



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.

TABLE OF CONTENTS

Chapter 1 Introduction	1
1.1 Overview	1
1.2 First-Time Configuration Process	2
Chapter 2 Device Basic Settings	3
2.1 Connect Device and Screen	3
2.2 Activate and Log In to Device	4
2.2.1 Activate the Device via HiTools Delivery Client	4
2.2.2 Activate the Device via SADP Client	5
2.2.3 Activate the Device via Web Browser	7
2.3 Configure the Network Address	8
2.4 Configure Direct-Connect LED Display Mapping	9
Chapter 3 Video Wall Management	13
3.1 Configure Video Wall Scale	13
3.2 Configure the Output of a Video Wall	15
3.2.1 Edit the Output Port Parameters	15
3.2.2 Bind Output Ports with Video Wall	15
3.2.3 Configure an Audio Output	16
3.2.4 Configure Other Output Parameters	18
3.3 Configure the Input of a Video Wall	20
3.3.1 Add a Network Signal Source	20
3.3.2 Manage Signal Sources	22
3.3.3 Bind Signal Sources with Video Wall	27
3.4 Operate a Video Wall	28
3.4.1 Edit Signal Source Window Parameters	28
3.4.2 Configure Subtitles	31
3.4.3 Manage Scenes	33
3.4.4 Manage Plans	34
Chapter 4 LED Controller Board Advanced Configuration	36
4.1 Calibrate Receiving Cards	36
4.2 Configure Display Effect	39
4.3 Configure Loading Mode	41
4.4 Configure Auto Dehumidification	42
4.5 Configure External Sensors	43
4.6 Configure Power Distribution Cabinets	44
4.7 Maintain an LED Controller Board	46
4.7.1 View Status of LED Controller Board	46
4.7.2 Test Condition of Directly Connected LED Display	47
4.7.3 Quickly Maintain Receiving Cards	48
Chapter 5 Configure General Parameters	51
5.1 Configure System Parameters	51

5.2 Configure Network Parameters	54
5.2.1 Configure HTTP(S) Parameters	54
5.2.2 Configure Central Control Port	55
5.3 Configure Events	55
5.4 Configure Other Parameters	56
Chapter 6 Device Maintenance	59
6.1 View Device Status	59
6.2 Maintain Screens	59
6.2.1 Maintain Screen via Serial Port	59
6.2.2 Control Screens via HDMI Ports	62
6.3 Maintain the System	63
6.4 Maintain the Device Security	66

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

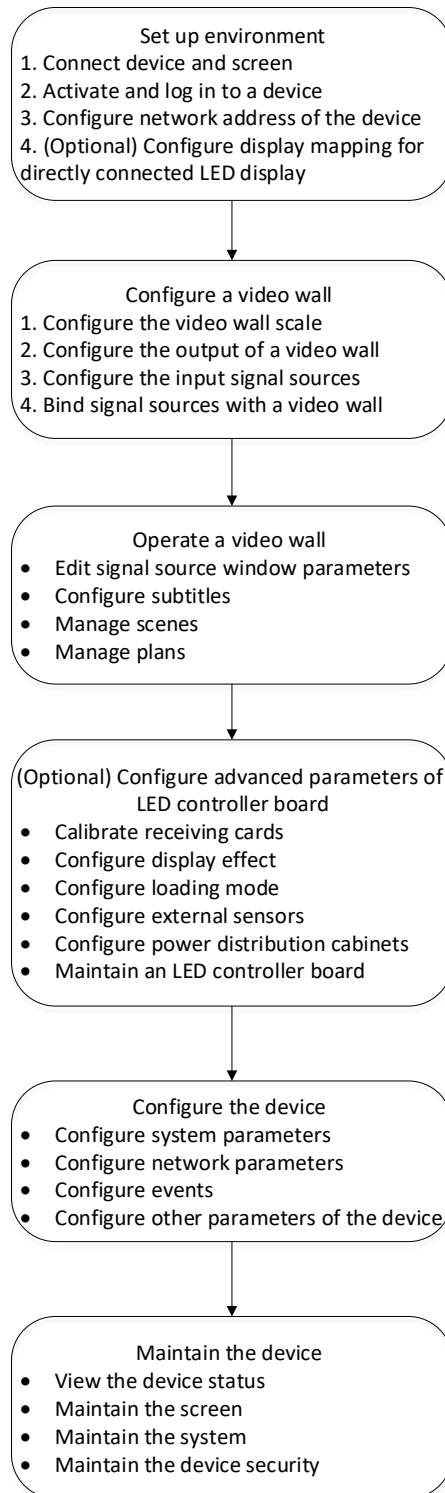


Figure 1-1 First-Time Configuration Process

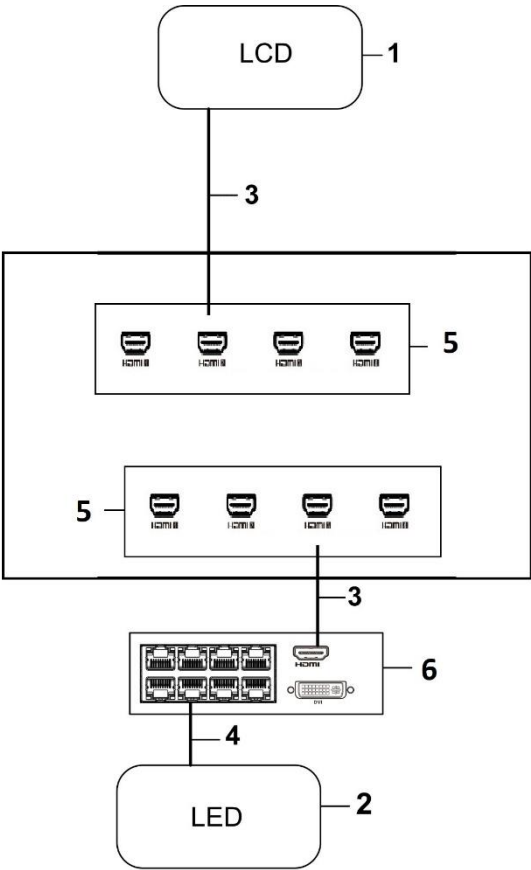
Chapter 2 Device Basic Settings

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**.

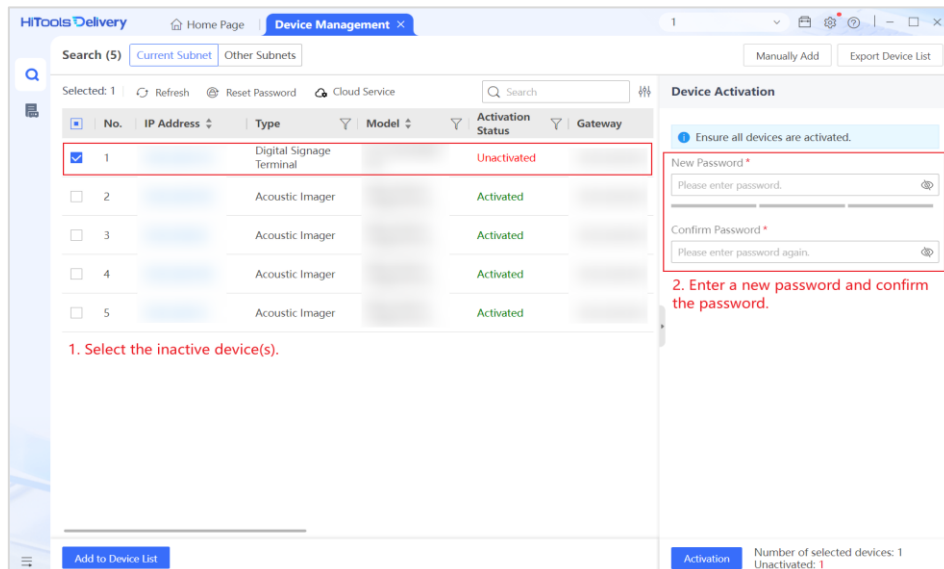


Figure 2-1 Batch Activate Devices

Note

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

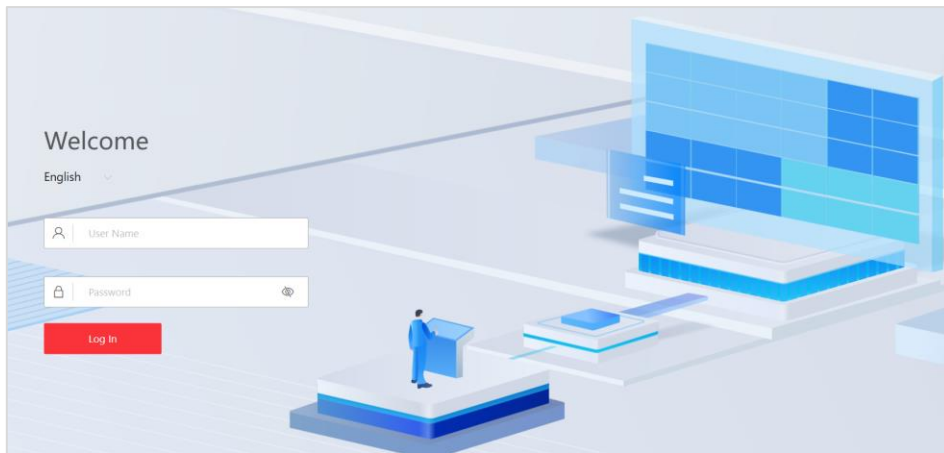


Figure 2-2 Login Page

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**.

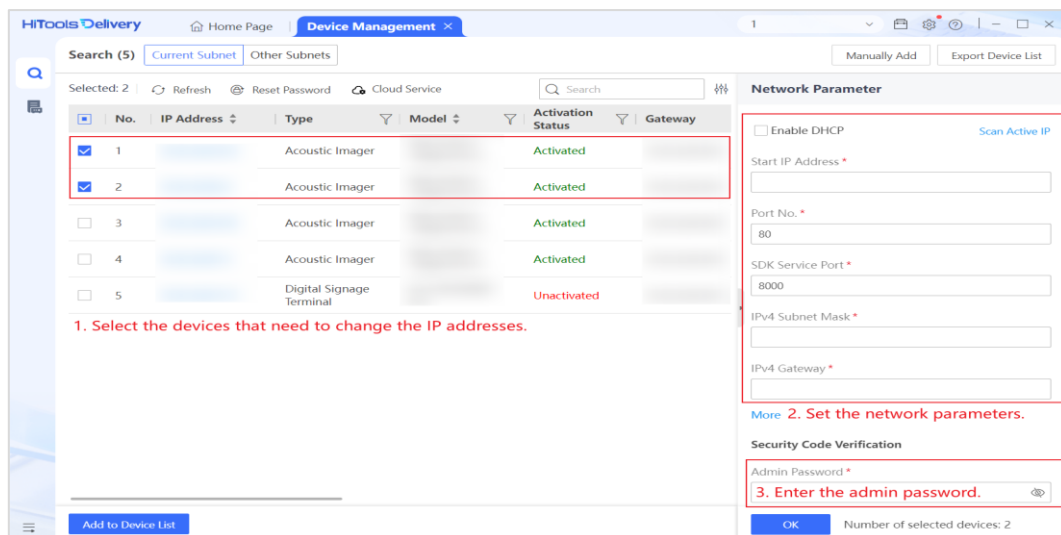


Figure 2-3 Batch Edit Device IP Addresses

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.

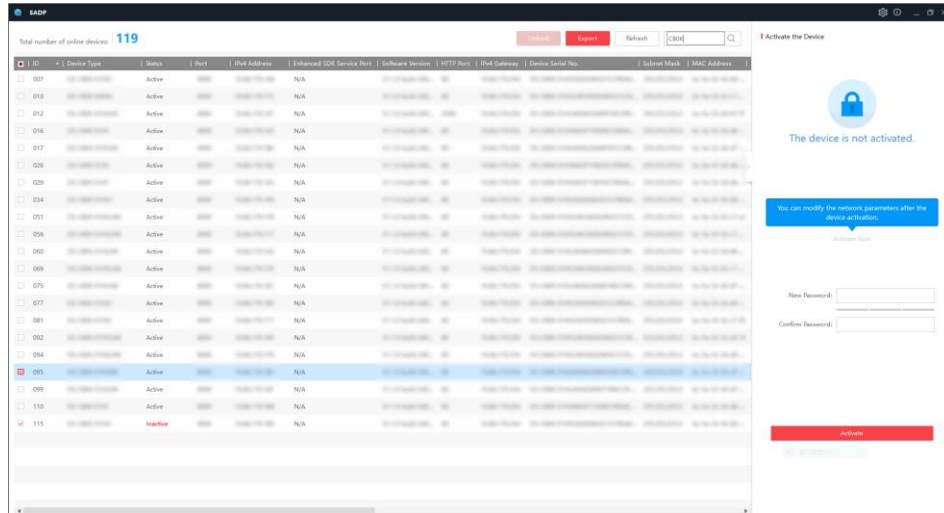


Figure 2-4 Activate the Device via SADP Client

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**.

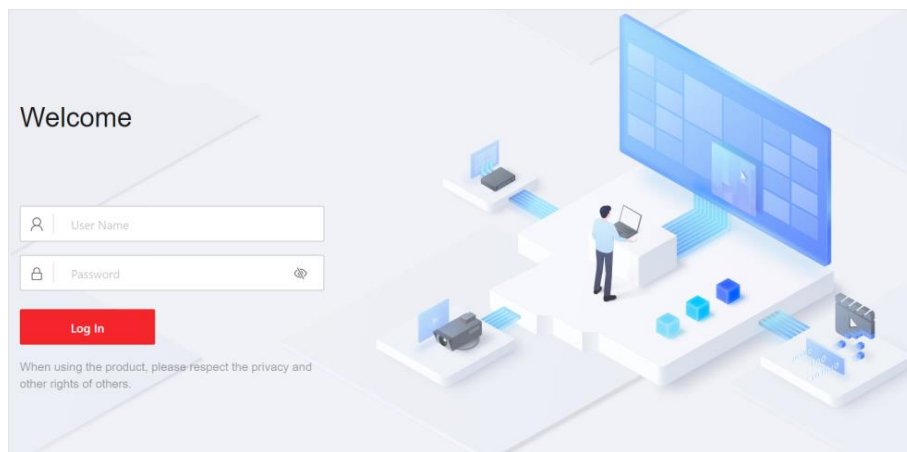


Figure 2-5 Login Page

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**.

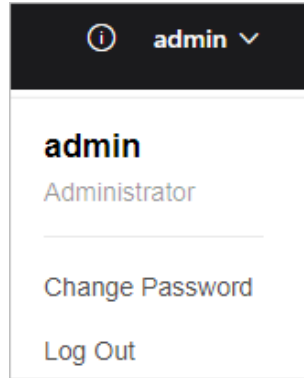


Figure 2-6 Change Password

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**.

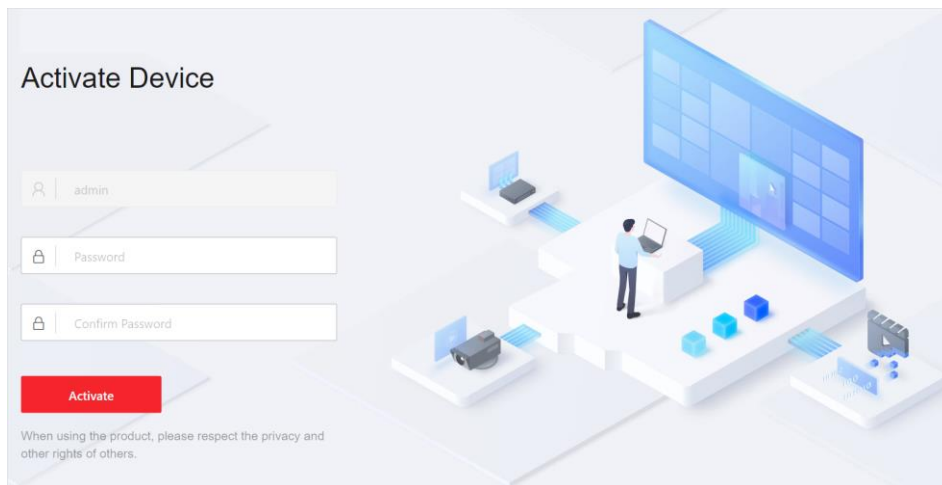


Figure 2-7 Activate the Device via Browser

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

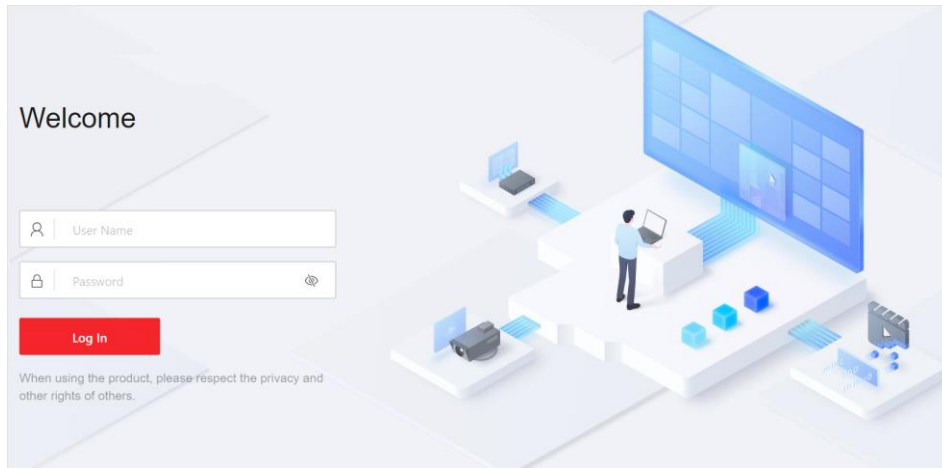


Figure 2-8 Login Page

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**.

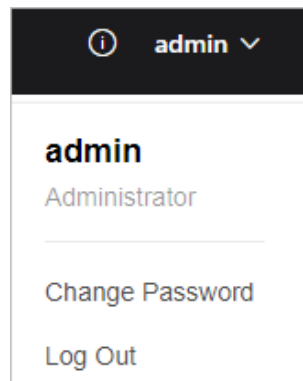
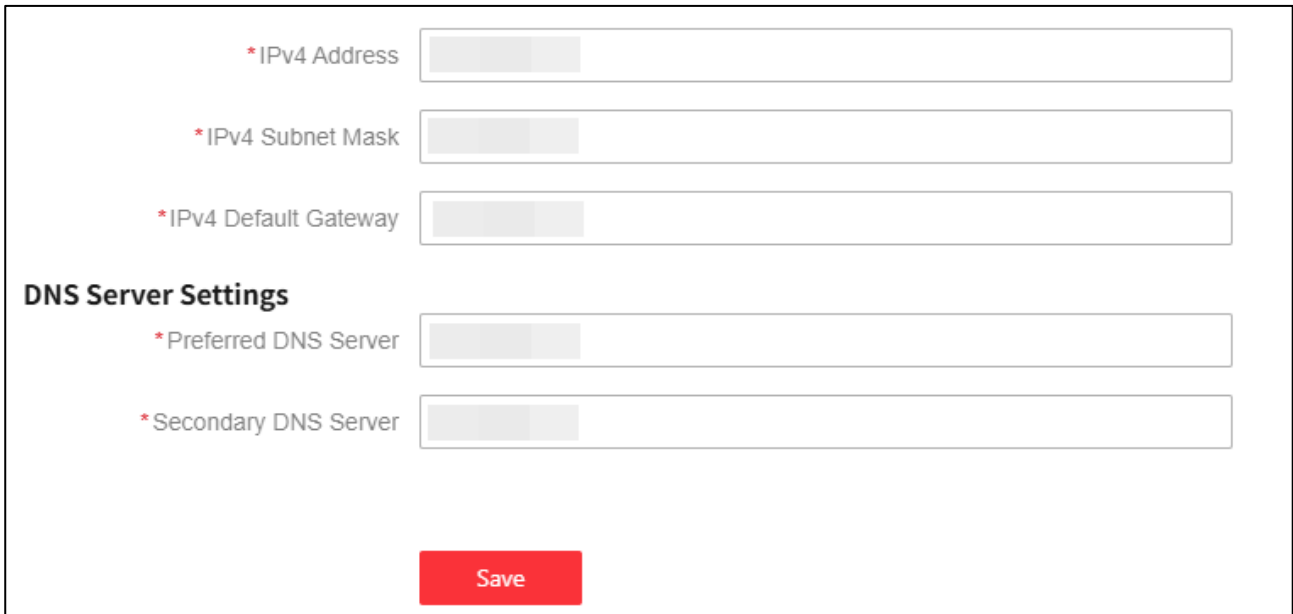


Figure 2-9 Change Password

2.3 Configure the Network Address

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



The screenshot displays a web interface for configuring the device's IPv4 address. It includes three input fields for IPv4 Address, IPv4 Subnet Mask, and IPv4 Default Gateway, each preceded by a red asterisk. Below these is a section titled "DNS Server Settings" with two input fields for Preferred DNS Server and Secondary DNS Server, also marked with red asterisks. A red "Save" button is positioned at the bottom center of the configuration area.

Figure 2-10 Configure the Device IPv4 Address

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

Step 3 If you use the domain name to access the device, set the preferred and alternative DNS server.

Step 4 Click **Save**.

Step 5 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 6 Enter the configured device IP address in the web browser of the computer to log in to the web page of the device.

2.4 Configure Direct-Connect LED Display Mapping

You must configure display mapping before configuring a video wall:

- Connect each LCD screen to the power supply. Generally, the LCD screen will light up once powered on. If it doesn't light up, connect the LCD screen to the power supply and press the power button on the LCD screen.
- Connect each LED display to the power supply and take the following measures to configure display mapping:
 - If the LED display is directly connected to an LED controller board in the device, you can use the web interface of the device or LED Tool client to configure display mapping.

Note

Display mapping can be configured via device's web interface or LED Tool client. Web interface will require reconfiguration if mapping was previously configured through LED Tool client.

- If the LED display is connected to the device through an external LED controller, you can configure display mapping via the web interface of the LED controller or LED Tool client.

Step 1 Use either of the following methods to enter the display mapping page:

- Navigate to **Display Mapping**.
- Navigate to **Video Wall Configuration**, and click  of the output port of an LED controller board to navigate to the **Display Mapping** page.

Note

One LED controller board provides only 1 output port. To edit the output port name, click .

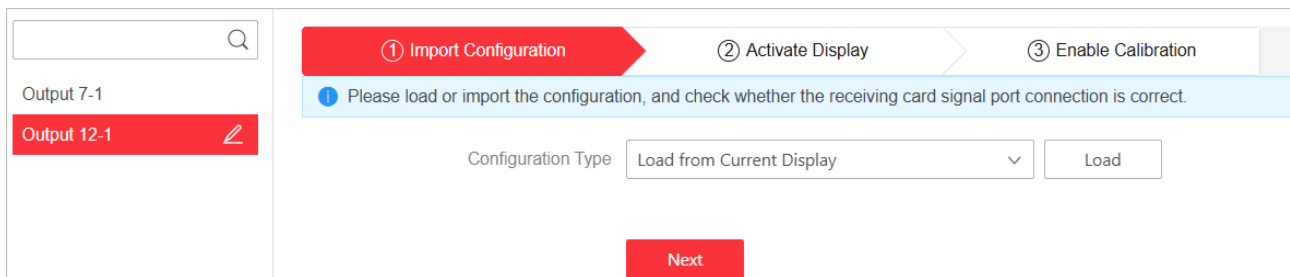


Figure 2-11 Display Mapping Page

Step 2 On the **Import Configuration** page, select one of the following methods to import the cabinet parameters.

- Load from Current Display: Click **Load**. If the LED module serial number is detected, a verification code is required for validation. Once verified, the cabinet parameters will be downloaded from the cloud.
- Load from Cloud: Enter the serial number and click **Search**. If the LED module serial number is detected, verification via a code is required first. Then, select the cabinet configuration file from the result list and click **Load**.
- Load from File: Click , select a local cabinet configuration file, and click **Load**.

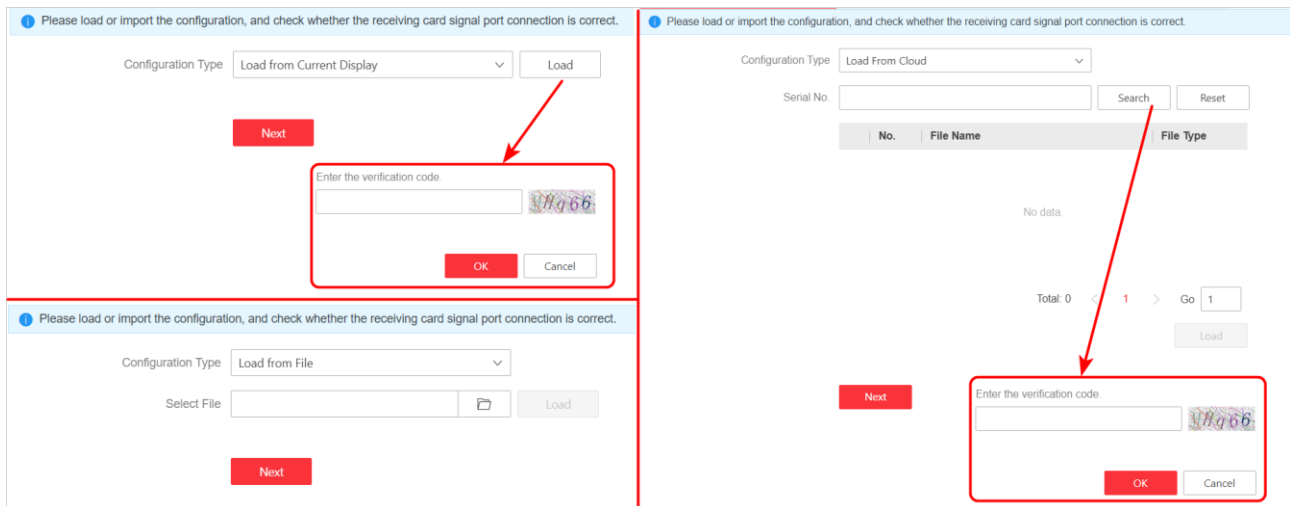


Figure 2-12 Import Cabinet Parameters

Step 3 Click **Next** to enter the **Activate Display** page.

Step 4 Enable **Show Connections**.

Step 5 Click **Edit** to set the display size, and click **OK**.

Step 6 According to the connection number shown on the cabinets, configure the connection between device network ports and cabinets.

- 1) Select a network port of the device. Each network port can connect to a maximum of 252 cabinets.
- 2) Take either of the following methods to connect the device network ports to cabinets:
 - Click on the cabinets in sequence to complete the connection according to the operation order. The connection may span across different network ports of the LED controller board.
 - Click on a cabinet as the starting point of the connection, press and hold to determine the connection range, select the connection shape in the pop-up window, and then click **OK** to complete the connection.
- 3) (Optional) You can perform the following operations as required:
 - Click **Undo** to undo the previous operation.
 - Click **Restore** to restore the previous operation.
 - Click **Clear Connections** and select **Clear Current Sending Port Connection** to clear the signal connection of the selected network port.
 - Click **Clear Connections** and select **Clear All Sending Port Connection** to clear the signal connection of all network ports.
 - Click **Get Status** to refresh the receiving card online status.
- 4) Click **Finish**.
- 5) Use the same method to configure signal connection for other network ports.

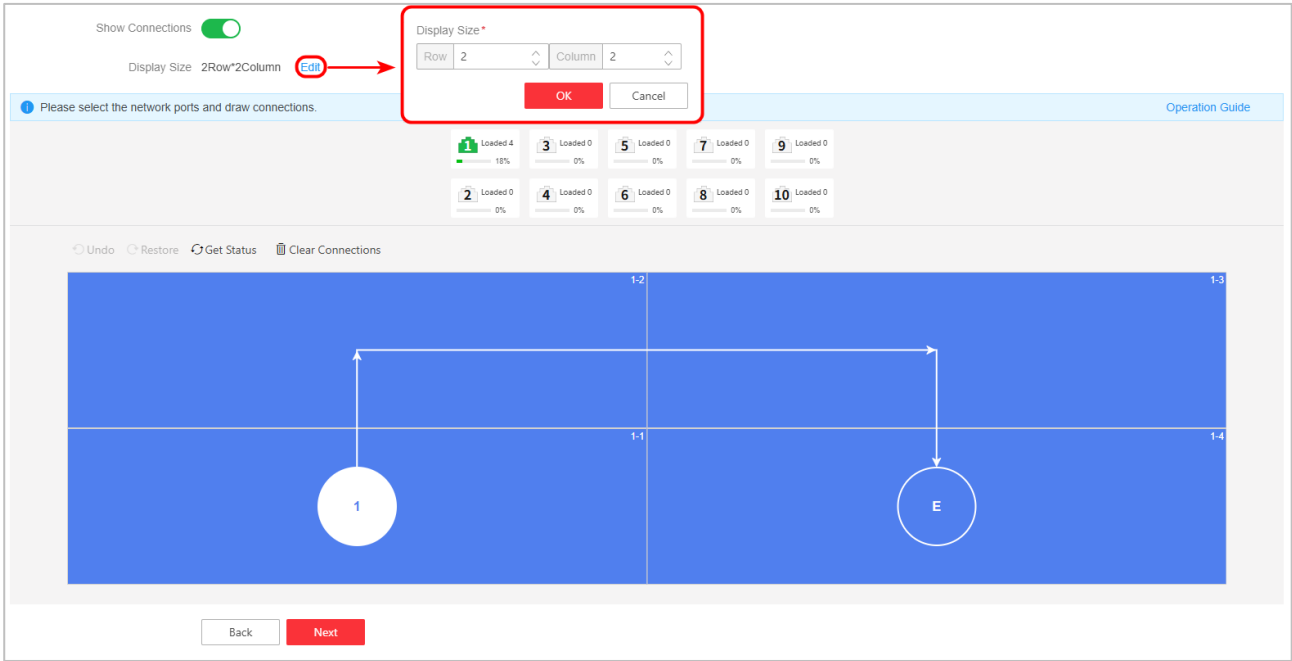


Figure 2-13 Configure Signal Cable Connection

Step 7 Complete display mapping:

- For the HUB receiving cards, you have completed the display mapping configuration.
- For the AXS receiving cards, click **Next**. On the **Enable Calibration** page, enable calibration.

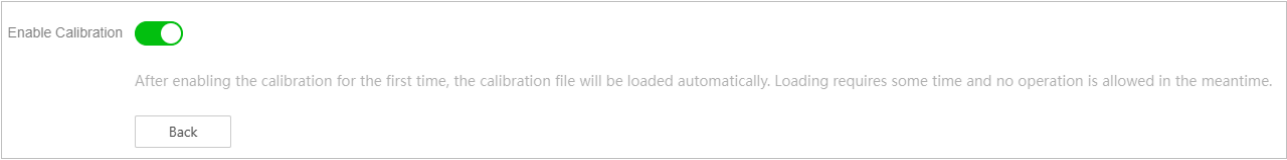


Figure 2-14 Firstly Calibrate AXS Receiving Cards

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.

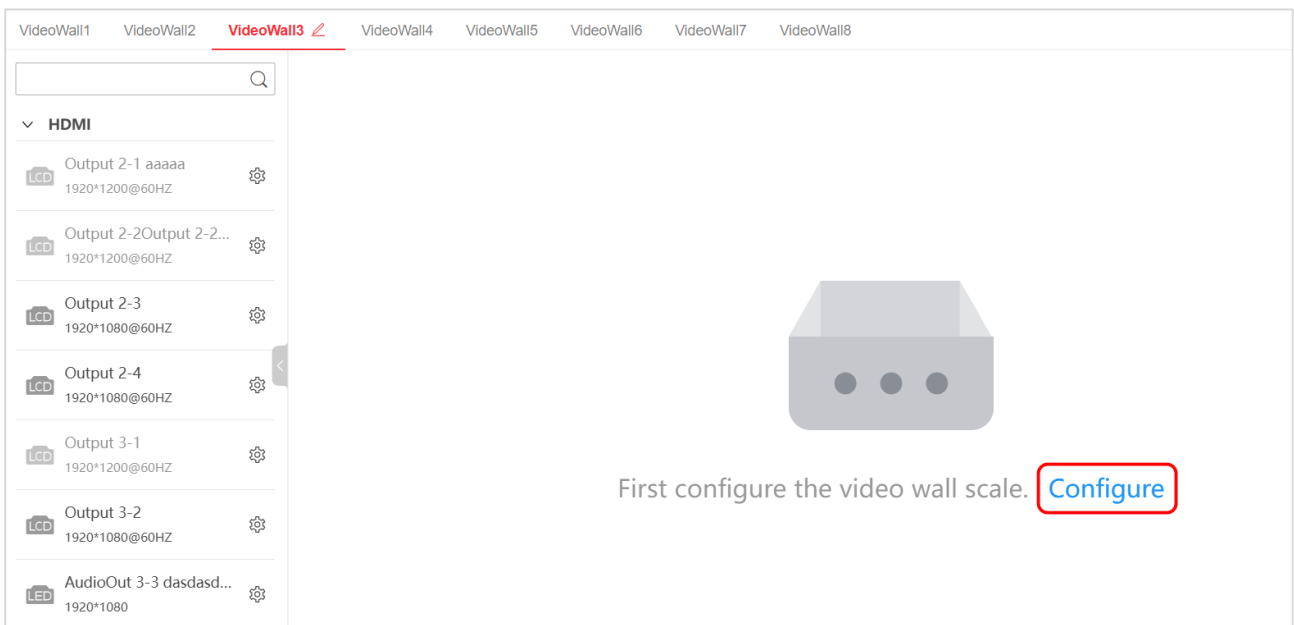


Figure 3-1 Video Wall Configuration Page

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.

* Name VideoWall1

Video Wall Type ☐ LCD ☒ LED

* Row(s) × Column(s) 2 × 2 [Clear](#)

* Decoding Output Resolution Custom

Whole Screen Width and Height 128*128

64 64 64 64

Save

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.

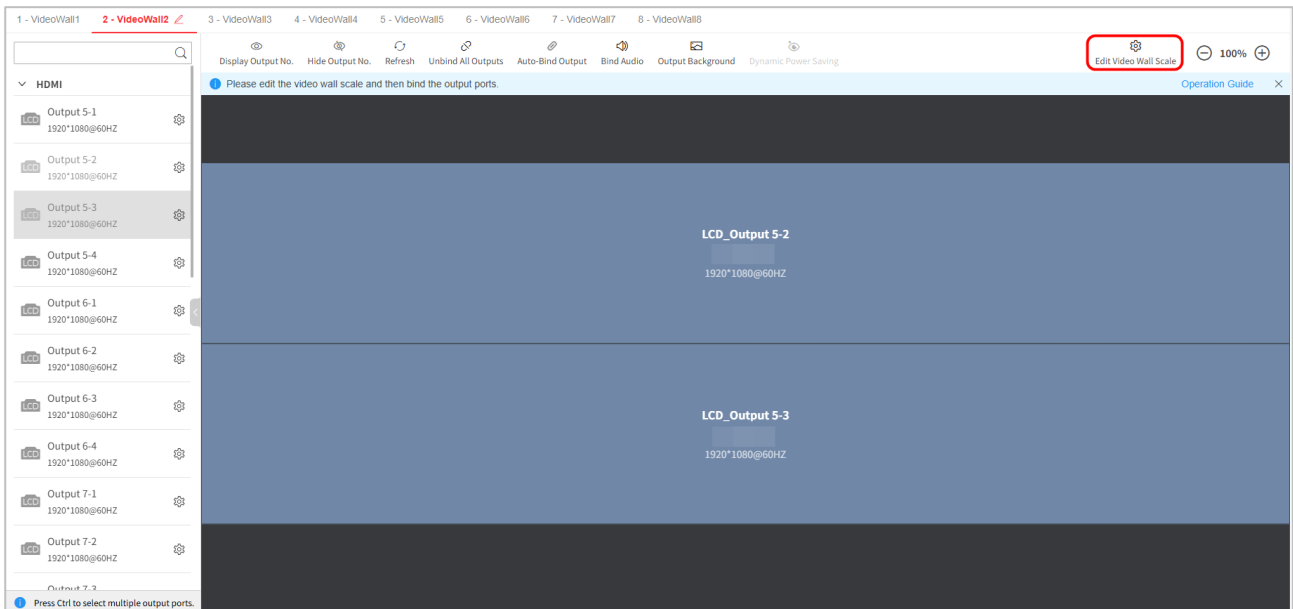


Figure 3-3 Edit the Video Wall Scale

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.

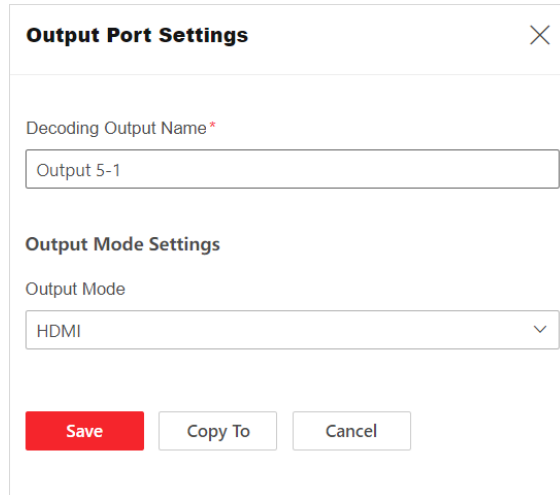


Figure 3-4 Configure HDMI Output Port

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**.

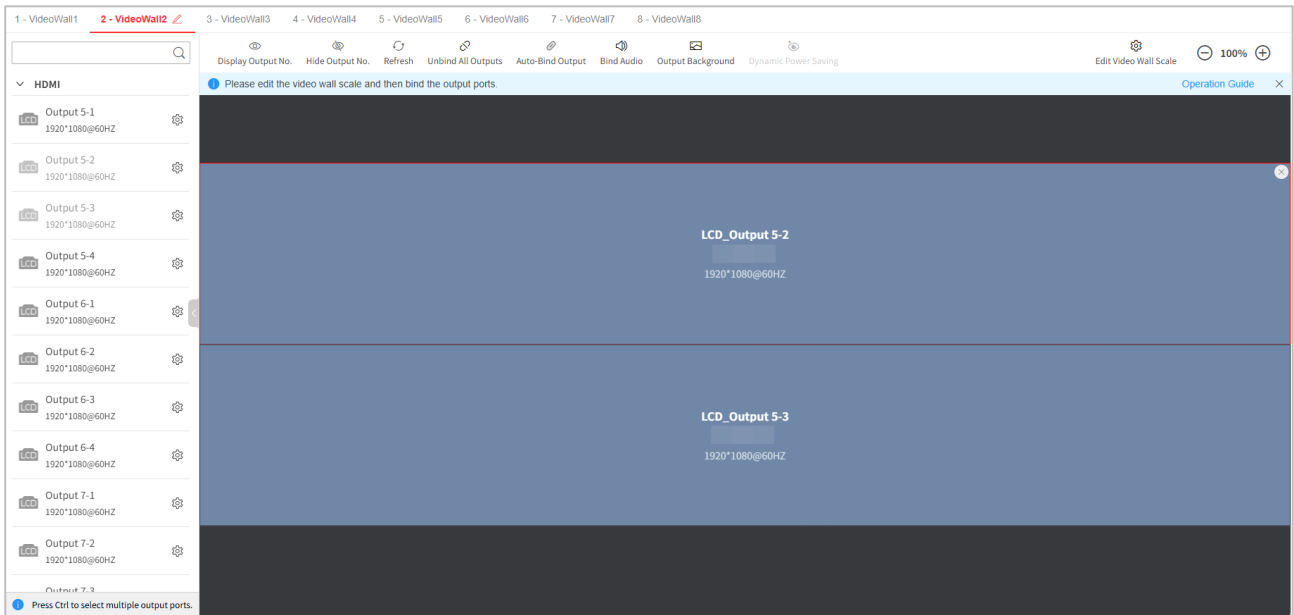


Figure 3-5 Bind Output Ports with Video Wall

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**.

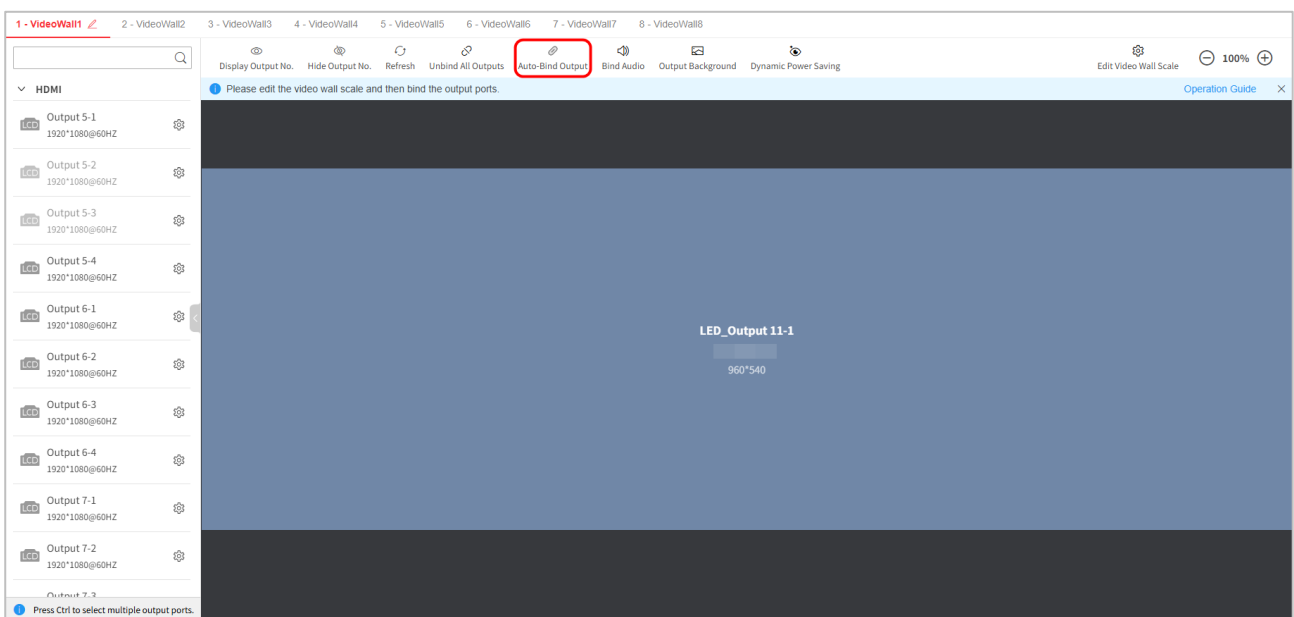


Figure 3-6 Auto-Bind Output Ports with Video Wall

3.2.3 Configure an Audio Output

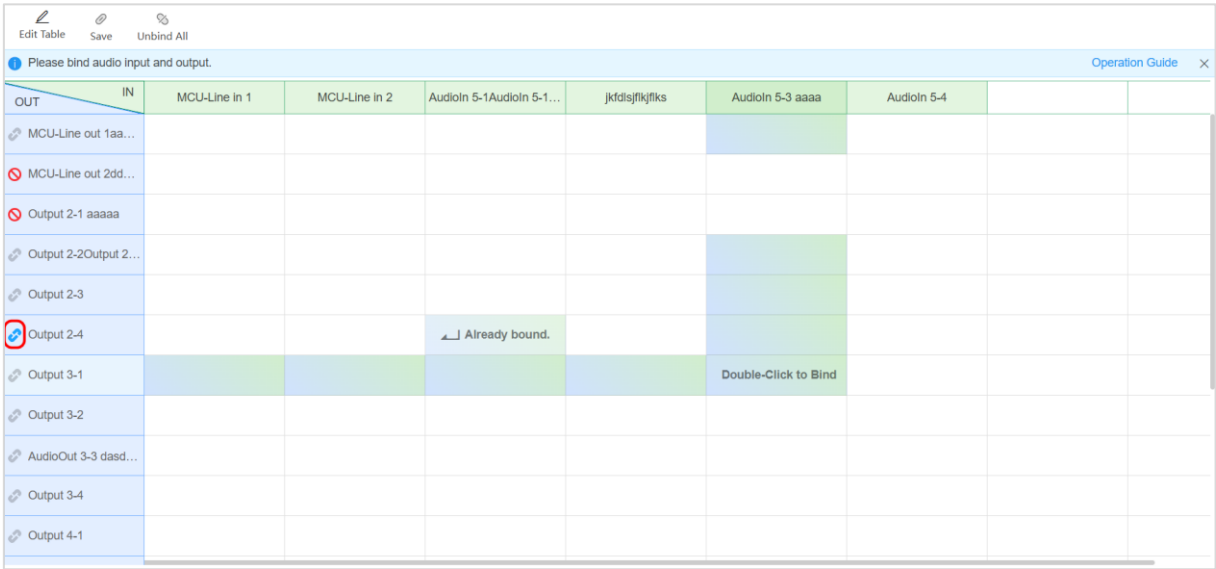
Configure Audio Matrix

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	AudioIn 5-1AudioIn 5-1...	Jkfdjsjflkjflks	AudioIn 5-3 aaaa	AudioIn 5-4		
MCU-Line out 1aa...									
MCU-Line out 2dd...									
Output 2-1 aaaaa									
Output 2-2Output 2...									
Output 2-3									
Output 2-4									
Output 3-1									
Output 3-2									
AudioOut 3-3 dasd...									
Output 3-4									
Output 4-1									

Figure 3-7 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.

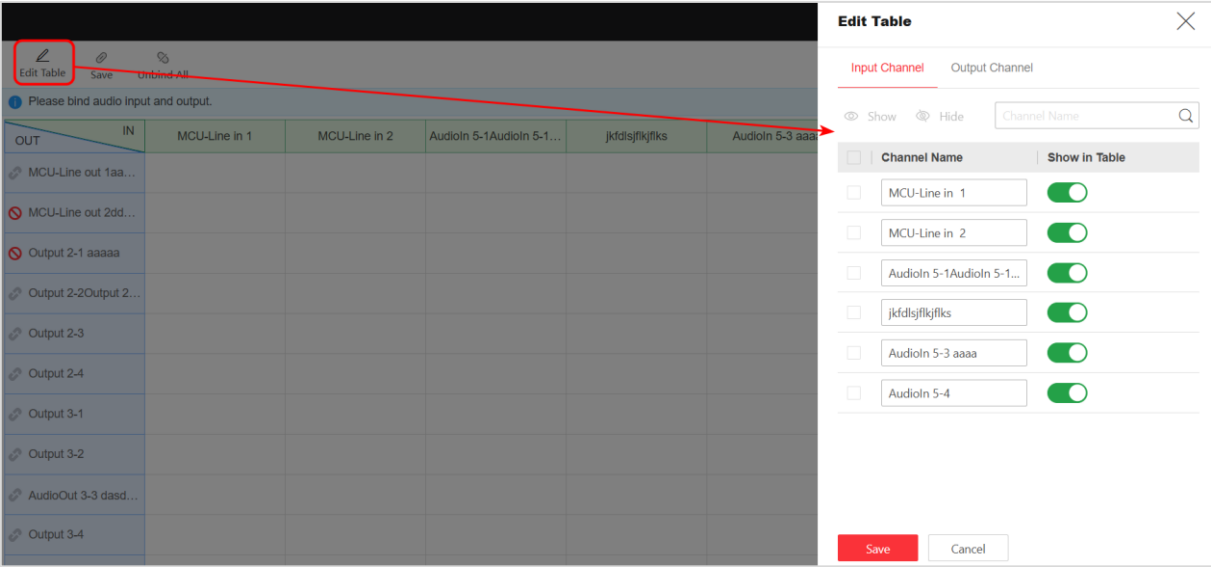


Figure 3-8 Edit Audio Channel Table

- 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.

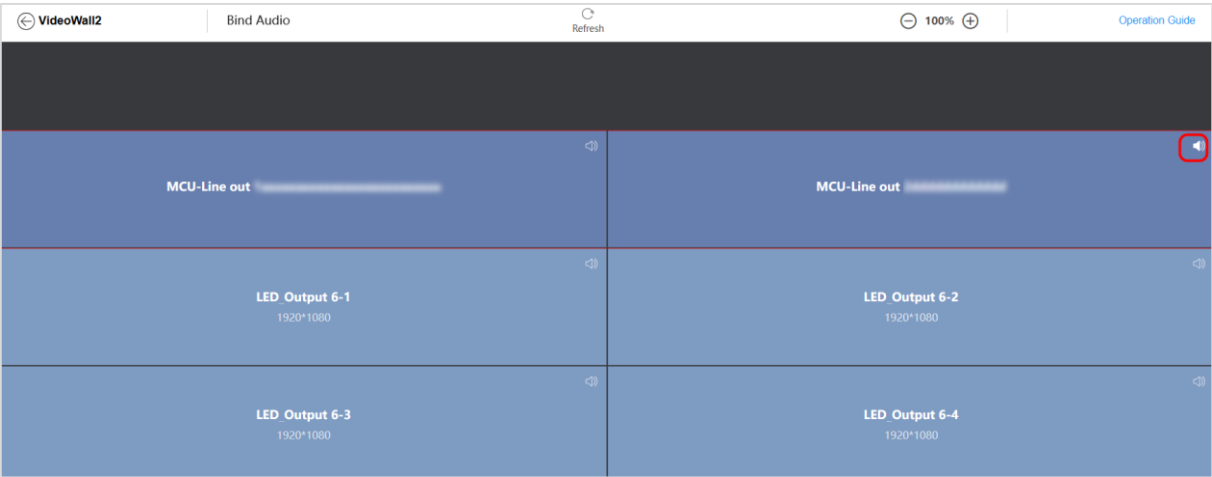


Figure 3-9 Set Output Audio

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.

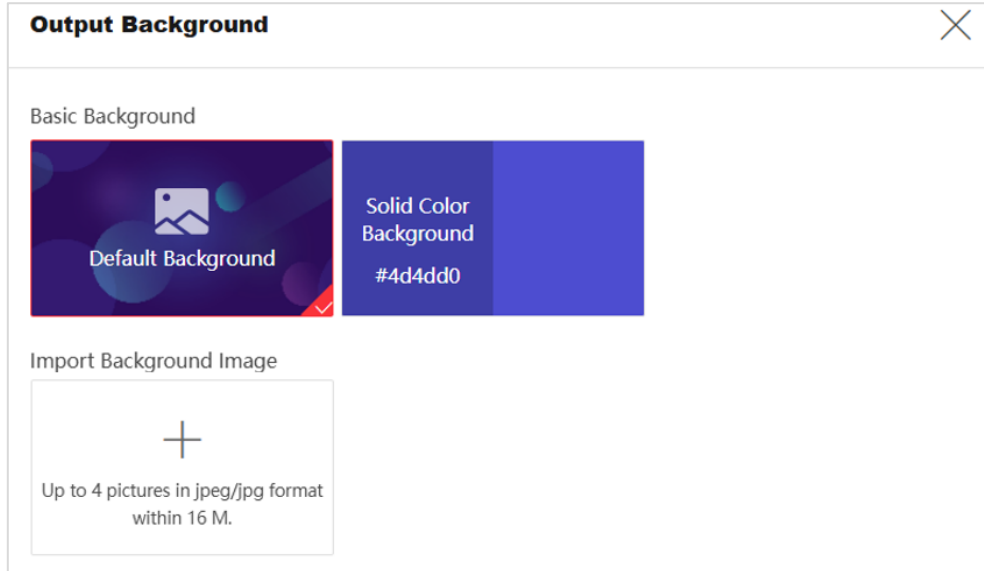


Figure 3-10 Edit Output Background

- Only the LED controller board supports the dynamic power saving function.
 - 1) Bind the output port of an LED controller board to the video wall.
 - 2) Click **Dynamic Power Saving** at the top of the **Video Wall Configuration** page.
 - 3) Enable dynamic power saving, set the strength coefficient, and click **Save**.

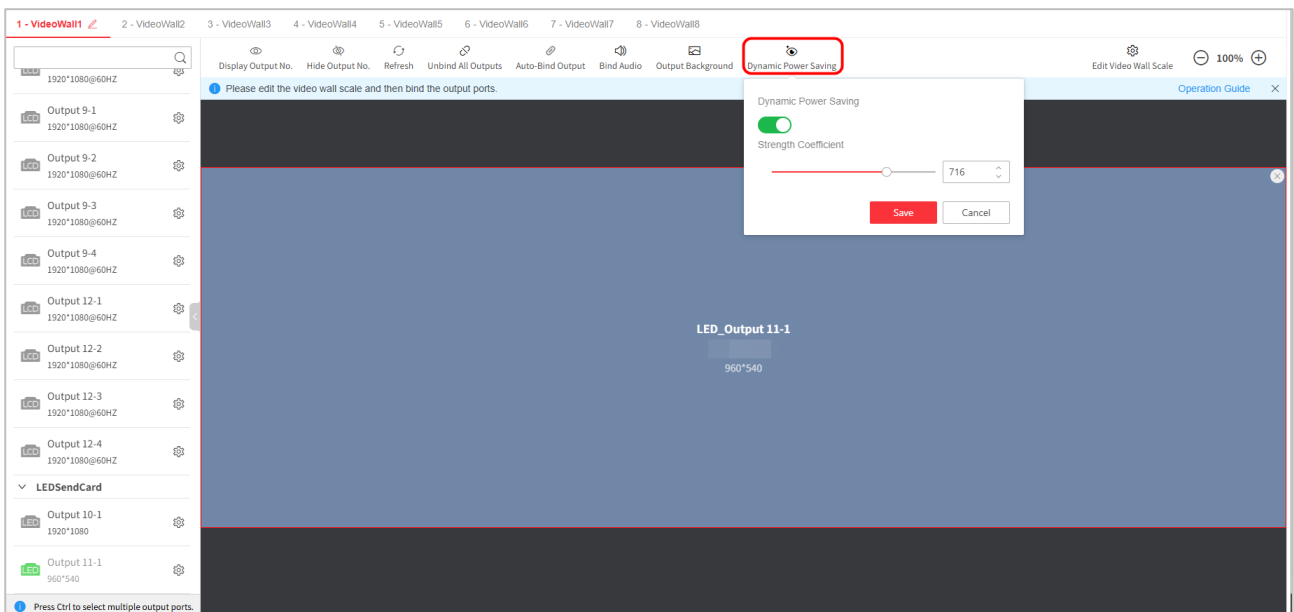


Figure 3-11 Set Dynamic Power Saving

- 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.

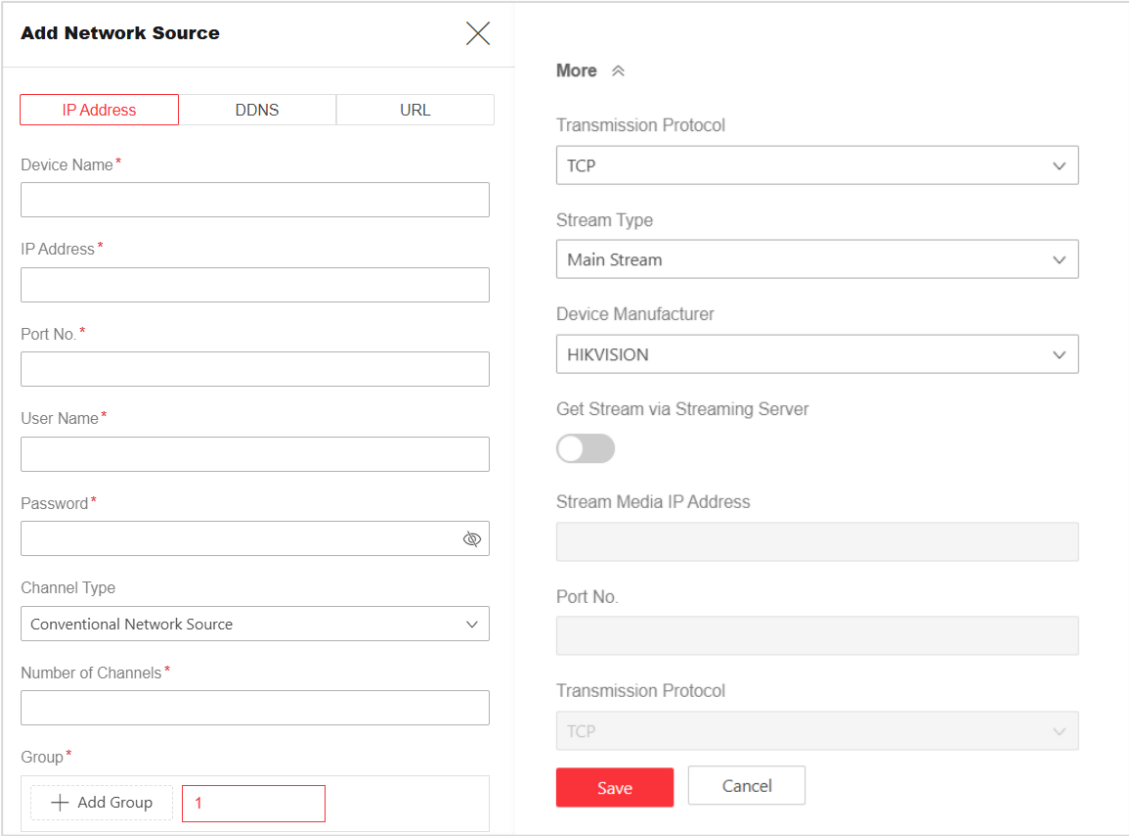


Figure 3-12 Add a Network Signal Source via IP Address

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.

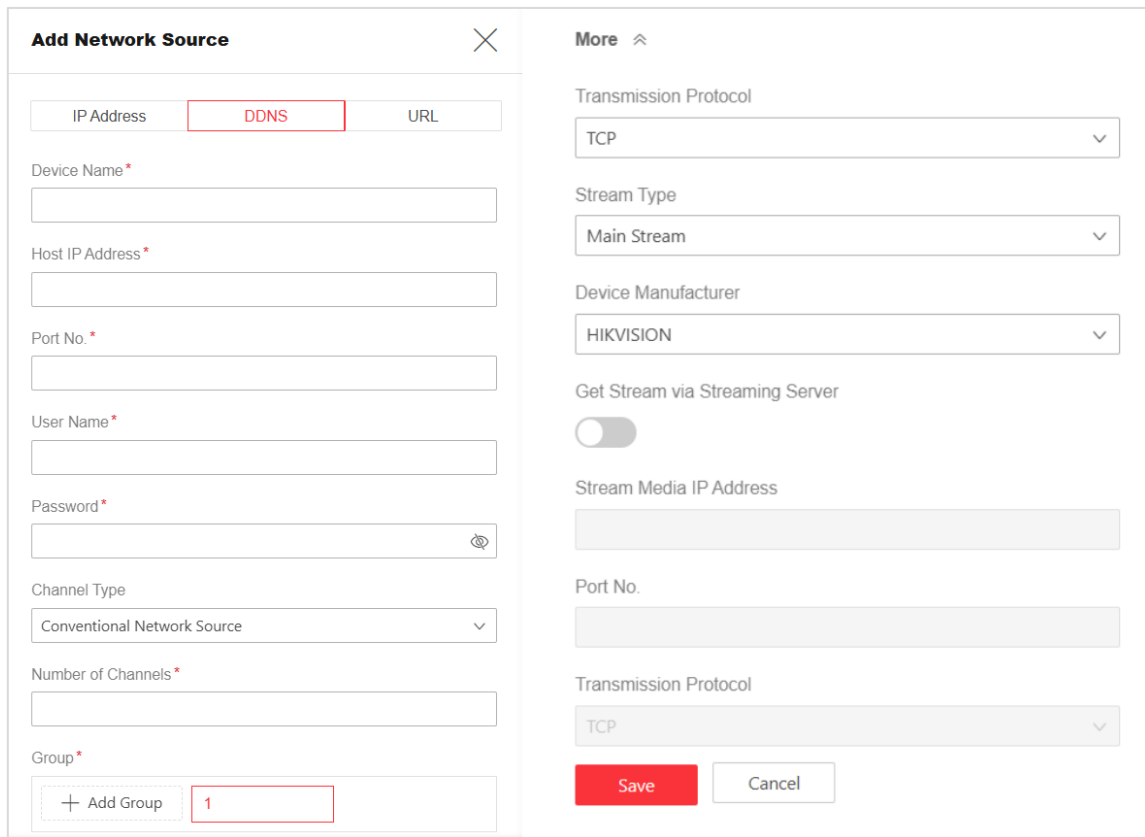


Figure 3-13 Add a Network Signal Source via DDNS

Step 3 Click **Save**.

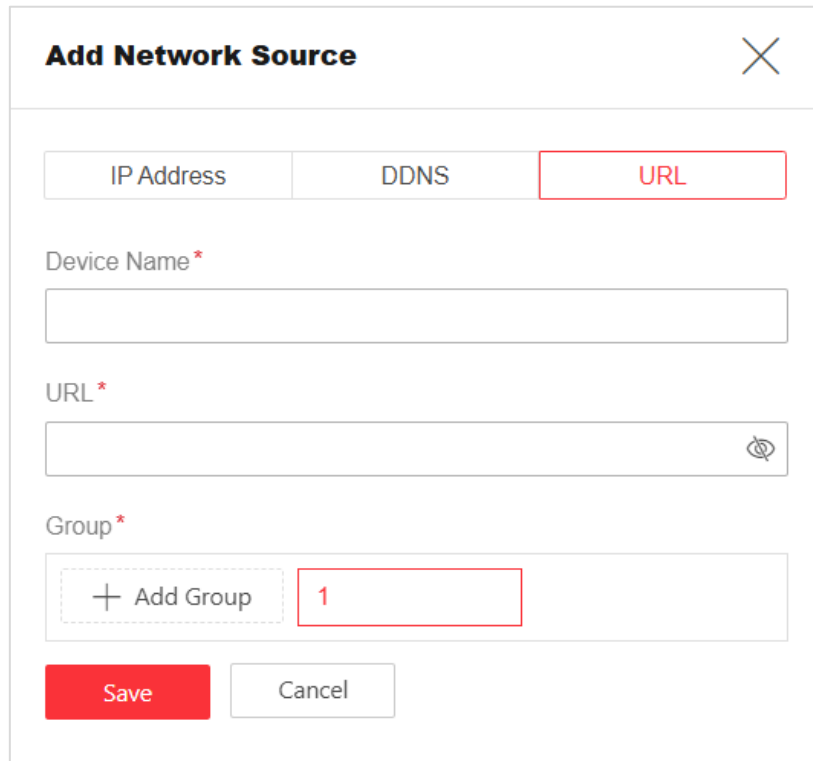
Add a Network Signal Source via URL Address

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**.



The 'Add Network Source' dialog box features a close button (X) in the top right corner. It contains three tabs: 'IP Address', 'DDNS', and 'URL', with the 'URL' tab selected and highlighted in red. Below the tabs are three input fields: 'Device Name *', 'URL *', and 'Group *'. The 'URL' field has a small eye icon on its right side. The 'Group' field includes a '+ Add Group' button and a text input containing the number '1', which is also highlighted in red. At the bottom are two buttons: a red 'Save' button and a grey 'Cancel' button.

Figure 3-14 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:

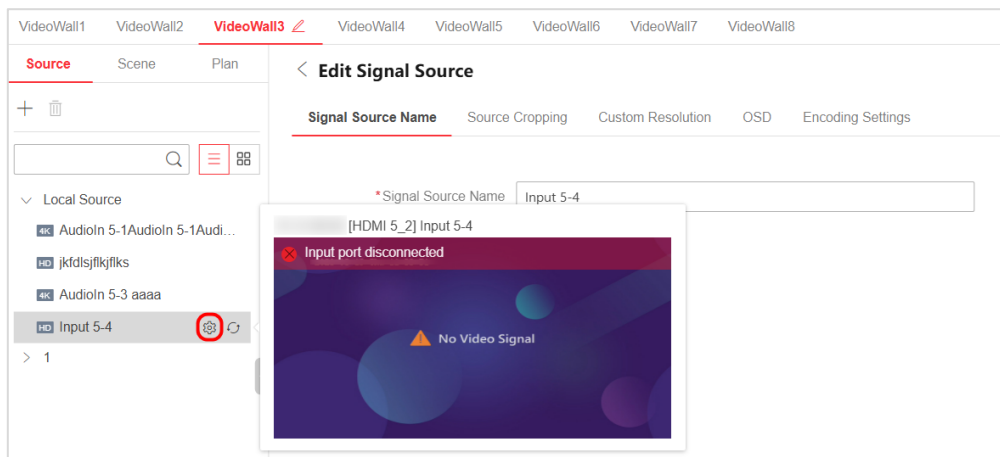


Figure 3-15 Edit a Local Signal Source

- 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 3-16 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.
 - Click **Custom Resolution**.
 - Enable custom resolution and set the refresh rate and resolution. Both the width and the height should be a multiple of 4.
 - (Optional) Click **Copy To** to copy the current signal source configuration to other signal sources.
 - Click **Save**.

Figure 3-17 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.

Figure 3-18 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 3-19 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.

Edit Network Source ✕

More ⌵

Device Name*
10.

IP Address*
10.

Port No.*
8000

User Name*
admin

Password*
.....

Channel Type
Conventional Network Source

Group*
+ Add Group 1

Transmission Protocol
TCP

Stream Type
Main Stream

Device Manufacturer
HIKVISION

Channel No.
1

Get Stream via Streaming Server
☒

Stream Media IP Address*
10.

Port No.*
556

Transmission Protocol
TCP

Save Cancel

Figure 3-20 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**.

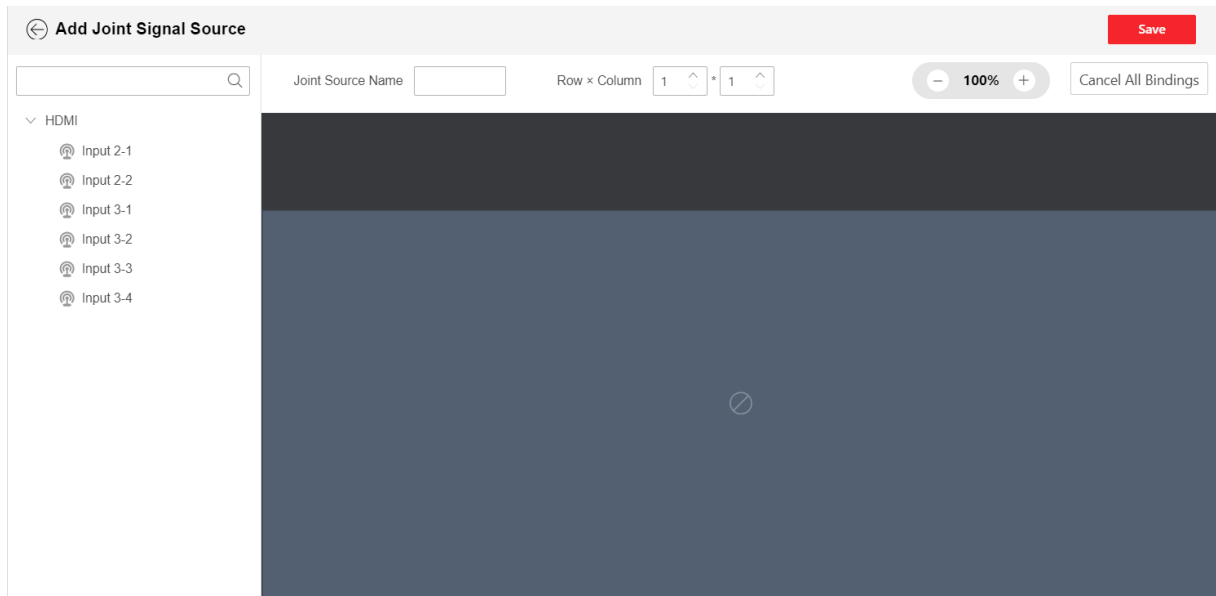


Figure 3-21 Add a Joint Signal Source

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.

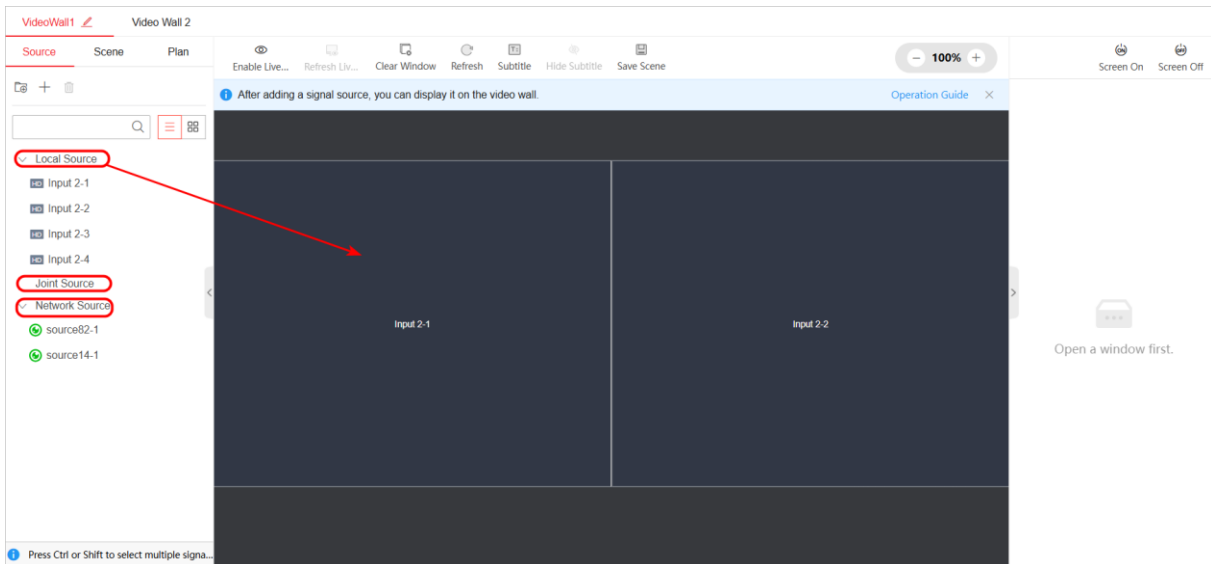


Figure 3-22 Batch Bind Signal Sources to Video Wall

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.

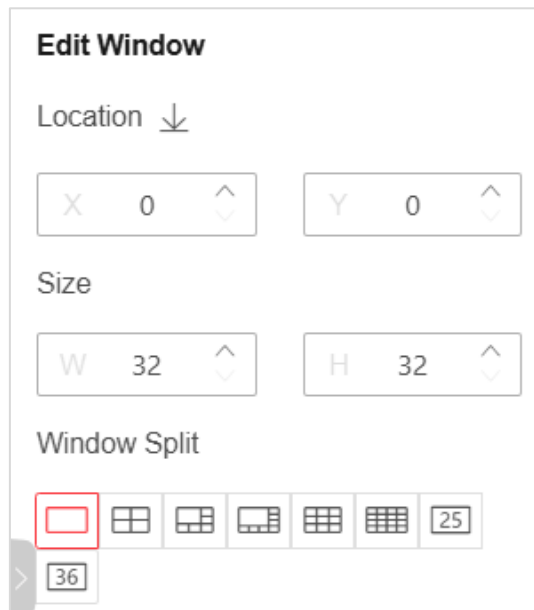


Figure 3-23 Adjust Position of a Signal Source Window

- 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**.

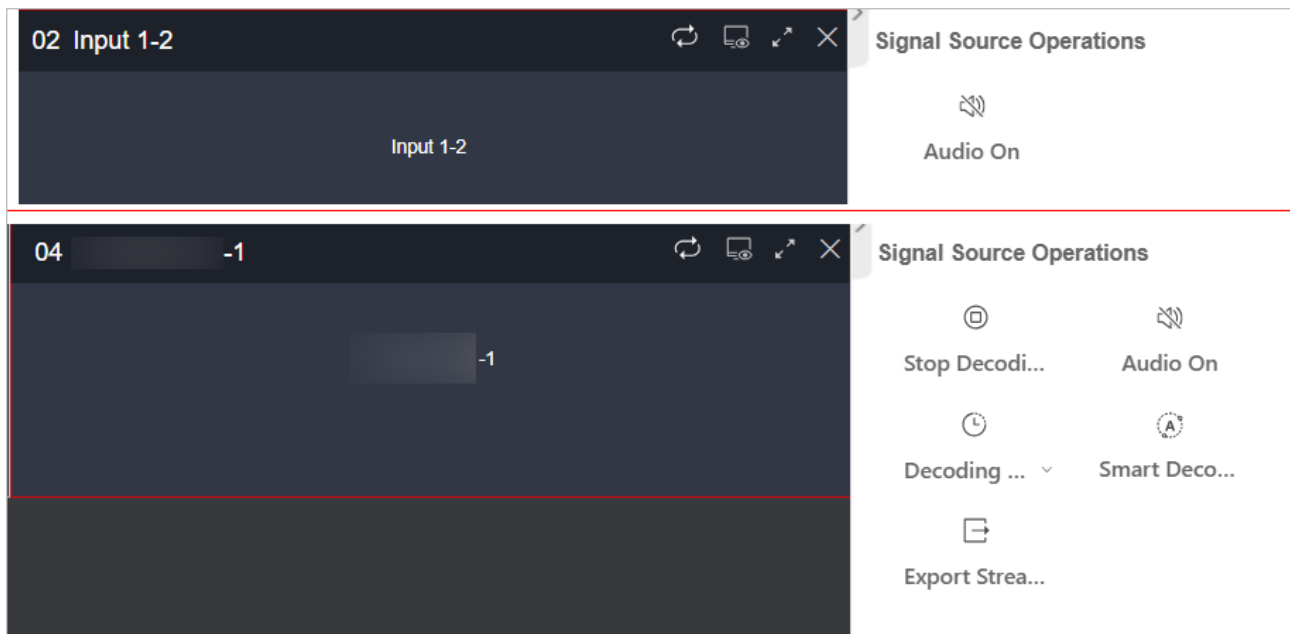


Figure 3-24 Enable Audio

- 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 **Configuration** → **Network Service** → **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**.

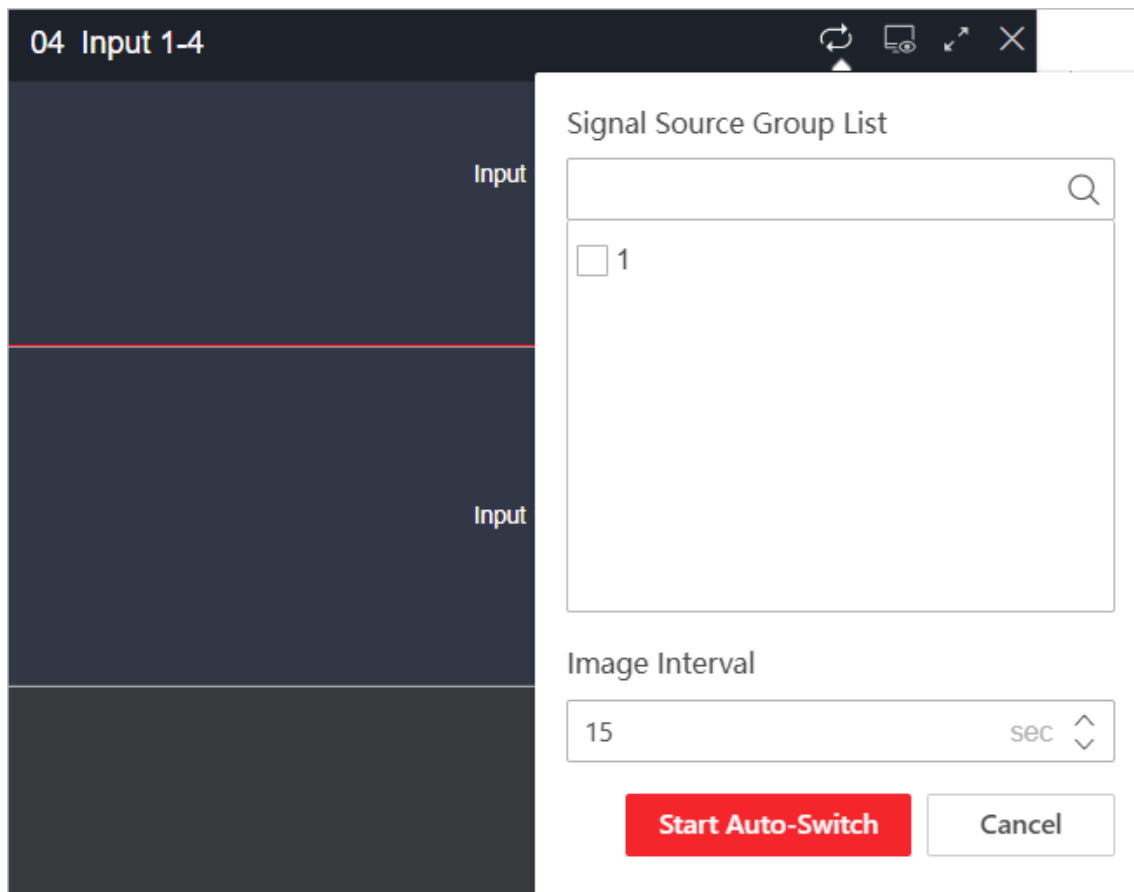


Figure 3-25 Set Signal Source Group Auto-Switching

- 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.

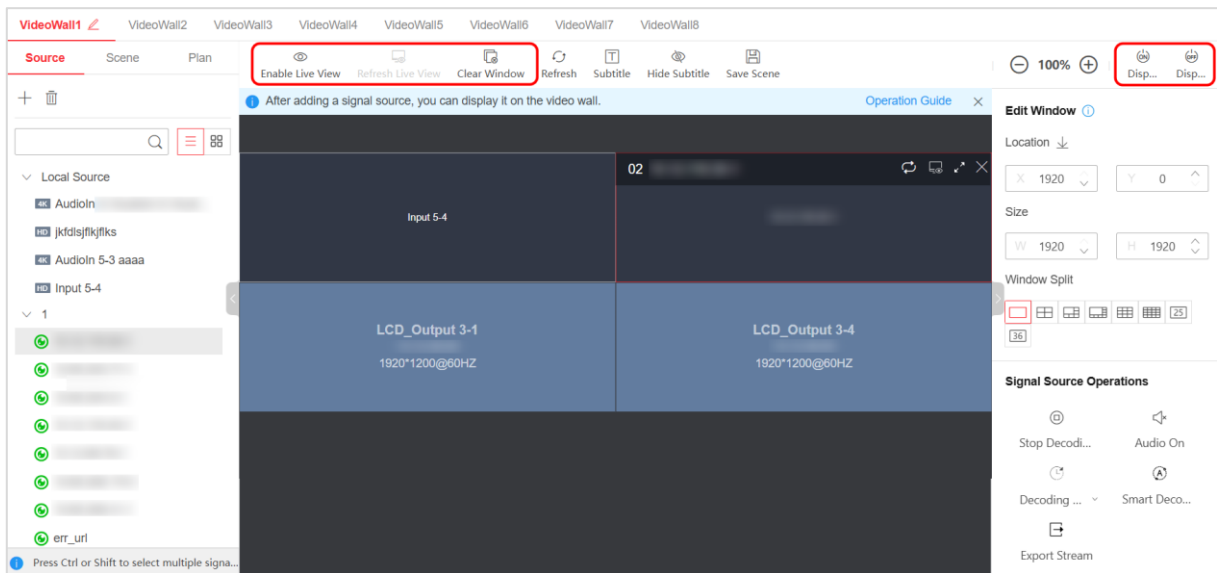


Figure 3-26 Preview Signal Source

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 “6.2.2 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.

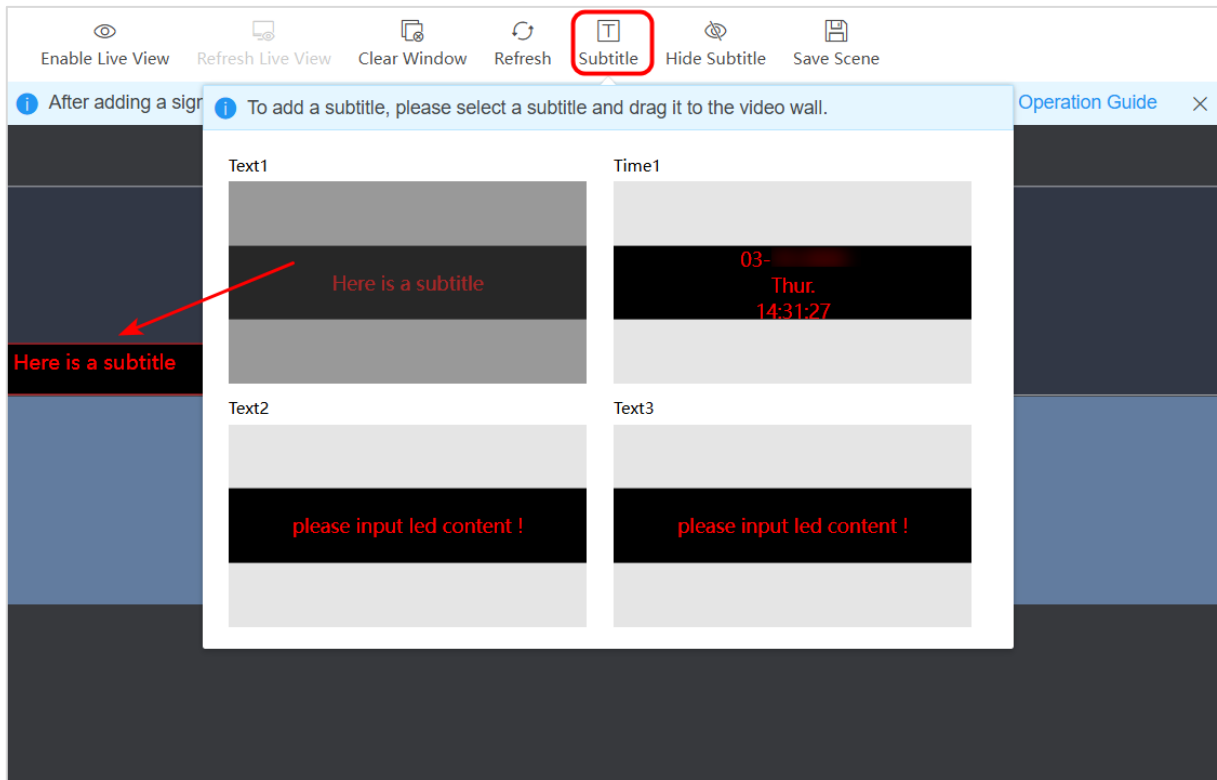


Figure 3-27 Add a Subtitle

- 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.

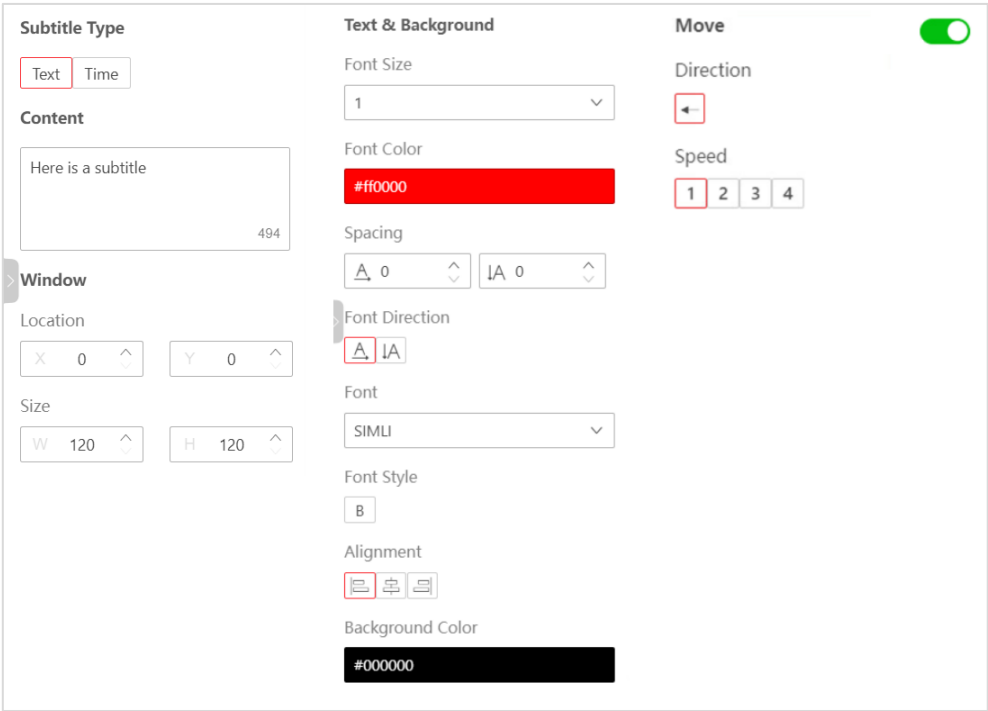


Figure 3-28 Add a Text Subtitle

- 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.

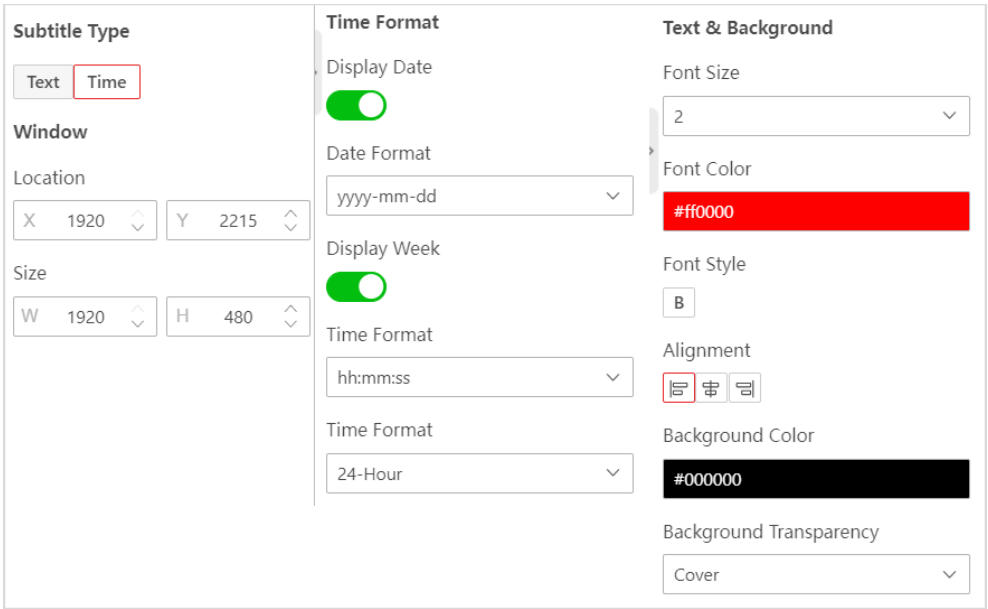


Figure 3-29 Add a Time Subtitle

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.

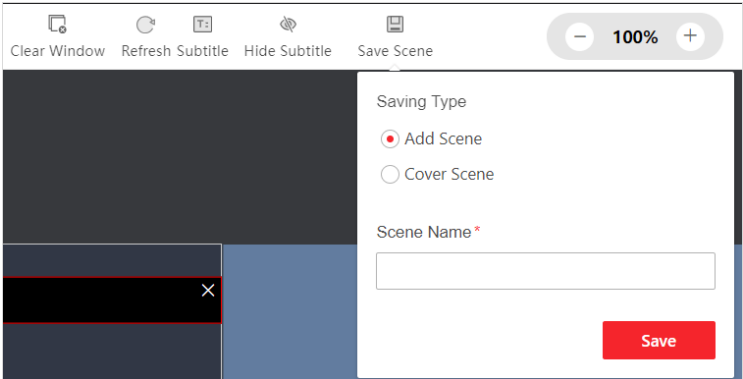


Figure 3-30 Save Scene

- 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.

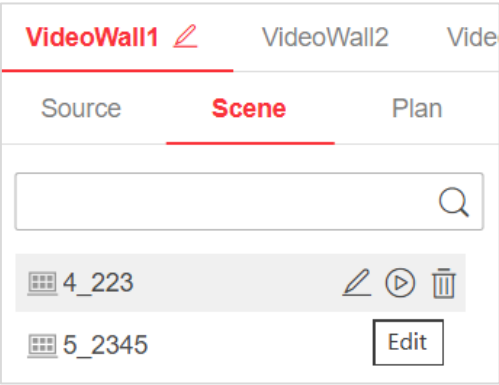


Figure 3-31 Manage Scene

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.

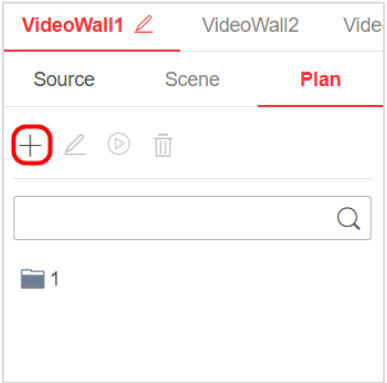
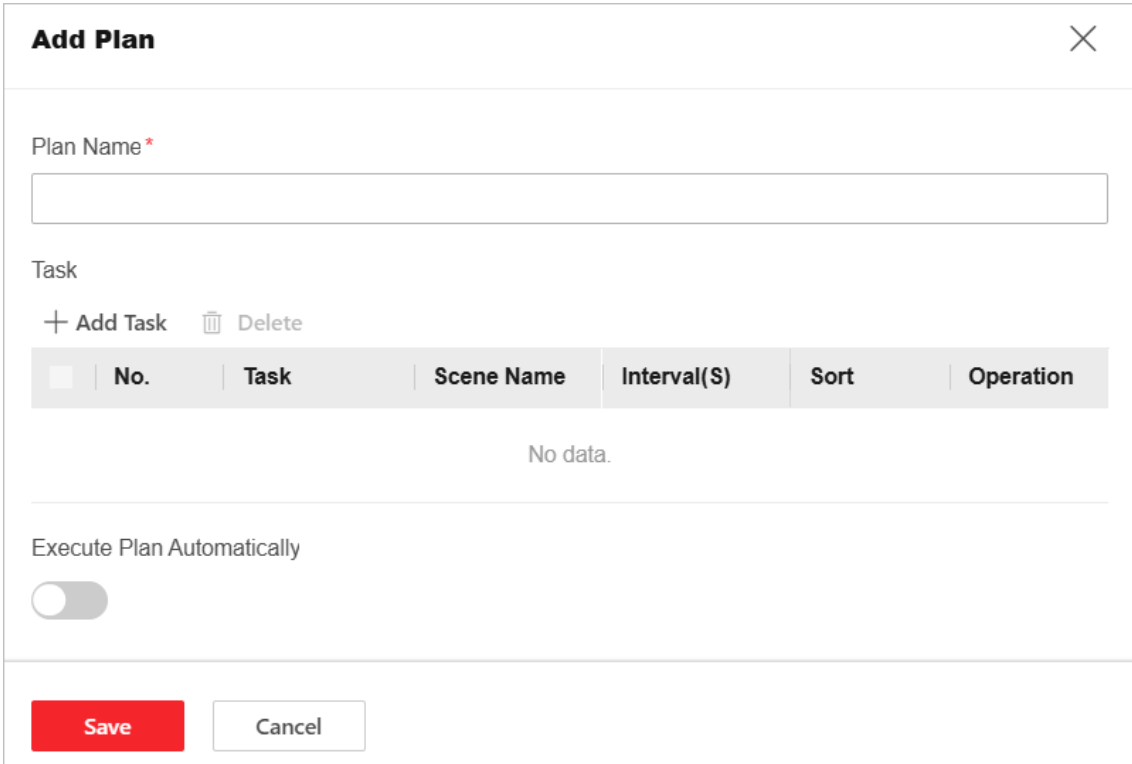


Figure 3-32 Manage Plan

- 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 3-33 Add a Plan

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

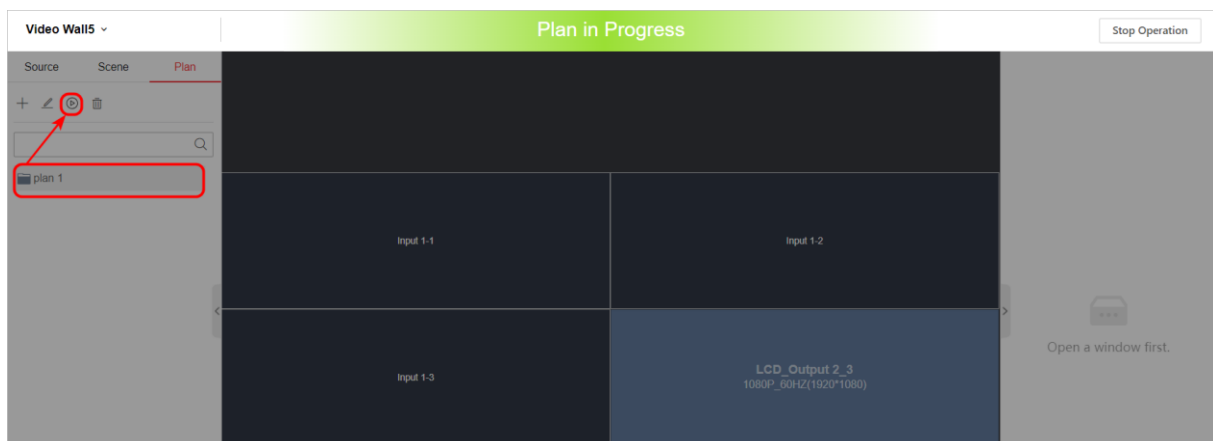


Figure 3-34 Call a Plan

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

Chapter 4 LED Controller Board Advanced Configuration

4.1 Calibrate Receiving Cards

Step 1 Navigate to **Configuration > Receiving Card Calibration**.

Step 2 Select an LED controller board or click **Batch Calibration**.

Step 3 Turn on the **Enable Calibration** switch to automatically enable brightness/chroma calibration. Check low gray calibration on supported LED modules.

Step 4 (Optional) If you cannot locate the calibration area, enable **Show Connections**. The actual screens will show the receiving card connection number.

Step 5 Select the calibration area:

- Click  and select the area to be calibrated.
- Click  and enter the start coordinates and end coordinates of the calibration area.
- If you need to calibrate modules, check **Show LED Module**.

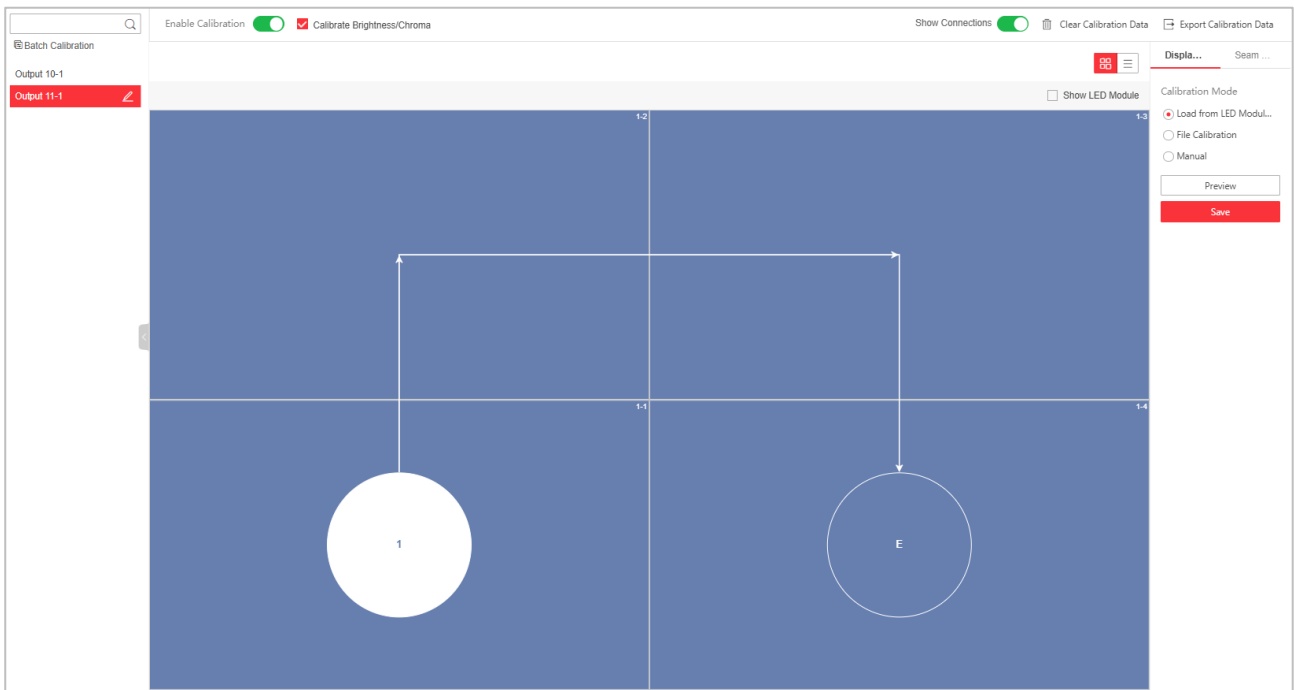


Figure 4-1 Select Calibration Area

Step 6 (Optional) For the AXS receiving cards, click **Load from LED Modules** and then click **Preview** to view the display effect after loading the factory calibration data from the LED modules.

**Note**

The HUB receiving cards do not support loading the factory calibration data from the LED modules.

Step 7 If the display effect does not meet the requirements, select **File Calibration** to upload a locally saved calibration file.

**Note**

Please contact the product supplier to obtain the calibration file and save the calibration file locally.

Step 8 If the display effect is unsatisfactory, manually calibrate the display:

- 1) In the **Display Calibration** window, manually adjust the red/green/blue values (in %). To synchronize adjustments to the same value for all three colors, enable **Sync Adjustment**.
- 2) Click **Preview** to check the display effect after manual calibration.
- 3) If satisfied, click **Save**.

Step 9 If brightness/darkness seams exist, manually calibrate seams:

- 1) Click **Seam Calibration** and set the seam direction and width.
- 2) Adjust the red/green/blue values (in %). To synchronize adjustments to the same value for all three colors, enable **Sync Adjustment**.
- 3) Click **Preview** to verify the seam display effect.
- 4) If satisfied, click **Save**.

Screen... Seam ...	Screen... Seam ...	Screen... Seam ...	Screen ... Seam ...
Calibration Mode ☒ Load from LED Modul... ☐ File Calibration ☐ Manual Preview Save	Calibration Mode ☐ Load from LED Modul... ☒ File Calibration ☐ Manual Upload Calibration File 📁 Preview Save	Calibration Mode ☐ Load from LED Modul... ☐ File Calibration ☒ Manual Sync Adjustment ☐ Red <input type="range"/> 1000 ^ v Green <input type="range"/> 1000 ^ v Blue <input type="range"/> 1000 ^ v Preview Save	Calibration Range ☒ All ☐ Vertical ☐ Horizontal Seam Width <input type="range"/> 1 ^ v Sync Adjustment ☐ Red <input type="range"/> 1000 ^ v Green <input type="range"/> 1000 ^ v Blue <input type="range"/> 1000 ^ v Preview Save

Figure 4-2 Calibrate AXS Receiving Cards

Step 10 (Optional) You can perform the following operations as required:

- If the calibration results are unsatisfactory, click **Clear Calibration Data** and select the target area(s) to reset.
- Click **Export Calibration Data** and select the target area(s) to export the calibration data.

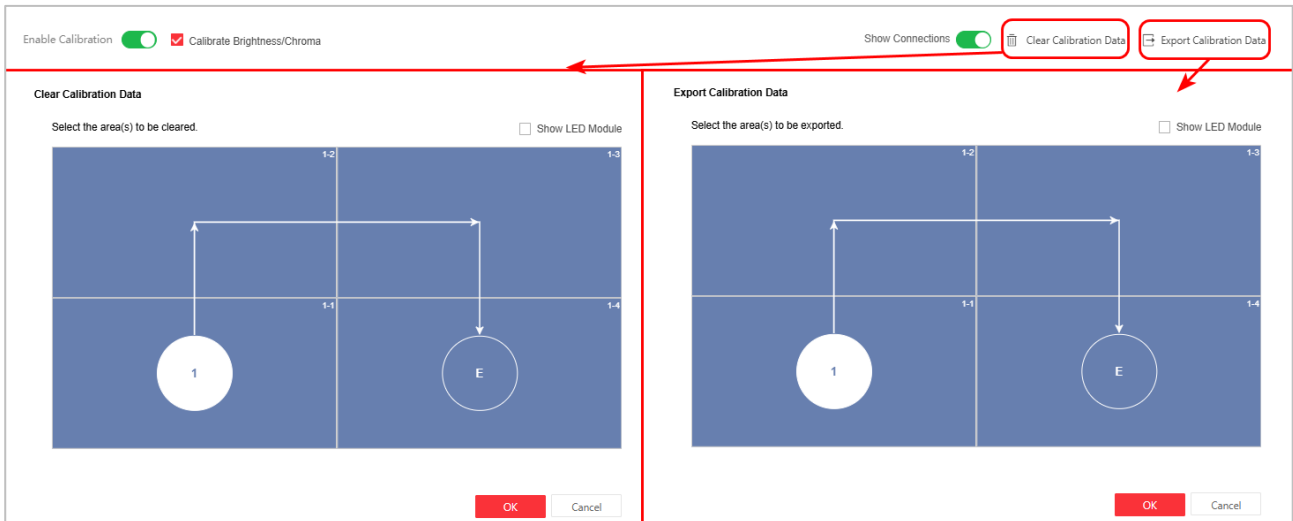


Figure 4-3 Clear/Export Calibration Data

4.2 Configure Display Effect

When the device is equipped with multiple LED controller boards whose output ports are bound to the same video wall, these LED controller boards must use the same display parameters.

Step 1 Navigate to **Configuration > Display Effect**.

Step 2 Select the output port of an LED controller board or enable **Apply to This Wall**.

- To configure a single LED controller board: select the corresponding output port of the LED controller board.
- To configure the entire video wall: select a video wall and enable **Apply to This Wall**. Once enabled, configurations made to the output ports of an LED controller board can be applied to the entire video wall. When the video wall is bound with the output ports of multiple LED controller boards, those ports can use the same display effect parameters.

Step 3 Select a preset mode.

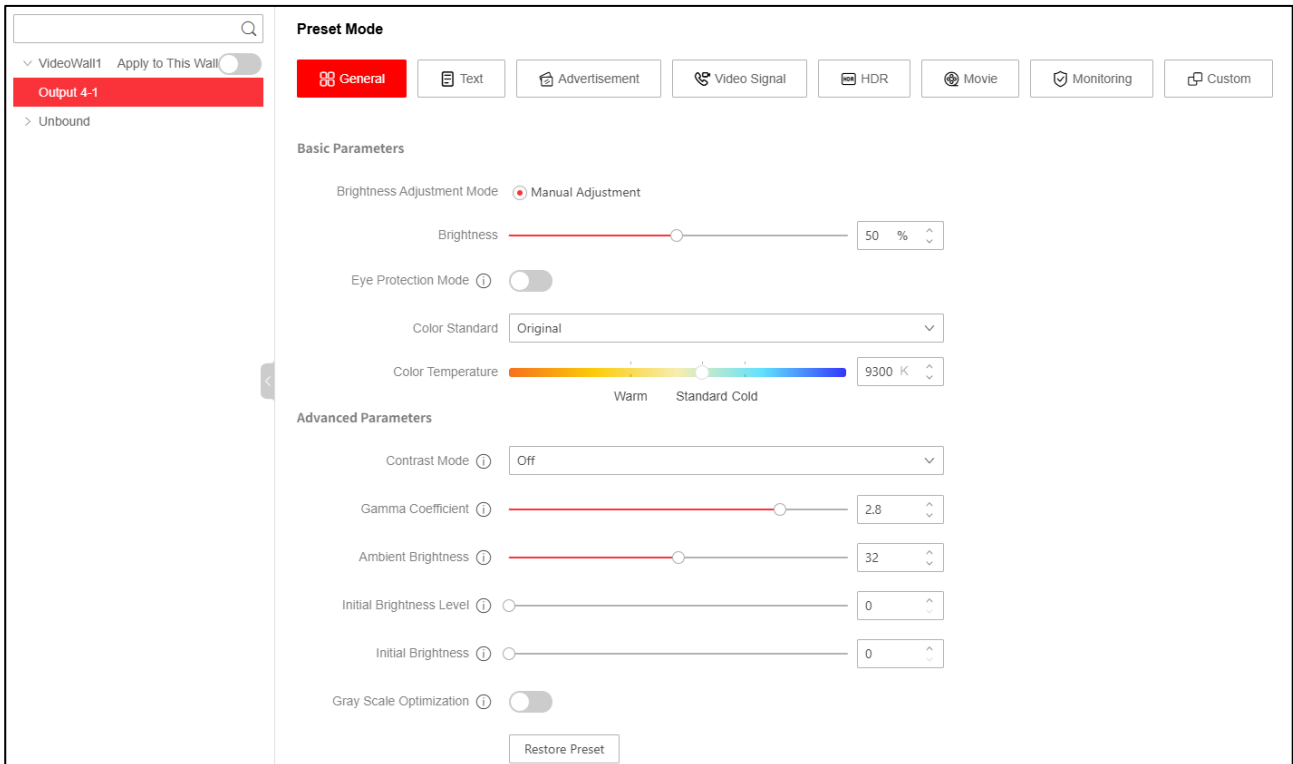


Figure 4-4 Select Preset Mode

Step 4 If the display effect does not meet the requirements, customize the parameters.

- Adjust brightness:
 - Manual adjustment: Set brightness directly.
 - Auto adjustment: Supports auto-brightness when the LED controller board is connected to a light sensor via the multi-function card and the light sensor is configured on the **IoT Configuration** page.
 - Enable **Eye Protection Mode** to reduce brightness and blue light output.
- Optimize color and grayscale:
 - Set the color standard, color temperature, and contrast mode.
 - Lower the Gamma coefficient to brighten dark areas or raise it to enhance contrast.
 - Set the appropriate ambient brightness: Increase the value in strong lighting conditions.
- Address low-gray anomalies:
 - Adjust the initial brightness level if low-gray flickering occurs.
 - Increase the initial brightness value if low-gray banding is uneven.
 - Enable **Gray Scale Optimization** for uneven grayscale (only supported by some receiving cards).

Advanced Parameters

Contrast Mode ⓘ Off ▾

Gamma Coefficient ⓘ 2.8 ▴ ▾

Ambient Light ⓘ 1 ▴ ▾

Initial Brightness Level ⓘ 0 ▴ ▾

Initial Brightness ⓘ 0 ▴ ▾

Gray Scale Optimization ⓘ ☐

Restore Preset

Figure 4-5 Set Advanced Image Parameters

Step 5 (Optional) Click **Restore Preset** to restore the default parameters of the selected preset mode.

4.3 Configure Loading Mode

Important

- To use the standard loading mode, ensure that both the LED controller board and the receiving card support standard loading mode.
- When multiple LED output boards are installed in the device, and their corresponding output ports are bound to the same video wall, these LED controller boards must use the same loading mode.

Steps

Step 1 Navigate to **Configuration > Loading Mode**.

Step 2 Select the output port of an LED controller board or enable **Configure All LED Controllers**.

Step 3 Set a loading mode and click **Save**.

- **Adaptive:** Default loading mode of the LED controller board. This mode can automatically switch between standard loading and mini loading based on the load capacity of a single network port.
- **Standard Loading:** Choose this mode when the total load of the LED controller board is $\leq 10.4\text{MP}$ and the load capacity of a single network port is between 0.65MP and 2.925MP . This mode enhances data transmission capability.

- **Mini Loading:** Choose this mode when the load capacity of a single network port on the LED controller board is $\leq 0.65\text{MP}$. This mode does not compress images.

The screenshot shows a web interface for configuring the UHD Decoder Server. On the left, there is a search bar and a toggle switch labeled 'Configure All LED Co...'. Below this, a list of output ports is shown: 'Output 10-1' and 'Output 11-1'. The 'Output 11-1' item is highlighted in red. On the right, the 'Loading Mode' section has three radio buttons: 'Adaptive' (selected), 'Standard Loading', and 'Mini Loading'. A red 'Save' button is located at the bottom right of the configuration area.

Figure 4-6 Configure Loading Mode

4.4 Configure Auto Dehumidification

When multiple LED output boards are installed in the device, and their corresponding output ports are bound to the same video wall, these LED controller boards must use the same dehumidification parameters.

Step 1 Navigate to **Configuration > IoT Configuration > Dehumidification** and select the output port of an LED controller board.

Step 2 Enable **Auto Dehumidification** and set the dehumidification parameters.

Step 3 Select the region according to the actual humidity condition of the device location. If you select **Custom**, set the time step, brightness step and duration.

- **Time Step:** The time interval between two consecutive brightness adjustments by the device during a single dehumidification process. If the brightness is adjusted every 5 minutes, the time step is 5 minutes.
- **Brightness Step:** The minimum change in brightness for each adjustment by the device during a single dehumidification process. If the brightness increases by 1 each time, the brightness step is 1.
- **Duration:** The total time of a single dehumidification process.
- **Usage:** The usage rate of the device.

Step 4 Click **Save** or **Save and Start**.

Step 5 (Optional): Click **Stop Current Dehumidification Process** to stop the ongoing dehumidification process.

Figure 4-7 Configure Auto Dehumidification

4.5 Configure External Sensors

Navigate to **Configuration > IoT Configuration > Sensors** and select the output port of an LED controller board. You can monitor the following parameters and click **Save**. When a parameter reaches its threshold, the alarm will be triggered on the screens and the parameter value will be shown on the screens.

- Some receiving cards support detecting the cabinet voltage and cabinet temperature. Enable **Cabinet Voltage Detection** and **Cabinet Temperature Detection**, and set the thresholds.
- When the LED controller board is connected to the multi-function card, and the multi-function card is connected to the temperature and humidity sensor, you can monitor the environmental temperature and humidity.
 - 1) Select **Temperature and Humidity Sensor** for the corresponding channel and set the sensor quantity.
 - 2) Click  to refresh the sensor settings.
 - 3) Enable **Ambient Temperature Detection** and **Ambient Humidity Detection**, and set the thresholds.
- When the LED controller board is connected to the multi-function card, and the multi-function card is connected to the human body sensor, you can set the auto sleep function.
 - 1) Select **Human Body Sensor** for the corresponding channel and set the sensor quantity.
 - 2) Click  to refresh the sensor settings.
 - 3) Enable **Auto Sleep**.
 - 4) Set the time after which the screen brightness decreases, the OSD prompt appears, and the screens enter sleep mode.
- When the LED controller board is connected to the multi-function card, and the multi-function card is connected to the light sensor, you can set the auto adjustment.
 - 1) Select **Light Sensor** for the corresponding channel and set the sensor quantity.

2) Click  to refresh the sensor settings.

Output 8-1

Output 12-1

Select Sensor Type

Channel No.	Sensor Type	Sensor Quantity	Status
1	Temperature and Humidit...	1	Offline
2	Light Sensor	1	Offline
3	Human Body Sensor	1	Offline
4	None	1	Offline

Sensor Threshold Settings

Cabinet Voltage Detection

* Max. Voltage V

* Min. Voltage V

Cabinet Temperature Detection

* Cabinet Temperature Threshold °C

Ambient Temperature Detection

* Ambient Temperature Threshold °C

Ambient Humidity Detection

* Ambient Humidity Threshold %RH

Auto Sleep

* Decrease Brightness After s

* Show OSD Prompt After s

* Sleep After s

Save

Figure 4-8 Configure Sensors

4.6 Configure Power Distribution Cabinets

When the LED controller board is connected to the multi-function card, and the multi-function card is connected to the distribution cabinet, you can control the status of the power distribution cabinet remotely.

Navigate to **Configuration > IoT Configuration > Power Distribution Cabinet** and select the output port of an LED controller board. You can use either of the following methods to remotely control the power distribution cabinet and click **Save**.

- Set immediate power on or power off:
 - Enable the circuit that is connected to the power distribution cabinet to power on the power distribution cabinet. Disable the circuit to power off the power distribution cabinet.
 - (Optional) When one multi-function card is connected to multiple power distribution cabinets, it is recommended to enter the device name.

Output 8-1

Output 12-1

Wiring Method

☒ Dry Contact

Power Distribution Cabinet Status

Channel No.	Device Name	Status
Circuit 1		☒
Circuit 2		☐
Circuit 3		☐

Timer List

Scheduled Startup/Shutdown ☐

+ Add

Date	Start Time - End Time	Closed Circuit	Operation
No data.			

Save

Figure 4-9 Set Immediate Power On/Off

- Set scheduled startup or shutdown:
 - 1) Click **Add** to add the timer and click **Save**.
 - 2) Enable **Scheduled Startup/Shutdown**.

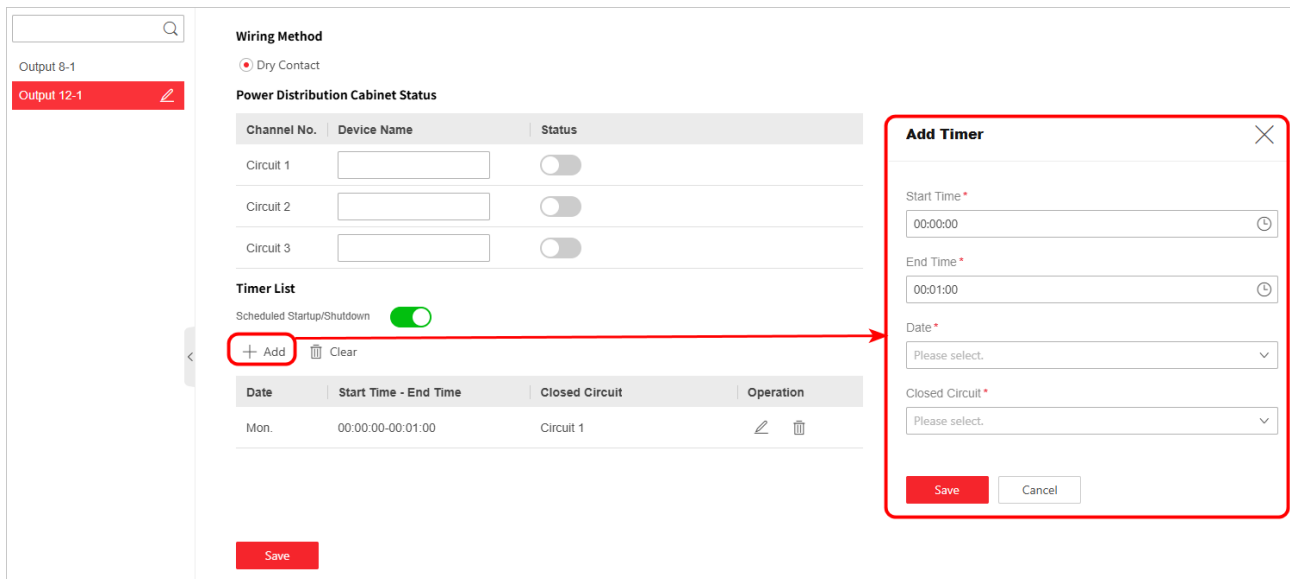


Figure 4-10 Set Scheduled Startup/Shutdown

4.7 Maintain an LED Controller Board

4.7.1 View Status of LED Controller Board

Navigate to **Display Maintenance > Target Video Wall > Receiving Card Status**, select the output port of an LED controller board, and view the following information:

- This page visually shows the basic information of the selected LED controller board and its network interface usage.
- A blue screen indicates that its receiving cards are online. You can hover over a screen to view the resolution of receiving cards.
- Hover over a network interface to view the network interface usage.
- Click **Receiving Card Status** to view the detailed information of the receiving cards. For HUB receiving cards, you can click  to view its signal port connection.
- Click **Refresh** to obtain the latest status of the LED controller board.

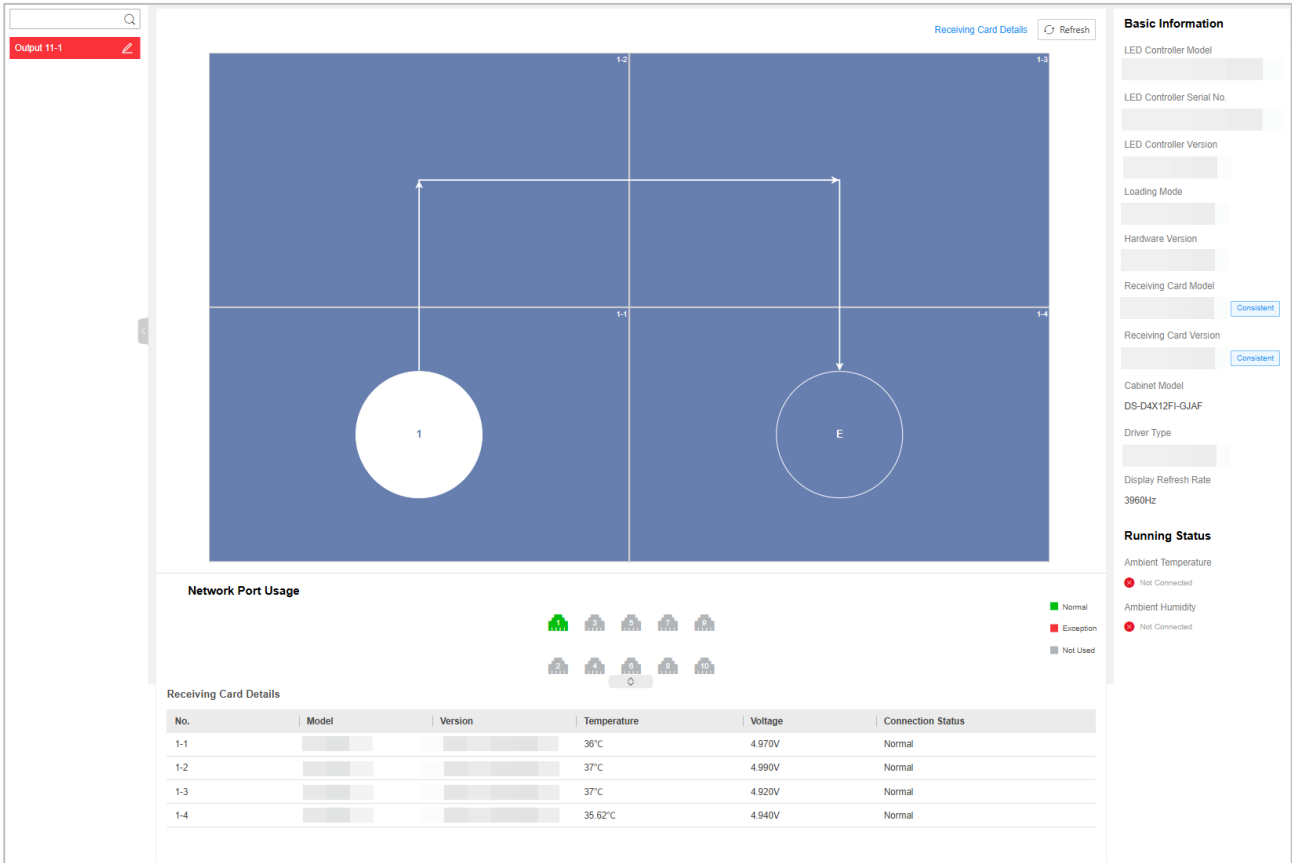


Figure 4-11 View Receiving Card Status

- After configuring display mapping via the LED Tool client, you will see a prompt to reconfigure the display mapping parameters on the **Receiving Card Status** page when you log in to the device web page. Please reconfigure the display mapping parameters on the web page.

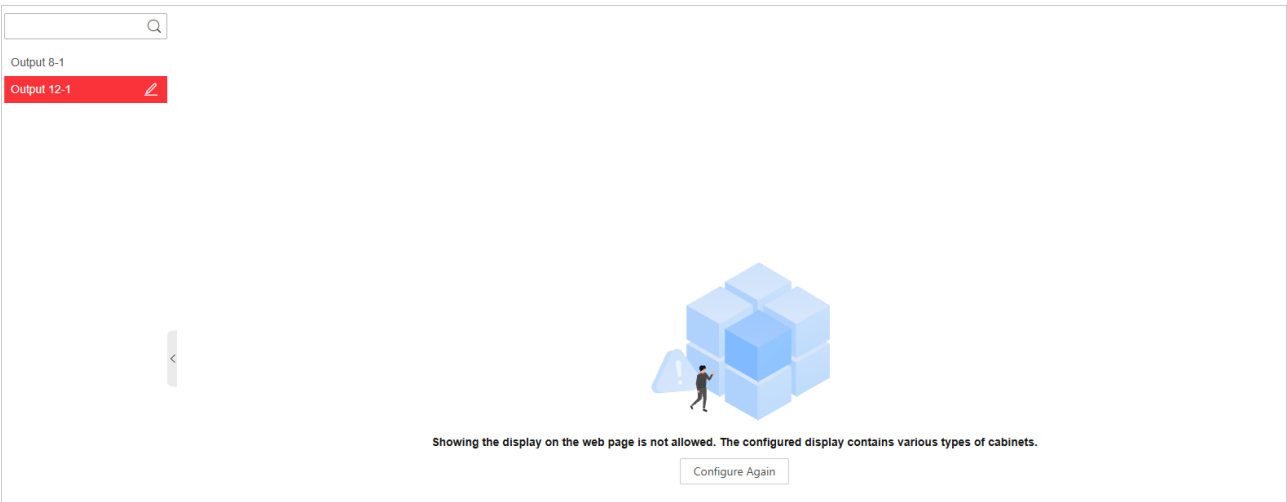


Figure 4-12 Reconfiguration Prompt (Receiving Card Status Page)

4.7.2 Test Condition of Directly Connected LED Display

Step 1 Navigate to **Display Maintenance > Target Video Wall > Display Test**.

Step 2 Enable the display test.

Step 3 Select a pure color, gray scale, dots, or grid to check whether the display color is normal or whether the dead pixels exist.

If the existing color does not meet the requirements, add a new color. You can edit the newly added color.

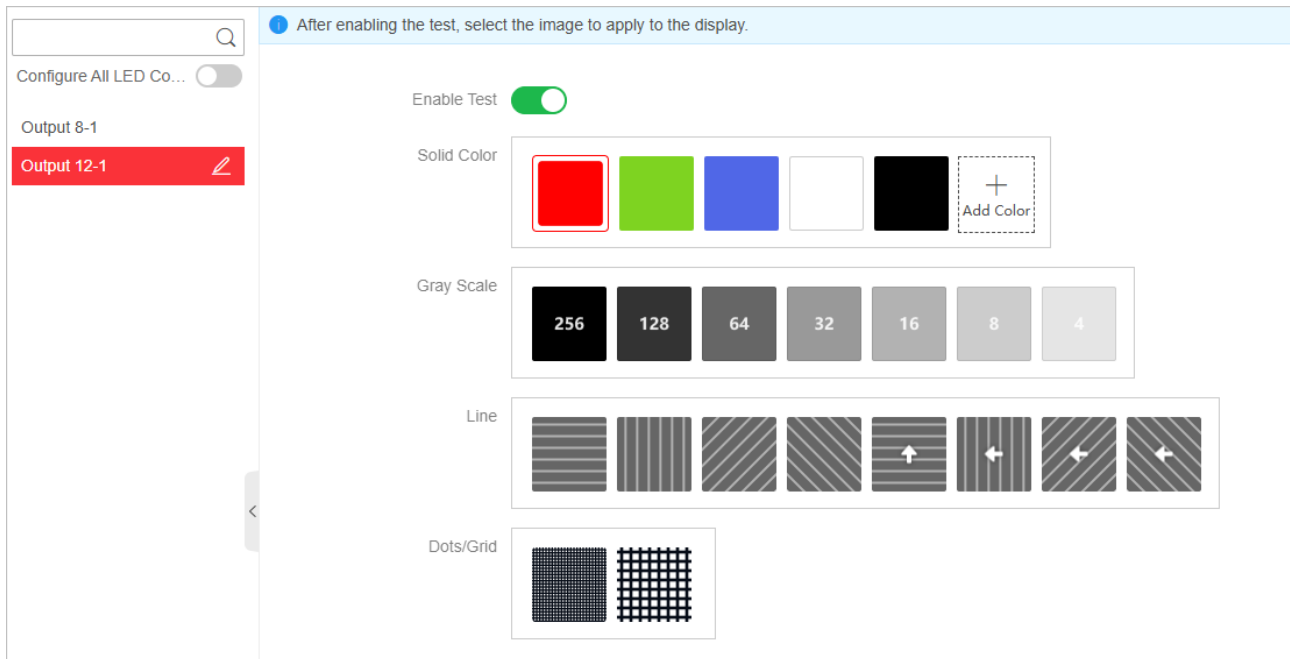


Figure 4-13 Test Display Condition

4.7.3 Quickly Maintain Receiving Cards

Manual Mode

Function Description

Manually designate a correctly configured receiving card as the reference card, and precisely copy its parameters (including configuration file and program) to specified new receiving cards.

Important

- At least one receiving card with correct parameters must exist in the system to serve as the reference card.
- The new receiving cards must be properly connected to the LED controller board.

Steps

Step 1 Install the receiving cards and ensure that they are correctly connected to the LED controller.

Step 2 Navigate to **Display Maintenance > Target Video Wall > Receiving Card Quick Maintenance**.

Step 3 Click on a correctly configured receiving card, and then click **Set as Reference Card**.

Step 4 Click on the newly installed receiving cards, and click **Set as New Card**.

Step 5 Click **Copy** to copy the parameters (including configuration file and program) from the reference card to the new cards.

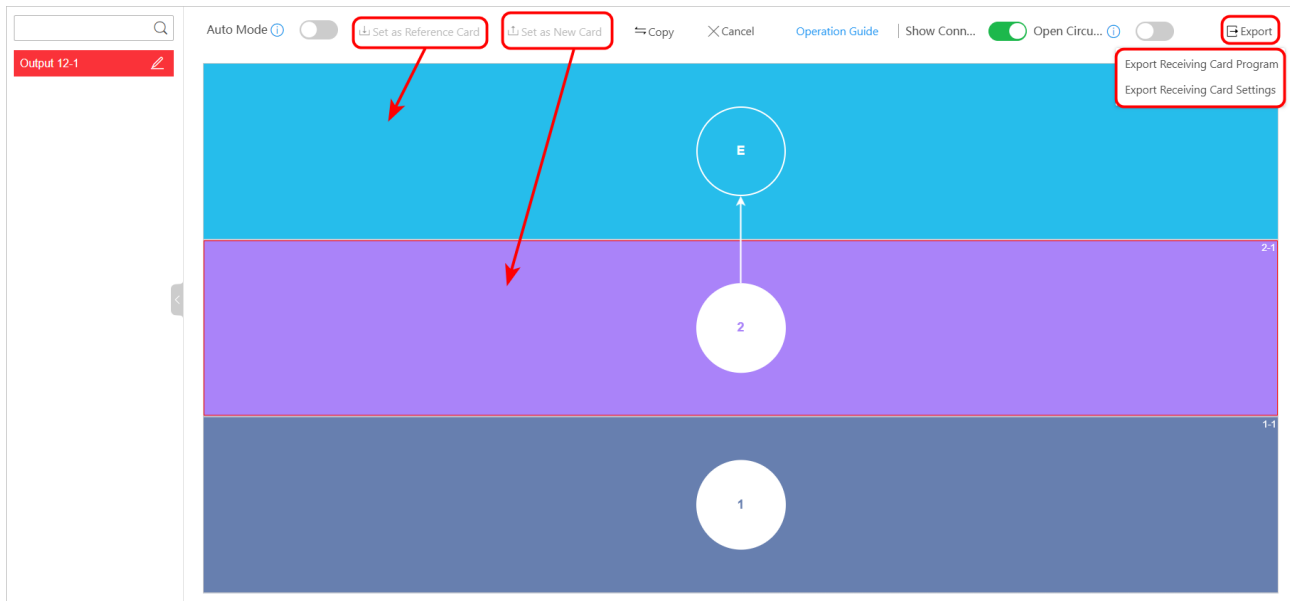


Figure 4-14 Manual Mode

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

- Click **Export** to export the receiving card program file or receiving card configuration file.
- Click **Cancel** to cancel the copy operation.
- Click **Show Connections**. The LED display will show the connection numbers between the receiving cards and network ports of the LED controller.
- Enable **Open Circuit Detection** to automatically detect and mask open-circuit bad pixels, eliminating display abnormalities such as cross-shaped bright lines. Disable this function before performing physical LED bead repairs to ensure faulty pixels remain visible for maintenance. This function is only supported by certain receiving card models.

Auto Mode

Function Description

When new cards are detected, the system automatically uses a normally functioning receiving card within the same area as a template to copy its parameters (including configuration file and program) to the new cards.

Important

Before enabling this mode, ensure that all receiving cards within a single LED controller board area have identical parameters (including configuration file and program).

Steps

Step 1 Navigate to **Display Maintenance > Target Video Wall > Receiving Card Quick Maintenance**.

Step 2 Confirm that all receiving cards are installed, and then enable **Auto Mode**.

Step 3 When receiving cards fail, replace the faulty cards with new ones.

Step 4 The system automatically identifies the new cards and completes the parameter copying process (including configuration file and program).



Figure 4-15 Auto Mode

Chapter 5 Configure General Parameters

5.1 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 a web interface for configuring system parameters. It includes the following fields and controls:

- * Device Name:** A text input field containing "Video Integrated Platform".
- MAC Address:** A text input field.
- Model:** A text input field.
- Device Serial No.:** A text input field.
- Main Control:** A text input field with a blue **Upgrade** button to its right.
- Decoder Version:** A text input field.
- Web Version:** A text input field.
- Save:** A red button at the bottom center.

Figure 5-1 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 a web interface for configuring time settings. It includes the following fields and controls:

- Device Time:** A display field showing "15:28:36".
- Time Zone:** A dropdown menu showing "(GMT+08:00) Beijing, Urumqi, Singapore, Perth".
- Time Sync Mode:** Two radio buttons: **NTP Sync** (selected) and **Manual Time Sync**.
- * Server Address:** A text input field.
- * NTP Port:** A text input field containing "123".
- * Interval:** A text input field containing "60" with a "min" unit indicator.

Figure 5-2 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 15:29:14. Below it, '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, 'Set Time' is 15:28:28, and there is a 'Sync With Computer' button.

Figure 5-3 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 is turned on (green). Below it, 'Start Time' is set to Apr. First Sun. 02:00. 'End Time' is set to Oct. Last Sun. 02:00. 'Bias Time' is set to 30min. A red 'Save' button is at the bottom.

Figure 5-4 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.

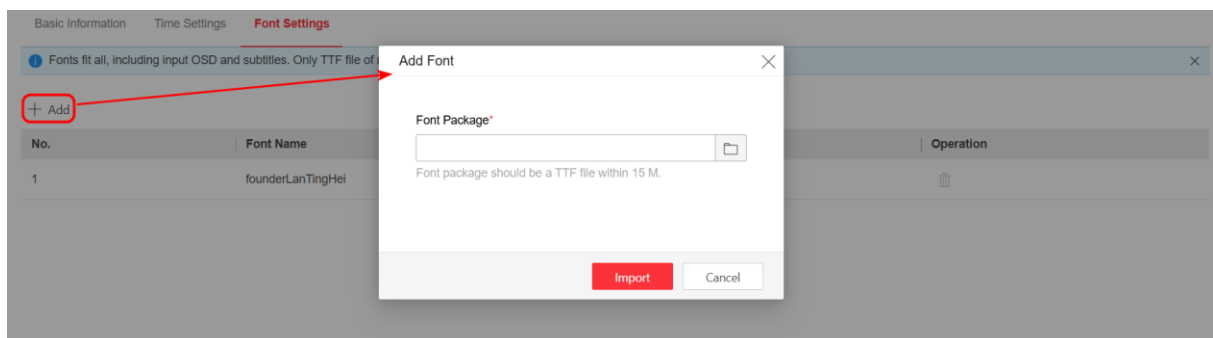


Figure 5-5 Set Font

- 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.

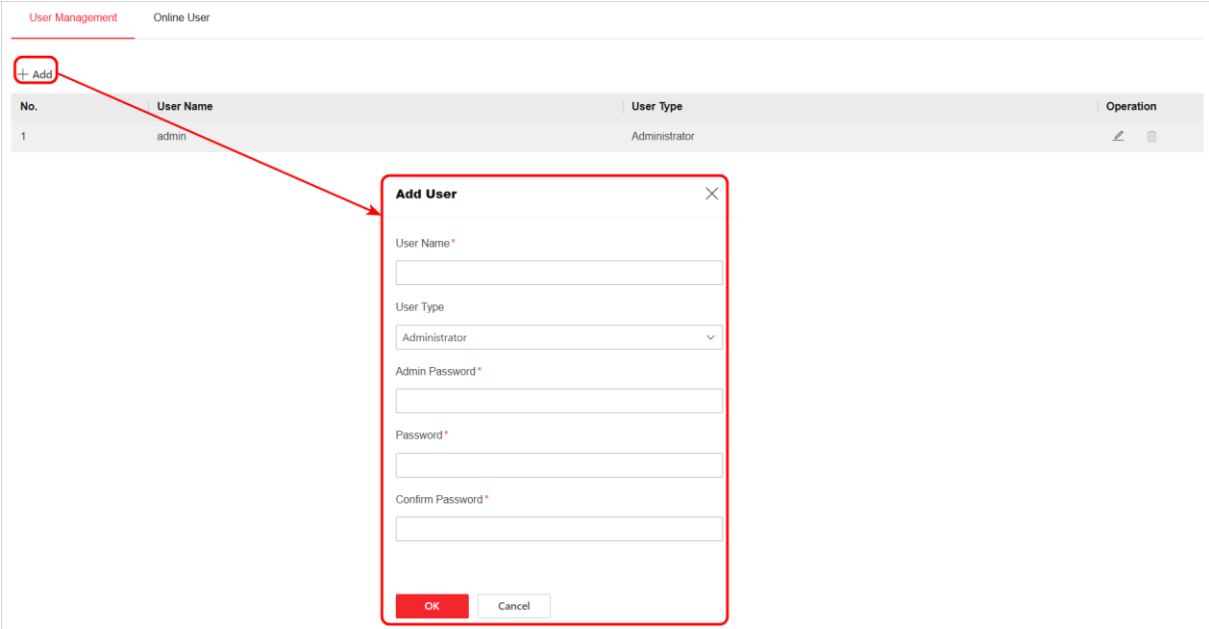


Figure 5-6 Manage Users

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



Figure 5-7 View Online Users

5.2 Configure Network Parameters

5.2.1 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**.

Figure 5-8 Configure HTTP (S) Parameters

5.2.2 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.

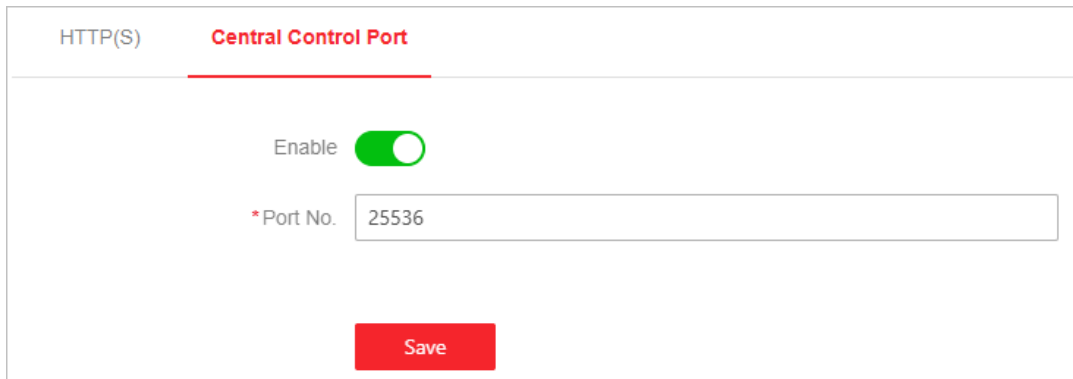
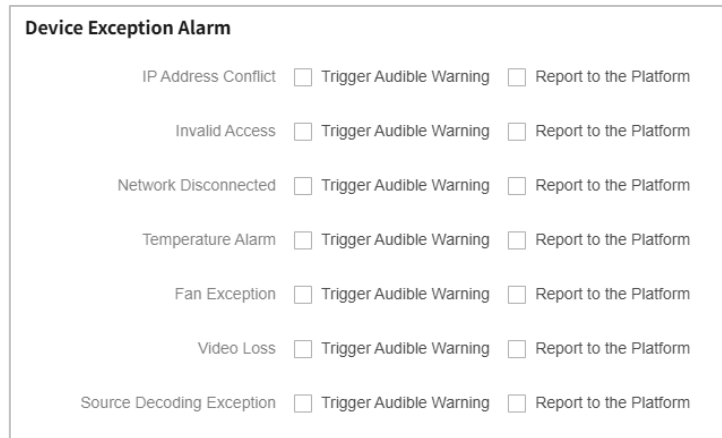
The screenshot shows a web interface for configuring the Central Control Port. At the top, there are two tabs: 'HTTP(S)' and 'Central Control Port', with the latter being selected and highlighted in red. Below the tabs, there is a section for enabling the port. It includes a label 'Enable' followed by a green toggle switch that is currently turned on. Below this, there is a label '* Port No.' followed by a text input field containing the value '25536'. At the bottom of the configuration area, there is a red button labeled 'Save'.

Figure 5-9 Configure Central Control Port

5.3 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.
- The video is lost.
- The decoding signal source is abnormal.



Device Exception Alarm		
IP Address Conflict	☐ Trigger Audible Warning	☐ Report to the Platform
Invalid Access	☐ Trigger Audible Warning	☐ Report to the Platform
Network Disconnected	☐ Trigger Audible Warning	☐ Report to the Platform
Temperature Alarm	☐ Trigger Audible Warning	☐ Report to the Platform
Fan Exception	☐ Trigger Audible Warning	☐ Report to the Platform
Video Loss	☐ Trigger Audible Warning	☐ Report to the Platform
Source Decoding Exception	☐ Trigger Audible Warning	☐ Report to the Platform

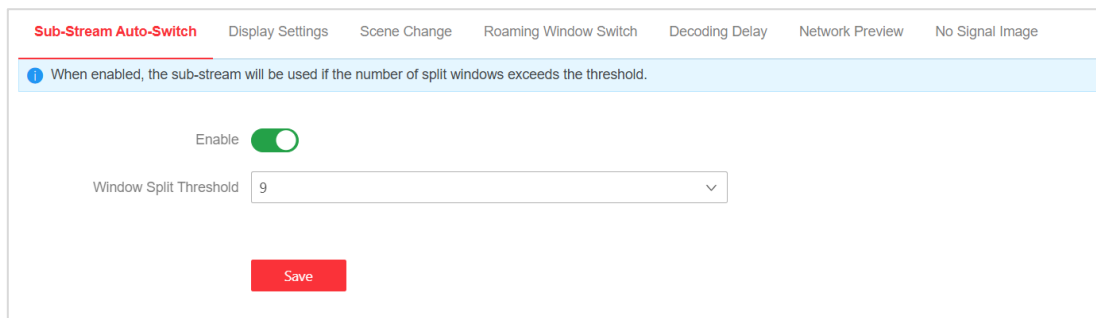
Figure 5-10 Set Device Exception Alarm

5.4 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.



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

When enabled, the sub-stream will be used if the number of split windows exceeds the threshold.

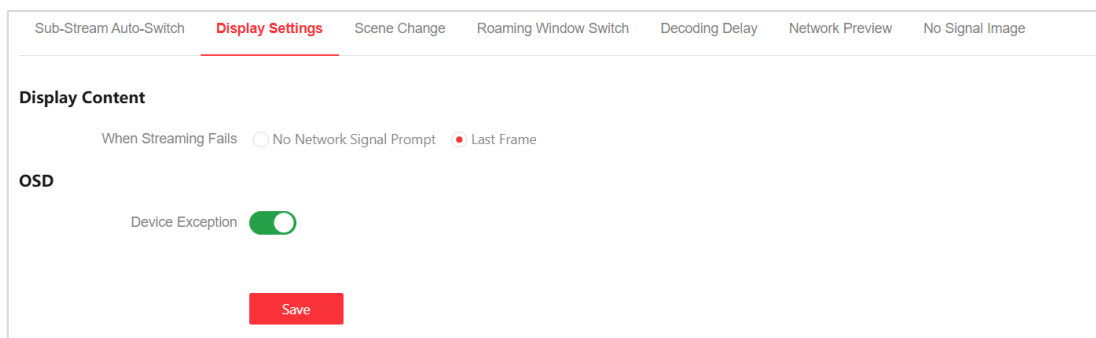
Enable ☒

Window Split Threshold 9

Save

Figure 5-11 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.



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

Display Content

When Streaming Fails ☐ No Network Signal Prompt ☒ Last Frame

OSD

Device Exception ☒

Save

Figure 5-12 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 5-13 Set Scene Change Parameters

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

Figure 5-14 Enable Roaming Window Switch

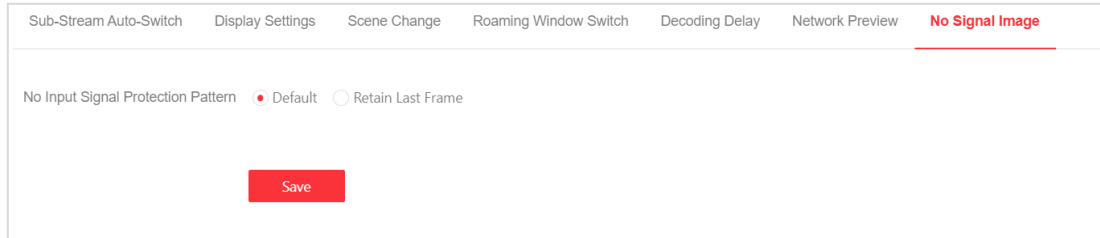
- Click **Decoding Delay** and select a default decoding delay level.

Figure 5-15 Set Decoding Delay Level

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

Figure 5-16 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.



The screenshot shows a web interface with a horizontal menu at the top containing the following items: Sub-Stream Auto-Switch, Display Settings, Scene Change, Roaming Window Switch, Decoding Delay, Network Preview, and No Signal Image. The 'No Signal Image' item is highlighted with a red underline. Below the menu, the main content area is titled 'No Input Signal Protection Pattern' and contains two radio button options: 'Default' (which is selected) and 'Retain Last Frame'. At the bottom center of the page is a red 'Save' button.

Figure 5-17 Configure No Signal Image

Chapter 6 Device Maintenance

6.1 View Device Status

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

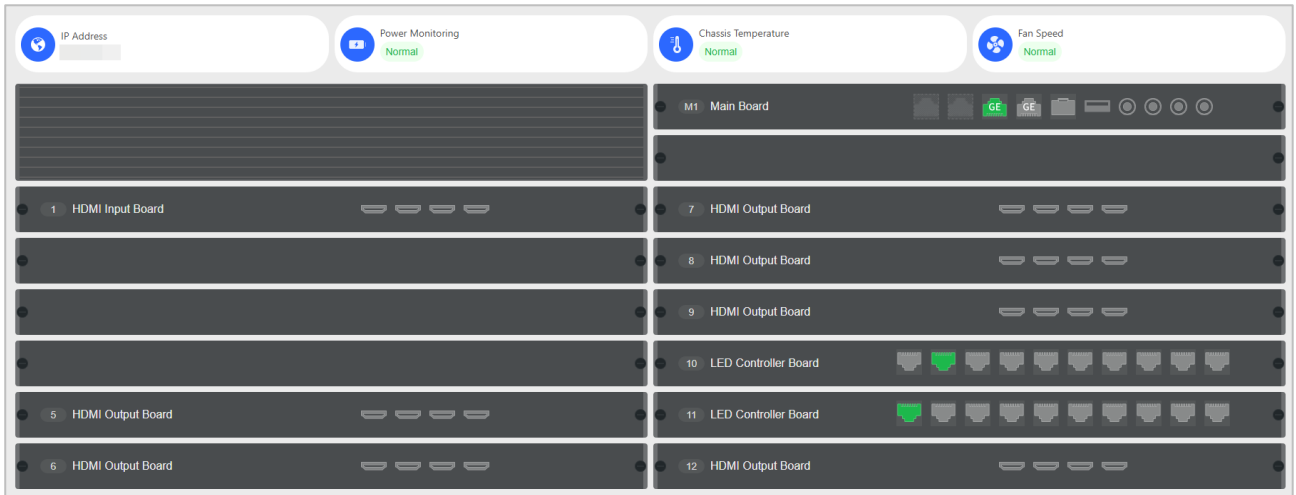


Figure 6-1 View Device Status

6.2 Maintain Screens

6.2.1 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 6-2 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 6-3 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.

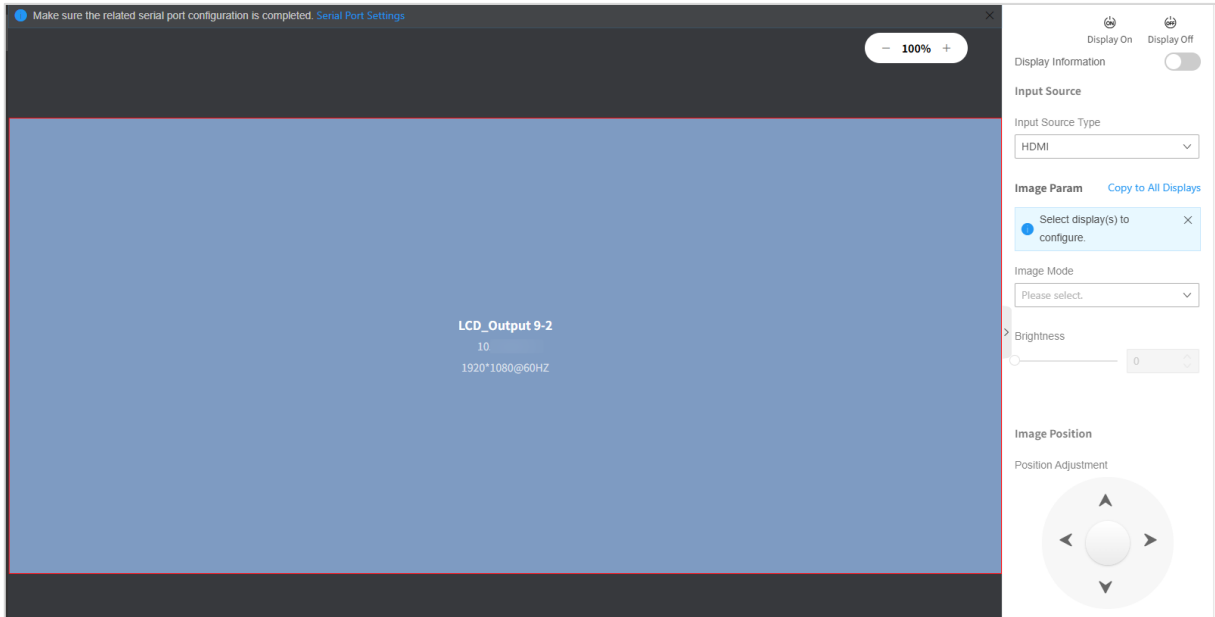


Figure 6-4 Control LCD Screen via Serial Port

6.2.2 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.

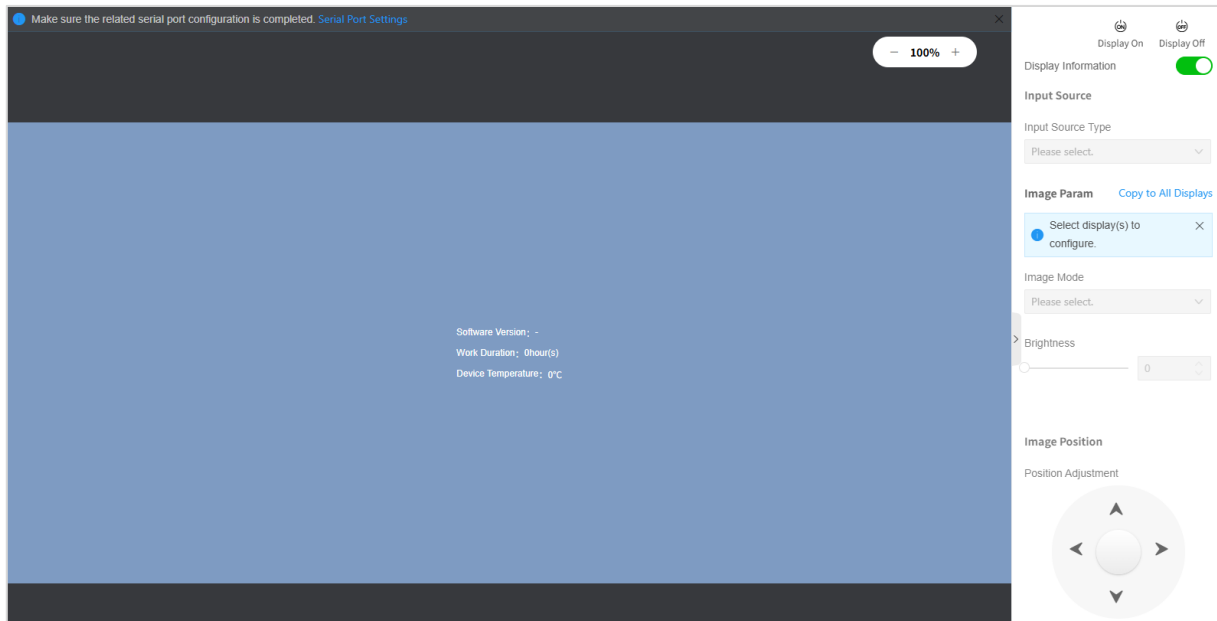


Figure 6-5 Show Screen Information

6.3 Maintain the System

- Go to **Maintenance and Security** → **System Maintenance** → **Restart**, and restart the following devices as required:
 - Click **Restart** to restart the device.
 - Select an LED controller board and click **Restart** to restart the receiving cards that are controlled by the selected LED controller board.

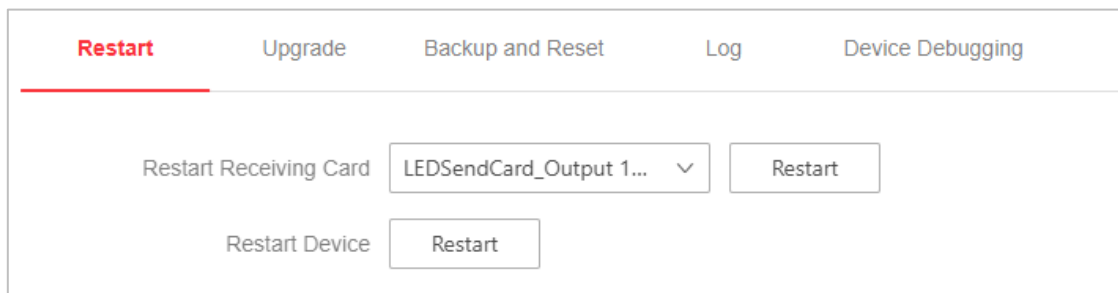


Figure 6-6 Restart Page

- Go to **Maintenance and Security** > **System Maintenance** > **Upgrade**, and upgrade the following devices as required:
 - Upgrade the device: Click  to select an upgrade file of the device, and click **Upgrade**.
 - Upgrade all LED controller boards in the device: In the **Upgrade Device** area, click  to select an upgrade file of the LED controller board, and click **Upgrade**.
 - Upgrade a receiving card: Select an LED controller board, click  to select an upgrade file of the receiving card, and click **Upgrade**.

Figure 6-7 Upgrade the System

- Go to **Maintenance and Security > System Maintenance > Backup and Reset**, and back up the following parameters:
 - Select an LED controller board and click **Export** to export the debug file of the receiving cards that are controlled by the selected LED controller board.
 - Select an LED controller board and click **Export** to export the configuration file of the receiving cards that are controlled by the selected LED controller board.
 - Select an LED controller board and click **Export** to export the configuration file of the selected LED controller board.
 - Click **Export** to export the device parameters.
- On the **Backup and Reset** page, import the following parameters:
 - Select an LED controller board, click  to select a configuration file of the LED controller board, and click **Import**.
 - Click  to select a device parameter file, and click **Import**.
- On the **Backup and Reset** page, reset the device:
 - Click **Restore Default** to restore the device configuration parameters except for user information, network parameters, and logs to the default settings. Please use this function with caution.
 - Click **Restore Factory Defaults** to erase and overwrite the storage areas containing user data, including user passwords, runtime data, operation logs, and configuration parameters. User data cannot be recovered and the device will be restored to factory settings. Please use this function with caution.

Backup

Receiving Card Debug File

LEDSendCard_Output 10-1

Export

Receiving Card Configuration File

LEDSendCard_Output 10-1

Export

LED Controller Configuration File

LEDSendCard_Output 10-1

Export

Device Parameters

Export

Import Parameters

Import LED Controller Configuration File

LEDSendCard_Output 10...

Import

Import Device Parameters

Import

Reset

Restore Default

Restore Default

This will clear device configuration parameters and restore them to defaults. Network parameters, user accounts, and logs will be retained. Proceed with caution.

Restore Factory Defaults

Restore Factory

This will erase and overwrite the storage areas containing user data, including user passwords, runtime data, operation logs, and configuration parameters. User data cannot be recovered and the device will be restored to factory settings. Proceed with caution.

Figure 6-8 Backup and Reset Device Parameters

- Go to **Maintenance and Security > System Maintenance > Log**, set the search condition and click **Search**. You can view the searched logs in the list below and export the logs as required.

Main Type

All Types

Sub Type

All Types

Time

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 6-9 Search Logs

- Go to **Maintenance and Security > System Maintenance > Device Debugging**, and configure the following parameters as required:
 - 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 6-10 Debug the Device

6.4 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.

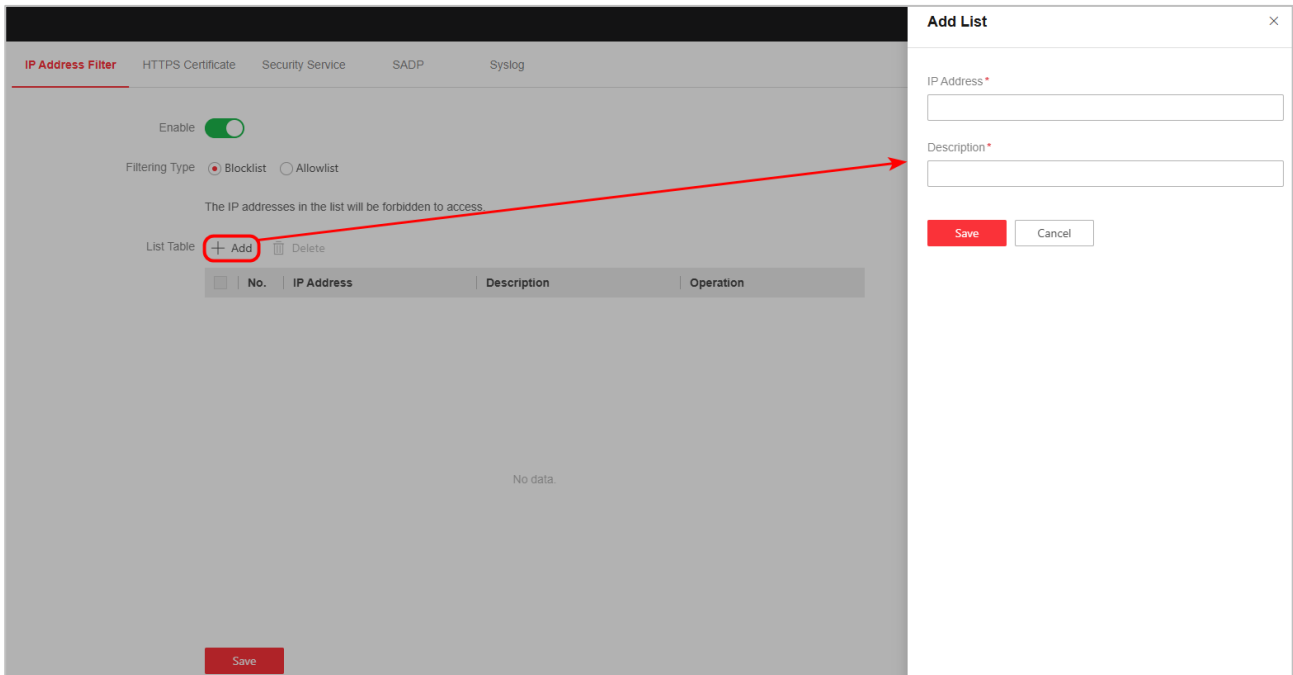


Figure 6-11 Configure IP Address Filter

- 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 6-12 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.

Enable ☒

* Server IP Address

* Port No.

* Uploading Period

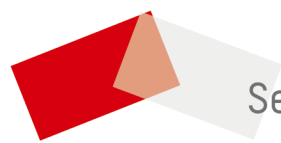
h

* Protocol Type

TCP

Save

Figure 6-13 Enable Syslog



See Far, Go Further