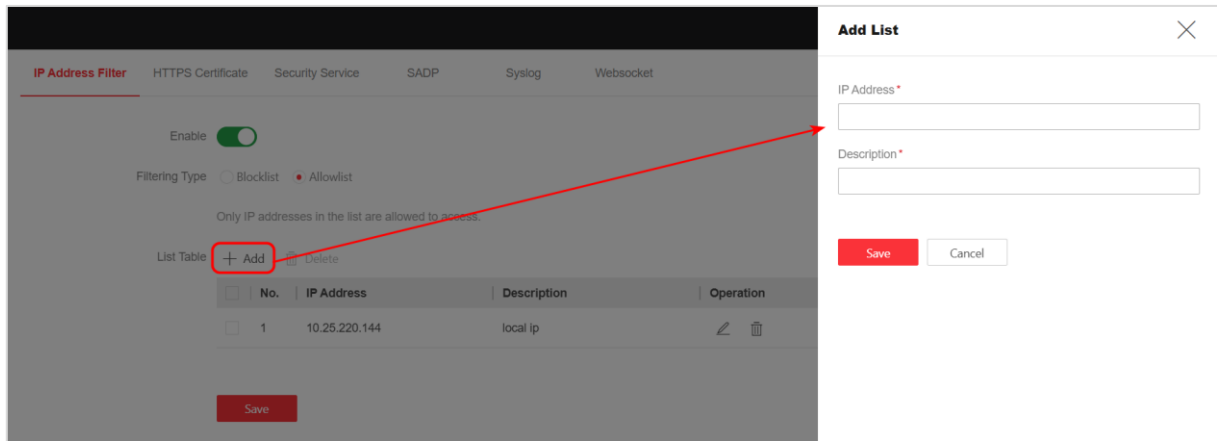


Figure 5-10 Configure IP Address Filter

- Import the locally saved HTTPS certificate and secret key.

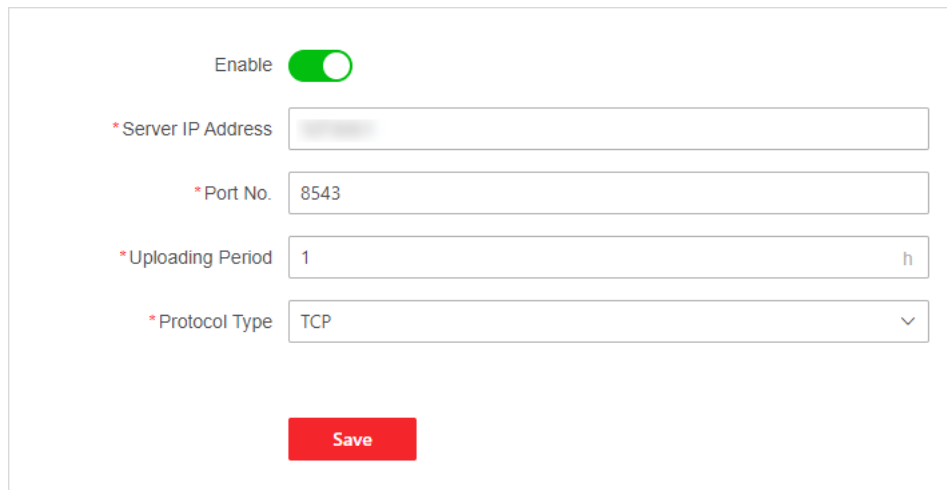
ⓘ Device will be restarted after the certificate and secret key are imported.

Certificate

Secret Key

Figure 5-11 Import HTTPS Certificate and Secret Key

- Click **Security Services** to disable **Serial Port Authentication Service** temporarily if needed. The function is enabled by default. To temporarily disable this service, set the shutdown duration and click **Save**.
- 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.



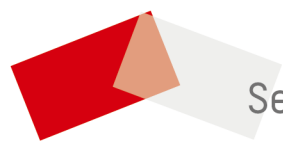
The screenshot shows a configuration form for enabling Syslog. At the top, there is a toggle switch labeled 'Enable' which is currently turned on (green). Below this, there are four input fields, each preceded by a red asterisk indicating they are required:

- * Server IP Address**: A text input field with a blurred value.
- * Port No.**: A text input field containing the value '8543'.
- * Uploading Period**: A text input field containing the value '1', followed by a unit selector dropdown showing 'h' (hours).
- * Protocol Type**: A dropdown menu currently set to 'TCP'.

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

Figure 5-12 Enable Syslog

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



See Far, Go Further