



DS-6900UDI(C) Series  
Ultra HD Video and Audio Decoder

User Manual

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#### FCC Compliance


This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.


#### FCC Conditions


This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

### EU Conformity Statement

 This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2014/30/EU, the LVD Directive 2014/35/EU, the RoHS Directive 2011/65/EU.

 2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: [www.recyclethis.info](http://www.recyclethis.info)

 2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: [www.recyclethis.info](http://www.recyclethis.info)

### Industry Canada ICES-003 Compliance

This device meets the CAN ICES-3 (A)/NMB-3(A) standards requirements.

## Applicable Models

This manual is applicable to the models listed in the following table.




Series	Model
DS-6900UDI Decoder	DS-6901UDI(C)
	DS-6904UDI(C)
	DS-6908UDI(C)
	DS-6910UDI(C)
	DS-6912UDI(C)
	DS-6916UDI(C)

## About the Default

Item	Default Value
User name	admin
Device IP address	192.0.0.64
SSH login	User name: admin Password: same as the device

## Symbol Conventions

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

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

## Safety Instructions

- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region. Please refer to technical specifications for detailed information.
- Use the power adapter delivered with the device only.
- If the product does not work properly, please contact your dealer or the nearest service center. Never attempt to disassemble the product yourself. (We shall not assume any responsibility for problems caused by unauthorized repair or maintenance.)
- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.
- Please enhance the protection for personal information and data security as the device may be confronted with the network security problems when it is connected to the Internet. Please contact your dealer or the nearest service center once you find that there may be the network security problems.
- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.

 **Caution**

- Do not drop the device or subject it to physical shock, and do not expose it to high electromagnetism radiation. Avoid the equipment installation on vibrations surface or places subject to shock (ignorance can cause equipment damage).
- Do not expose the device to the explosive situation.
- Keep clean and dry on the surface of the device.
- Do not touch the exposed connection points or components when the device is powered on.

 **Caution**

- The equipment is a system level monitoring device, usually placed in the central computer room of each level of monitoring system for use. The selection of its installation site should comply with the relevant standards for the construction of computer rooms in the country and region where it is used.
- The equipment is a standard rack, mounted device fixed in the cabinet for use. Please pay attention to the following during installation and use:
  - Ensure that the temperature inside the cabinet is within the range of 0 °C~45 °C.
  - Ensure that the humidity in the computer room is between 10%~90% RH.
  - Ensure that the cabinet is sturdy enough to support the weight of the equipment and its accessories, and pay attention to avoiding hazards caused by uneven mechanical loads during installation.
  - Ensure that there is sufficient installation space for the video and audio cables, and the bending radius of the cables should not be less than 5 times the outer diameter of the cables.

- Ensure a good ventilation environment, and it is recommended to install the equipment with a ground clearance of more than 50 cm.

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# Chapter 1 Introduction

## 1.1 Provisions

In order to simplify the description, the following provisions are made in this manual:

- Smart Wall software are referred to as “Client Software”.
- “Click” means clicking the left mouse button. “Double Click” refers to double clicking the left mouse button. “Right Click” means clicking the right mouse button.
- The figures in this manual are only examples, please refer to the actual software interface for details.

## 1.2 Product Introduction

DS-6900UDI(C) series decoder is developed on the basis of embedded hardware platform, and it supports multiple video stream formats like H.265, H.264+, H.264, with strong decoding performance and supports 4K30 ultra high definition output. It is widely used in various video monitoring system projects.

## 1.3 Management Software Description

The decoder can be managed and configured through the Smart Wall Client. For specific operation methods, please refer to Chapter 5 Device Information. You can also manage and configure through the corresponding platform software. For platform software operations, please refer to the corresponding manual.

## Chapter 2 Video Wall Configuration

You can add signal source, decode video on the video wall, manage scenes, and so on, through the web.

### 2.1.Web Login

Enter the IP address of the decoder on the address bar of web browser, and enter the user name and password in the login page.

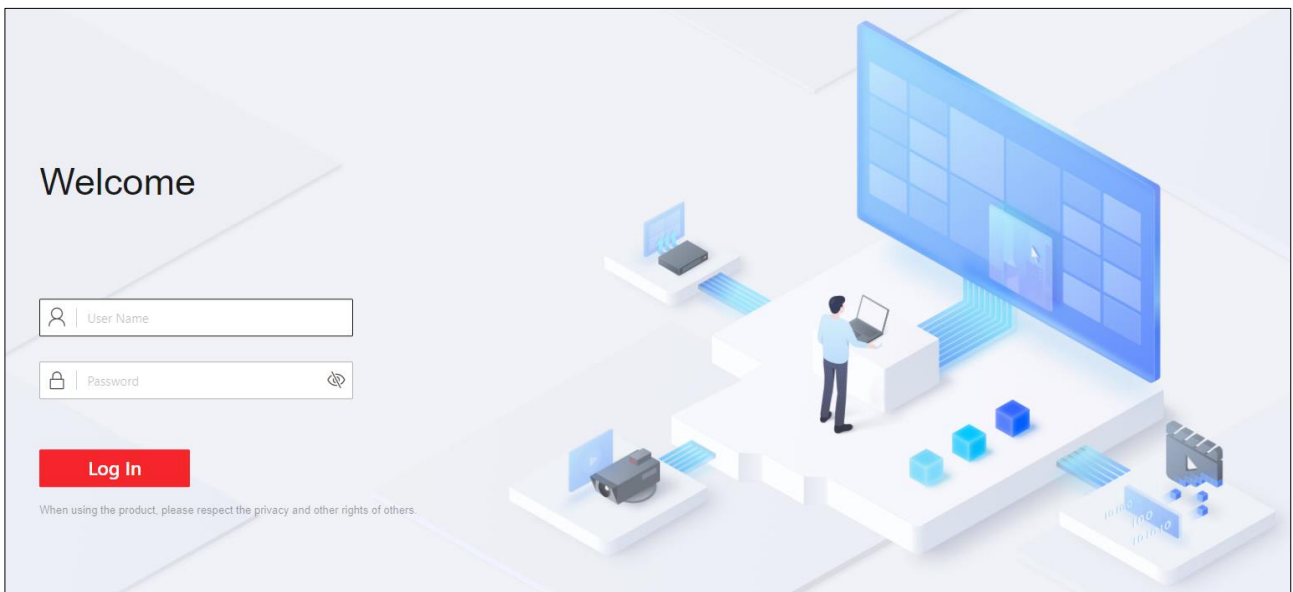


Figure 2-1 Login Page

Click **Log In** to enter the Welcome page.

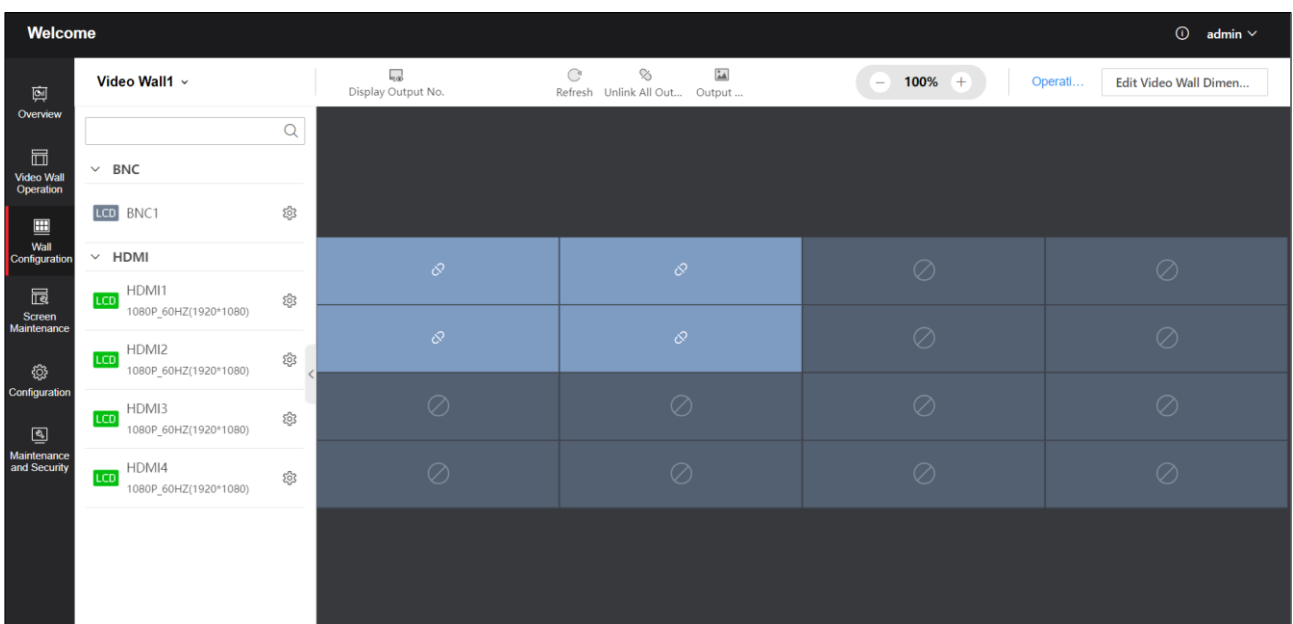


Figure 2-2 Welcome Page

## 2.2 Video Wall Configuration

Click **Video Wall Configuration** to enter the corresponding page.

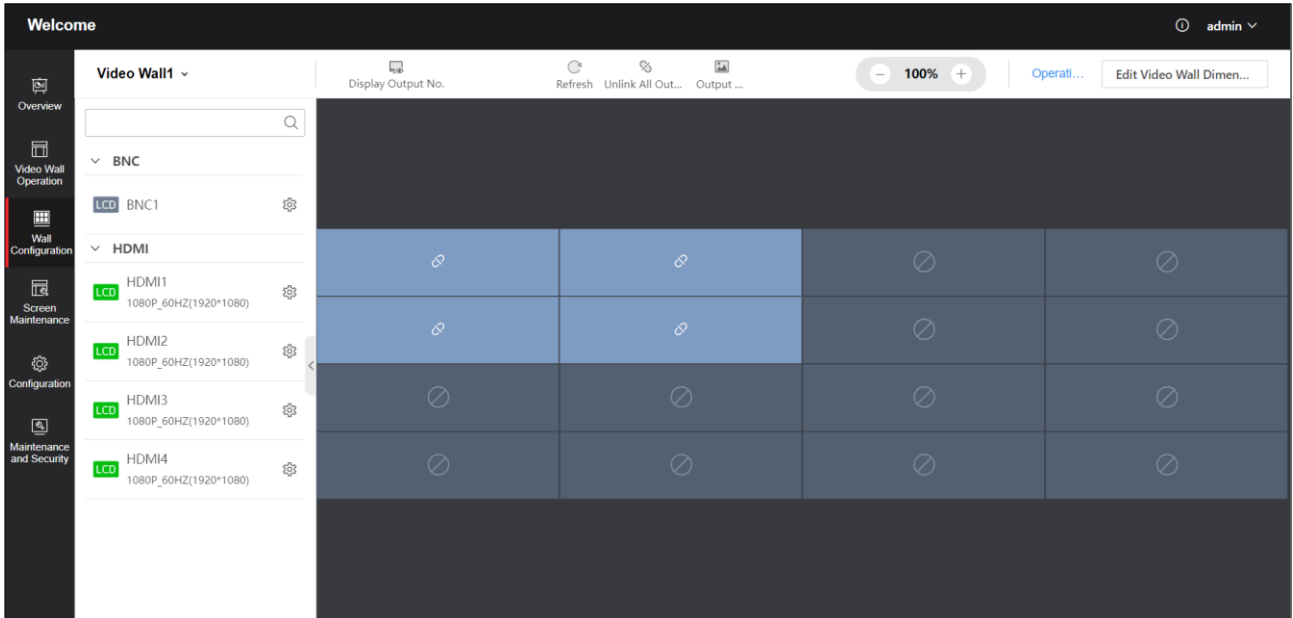


Figure 1-1 Video Wall Configuration

### 2.2.1 Edit Video Wall Dimensions

Click **Video Wall Configuration > Edit Video Wall Dimensions** in the upper-right corner of the page to set video wall dimensions (row × column). Enter the number of screens in row and column. Click **Save**.

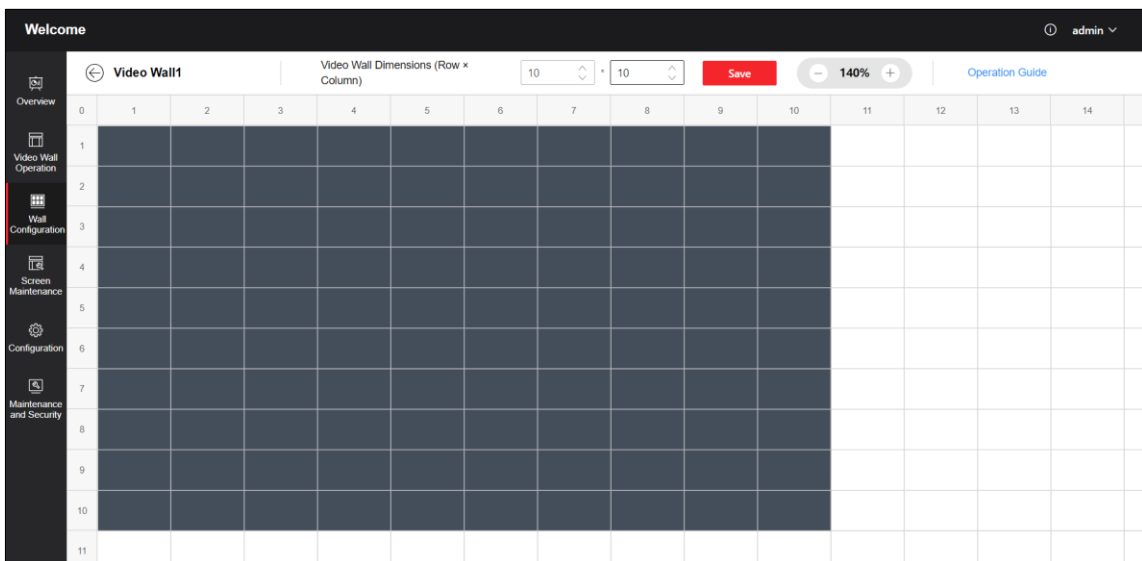



Figure 2-4 Edit Video Wall Dimensions

## 2.2.2 Connect with Video Wall

Click **Video Wall Configuration** to drag the output channels from the left-side list to the right display screen to connect them with the video wall.

### Note

If all screens of the current video wall are connected, click  to cancel the connection first and then drag the output channels to connect once again.

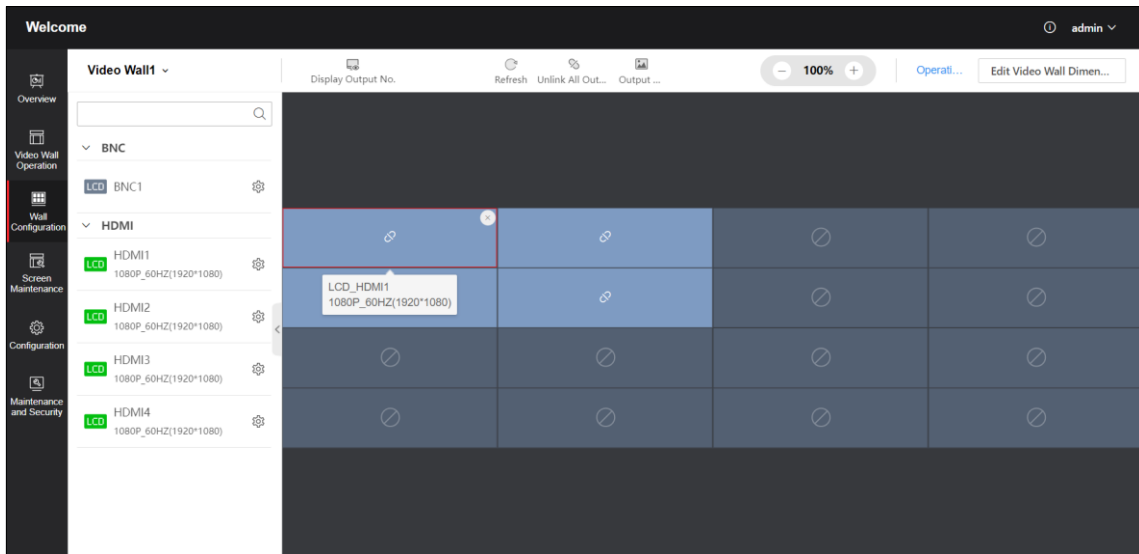



Figure 2-5 Connect with Video Wall

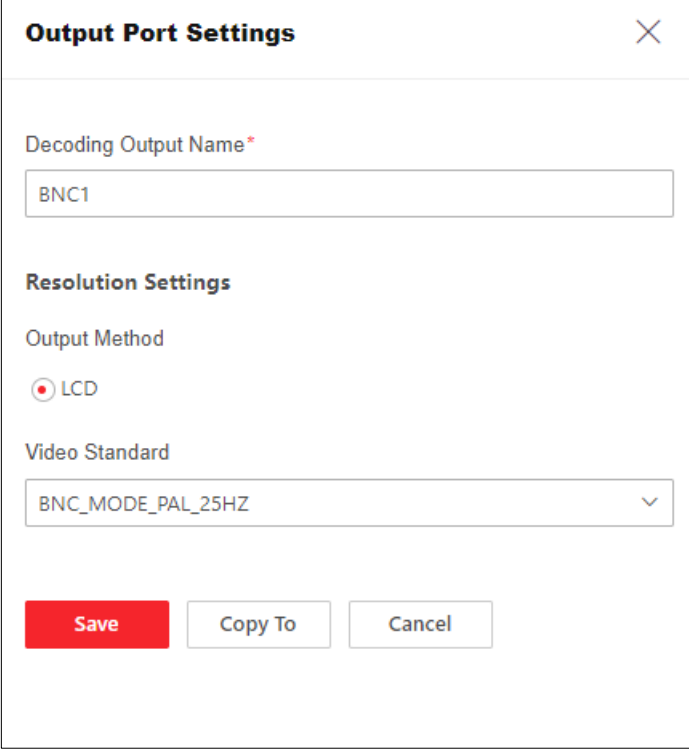
Click  of the output port in the left list to configure the output mode and resolution.

- BNC Output Port

**Output Name:** Customize a name.

**Video Format:** Select according to actual needs.

**Copy To:** Copy the BNC output port configuration to other decoders.



**Output Port Settings**

Decoding Output Name\*

BNC1

**Resolution Settings**

Output Method

LCD

Video Standard

BNC\_MODE\_PAL\_25HZ

Save Copy To Cancel

Figure 2-6 BNC Output Port

- HDMI Output Port

**Output Name:** Customize a name.

**Video Format:** Select the output mode of the decoder connected to the display screen, with options for HDMI and DVI. If the decoder is connected to the display screen and uses HDMI output, the output mode can be set to HDMI.

**Output Method:** Select LCD based on the type of display screen connected to the decoder.

**Resolution:** Set the resolution based on the display screen.

**LCD:** When selecting the LCD output method, select the LCD resolution according to the requirement.

**Audio Sampling Rate:** Select according to actual needs.

**Copy To:** Copy the HDMI output port configuration to other decoders.

**Output Port Settings** ✕

Decoding Output Name \*

HDMI1

**Output Mode Configuration**

Output Mode

HDMI ▾

**Resolution Settings**

Output Method

LCD

LED

Resolution

1080P\_60HZ(1920\*1080) ▾

**Audio Configuration**

Audio Sampling Rate

32KHZ ▾


Save Copy To Cancel

Figure 2-7 HDMI Output Port

### 2.2.3 Other Configurations

- Edit Output Background

Edit the output background of the single video wall.

Click **Output Background** >  in the lower right to edit the background color.

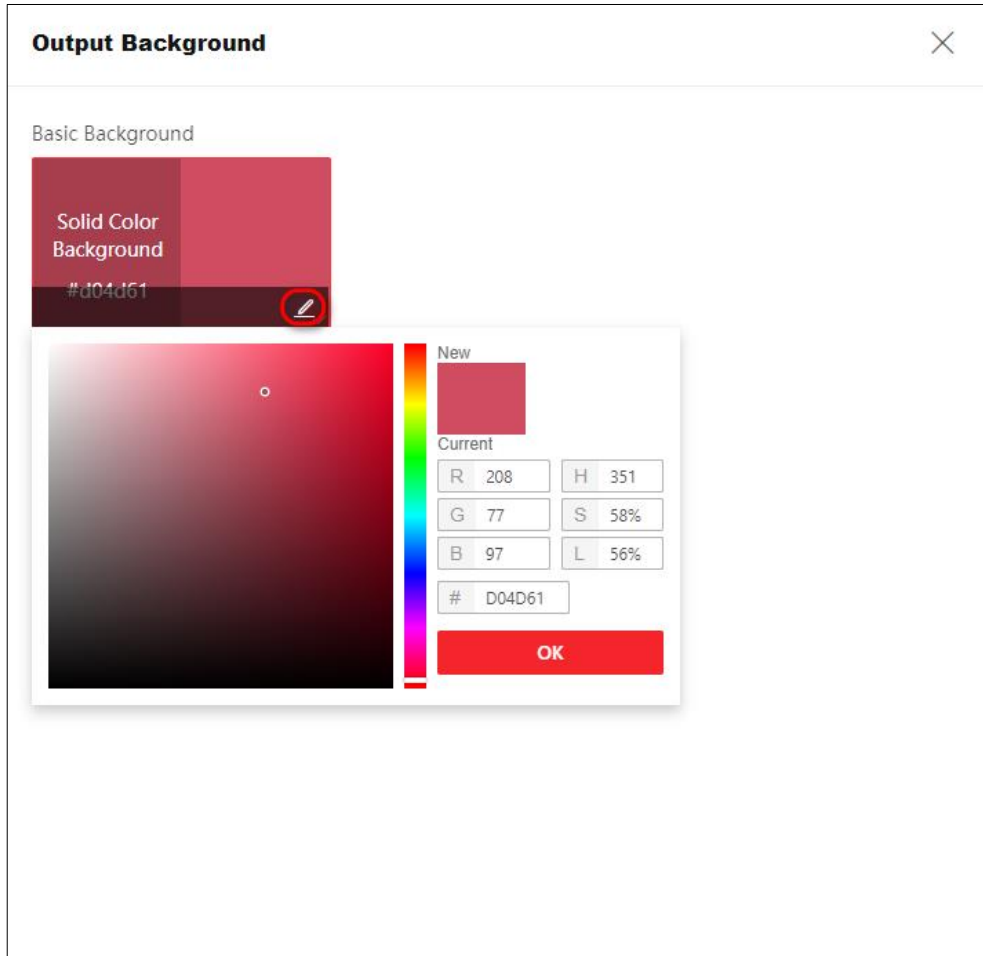


Figure 2-8 Select Solid Color Background

- Unlink All Output Ports

Click **Unlink All Output Ports**, and click **Save**.



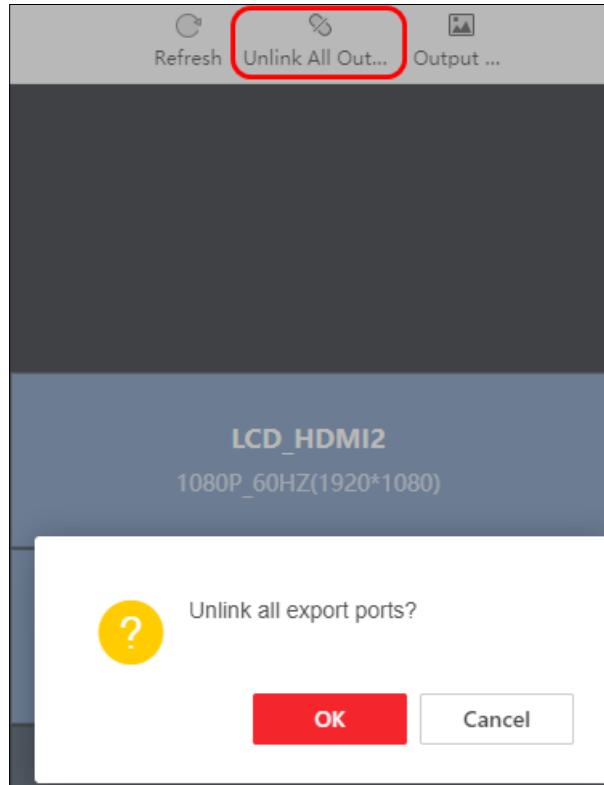


Figure 2-9 Unlink All Output Ports

- Display Output No.  
Click **Display Output No.** to display the output No.
- Refresh  
Click **Refresh** to refresh the video wall configuration.


## 2.3 Network Signal Source Management

Signal source can be added by entering IP address or URL.

### 2.3.1 Add by IP Address

Step 1 Click **Video Wall Operation** > **Signal Source** >  to select IP address.

Step 2 Fill in signal source information and stream media information.

- Device Name: Enter a custom name.
- IP Address and Port No.: Enter signal source address and port No..
- User Name and Password: Enter user name and password of the signal source.
- Group: Select the group for the signal source. You can also click  **Add Group** to add a new group.
- Channel Type:

- Ordinary Network Source: Fill in the number of channels based on the number of channels in the signal source, and check the channels that need to be added.
  - Zero Channel Network Source: No channel number needs to be set.
- 

 **Note**

If the added signal source is NVR, the number of channels needs to be calculated starting from 33, and the first 32 channels are reserved as analog channels. For example, to add a **32** channel NVR, the number of channels needs to be set to  $32 + 32 = 64$ .

---

Step 3 Click **More** to select transfer protocol, stream type, device manufacturer and stream IP address.

- Transfer Protocol: Support TCP and UDP.
- Stream Type: Support main stream, sub-stream, and third stream.
- Encrypted Stream: When Enabled, the stream can be encrypted, and a secret key needs to be set at the same time.
- Device Manufacturer: Select the manufacturer to which the signal source belongs.
- Get Stream via Streaming Server: Enable according to the requirement, and set the stream media IP address, port and transmission protocol simultaneously. Transfer real-time preview data through streaming media servers to reduce network pressure.

**Add Signal Source** [X]

IP Address    DDNS    URL

IP Address \*

Port No. \*

8000

User Name \*

admin

Password \*

.....

Group \*

+ Add Group    1

Channel Type

Conventional Network Source

Number of Channels \*

64

Select Channel (Enter Channel No. First)

Select All

Channel: 1    Channel: 2    Channel: 3    Channel: 4

Channel: 5    Channel: 6    Channel: 7    Channel: 8

Channel: 9    Channel: 10    Channel: 11    Channel: 12

Channel: 13    Channel: 14    Channel: 15    Channel: 16

Channel: 17    Channel: 18    Channel: 19    Channel: 20

Channel: 21    Channel: 22    Channel: 23    Channel: 24



More [v]

Save    Cancel

Figure 2-10 Add Signal Source by IP Address

Step 4 Click **Save**.


Step 5 (Optional) Perform the following operations.

- Click  to modify the information like Device Name, Transmission Protocol, Group, Getting Stream via Stream Media of the Added Signal Source.
- Click  to delete the signal source that has already been added.


 **Note**

If the network signal source has been decoded onto the video wall, editing or deleting is not supported.

### 2.3.2 Add by DDNS

Step 1 Click **Video Wall Operation** > **Signal Source** >  to select DDNS.

Step 2 Fill in signal source information and stream media information.

- Device Name: Customized entering.
- Host IP Address and Port No.: Entering signal source host IP address and port number.
- User Name and Password: Entering user name and password of the signal source.
- Group: Select the group of the signal source added. You can also click  **Add Group** to add a new group.
- Channel Type:
- Ordinary Network Source: Fill in the number of channels based on the number of channels in the signal source, and check the channels that need to be added.
- Zero Channel Network Source: No channel number needs to be set.

---

#### **Note**

If the added signal source is NVR, the number of channels needs to be calculated starting from 33, and the first 32 channels are reserved analog channels. For example, to add a **32** channel NVR, the number of channels needs to be filled in as  $32 + 32 = 64$ .

---

Step 3 Click **More** to select transfer protocol, stream type, device manufacturer and stream IP address.

- Transfer Protocol: Support TCP and UDP.
- Stream Type: Support main stream, sub-stream, and third stream.
- Encrypted Stream: When Enabled, the stream can be encrypted, and a secret key needs to be set at the same time.
- Device Manufacturer: Select the manufacturer to which the signal source belongs.
- Get Stream via Streaming Server: Enable according to the requirement, and set the stream media IP address, port and transmission protocol simultaneously.
- Transfer real-time preview data through streaming media servers to reduce network pressure.

**Add Signal Source**

IP Address **DDNS** URL

Device Name\*  
test

Host IP Address\*  
hostname

Port No.\*  
8000

User Name\*  
admin

Password\*  
.....

Group\*  
+ Add Group 1

Channel Type  
Conventional Network Source

Number of Channels\*  
64

Select Channel (Enter Channel No. First)  
 Select All

Channel: 1  Channel: 2  Channel: 3  Channel: 4  
 Channel: 5  Channel: 6  Channel: 7  Channel: 8  
 Channel: 9  Channel: 10  Channel: 11  Channel: 12  
 Channel: 13  Channel: 14  Channel: 15  Channel: 16  
 Channel: 17  Channel: 18  Channel: 19  Channel: 20  
 Channel: 21  Channel: 22  Channel: 23  Channel: 24

More ▾

Save Cancel

Figure 2-11 Add Signal Source by DDNS

Step 4 Click **Save**.

Step 5 (Optional) Perform the following operations:

- Click to modify the information like Device Name, Transmission Protocol, Group, Getting Stream via Stream Media of the Added Signal Source.
- Click to delete the signal source that has already been added.

### Note

If the network signal source has been decoded onto the video wall, editing or deleting is not supported.

## 2.3.3 Add by URL

Step 1 Click **Video Wall Operation > Signal Source >** to select URL.

Step 2 Fill in signal source information and stream media information.

- Device Name: Enter a custom name.
- URL: Enter signal source URL.

The URL parameters are described as follows:

```
rtsp://IP:554/h264/ch1/main/av_stream/?username=admin?password=12345678?linkmode=tcp
```

For example

```
rtsp://192.0.0.1:554/h264/ch1/main/av_stream/?username=admin?password=12345678?linkmode=tcp
```


Among them, 192.0.0.1 is the IP address of the signal source, admin is the user name, 12345678 is the password, and TCP is the streaming protocol (the streaming protocol supports TCP, UDP)

- Encrypted Stream: When enabled, the stream will be encrypted, and a secret key needs to be set at the same time.
- Group: Select the group for the signal source. You can also click [+ Add Group](#) to add a new group.

Figure 2-12 Add by URL

Step 3 Click **Save**.

## 2.4 Video Wall Operation

Click **Video Wall Operation** to drag the signal source on the left to the output port on the right to decode on the video wall. Click  to stop the signal source from decoding onto the video wall.

## 2.4.1 Edit Decoding Window

Click the decoding window to adjust the window position and size, and perform operations such as splitting, roaming and enlarging window.

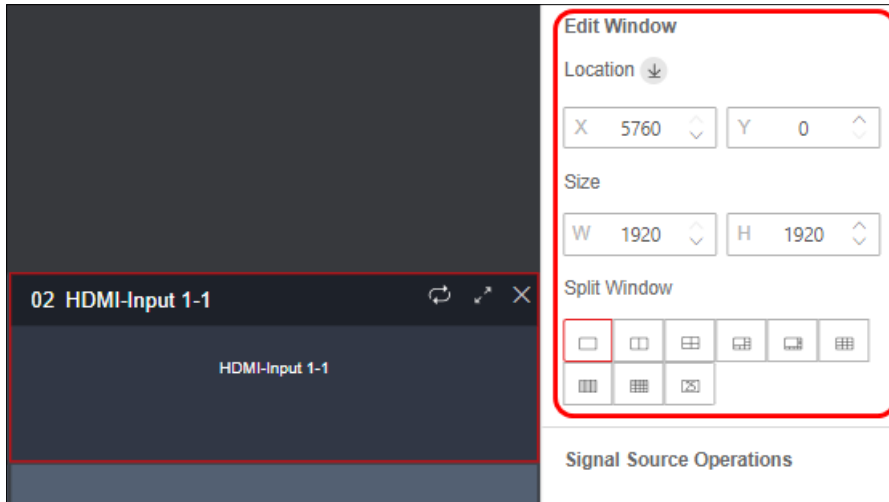


Figure 2-13 Edit Window


- Split Window

Click the corresponding split screen icon to perform window splitting.



Figure 2-14 Split Window

- Sticking Layer at Bottom

After decoding to the video wall, a layer will be displayed on the corresponding output port. Click the layer and click  to stick the layer at bottom.

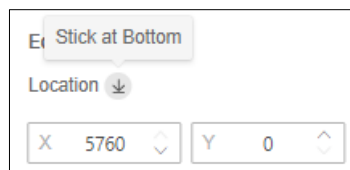




Figure 2-15 Stick the Layer at Bottom

- Roam and Enlarge Window

When roaming a window to multiple output ports, click  to enlarge the window to cover the occupied output ports, and then click  to restore again.

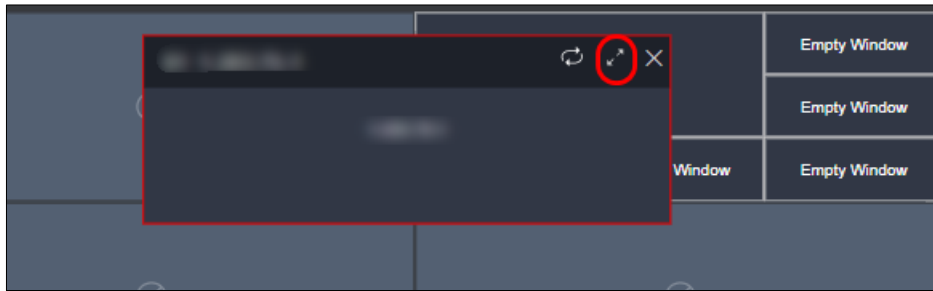


Figure 2-16 Roam Window

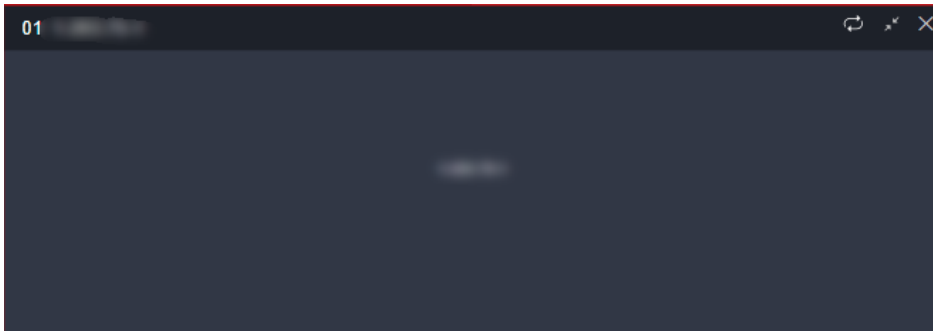


Figure 2-17 Enlarge Window

- **Batch Open Windows**

Directly drag the folder to the output port to batch open windows and decode to the video wall.

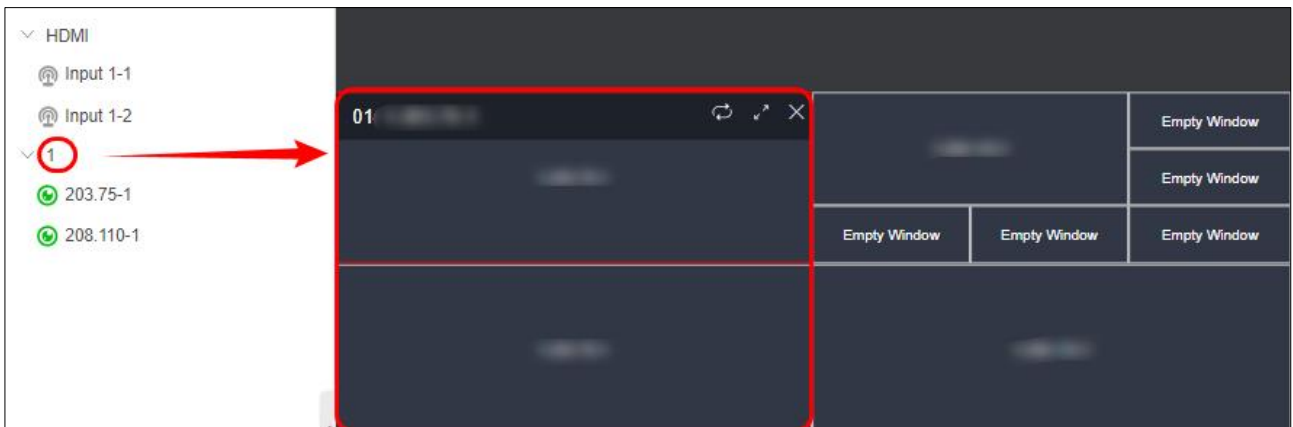



Figure 2-18 Batch Open Window

- **Start Signal Source Auto-Switch**

Click  to select the signal source and set the screen dwell time. Click **Start Auto-Switch**.



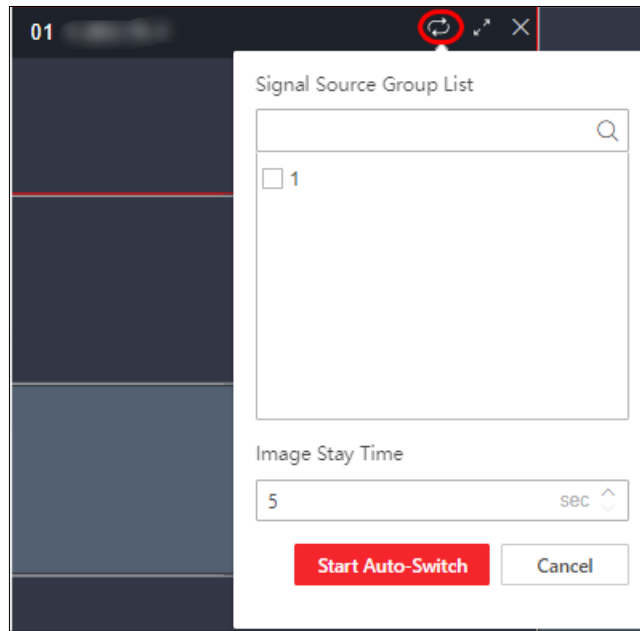


Figure 2-19 Start Signal Source Auto-Switch

- Clear Window

Click **Clear** to clear all windows of the signal source.

## 2.4.2 Signal Source Operations

Click the decoding window to stop/start decoding, turn on/off audio, set decoding delay, and turn on/off intelligent decoding for the signal source.

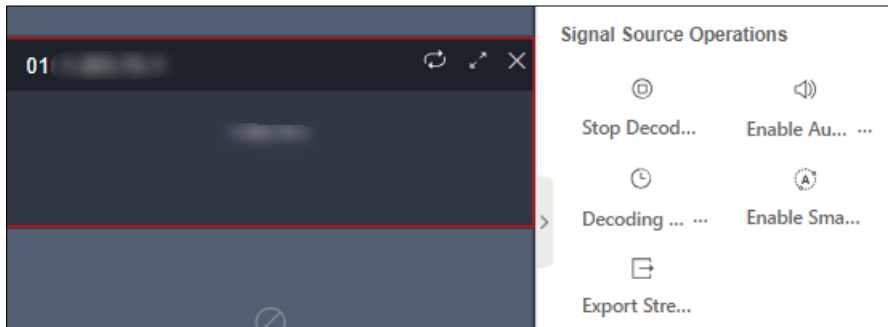


Figure 2-20 Decoding Status

### Note

After enabling intelligent decoding, the device can decode and display behavior information detected by cameras.

## 2.4.3 View Decoding Status

You can view the decoding window No., decoding connection status, decoding status, picture width and height, video frame rate, audio frame rate (sound needs to be turned on), stream transmission

rate, encoding type, packaging format, and decoded video frames. Click **Show All** to enter the decoding status page.

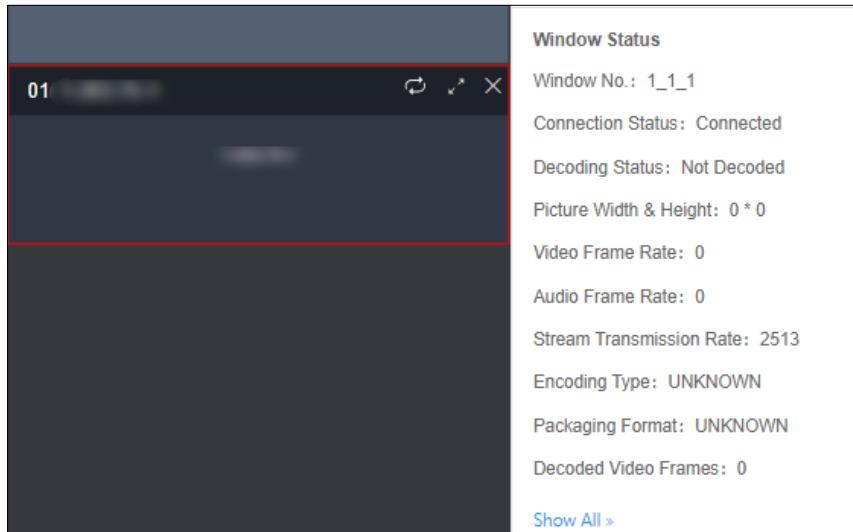


Figure 2-21 Decoding Status Details

#	Window No.	Connection Status	Decoding Status	Picture Width & Height	Video Frame Rate	Audio Frame Rate	Stream Transmission Rate	Encoding Type	Packaging Format	Decoded Video Frames
1	1_1_1	Connected	Not Decoded	0 * 0	0	0	2	UNKNOWN	UNKNOWN	0
2	1_2_1	Connected	Not Decoded	0 * 0	0	0	2418	UNKNOWN	UNKNOWN	0

Figure 2-22 Decoding Status Page

## 2.4.4 Scene Management

### Note

No more than 64 scenes can be added for a device.

Click **Video Wall Operation > Scene** to edit, call and delete scenes.

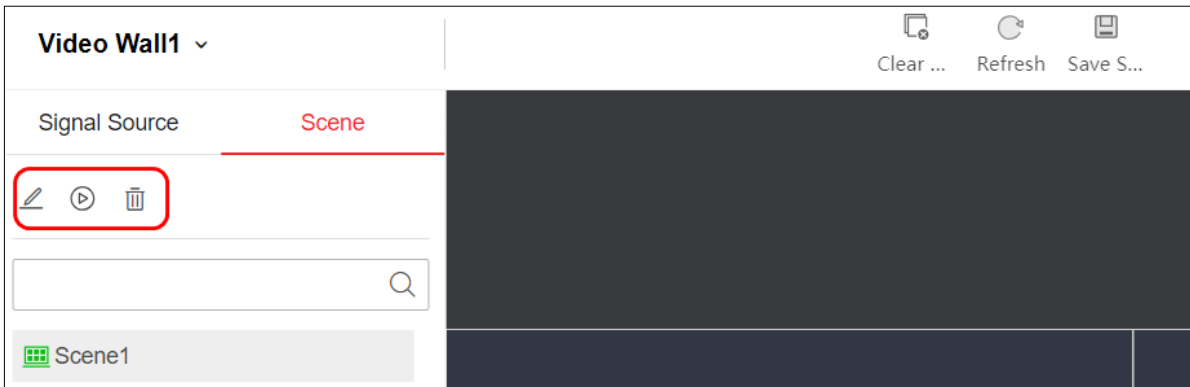


Figure 2-23 Scene Management

- Save Scene: Click **Save Scene** to save the current video wall scheme as a new scene or overwrite the old scene.

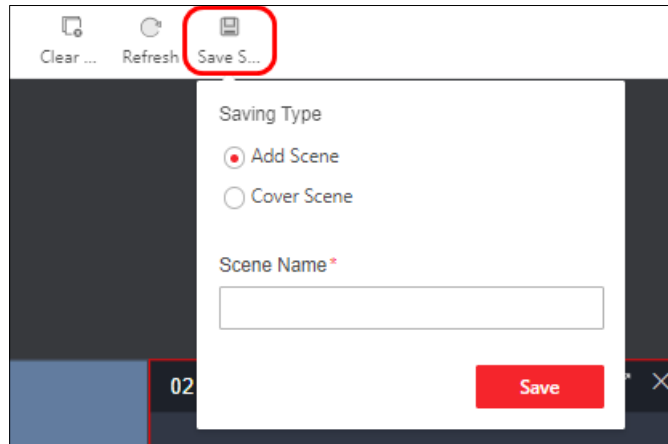





Figure 2-24 Save Scene

- Call Scene: Click  to call the scene.
- Edit Scene: Click  to edit the scene name.
- Delete Scene: Click  to delete the scene.

## Chapter 3 General Configuration

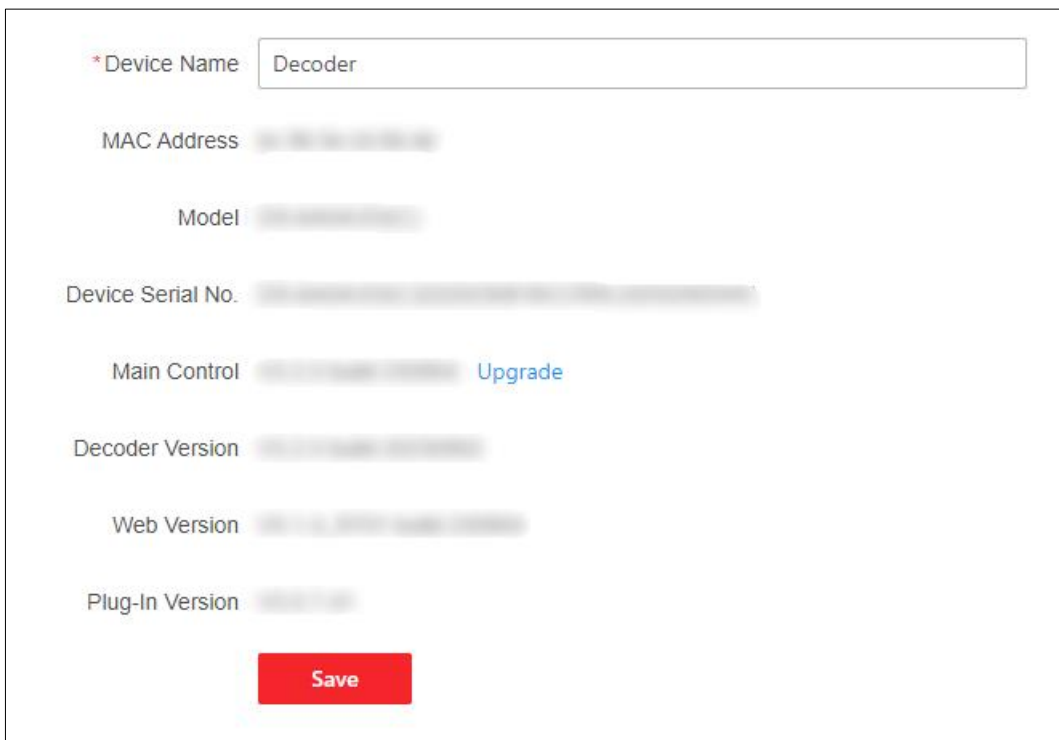
### 3.1 System Configuration

#### 3.1.1 Check Basic Information

Click **Configuration** > **System** > **System Settings** > **Basic Information**.

You can check the device information, such as the device name, Mac address, model, device serial No., main control version, etc.

You can edit the device name or click **Upgrade** to upgrade the main control.



\* Device Name

MAC Address

Model

Device Serial No.

Main Control  [Upgrade](#)

Decoder Version

Web Version

Plug-In Version

Figure3-1 Basic Information

#### 3.1.2 Configure Time Settings

You can set the time zone, time synchronization mode, and time for the decoder, or enable the DST.

Step 1 Click **Configuration** > **System Config.** > **Time Settings** to enter the Time Setting page.

Device Time 2023-09-16 13:28:30

Time Zone (GMT+08:00) Beijing, Urumqi, Singapore, Perth

Time Sync Mode  NTP Time Sync.  Manual Time Sync.

Set Time 2023-09-16 13:02:15 Sync With Computer Ti...

**DST**

Enable

Save

Figure 3-2 Configure Time Settings

Step 2 Step 2 Select a time zone.

Step 3 Select a time synchronization mode and set the corresponding parameters.

#### ● Synchronize Time with NTP Server

Select NTP Time Sync., enter the IP address and port No. of NTP server, and select the synchronization interval.

TCP/IP

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

\*IPv4 Address

\*IPv4 Subnet Mask

\*IPv4 Default Gateway

**DNS Server Settings**

\*Preferred DNS Server

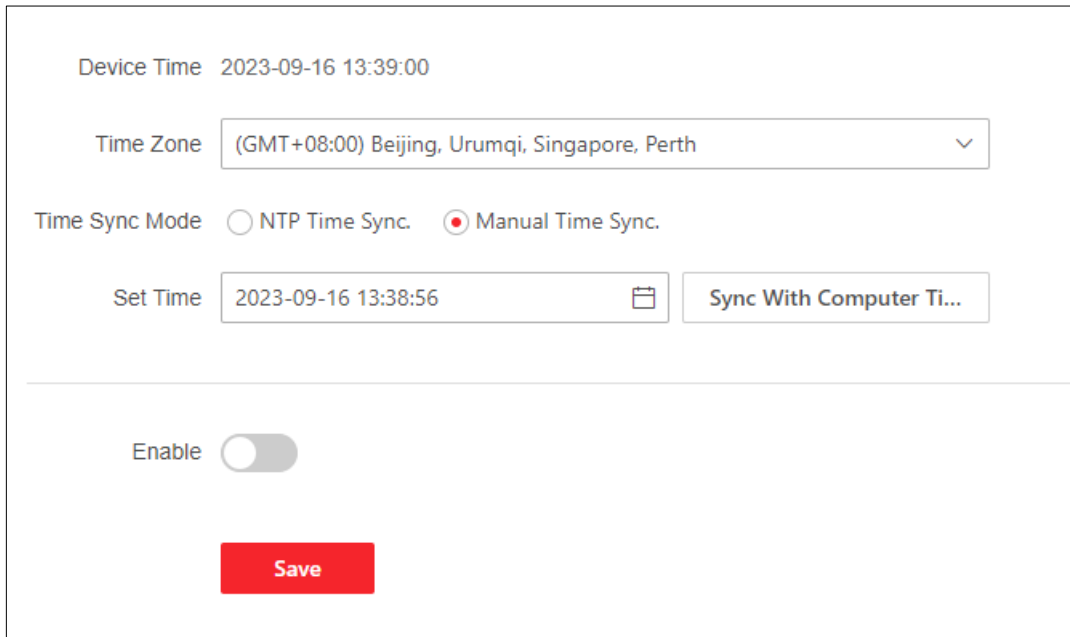
\*Alternative DNS Server

Save

Figure 3-3 Configure Time by NTP

#### ● Synchronize Time Manually

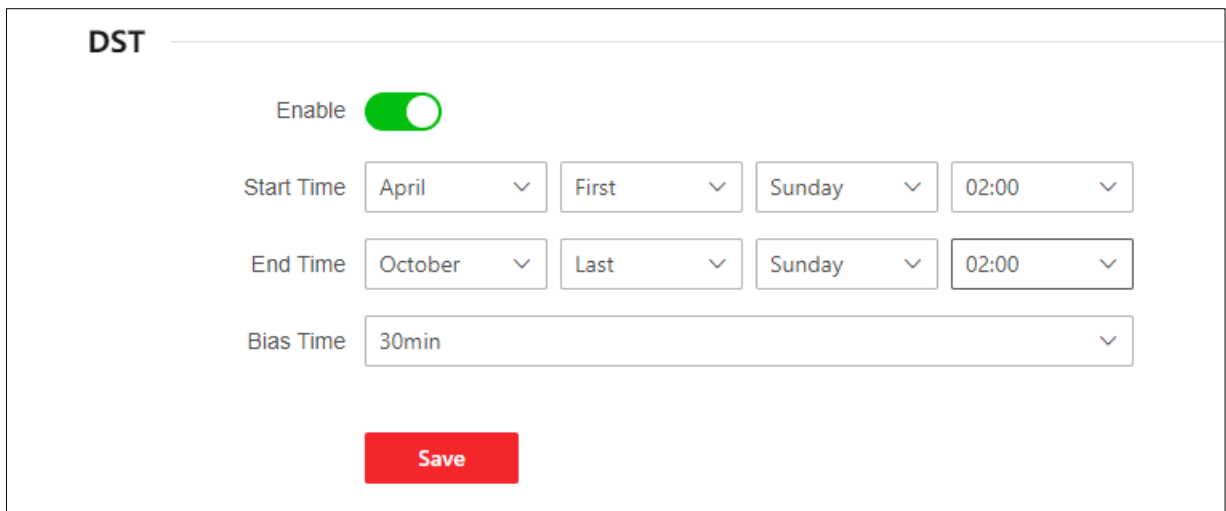
Select **Manual Time Sync.** and manually set the time for synchronization. You can also click **Sync With Computer Time** and the system time will be synchronized with the computer time.



The screenshot shows a configuration panel for manual time synchronization. At the top, the 'Device Time' is displayed as '2023-09-16 13:39:00'. Below this, the 'Time Zone' is set to '(GMT+08:00) Beijing, Urumqi, Singapore, Perth' via a dropdown menu. The 'Time Sync Mode' section has two radio buttons: 'NTP Time Sync.' (unselected) and 'Manual Time Sync.' (selected). Underneath, the 'Set Time' field shows '2023-09-16 13:38:56' with a calendar icon, and a button labeled 'Sync With Computer Ti...'. At the bottom, there is an 'Enable' toggle switch that is currently turned off, and a red 'Save' button.

Figure 3-4 Configure Time Manually

Step 4 (Optional) Enable the DST function and configure the start time, end time, and bias time.



The screenshot shows the 'DST' configuration panel. The 'Enable' toggle switch is turned on (green). The 'Start Time' is configured with four dropdowns: 'April', 'First', 'Sunday', and '02:00'. The 'End Time' is configured with four dropdowns: 'October', 'Last', 'Sunday', and '02:00'. The 'Bias Time' is set to '30min' via a dropdown menu. A red 'Save' button is located at the bottom of the panel.

Figure 3-5 DST Function Enabled

### 3.1.3 Configure Serial Ports

You can debug or control other products by serial ports settings.

- Configure RS-232 Serial Port

Click **Configuration > System > Serial Port Settings > Select Serial Port(s) 1** to enter the following page and configure the serial port parameters

Select Serial Port(s)  1  2

Serial Port Type  RS232

Duplex Mode Full-Duplex

Baud Rate 115200

Data Bit 8

Stop Bit 1

Checking Type Even Parity

Flow Control Type Software Flow Control

Working Mode Console (Parameter Control)

Save

Figure 1-6 Configure RS-232 Settings

- Configure RS-485 Serial Port

Click **Configuration** > **System** > **Serial Port Settings** > **Select Serial Port(s) 2** to enter the following page.

Select Serial Port(s)

Serial Port Type  RS485

Duplex Mode

Baud Rate

Data Bit

Stop Bit

Checking Type

Flow Control Type

Working Mode

Figure 1-7 Configure RS-485 Settings

● Configuring Transparent Channel

Click **Configuration > System > Serial Port Settings > Transparent Channel** to enter the following page. Click to configure channel parameters.

No.	Local: Serial Port	Remote: Serial Port	IP Address	Port No.	Connection Status	Operations
1	RS-485	RS-485	10.65.208.110	8000	<span style="color: green;">✔ Connected</span>	
2	RS-485	--	0.0.0.0	0	<span style="color: red;">✘ Not Connected</span>	
3	RS-485	--	0.0.0.0	0	<span style="color: red;">✘ Not Connected</span>	
4	RS-485	--	0.0.0.0	0	<span style="color: red;">✘ Not Connected</span>	
5	RS-485	--	0.0.0.0	0	<span style="color: red;">✘ Not Connected</span>	
6	RS-485	--	0.0.0.0	0	<span style="color: red;">✘ Not Connected</span>	
7	RS-485	--	0.0.0.0	0	<span style="color: red;">✘ Not Connected</span>	
8	RS-485	--	0.0.0.0	0	<span style="color: red;">✘ Not Connected</span>	
9	RS-485	--	0.0.0.0	0	<span style="color: red;">✘ Not Connected</span>	
10	RS-485	--	0.0.0.0	0	<span style="color: red;">✘ Not Connected</span>	

Figure3-8 Select the Channel



Figure3-9 Configure Channel Parameters

### 3.1.4 Manage Users

Click **Configuration > System > User Management** to enter the following page, which supports adding, editing, and deleting user accounts.

No.	User Name	User Type	Operations
1	admin	Administrator	
2	test	Administrator	

Figure3-10 User Management

- Add User Accounts

Click **Add** to fill in the user name, admin password, password, and confirm password.

**Add User** [X]

User Name\*

User Type  

Admin Password\*

Password\*

Confirm Password\*

**OK** Cancel

Figure 3-11 Add User Accounts

- Edit User Name or Change Password







Click  to edit the user name or change password.


Figure 3-12 Edit User Information

- Delete User Accounts

Click  to delete the user account and click **OK**.

No.	User Name	User Type	Operations
1	admin	Administrator	 
2	test	Administrator	 

 Delete this user?

**OK** Cancel

*(A red arrow points from the trash icon in the second row of the table to the 'Delete this user?' dialog box.)*

Figure 3-13 Delete User Accounts

 **Note**

Only the admin password can be changed. The name of admin user cannot be edited and the admin user cannot be deleted.

## 3.2 Network Configuration

### 3.2.1 Configure Network Parameters

Step 1 Click **Configuration > Network > Network Settings > TCP/IP** to configure network parameters, such as the IPv4 address, IPv4 subnet mask, IPv4 default gateway, and the IP addresses of preferred and alternative DNS server.

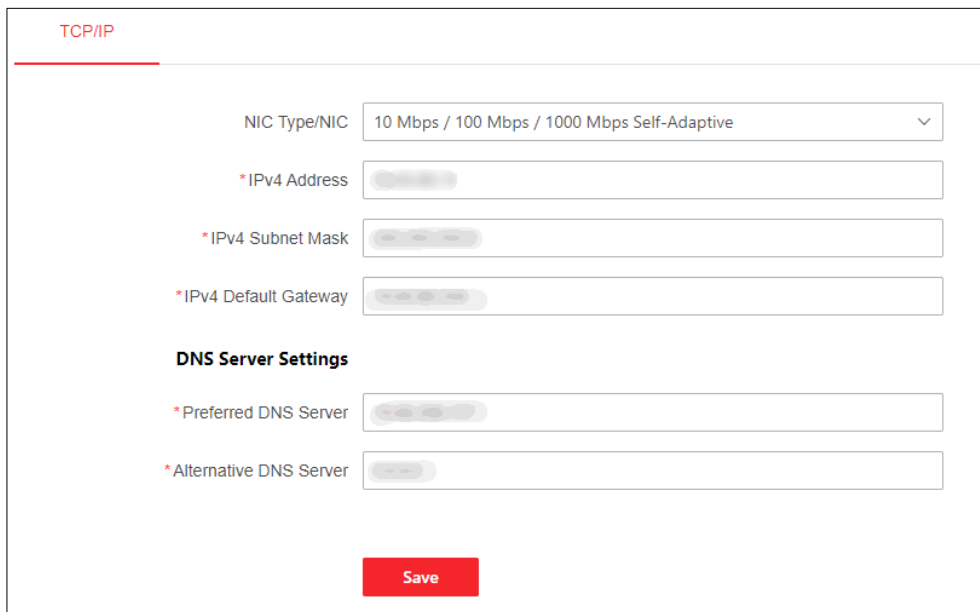


Figure 3-14 Configure Network Parameters

Step 2 Click **Save**.

### 3.2.2 Configure HTTP(S)

Step 1 Click **Configuration > Network > Network Services > HTTP(S)** to enter the following page.

- HTTP Port

The port for the browser to access the device. When the HTTP port is changed to 81, you need to enter <http://Device IP Address:81> on the browser address bar.

- Enable HTTPS

Use HTTPS to access the device while setting the HTTPS port. When editing the HTTPS port to 443 and logging in using a browser, you need to enter <https://Device IP Address:443> on the browser bar.

- Redirect to HTTPS Automatically

If enabled, HTTPS will be used by default when accessing the device.

HTTP(S)

HTTP

\* HTTP Port 80

HTTPS

Enable

\* HTTPS Port 443

Redirect to HTTPS Automatically

Save

Figure 3-15 Configure HTTP(S)

Step 2 Click **Save**.

### 3.3 Configure Encoding Devices

Click **Configuration > Signal Source Configuration > Encoding Configuration** to set video encoding parameters such as stream type and resolution.

- Select Signal Source: Select the signal source that requires encoding parameters.
- Stream Type: Sub-stream, which is used for standard definition storage and live view in case of insufficient bandwidth.
- Bit Rate Type and Max. Bit Rate: Bit rate type can be set to variable or constant bit rate.
- Constant bit rate: Maintain the average bit rate for transmission with fast compression speed, which may cause video mosaic phenomenon.
- Variable bit rate: Adjust the bit rate on the basis of not exceeding the upper limit of the bit rate with relatively slow compression speed, but able to ensure image clarity in complex scenes.
- Image Quality: Select according to the requirement of image clarity. The higher the image quality, the higher the bandwidth requirement for the network.
- I-Frame Interval: I-Frame Interval is the amount of frames between two continuous I-Frames. The larger the frame interval, the smaller the fluctuation of the bit stream, but the image

quality is relatively low. On the contrary, the larger the fluctuation of the bit stream, the higher the image quality.

- Resolution: Select according to the actual requirement for video clarity. The higher the resolution, the higher the bandwidth requirement for the network.
- Frame Rate: Refers to the number of frames per second in a video. Based on the actual bandwidth situation, the higher the video rate, the higher the required bandwidth and storage space.
- Encoding Type: The encoding standard for the bit stream can be selected.
- Video Type: You can choose between video stream and composite stream, which includes video stream and audio stream.
- Audio Encoding Type: Select the encoding standard for audio.

### Encoding Configuration

---

Select Signal Source

#### Video Encoding

Stream Type  Main Stream (Scheduled)  Sub-stream

Bit Rate Type  Variable  Constant Bit Rate

Image Quality

\*I-Frame Interval

\*Custom Max. Bit Rate

Resolution

Frame Rate

Encoding Type  H.264  H.265

Video Type  Video Stream  Video & Audio

#### Audio Encoding

Encoding Type

Input Audio Mode

Figure 3-17 Encoding Configuration

## 3.4 Event Configuration

When detecting incidents such as IP address conflicts, invalid access, network disconnection, and temperature alarm, you can configure whether triggering the audible alarm and linking to report platform or not.

Click **Configuration** > **Event**. All abnormal events support triggering the audible alarm and linking to report platform

### 3.4.1 Configure Device Exception Alarms

- **IP Address Conflict:** When the IP address of a device is the same as that of other devices in the network, an alarm will be triggered and uploaded to the platform.
- **Invalid Access:** It indicates that when entering an incorrect user name or password, an alarm will be triggered and uploaded to the platform.
- **Network Disconnected:** When the network of device is disconnected, an alarm will be triggered and uploaded to the platform.
- **Temperature Alarm:** When the temperature of device is too high or too low, an alarm will be triggered and uploaded to the platform.
- **Fan Exception:** It indicates that when the fan status is abnormal, an alarm will be triggered and uploaded to the platform.
- **Video Loss:** It indicates that when a video is lost, an alarm will be triggered and uploaded to the platform.
- **Decoding Signal Source Exception:** When the decoding signal source is abnormal, an alarm will be triggered and uploaded to the platform.

**Device Exception Alarm Configuration**

IP Address Conflict	<input type="checkbox"/> Trigger Audible Warning	<input type="checkbox"/> Link to Report Platform
Invalid Access	<input type="checkbox"/> Trigger Audible Warning	<input type="checkbox"/> Link to Report Platform
Network Disconnected	<input type="checkbox"/> Trigger Audible Warning	<input type="checkbox"/> Link to Report Platform
Temperature Alarm	<input type="checkbox"/> Trigger Audible Warning	<input type="checkbox"/> Link to Report Platform
Fan Exception	<input type="checkbox"/> Trigger Audible Warning	<input type="checkbox"/> Link to Report Platform
Video Loss	<input type="checkbox"/> Trigger Audible Warning	<input type="checkbox"/> Link to Report Platform
Decoding Signal Source Exception	<input type="checkbox"/> Trigger Audible Warning	<input type="checkbox"/> Link to Report Platform

Figure 3-18 Configure Device Exception Alarms

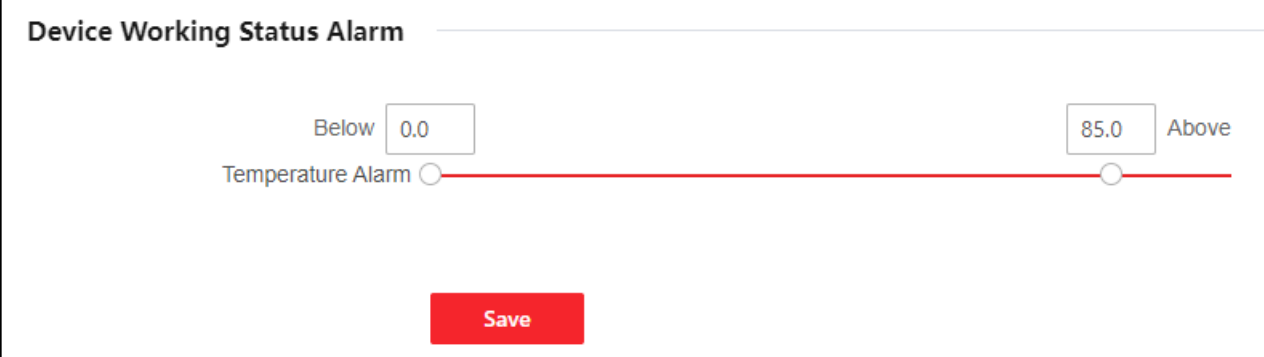
#### Note

Multi-channel devices support abnormal fan status and video loss alarm, refer to the actual capacity of the device for details.

### 3.4.2 Configure Device Working Status Alarms



Set the maximum and minimum temperature thresholds for devices when they are working normally. When the device temperature is higher than the maximum threshold or lower than the minimum threshold, an alarm will be triggered and uploaded to the platform.



The screenshot shows a configuration window titled "Device Working Status Alarm". It features a horizontal slider with a red line. On the left side of the slider, there is a text input field containing "0.0" and the word "Below" above it. On the right side, there is a text input field containing "85.0" and the word "Above" above it. Below the slider, there is a red button labeled "Save".

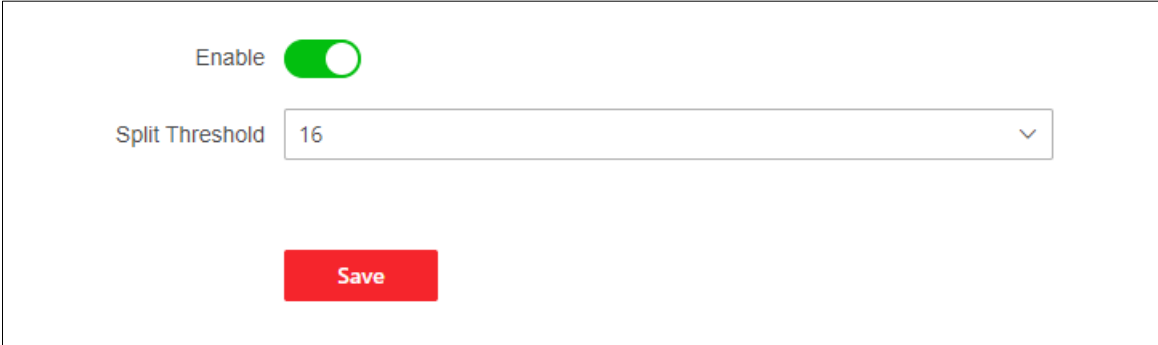
Figure 3-19 Configure Device Working Status Alarm

## 3.5 Other Settings

### 3.5.1 Split Image to Get Sub-stream

Click **Configuration** > **Other Settings** > **Split Image to Get Sub-stream** to enable the function and set the split threshold.

When the threshold approaches, the image will automatically switch to sub-stream.



The screenshot shows a configuration window for "Split Threshold Configuration". It has a toggle switch labeled "Enable" which is turned on (green). Below the toggle is a dropdown menu labeled "Split Threshold" with the value "16" selected. At the bottom, there is a red button labeled "Save".

Figure 3-20 Split Threshold Configuration

### 3.5.2 Configure Display Settings

Configure display settings when stopping decoding images, getting stream failed, and the decoding resource is insufficient.

Click **Configuration** > **Other Settings** > **Display Settings** to configure parameters of display settings.

- Stop Decoding Images: Select **Black** or **Last Frame**.
- Image of Getting Stream Failed: Select **Connection Exception** or **Last Frame**.

 **Note**

If you select connection exception, the concrete reason will be displayed.

- Insufficient Decoding Resource Prompt: Enable the button to prompt insufficient decoding resource.

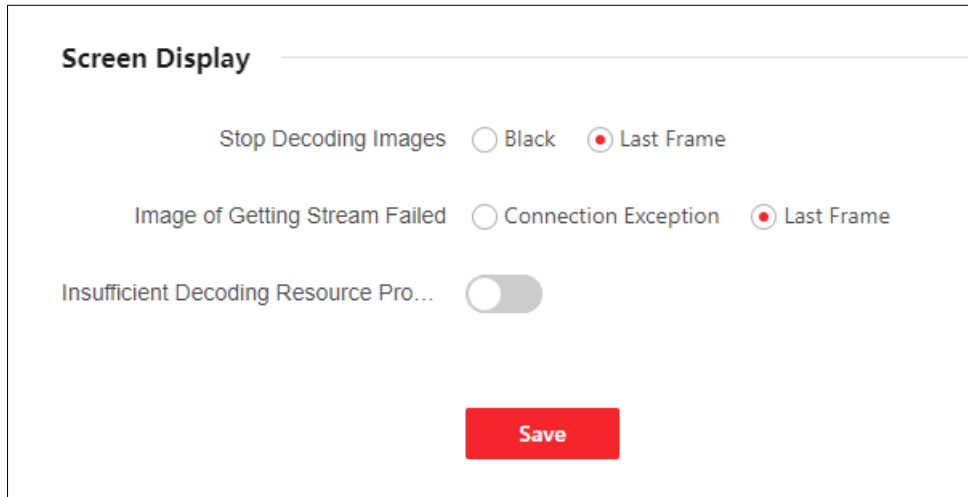


Figure 3-21 Screen Display Configuration

### 3.5.3 Configure Decoding Delay

Configure the preference for real-time or fluency when decoding.

Click **Configuration > Other Settings > Decoding Delay** to select default decoding delay level.

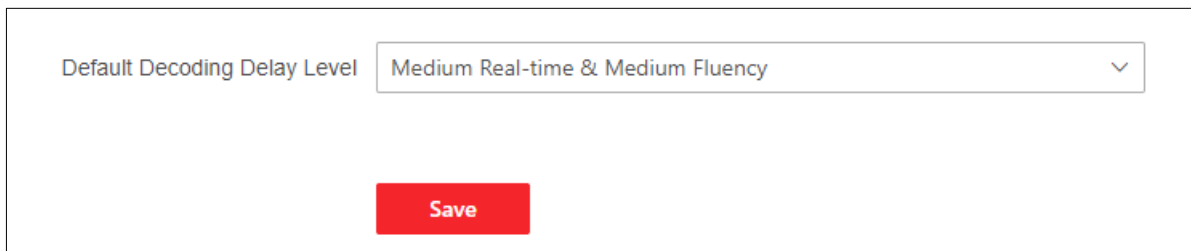


Figure 3-22 Decoding Delay Level

## Chapter 4 Maintenance and Security

### 4.1 System Maintenance

#### 4.1.1 Reboot

Click **Maintenance and Security > System Maintenance > Reboot**. Click **Reboot** to reboot the device.

#### 4.1.2 Upgrade

Click **Maintenance and Security > System Maintenance > Upgrade**. Click  to select upgrading files. Click **Upgrade**.

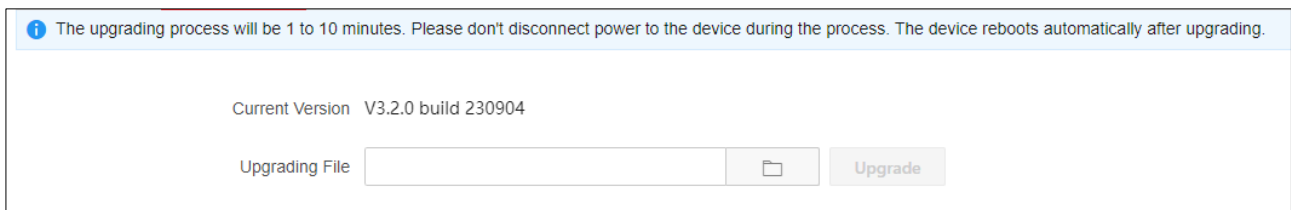


Figure 4-1 Upgrade

#### Note

You need to acquire the upgrading files previously and save it in the local directory. Do not power off in the process of upgrading. The devices will automatically reboot after upgrading.

#### 4.1.3 Backup and Restore

Click **Maintenance and Security > System Maintenance > Backup and Restore** to perform operations such as importing/exporting parameters and restoring to default settings.

##### Export Parameters

Export device and scene parameters to quickly import the exported parameters into other devices.

- Export Device Parameters

By exporting device parameters for the convenience of configuring other devices with the same parameters.

- Export Scene Parameters

By exporting the scene parameters for the convenience of configuring other devices with the same parameters.

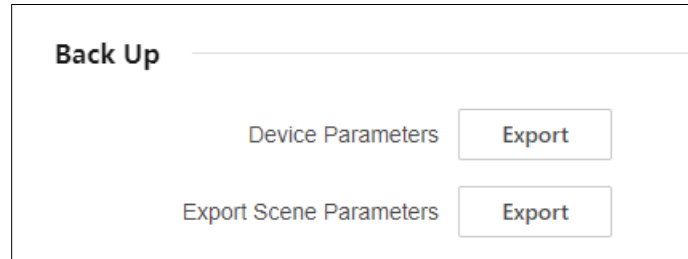


Figure 4-2 Back Up

## Reset

- Partial Reset

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

- Factory Reset

All functions and parameters will be restored to factory settings.

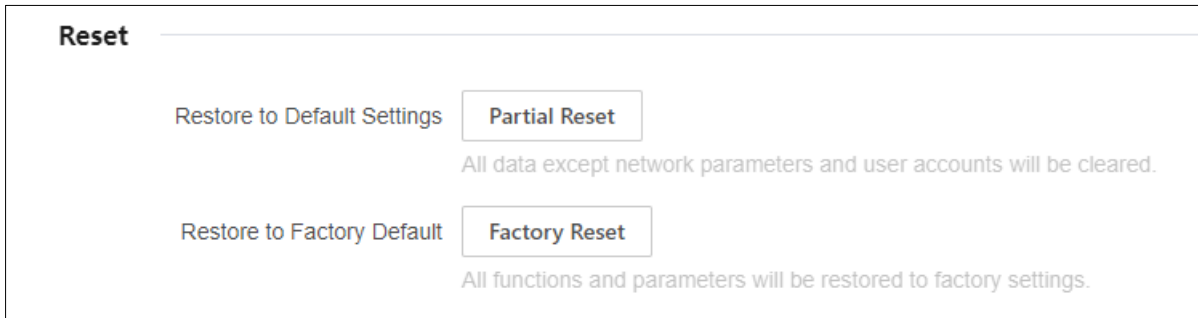


Figure 4-3 Reset

## Import Parameters

Import parameters that are exported from other devices to quickly use the same configuration.

- Import Device Parameters

Import configured parameters that are exported from other devices to quickly use the same parameters configuration.

- Import Scene Parameters

Import scene parameters that are exported from other devices to quickly use the same scene parameters configuration.

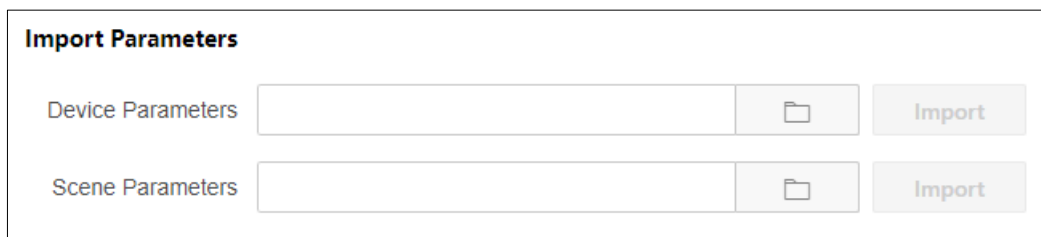


Figure 4-4 Import Parameters

## 4.1.4 Log

Search and export logs.

- Search Logs

Click **Maintenance and Security > System Maintenance > Log** to set search conditions. Click **Search**.

No.	Time	Primary Type	Sub Type	Remote Host IP	Description
1	2023-08-16 23:59:25	Exception	--		[admin] manual operation reboot device from web
2	2023-08-16 23:58:20	Exception	Video Signal Exception	-	signal Recover
3	2023-08-16 23:58:20	Exception	--		sdk [admin] operate logout
4	2023-08-16 23:58:20	Operations	Remote: Login		sdk [admin] operate login
5	2023-08-16 23:58:17	Exception	--	-	-
6	2023-08-16 23:58:16	Exception	--		slot[1] dev[1]
7	2023-08-16 23:57:25	Exception	--		[admin] manual operation reboot device from web
8	2023-08-16 23:56:50	Operations	Remote: Login		sdk [admin] operate login
9	2023-08-16 23:56:20	Exception	Video Signal Exception	-	signal Recover

Figure 4-5 Log

- Export Logs

Click **Export CSV File** to export log files in the CVS format.

## 4.1.5 Device Debugging

Click **Maintenance and Security > System Maintenance > Device Debugging**.

- SSH

Once enabled, remote devices can be accessed through SSH.

- Export Logs to USB Drive

You can export device logs to a FAT32 USB drive, which requires formatting before inserting it into the drive.

- Export Network Switching Packet

Select a partition and click **Start Capturing** to capture network packet. Click **Download** to export the captured content.

- Shell Command Operation

Enter the Shell command, click **Send** and determine the abnormal situation of the device by checking for received message.

The screenshot displays a web-based interface for device debugging, organized into four main sections:

- SSH:** Features an "Enable" toggle switch that is currently turned on (green).
- Export Logs to USB Drive:** Includes a "Start Exporting" toggle switch (currently off) and a status indicator "USB Flash Drive Status" showing "No USB flash drive."
- Export Network Switching Packet:** Contains a "Partition" dropdown menu set to "Board0\_SubSys0" and a "Start Capturing" button. Below this is a "Captured Packet" area with a placeholder icon and the text "Please click Start Capturing."
- Shell Command Operation:** Features a "Shell Command" input field, a "Send" button, a "Status" label, and a "Receive Message" area with a placeholder icon and the text "Please send command first."

Figure 4-6 Device Debugging

## 4.2 Security Management

### 4.2.1 IP Filtering Control

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

Step 1 Click **Maintenance and Security > Security Maintenance > IP Filtering Control** to enable the function.

Step 2 Select **Filtering Type**.

- **Blocklist:** You are prohibited to access the device with the IP address.
- **Allowlist:** You are allowed to access the device with the IP address.

Step 3 Click **Add** to add the corresponding IP address and description. Click **Save**.

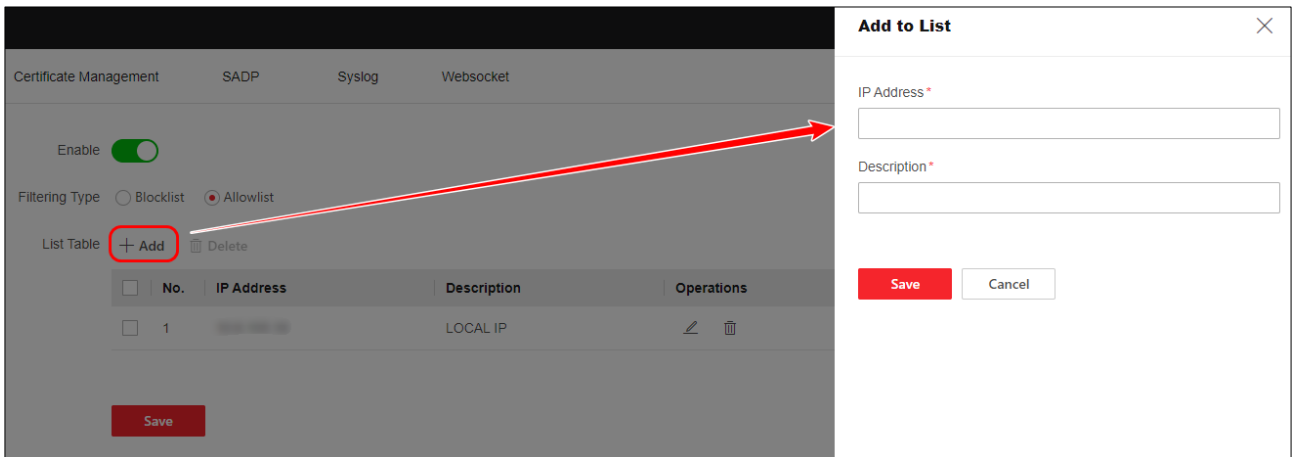




Figure 4-7 IP Filtering Control

- Modify List: Click  to edit the corresponding IP address and description of the list.
- Delete List: Click  to delete the list.


Step 4 Click **Save**.

## 4.2.2 Certificate Management

Import the HTTPS certificate and secret key.

Step 1 Click **Maintenance and Security** > **Security Maintenance** > **Certificate Management**.

Step 2 Set HTTPS Certificate Import Method to **Certificate and Secret Key**.

Step 3 Click  in the Certificate or Secret Key field to select a certificate file or secret key file from the local storage to import it.

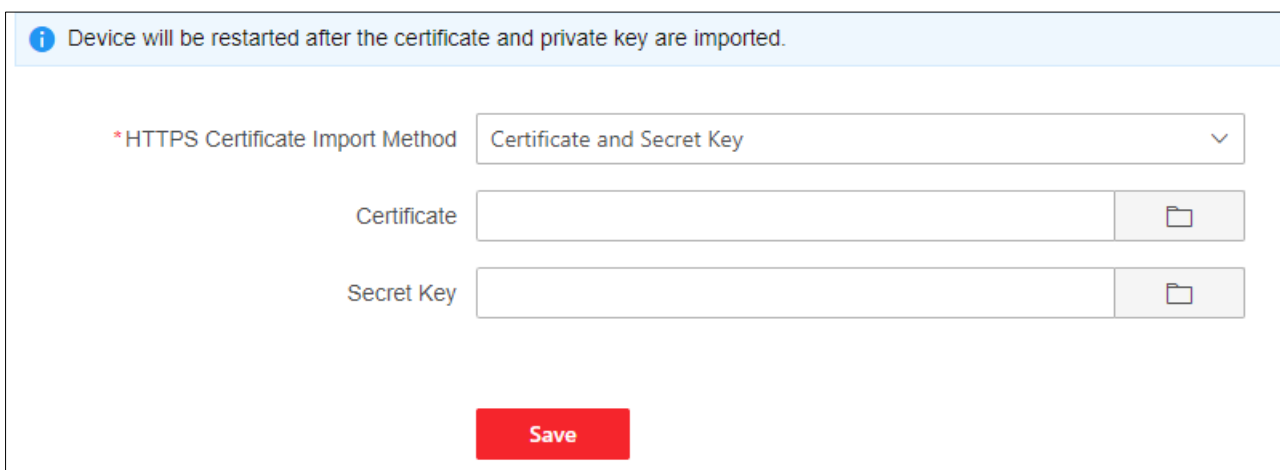


Figure 4-8 Certificate Management

Step 4 Click **Save**.

### 4.2.3 SADP

Once enabled, the device can be searched by SADP software on the same network.

Click **Maintenance and Security > Security Maintenance > SADP** to enable or disable SADP.

### 4.2.4 Syslog

Once enabled, the device log can be uploaded to the Syslog server automatically.

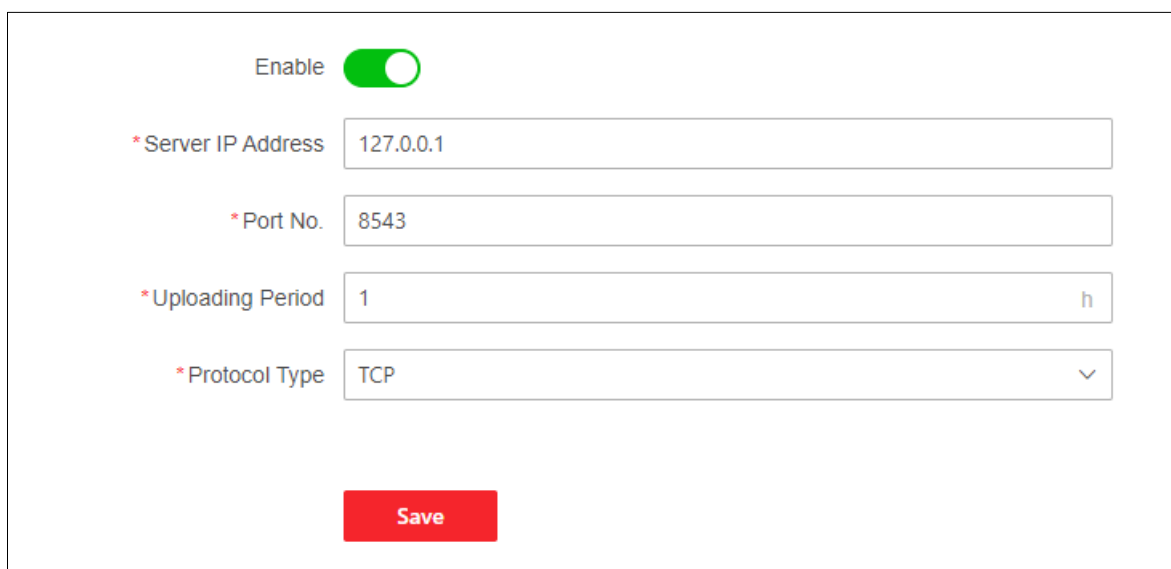
Step 1 Click **Maintenance and Security > Security Maintenance > Syslog** to enable the function.

Server IP: IP address of the Syslog server.

Port: The port No. of the Syslog server.

Uploading Period: Set the period of uploading logs.

Protocol Type: Select **TCP** or **UDP**.



The screenshot displays the Syslog configuration page. At the top, there is an 'Enable' toggle switch that is currently turned on (green). Below this, there are four input fields, each with an asterisk indicating it is required: '\* Server IP Address' with the value '127.0.0.1', '\* Port No.' with the value '8543', '\* Uploading Period' with the value '1' and a unit selector 'h' (hours), and '\* Protocol Type' with a dropdown menu set to 'TCP'. At the bottom center of the form is a red 'Save' button.

Figure 4-9 Enable Syslog

Step 2 Click **Save**.

### 4.2.5 WebSocket

Enable WebSocket to export the stream.

Click **Maintenance and Security > Security Maintenance > WebSocket** to enable or disable the WebSocket.



## Chapter 5 Device Information

### 5.1 Check Device Status

You can check the device health status such as firmware usage, decoding usage, network status, and partition status.

Click **Overview** to check the resource usage and device status.

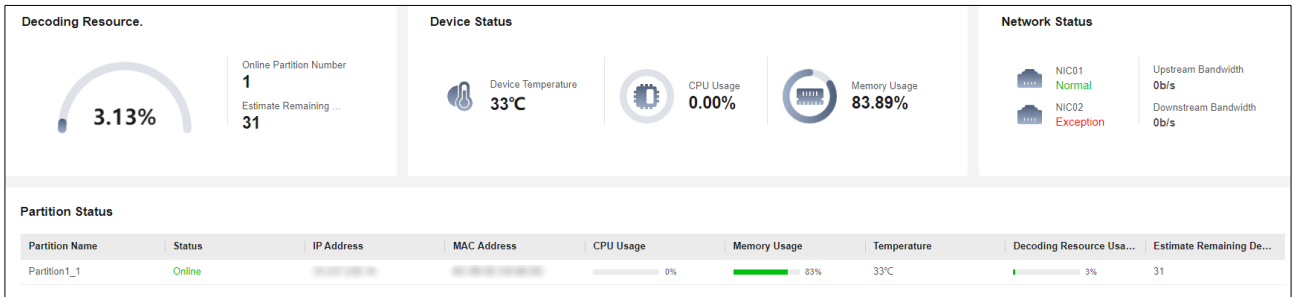


Figure 5-1 Check Device Status

### 5.2 Screen Maintenance

You can view the screen information, configure the signal source type and image parameters, and start up or shut down the screen.

#### Note

Only partial models support screen maintenance. The actual product prevails.

#### Prerequisites

Make sure you have configured the related serial ports.

Step 1 Click **Screen Maintenance** to enter page below.

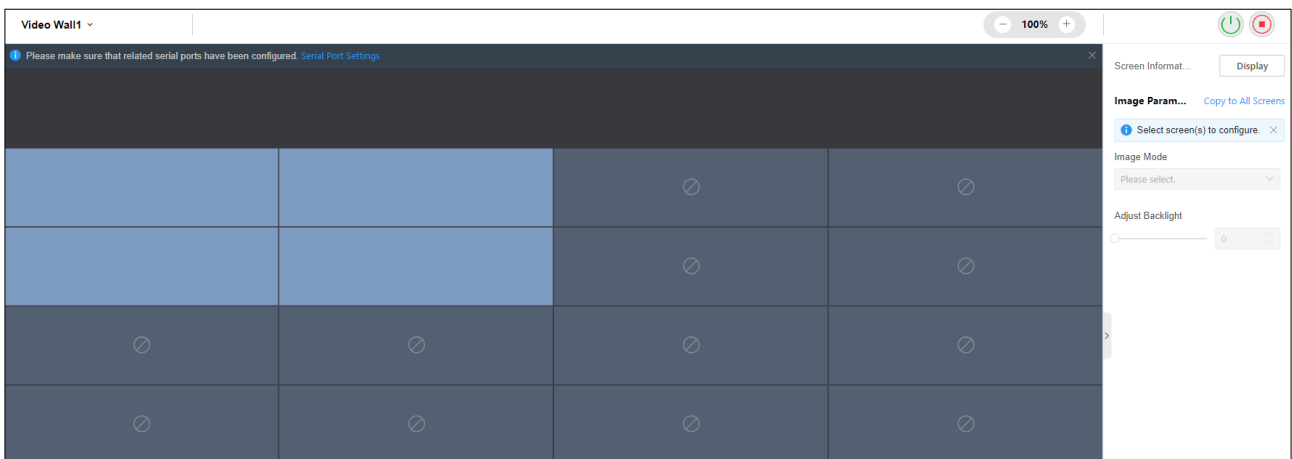


Figure 5-2 Screen Maintenance Page

Step 2 (Optional) Perform the following operations as needed.

- Display Screen Information

Click **Display** to show the screen information such as work duration and temperature.



Figure 5-3 Display Screen Information

- Configure Signal Source Type

Select the screen to be configured, and open the corresponding drop-down list to select the importing source type.

- Modifying Image Mode

Select the screen to be configured, and open the corresponding drop-down list to select the image mode.

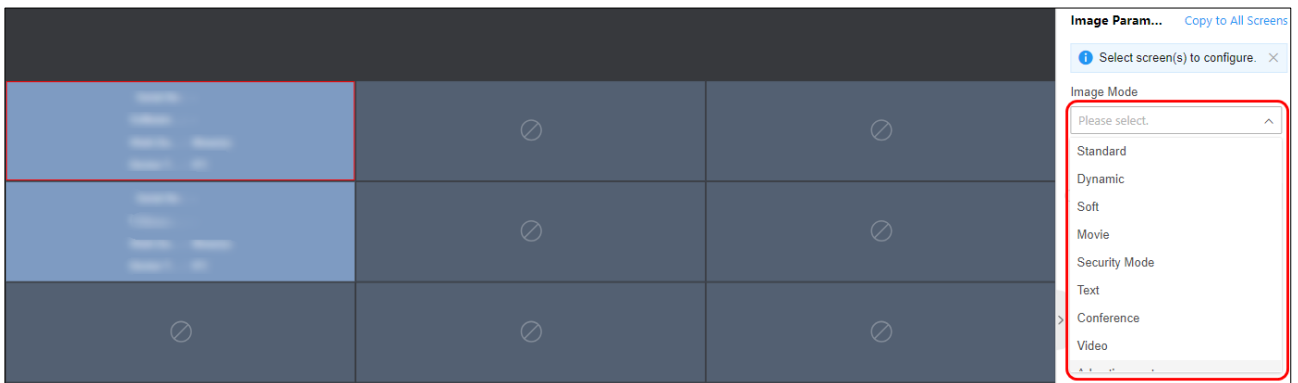


Figure 5-4 Select Image Mode

- Adjust Backlight

Select the screen to be configured and move the slider or enter the number to adjust screen backlight.

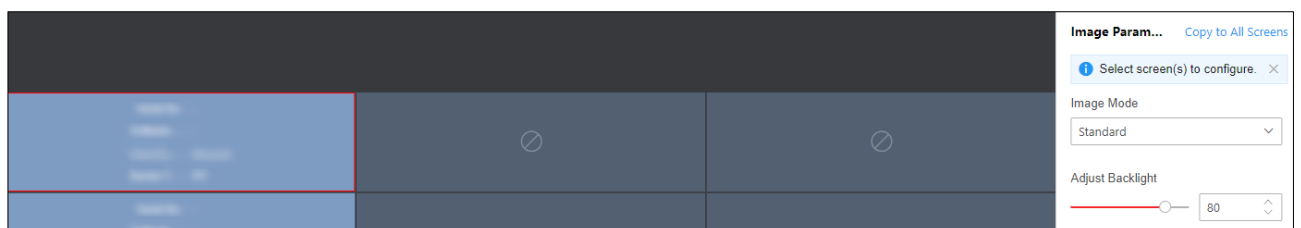



Figure 5-5 Adjust Screen Backlight

- Copy to All Screens

Click **Copy to All Screens** to copy the current screen settings to all other screens.

- Start Up/Shut Down Screen

Click / to start up/shut down the screen.



You can also start up or shut down the screen by controlling the serial port.

## Chapter 6 More Information

Scan the QR code below to acquire Smart Wall Client User Manual.





See Far, Go Further