

Video Wall Controller

User Manual

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Preface

Applicable Models

This manual is applicable to the DS-C60S series video wall controller.

Default Parameters

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

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
i Note	Provides additional information to emphasize or supplement important points of the main text.
A 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

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



- 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.

TABLE OF CONTENTS

Chapter 1 Introduction	1
1.1 Overview	1
1.2 First-Time Configuration Process	2
Chapter 2 Prerequisite Configuration	3
2.1 Connect Screens and Devices	3
2.2 Activate and Log In to Device	6
2.3 Configure the Network Address of Device	9
2.4 Lighten Screens	9
2.4.1 Lighten LED Screens (Directly Connected to Electrical LED Controller Board)	
2.4.2 Lighten LED Screens (Directly Connected to Optical LED Controller Board)	
2.5 (Optional) Configure Directly Connected LED Screens	16
2.5.1 Correct Receiving Cards	16
2.5.2 Configure Display Effect	19
2.5.3 Configure Loading Mode	21
2.5.4 Configure Auto Dehumidification	22
2.5.5 Configure Sensors	23
2.5.6 Configure Power Distribution Cabinets	24
Chapter 3 Video Wall Management	27
3.1 Configure a Video Wall	27
3.1.1 Configure the Video Wall Scale	27
3.1.2 Configure the Output of a Video Wall	
3.1.3 Configure Signal Sources	
3.1.4 Bind Signal Sources with a Video Wall	
3.2 Operate a Video Wall	
3.2.1 Edit Signal Source Window Parameters	
3.2.2 Edit Signal Source Parameters	
3.2.3 Splice Signal Source	
3.2.4 Configure Subtitles	
3.2.5 Manage Scenes	
3.2.6 Manage Plans	51
Chapter 4 Other Parameters	53
4.1 Configure System Parameters	53
4.2 Configure HTTP(S) Parameters	56
4.3 Configure Events	57
4.4 Set Other Parameters of Device	58
Chapter 5 Device Maintenance	61
5.1 View Device Status	61
5.2 View Status of LED Controller Board	61
5.3 Test Condition of Directly Connected LED Screens	63
5.4 Quickly Maintain a Receiving Card	64

5.5 Maintain Screens	64
5.5.1 Control Screen via Serial Port	64
5.5.2 Control Screens via HDMI Ports	67
5.6 Maintain the System	68
5.7 Maintain the Device Security	73

Chapter 1 Introduction

1.1 Overview

The video wall controller (hereinafter referred as the device) is the core control device of the screen splicing control system. As a new-generation FPGA-based pure hardware image processing device, it adopts the structure of main control board and service boards to provide the following advantages:

- Supports the video input and video output via various ports.
- Supports the network encoding and real-time preview of signal sources.
- Supports the decoding and output of various network signal sources.
- Supports the high-definition (HD) video splicing and fusion.
- Supports the window splicing, roaming window, and other operations.
- Supports the management on users, network, operation, alarm and logs.

1.2 First-Time Configuration Process



Figure 1-1 First-Time Configuration Process

Chapter 2 Prerequisite Configuration

2.1 Connect Screens and Devices

Connect Single Device and Screens

• Connect an LCD screen and the device: Use a video cable to connect an output port of the device output board to an LCD screen.

• One LED screen consists of multiple LED cabinets. Take either of the following methods to connect an LED screen and the device:

- Use multiple network cables to connect an external LED controller to multiple LED cabinets, and then use a video cable to connect an output port of the device output board to the external LED controller.
- Use multiple network cables to connect an electrical LED controller board to multiple LED cabinets.

iNote

The figure below is for illustration only.



Figure 2-1 Connect Screen and Device

1. LCD screen	2. LED screen	3. HDMI or DVI video cable
4. Network cable	5. Output board	6. Electrical LED controller board
7. Device	8. External LED controller	

Connect Two Devices and Screens

Step 1 Connect the indoor device and outdoor device for long distance transmission.

- 1) Use multiple network cables to connect multiple electrical ports of an optical LED controller board in the outdoor device to multiple LED cabinets.
- 2) Use the optical fibers to connect the optical ports of the optical LED controller board in the outdoor device to the optical ports of the optical LED controller board in the indoor device.

iNote

- You cannot install the input boards or decoding boards in the outdoor device.
- You cannot install the input board in Slot S6 of the indoor device.

Step 2 Connect the indoor device and a screen.

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

iNote

The figure below is for illustration only.





1. LED screen	2. Network cable	3. Optical LED controller board
4. Outdoor device	5. LCD screen	6. HDMI or DVI video cable
7. Optical fiber	8. Output board	9. Input board
10. Indoor device	11. External LED controller	

2.2 Activate and Log In to Device

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

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

Use SADP Client and Web Page

- Step 1 Connect the device and computer to the same LAN. Make sure the device and computer in the same network segment.
- Step 2 Download and install the <u>SADP client</u> 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**.

SADP														\$0_ a×
Total numbe	r of online devices: 11	9							Usbied	Export	Refresh		Q	Activate the Device
 1 iD 	• Device Type	Status	Port	IPv4 Address	Enhanced SDK Service Port	Software Version	HTTP Port	IPv4 Gateway	Device Seria	al No.	Su	bnet Mask	MAC Address	
007	the case in our	Active		10000	N/A	10.000		100010000					$\ g_{n-1}(x_{n-1})\ \leq \ g_{n-1}(x_{n-1})\ \leq \ g_{n-1}(x_{n-1})\ $	
010	11.000.000	Active	-	1000	N/A	$(x_1,\ldots,x_n) \in \{0,1,\ldots,n\}$	-	-					$\{a_i,a_{i+1},\ldots$	4
012		Active		10000-0000	N/A								$ _{X_{n}}= _{X_{n}$	
016	11-188-114	Active	-	1040.000	N/A	$(1,1) \in [0,1] \times [0,1]$		1000-0000					$[g_{ij},g_{ij}] \in [0,\infty,\infty]$	The device is not activated
017		Active			N/A		-	10.00					$(a_1,a_2,\ldots,a_{n-1},\ldots,a_{$	The device is not derivated.
026	the other loop	Active	-	10000	N/A		-	100000000						
029		Active			N/A	$(1,1,1) \in [0,1] \times [0,1]$								
034	10.000 (CONT.	Active	-	10000	N/A	$(1,\ldots, n) \in \{1,\ldots, n\}$		10.00					$[1,\infty) \in [0,\infty)$	You can modify the natural: naramaters after the
051		Active		1000	N/A								$\ \ = \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	device activation.
056	10.000	Active		10000	N/A	11-11-10-10		100010-004					$\ g_{n-1} (g_{n-1}) - g_$	Activiste Now
060		Active		$(1,1,2,2,\ldots,2,2,2,2,2,2,2,2,2,2,2,2,2,2,2,$	N/A	$(1,\ldots,n_{n-1}) \in \{1,\ldots,n_{n-1}\}$					-		[2, -2, -2, -2, -2, -2, -2, -2, -2, -2, -	
069	10.000	Active	-	1000	N/A			1000-0100					$\ g_{i,j} - g_$	
075	10.000	Active	-	10.000	N/A	$(1-1)^{-1}(\alpha,\beta) \in [0,1]$	-	10000-0000					$[a_1,a_2,\ldots,a_{n-1}] = [a_1,a_2,\ldots,a_{n-1}]$	
077	101-1020-101-001	Active	-	10.00	N/A	$(1,\ldots, n_{n-1}) \in \{1,\ldots, n_{n-1}\}$		10.00			-		$[a_1,a_2,\cdots,a_{n-1},a_{n-1}]$	New Password:
081		Active	-	1000	N/A		-				-		$ _{\mathcal{T}_{\mathcal{T}}} = _{\mathcal{T}}} = _{\mathcal{T}_{\mathcal{T}}} $	Confirm Password:
092	11.000.000	Active		$(1,1,2,\ldots,1) \in \{0,1,2,\ldots,n\}$	N/A		-							
094	11-11-11-11-11-11-11-11-11-11-11-11-11-	Active		1000	N/A	$ _{\mathcal{T}} = _{\mathcal{T}} + _{\mathcal{T}} + _{\mathcal{T}} + _{\mathcal{T}} + _{\mathcal{T}} + _{\mathcal{T}} + $					-		$\{y_{i},y_{$	
095		Active	-	1000	N/A		-	-					where we a	
099		Active	-	1000	N/A		-				-		$(a,b,c)\in \mathbb{R}^{n} \to \mathbb{R}^{n}$	
110	10.000	Active	-	10.00	N/A	$(1,1,1) \in \{1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,1,$		10.00					$[a_1,a_2,a_3,a_4,a_5,a_5,a_5,a_5,a_5,a_5,a_5,a_5,a_5,a_5$	
9 115		Inactive	-		N/A								$ y_{i-1}(y_{i}) = y_{i-1}(y_{i-1}) = y_{i-1}(y_{i-1}(y_{i-1}) = y_{i-1}(y_{i-1}) = y_{i-1}(y_{i-1}(y_{i-1}) = y_{i-1}(y_{i-1}(y_{i-1}(y_{i-1}) = y_{i-1}(y_{i-1}(y_{i-1}(y_{i-1}) = y_{$	ANY ASS
														Activate
4														

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

Figure 2-3 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 2-4 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 2-5 Change Password

Use Web Page

- Step 1 Use a network cable to connect a computer to the device.
- Step 2 Set the computer IP address to any IP address in the range of 192.0.0.2 to 192.0.0.253 (excluding 192.0.0.64) and set the computer gateway address to 192.0.0.1.

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

- Step 3 Enter 192.0.0.64 in the computer browser to enter the device activation page.
- Step 4 Set the activation password, and then click Activate.



Figure 2-6 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**.

Welcome			
R User Name			
A Password	Ø	1	
Log In			
When using the product, please respect th other rights of others.	e privacy and		

Figure 2-7 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 2-8 Change Password

2.3 Configure the Network Address of Device

Step 1 Go to Configuration \rightarrow Network \rightarrow Network Configuration \rightarrow TCP/IP.

TCP/IP	
NIC Type/NIC	1000 Mbps Full-Duplex
*IPv4 Address	
*IPv4 Subnet Mask	
* IPv4 Default Gateway	
	Save

Figure 2-9 Configure the Device IPv4 Address

Step 2 Select the NIC type.

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

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

Step 4 Click Save.

- Step 5 (Optional) Remove the network cable that connects the device and computer, and use the network cable to connect the device to the on-site network.
- Step 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 Lighten Screens

You must lighten the screens before configuring a video wall:

- Connect the LCD screens to the power source. Typically, the LCD screens are lightened automatically once powered. If not, connect the LCD screens to the power source and press the power buttons on LCD screens.
- Connect the LED screens to the power source and lighten the LED screens as follows:
 - If the LED screens are directly connected to the LED controller boards in the device, you can use the web interface of the device or LED Tool client to lighten the screens.

iNote

After lightening the screens via the LED Tool client, you will see a prompt to reconfigure the display lightening parameters on the **Screen Lightening Configuration** page when you log in to the device web page. Please reconfigure the screen lightening parameters on the web page.



Figure 2-10 Reconfiguration Prompt on Screen Lightening Configuration Page

• If the LED screens are connected to the device through an external LED controller, you can use the web interface of the LED controller, LED batch controller client, or LED Tool client to lighten the LED screens.

2.4.1 Lighten LED Screens (Directly Connected to Electrical LED Controller Board)

When the LED screens are directly connected to the electrical LED controller boards, lighten the LED screens as follows.

Step 1 Use either of the following methods to enter the screen lightening configuration page:

- Go to Screen Lightening Configuration.
- Go to Video Wall Configuration, and click ⁽²⁾ of the output port of an LED controller board to go to the Screen Lightening Configuration page.



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

Q	① Import Configuration	② Lighten Screens	③ Enable Correction	
Output 6-1 🖉	Please load or import the configurat	ion, and check whether the receiving c	ard signal port connection is correct.	Operation Guide $ imes$
Decoding Output Name*	Configuration Type	Load From Current Screen	✓ Load	

Figure 2-11 Edit Output Port Name

Step 2 On the **Import Configuration** page, select one of the following methods to import the receiving card configuration file and click **Next**.

- 1) Set the screen size according to the receiving card quantity. Make sure the product of the screen column and screen row is equal to the actual receiving card quantity.
- 2) Select one of the following methods to import the receiving card configuration file:
 - Select Load From Current Screen and then click Load.
 - Select Load From File, click 🗀 to import a file, and click Load.
 - Select Load from Cloud, enter the serial number, and click Search. Select a searched configuration file and then click Load.

i Please load or import the configura	ation, and check whether the receiving ca	rd signal port c	connection is corre	ect.		Operation G	iuide $ imes$	
Configuration Type	Load From Current Screen	~	Load	Configuration Type	Load from Cloud	~		
				Serial No.			Search	Reset
	Next				No. File N	lame	F	ile Type
Configuration Type	Load From File	\sim						
Select File			Load			No data.		
	Next							
						Total: 0 <	1 >	Go 1
								Load
					Next			

Figure 2-12 Import Receiving Card Configuration File

Step 3 On the Lighten Screens page, configure the signal cable connection.

1) Click **Show Connections** to display the network port number on the actual screens.

i Note

The device supports showing the connection number only when the loaded resolutions of multiple receiving cards controlled by a single LED controller board is consistent.

2) According to the network interface number on the actual screens, select a network interface of the LED controller board and then take either of the following methods to connect the selected network interface to the screens:

- Click to select screens and connect them in the order of operation. The connection can span different network interfaces of the device.
- Click a screen to set as the start point of the connection and hold a screen to select the connection range. Batch connect screens in the order of operation. The connection can span different network interfaces of the device. If the start point and end point are not on the same row or column, the connection will be S-shaped in the order of operation.
- 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 on this page.
- 4) Click Finish.
- 5) Use the same method to configure signal connection for other network interfaces.



Figure 2-13 Configure Signal Cable Connection

Step 4 Complete the screen lightening configuration:

• For the HUB receiving cards, you have completed the screen lightening configuration.

For the AXS receiving cards, click Next. On the Enable Correction page, enable correction.

Enable Correction	
	After enabling the correction for the first time, the correction file will be loaded automatically. Loading requires some time and no operation is allowed in the meantime.
	Back

Figure 2-14 Firstly Correct AXS Receiving Cards

2.4.2 Lighten LED Screens (Directly Connected to Optical LED Controller Board)

When the LED screens are directly connected to the electrical LED controller boards, lighten the LED screens as follows.

Step 1 Use either of the following methods to enter the screen lightening configuration page:

- Go to Screen Lightening Configuration.
- Go to Video Wall Configuration, and click ⁽²⁾ of the output port of an LED controller board to go to the Screen Lightening Configuration page.

iNote

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

Q	(1) Initial Configuration	(2) Import Configuration	③ Lighten Screens
Output 6-1	Enable Long Distance Transmission		
Output 6-1	Save	Next	

Figure 2-15 Edit Output Port Name

Step 2 On the Initial Configuration page, enable long distance transmission and click Next.

- 1) On the web page of the indoor device, enable long distance transmission and complete screen lightening.
- 2) On the web page of the outdoor device, enable long distance transmission.



Figure 2-16 Enable Long Distance Transmission

- Step 3 On the **Import Configuration** page, select one of the following methods to import the receiving card configuration file and click **Next**.
 - 1) Set the screen size according to the receiving card quantity. Make sure the product of the screen column and screen row is equal to the actual receiving card quantity.
 - 2) Select one of the following methods to import the receiving card configuration file:
 - Select Load From Current Screen and then click Load.
 - Select Load From File, click 🗀 to import a file, and click Load.
 - Select Load from Cloud, enter the serial number, and click Search. Select a searched configuration file and then click Load.

i Please load or import the configura	tion, and check whether the receiving card signal port	ect.		Operation Guide $ imes$	
Configuration Type	Load From Current Screen \checkmark	Load	Configuration Type	Load from Cloud	~
			Serial No.		Search Reset
	Next			No. File Name	File Type
Configuration Type	Load From File 🗸				
Select File		Load			No data.
	Next				
					Total: 0 < 1 > Go 1
					Load
				Next	

Figure 2-17 Import Receiving Card Configuration File

Step 4 On the Lighten Screens page, configure the signal cable connection.

1) Click **Show Connections** to display the network port number on the actual screens.

iNote

The device supports showing the connection number only when the loaded resolutions of multiple receiving cards controlled by a single LED controller board is consistent.

- 2) According to the network interface number on the actual screens, select a network interface of the LED controller board and then take either of the following methods to connect the selected network interface to the screens:
 - Click to select screens and connect them in the order of operation. The connection can span different network interfaces of the device.
 - Click a screen to set as the start point of the connection and hold a screen to select the connection range. Batch connect screens in the order of operation. The connection can span different network interfaces of the device. If the start point and end point are not on the same row or column, the connection will be S-shaped in the order of operation.
- 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 on this page.

- 4) Click Finish.
- 5) Use the same method to configure signal connection for other network interfaces.



Figure 2-18 Configure Signal Cable Connection

Step 5 Complete the screen lightening configuration:

- For the HUB receiving cards, you have completed the screen lightening configuration.
- For the AXS receiving cards, click **Next** and enable correction.



Figure 2-19 Firstly Correct AXS Receiving Cards

2.5 (Optional) Configure Directly Connected LED Screens

When the LED screens are directly connected to the LED controller boards in the device, configure the LED screen parameters as required based on their lightening status.

2.5.1 Correct Receiving Cards

Step 1 Go to **Configuration** \rightarrow **Receiving Card Correction**.

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

- Step 3 According to actual needs and lamp board capabilities, switch on **Enable Correction** and check the corresponding correction mode. The available correction mode includes brightness chroma correction and low gray correction. Only some lamp boards support low gray correction.
- Step 4 (Optional) If you cannot locate the correction area, enable Show Connections. The actual screens will show the receiving card connection number.

Step 5 Select the correction area:

- Click and select the area to be corrected.
- Click \equiv and enter the start coordinates and end coordinates of the correction area.
- If you need to correct modules, check **Show Module**.



Figure 2-20 Select Correction Area

Step 6 (Optional) For the AXS receiving cards, click **Load from Lamp Board** and then click **Live View** to view the display effect after loading the factory correction data from the lamp boards.

iNote

The HUB receiving cards do not support loading the factory correction data from the lamp boards.

Step 7 If the display effect does not meet the requirements, perform manual correction, and then click **Live View** to view the display effect after manual correction.

- If the color difference exists, select **Manual** and adjust the RGB values.
- If bright or dark seams exist, select Seam Correction, set the seam direction and width, and adjust the RGB values.
- To adjust RGB values synchronously, enable **Sync Adjustment**.

Screen Seam C	Screen Seam C	Screen Seam C	Screen Seam C
Correction Mode Load from Lamp Boards File Correction Manual Live View Save	Correction Mode Load from Lamp Boards File Correction Manual Upload Correction File Live View Save	Correction Mode Load from Lamp Boards File Correction Manual Sync Adjustment Red 1000 \diamondsuit Green 1000 \diamondsuit Blue 1000 \diamondsuit Live View Save	Correction Range

Figure 2-21 Correct AXS Receiving Cards

Step 8 If the display effect still does not meet the requirements, select **File Correction** to upload a locally saved correction file.

iNote

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

Step 9 When the desired display effect is reached, click Save.

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

- If the correction data do not meet the requirements, click **Clear Correction Data**, select the screen areas, and click **OK**.
- To export the correction data, click **Export Correction Data**, select the screen areas, and click **OK**.



Figure 2-22 Clear/Export Correction Data

2.5.2 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 Go to Configuration \rightarrow Display Effect.

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

Step 3 Select a preset mode.

Q	Preset Mode
Configure All LED Co	😫 General 🔁 Text 🔁 Advertisement 🥸 Video Signal 📾 HDR 🚳 Movie <table-cell> 🖓 Monitoring</table-cell>
Output 6-1	Basic Parameters
	Brightness Adjustment Mode 💿 Manual Adjustment
	Brightness 50 % 🗘
<	Eye Protection Mode ①
	Color Standard Original V
	Color Temperature 9300 K 🗘

Figure 2-23 Select Preset Mode

Step 4 If the display effect does not meet the requirements, edit the following parameters as required, and then click **Save**.

- Enable **Eye Protection Mode** to reduce brightness and power consumption.
- Adjust the brightness. The manual adjustment is supported by default. To use the automatic adjustment, perform the following steps:
 - 1) Connect the light sensor to the multi-function card and connect the multi-function card to the LED controller board.

- Go to Configuration → IoT Configuration → Sensors, select Light Sensor for the corresponding channel, and set the sensor quantity.
- 3) Click \bigcirc to refresh the sensor settings.

Q	Select Sensor Type $ \mathcal{G} $						
Output 4-1	Channel No.	Sensor Type		Sensor Quantity	Status		
Output 6-1 🖉	1	Light Sensor	~	1	8 Offline		
	2	None	\sim	1	8 Offline		
	3	None	\sim	1	8 Offline		
	4	None	\sim	1	8 Offline		
<	Sensor Thresho Cabinet V	Id Settings					
	Cabinet Tempe	rature Detection					
	Ambient Tempe	rature Detection					
	Ambient Hu	midity Detection					
Auto Sle		Auto Sleep					
		Save					

Figure 2-24 Configure Light Sensor

- Choose a color standard.
- Set the color temperature.
- Set the contrast mode.
- Set the Gamma coefficient: A smaller Gamma coefficient makes the low gray areas brighter, while a larger Gamma coefficient makes the low gray areas darker.
- Set the ambient light: When the ambient light is brighter, set a higher ambient brightness value.
- When low gray effect is abnormal, adjust the initial brightness level.
- When the low gray effect is poor, increase the initial brightness value.
- Enable **Gray Scale Optimization** to make the screen gray display more uniformly. This feature is supported by only some receiving cards.

Advanced Parameters		
Contrast (i)	Off	~
Gamma Coefficient (i)		2.8 ^
Ambient Light (i)	0	1
Initial Brightness Level (i)	0	0
Initial Brightness (i)	0	0
Gray Scale Optimization (i)		
	Restore Preset Save	

Figure 2-25 Set Advanced Image Parameters

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

2.5.3 Configure Loading Mode

Step 1 Go to **Configuration** \rightarrow **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**.

- Self-adaptive loading mode: By default, the LED controller board uses the self-adaptive loading mode. If you use this mode, the LED controller board automatically switches between standard loading and mini loading based on the network port loading capacity.
- Standard loading mode: Select this mode when the total load of the LED controller board does not exceed 10.4 MP and the per-port load of the board exceeds 0.65 MP and does not exceed 2.925 MP. If you select this mode, the device will compress the images.
- Mini loading mode: Select this mode when the per-port load of the LED controller board does not exceed 0.65 MP. If you select this mode, the device will not compress the images.

Configure All LED Co	Loading Mode 🔷 Self-Adaptive 🔷 Standard Loading 💿 Mini Loading
Output 4-1	
Output 6-1 🖉	Save

Figure 2-26 Configure Loading Mode

i Note

- Loading mode does not support batch configuration.
- To use the standard loading mode, ensure that both the LED controller boards and the receiving cards support standard loading mode.
- When the device is equipped with multiple LED controller boards whose output ports are bound to the same video wall, those LED controller boards must use the same loading mode.

2.5.4 Configure Auto Dehumidification

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

- Step 1 Go to **Configuration** \rightarrow **IoT Configuration** \rightarrow **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 LED controller 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 LED controller 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 Rate: The usage rate of the device.

Step 4 Click Save or Save and Start.

	Q		_
Output 6-1		Auto Dehumidification	
		Region	Custom ^
			High Humidity Area
			Medium Humidity Area
			Low Humidity Area
			Custom
	<	Time Step	5 min
		Brightnoss Stop	
		Digitiless Step	1
		Duration	30 min
		Usage	100%
			Save Save and Start

Figure 2-27 Configure Auto Dehumidification

2.5.5 Configure Sensors

Go to **Configuration** \rightarrow **IoT Configuration** \rightarrow **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 \bigcirc 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 \bigcirc 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.

Q Select Sensor	Гуре 🗘			
Output 4-1 Channel No.	Sensor Type	Sensor Quantity	Status	
1 <u>2</u>	Temperature and Humidity $~~$	1	⊗ Offline	
2	Light Sensor 🗸 🗸	1	⊗ Offline	
3	Human Body Sensor 🗸 🗸	1	⊗ Offline	
4	None ~	1 ^	⊗ Offline	
Sensor Threshold	Settings			
Cabinet Volt	age Detection			
	*Max. Voltage 4.6		V	
	*Min. Voltage 3.6		V	
Cabinet Tempera				
Subnot tompola				
* Cabinet Temperat	ture Threshold 76		°C	
Ambient Tempera	ture Detection			
*Ambient Temperat	ure Threshold 50.2		°C	
Ambient Hum	idity Detection			
*Ambient Humi	dity Threshold 80		%RH	
	Auto Sleep			
*Decrease Br	ightness After 31		S	
*Show OSE	D Prompt After 61		S	
	*Sleep After 121		s	
	,,		~	
	Save			

Figure 2-28 Configure Sensors

2.5.6 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.

Go to **Configuration** \rightarrow **IoT Configuration** \rightarrow **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.

Q Output 4-1	Wiring Method						
Output 6-1 🖉	Channel No.	Device Name	Status				
	Circuit 1						
	Circuit 2						
	Circuit 3						
<	Timer List	Shutdown					
	+ Add 🔟 (Ilear					
	Date	Start Time - End Time	Closed Circuit	Operation			
			No data.				
	Save						

Figure 2-29 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.

Q	Wiring Meth	od +				
Output 4-1	Power Distri	oution Cabinet Status			Add Timer	×
	Channel No	. Device Name	Status		Start Time *	
	Circuit 2				00:00:00	(
	Circuit 3				End Time *	0
<	Timer List				Date*	
	+ Add] Clear			Please select.	~
	Date	Start Time - End Time	Closed Circuit	Operation	Closed Circuit *	
	Fri.	00:00:00-00:01:00	Circuit 1	<u>/</u> Ū	Please select.	Y
					Save Cancel	
	Save					

Figure 2-30 Set Scheduled Startup/Shutdown

Chapter 3 Video Wall Management

3.1 Configure a Video Wall

3.1.1 Configure the Video Wall Scale

Step 1 Go to Video Wall Configuration and click Configure.

- Click
 to edit the video wall name.
- Click III to delete the video wall.
- Click Add to add a new video wall.

VideoWall1 🖉	
Source Scene Plan	්ෂ ශ් Screen On Screen Off
Image: Second and Source Input 2-1 Input 2-3 Input 2-4 Joint Source Network Source Network Source First configure the video wall scale. Configure	Open a window first.

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		+
					6
	64	64			
	Save				

Figure 3-2 Select a Decoding Output Resolution

- Step 6 (Optional) To set an LED video wall that uses varied height of the same row or varied width of the same column, set the special resolution.
 - 1) Go to **Configuration** \rightarrow **Other Settings** \rightarrow **Display Settings** and enable special resolution.

Special Resolution 🕕
Enable
Display Content
When Streaming Fails O Connection Exception 💿 Last Frame
Save

Figure 3-3 Enable Special Resolution

2) Select a defined resolution or select **Custom**, 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.
- You can click 🗎 to copy the value to the same row or column.

*Name	VideoWall1				
Video Wall Type	◯ LCD ● LED				
	 Set Basic Resolution 	② Set Sp	pecial Resolution		
*Row(s) × Column(s)	2 ^ *	2	Slear		
*Decoding Output Resolution	Custom	~			
Whole Screen Width and Height	128*128		Please input integer between 64 and	d 8192.	
			64		
			64		+
	64	64			
	Next				



- 3) Click Next.
- 4) Press and hold the left mouse button to select the first row, first column, last row, or last column, enter the column quantity, row quantity, row height, or column width, and then click **OK**.
 - The total resolution of the selected area cannot change.
 - Merging rows or columns reduces the number of screens on the current video wall, so you need to increase the column width or row height.
| *Name | VideoWall1 | | |
|-----------------|------------------------|--------------------------|----------------------|
| Video Wall Type | ◯ LCD ● LED | | |
| | ① Set Basic Resolution | ② Set Special Resolution | |
| | 🖯 Undo 🔿 Restore | | Operation Guide |
| | | | Adjust Selected Area |
| | | | Colum 1 |
| | | | No. Column Width |
| | | | 1 128 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | OK Cancel |
| | | | |

Figure 3-5 Set Special Resolution

5) Click Save.

*Name	VideoWall1		
Video Wall Type	◯ LCD		
	① Set Basic Resolution	② Set Special Resolution	
	🖰 Undo 🔿 Restore		Operation Guide
	Save Back	6 a b b b b b b b b b b	

Figure 3-6 Save Special Resolution

Step 7 (Optional) After setting the video wall scale, you can click **Edit Video Wall Scale** to change the video wall scale.

VideoWall1 🖉 🔟 🚽	New				
	Q	Display Output No. Refresh Unlink All Output Por	ts Link to Audio Output Background	lie Energy Saving	贷 - 100% +
✓ HDMI4K		Please edit the video wall scale and then bind the	output ports.		Operation Guide \times
Output 3-1 1920*1080@60HZ	续				
Output 3-2 1920*1080@60HZ	续				
✓ LEDSendCard					
Output 6-1 1920*1080	\$ \$				
					0
					LED_custom
					64*64
 Press Ctrl to select multiple 	e output ports.				

Figure 3-7 Edit the Video Wall Scale

3.1.2 Configure the Output of a Video Wall

Edit the Output Port Parameters

On the **Video Wall Configuration** page, click ⁽²⁾ 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: By default, the HDMI mode is used. For better compatibility, you can change it to DVI mode.

• Copy the current HDMI output configuration to other output ports: Click **Copy To** and then select the output ports.

Output Port	Settings		×
Decoding Output	Name*		
Output 5-1			
Output Mode S	Settings		
HDMI			~
Save	Сору То	Cancel	

Figure 3-8 Configure HDMI Output Port

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 On the **Video Wall Configuration** page, click **Display Output No.** to display the output port number on the actual screen.

This function is not available for the LED controller board.

- Step 2 According to the output number shown on the actual screen, drag the corresponding output ports to the screens of the video wall.
 - To batch bind output ports with the video wall, press **Ctrl** to select multiple output ports and drag the output ports to the screens of the video wall.
 - To cancel the linkage between a screen and an output port, click in the upper right corner of the screen.
 - To cancel the linkage between all screens and output ports, click **Unlink All Output Ports**.



Figure 3-9 Bind Output Ports with Video Wall

- Step 3 (Optional) If the screens that are used to configure the video wall support control linkage function, you can perform the following operations to 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) Click Edit Wall Scale and select Auto Configure.



Figure 3-10 Auto Bind Output Ports with Screens

Configure Audio Matrix

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

Step 1 Go to Configuration \rightarrow Audio Matrix.

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

Double click again or click 🤣 to unlink.

	Audio Matrix	Z Edit Table		Ø Save	S Unlink All		- 100%	+ Operation	Guide
		1	2	3	4	5	6	7	
		AudioIn 2-1	AudioIn 2-2	AudioIn 2-3	AudioIn 2-4	MCU-Line in 1	MCU-Line in 2		
1	🔗 AudioOut 3-1								
2	🔗 AudioOut 3-2	∡] Linked.							
3	🔗 MCU-Line out 1				Double Click to Unlink				
4	MCU-Line out 2								
5	🖉 MCU-Line out 3								
6	MCU-Line out 4								

Figure 3-11 Configure Audio Matrix

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

- Double click the name of an audio channel to edit its name.
- Click **Edit Table** to customize the audio channel name and configure the displaying of the audio channel in the table.

	Audio Matrix <u>Petr Table</u> Save Unlink All Operation Guit			Guide						
		1	2	3	4		5	6	7	
		AudioIn 2-1	AudioIn 2-2	AudioIn 2-3	AudioIn 2-4	MC	:U-Line in 1	MCU-Line in 2		
1	🧷 AudioOut 3-1						Edit Table		×	
2	AudioOut 3-2	Linked.				-	Input Channel	Output Channel		
3	🔗 MCU-Line out 1				المعالم Linked.		© Show ඁ	Hide Channel Nam	e Q	
4	Ø MCU-Line out 2						Channe Audiol	1 Name Sho	w in Table	
5	Ø MCU-Line out 3						Audiol	n 2-2	D	
6	Ø MCU-Line out 4						Audiol	n 2-3	0	
							Audiol	n 2-4	D	
							MCU-L	ine in 1	D	
							MCU-L	ine in 2	D	
						l	Save	Cancel		J

Figure 3-12 Edit Audio Channel Table

• Click **Unlink All** to unlink all audio linkage.

Step 4 Click Save.

Configure an Audio Output

On the **Video Wall Configuration** page, click **Link to Audio**. Click **(1)** 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.

- Volevitel Z + New

 Velocitie Control C
- One video wall can be linked with only one audio output.

Figure 3-13 Set Output Audio

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**.
 - When a video wall is bound to an output board, you can select a solid color or import an image as the background.
 - When a video wall is bound to an LED controller board, you can only select a solid color as the background.



Figure 3-14 Edit Output Background

• Only the LED controller board supports the energy saving function. Bind the output port of an LED controller board to the video wall, click **Energy Saving**, and then enable energy saving and set the strength coefficient.

VideoWall1 V	fideo Wall 2 🖉 📋	+ New	
	Q	Original Control Contro Control Control Control Control Control Control Control Control C	향 - 100% +
✓ HDMI4K		Please edit the video wall scale and then bind the output ports. Energy Saving	Operation Guide ×
Output 3-1 1 1920*1080@600	HZ 💱	Strength Coefficient	
CCD Output 3-2 1 1920*1080@600	HZ 🔅	716 🗘	8
✓ LEDSendCard		Save Cancel	
Cutput 6-1 2 64*64	¢3		
	<	LED_Output 6-1	
		64*64	
Press Ctrl to select r	multiple output ports.		

Figure 3-15 Set Eye Protection

- Click **Unlink All Output Ports** to unlink all output ports bound to the selected video wall.
- Click **Refresh** to refresh the information of all output ports.

3.1.3 Configure Signal Sources

Add a Network Signal Source via IP Address

Step 1 Go to Video Wall Operation \rightarrow Source, click +, and select IP Address.

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

• 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.

• If you add an NVR or IPC that has multiple channels, all channels of the NVR or IPC will be automatically added to the device.

VideoWall1 🖉 Video Wall 2	Add Network Source X	More 🙁
Source Scene Plan	····· //	Transmission Protocol
	IP Address URL	TCP ~
	Device Name *	Stream Type
		Main Stream V
✓ Local Source	IP Address*	Device Manufacturer
HD Input 2-2		HIKVISION
HD Input 2-3	Port No. *	Get Stream via Streaming Server
HD Input 2-4		
Joint Source <	User Name *	Stream Media IP Address*
	Password*	Port No.*
	Ø	
	Group*	Transmission Protocol
		TCP V
	Network Source	Save Cancel

Figure 3-16 Add a Network Signal Source via IP Address

Step 3 Click Save.

Add a Network Signal Source via URL Address

Step 1 Go to Video Wall Operation \rightarrow Source, click +, and select URL.

Step 2 Enter the device name and the URL address.

Add Network Source	×
IP Address	URL
Device Name*	
URL*	
	Ś
Group*	
Network Source	
Save Cancel	

Figure 3-17 Add a Network Signal Source via URL Address

Step 3 Click Save.

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 \square .

3.1.4 Bind Signal Sources with a 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.

VideoWall1 🖉 Video Wall 2			
Source Scene Plan	💿 📮 🔽 🕐 Enable Live Refresh Liv Clear Window Refresh Subtitle Hide Subtit	□ - 100% +	ල්ම මේ Screen On Screen Off
	 After adding a signal source, you can display it on the video wall. 	Operation Guide X	Edit Window ①
Q = 88			Location 😼
✓ Local Source			X 0 0 V 0
Input 2-1			Size
HD Input 2-2			W 1920 ♀ H 1920 ♀
HD Input 2-3			Window Division
Input 2-4			
V Network Source			>
Source82-1	Input 2-1		Signal Source Operations
Source14-1		1920-1080@60нг2	220
			Audio On
			Window Status
			Window No: 1 1 1
			Disture Wid 0 * 0
			VIDEO FRAM U
Press Ctrl or Shift to select multiple signa			Audio Fram 0

Figure 3-18 Bind a Signal Source to LCD Video Wall

• Drag a default signal source group or a newly created signal source group rightwards to the video wall.

- Before dragging a network signal source to the video wall, make sure that the decoding board is in the device.
- To create a new signal source group, see Create a Signal Source Group.
- 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.

VideoWall1 🖉 Video Wall 2			
Source Scene Plan	C C E C E C E C E C E C E C E C E C E C E C E C E C E C E Subtitle Hide Subtitle Save Scene	- 100% +	ශ් ශ් Screen On Screen Off
Co + 🔟	After adding a signal source, you can display it on the video wall.	Operation Guide \times	
Q = 88 Local Source Input 2.1 Input 2.2 Input 2.3 Input 2.4 Joint Source Network Source © source82.1 © source14.1	After adding a signal source, you can display it on the video wall.	Operation Guide ×	Open a window first.
Press Ctrl or Shift to select multiple signa			

Figure 3-19 Batch Bind Signal Sources to Video Wall

Create a Signal Source Group

Step 1 Click \square and enter the group name.

Step 2 Click 🤷 to add multiple signal sources to the created group.

i Note

You cannot add the network signal sources together with the local signal sources or joint signal sources to the same signal source group.

Step 3 Click OK.

VideoWall1 🖉 Video Wall 2	Group Name*				
Source Scene Plan					
	Save				
	Edit				×
✓ Local Source	*Group Name group 1	(
HD Input 2-1	Available(0/6)		Selected(0/1)		
HD Input 2-2	/ Wallabic(00)				
HD Input 2-3	Search Q		Search		Q
HD Input 2-4	✓ □ Local Source		✓		
Joint Source <	HD Input 2-1		Source82-1		
✓ Network Source	HD Input 2-2				
Source82-1	Input 2-3				
Source14-1	Input 2-4				
group 1	Joint Source				
	Source82-1				
	Source14-1				
				ОК	Cancel

Figure 3-20 Create Signal Source Group

3.2 Operate a Video Wall

3.2.1 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:

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

	Operation Guide \times	Edit Window ①
		Location 🛓
02 Input 2-2	ᢗᢑᠲ᠈╳	X 1920 🗘 Y 0 🗘
		Size
		W 1920 🔷 H 1920 🗘
		Window Division
mput 2-2		Signal Source Operations
		X)
		Audio On

Figure 3-21 Adjust Position of a Signal Source Window

• Enable audio: Make sure that you have configured the audio output for the video wall on the **Video Wall Configuration** page. Click **Audio On**.

• Control a network signal source: Set the decoding delay level and export the stream. After you enable Websocket, you can export stream.

After adding a signal source, you can display it on the video wall.		Operation Guide \times	Edit Window ①
	02 Input 2-2	ᢗᢑᠲ᠈╳	X 1920 🗘 Y 0 🗘
			Size
			W 1920 🗘 H 1920 🗘
			Window Division
source82-1	Input 2-2		
			Signal Source Operations
			20
			Audio On
1 After adding a signal source, you can display it on the video wall.		Operation Guide \times	Edit Window ①
			Location 🛓
01 source82-1 다 다 다 사 ×			X 0 $\stackrel{\wedge}{\bigtriangledown}$ Y 0 $\stackrel{\wedge}{\bigcirc}$
			Size
			W 1920 ↔ H 1920 ↔
			Window Division
source82-1 Input 2-2			
			Signal Source Operations
			Stop Decodi Audio On
			© =
			Decoding Y Export Strea

Figure 3-22 Enable Audio

• Set the signal source group auto-switching: Make sure that you have created the network signal source groups. For details, see Create a Signal Source Group. Click \square in the upper right corner of the signal source window, select a network signal source group, set the image interval, and then click **Start Auto-Switch**.

02 Input 2-2		ය 🧭 🗙
	Signal Source Group List	
		Q
	group 1	
	Image Interval	
	15	sec 🔶
	Start Auto-Switch	Cancel
Figure	3-23 Set Signal Source Group Au	to-Switching
Lock the window: Click		
01 Input 3-1	¢	⊑ A .* ×
	Input 3-1	
Figure 3-24	Locked Signal Source Window	

• 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:

• 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 3-25 Preview Signal Source

iNote

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

• Control all LCD screens of the selected LCD video wall. Make sure that you have configured the serial port. For details, see "5.5.1 Control Screen via Serial Port".

- Click Screen On to power on all LCD screens.
- Click Screen Off to power off all LCD screens.
- Control all LED screens of the selected LED video wall:
 - Click **Screen On** to wake the LED screens from sleep mode.
 - Click **Screen Off** to put the LED screens into sleep mode.
- Clear all bound signal source windows: Click **Clear Window**.

3.2.2 Edit Signal Source Parameters

Edit a Local Signal Source

Go to **Video Wall Operation**, hover over a local signal source and then click ^{12/2} to edit its parameters:

VideoWall1 🖉 Video Wall 2			
Source Scene Plan Edit Signal Source			
Co + 10 HDMI 2_1] Input 2-1	ng	Custom Resolution	OSD
✓ Local Source			
HD Input 2-1			
HD Input 2-2			
HD Input 2-3	6		
HD Input 2-4			
Joint Source			
✓ Network Source			
Source82-1			
Source14-1			
✓ group 1			
Source82-1			

Figure 3-26 Edit a Local Signal Source

- Edit the signal source name.
- Click Video Param, select a color mode, and adjust the brightness.

If you select custom color mode, the video parameters will restore to the default settings after you click **Restore Default** on the **Backup and Reset** page.

Signal Source Name	Input 3-1		
*Color Mode	Standard	~	
Brightness	0	128	🦺 No Signal
	Save		

Figure 3-27 Set Video Parameters

• Click **Source Clipping**, and set the clipping value at top, bottom, left, and right edges.

The clipping value ranges from 0 to 200. The clipping value at the top and bottom edges should be a multiple of 2, and the clipping value at the left and right edges should be a multiple of 4.

Signal Source Name	Input 3-1		
Top Edge Clipping	0	Pixel 🔶	
Lower Edge Clipping	0	Pixel 🔶	No Signal
Left Edge Clipping	0	Pixel 🖒	
Right Edge Clipping	0	Pixel 🔶	
	Save		



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

Signal Source Name	Input 3-1	
Enable		
*Refresh Rate	60 ~	[] No Signal
*Resolution	884 * 2560	
	Save Copy To	



- Click OSD, and then you can add multiple OSDs (On-Screen Displays) to the input signal image.
 - Overlay the character 1 to the input signal image. Set the content, font size, and font color, and adjust the character position. You can enter the position values or directly drag the character to adjust the position.
 - Overlay the character 2 to the input signal image. Set the content, font size, and font color, and adjust the character position. You can enter the position values or directly drag the character to adjust the position.
 - Click Copy To to copy the OSD configuration of the current signal source to other signal sources.

Signal Source Name Text Overlay	Input 3-1	
Character	Character 1 Character 2	
Enable		
*Character Content	Input Source 3-1	No Signal
*Font Size	64	
Font Color	#000000	Controller
*Character Position	1200 * 1400	Input Source 3-1
	Save Copy To	

Figure 3-30 Add OSDs

Edit a Network Signal Source

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

Edit Network Source $\qquad \qquad \qquad$	More
	Transmission Protocol
Device Name*	TCP ~
source82-1	
IP Address*	Stream Type
	Main Stream V
	Device Manufacturer
Port No.*	HIKVISION
I Iser Name *	Channel No.
	1
	Get Stream via Streaming Server
Password*	
······	
	Stream Media IP Address*
Gloup	
Network Source	Port No *
	Transmission Protocol
	TCP v
	Save Cancel

Figure 3-31 Edit a Network Signal Source

3.2.3 Splice Signal Source

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.

iNote

- Only UHD signal sources (such as 4K HDMI input channels or 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** \rightarrow **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.

iNote

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

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

Step 5 Click Save.

\bigcirc Add Joint Signal Source				Save
Q	Joint Source Name	Row × Column $\begin{bmatrix} 1 & 0 \\ 0 \end{bmatrix}^* \begin{bmatrix} 1 & 0 \\ 0 \end{bmatrix}$	- 100% +	Cancel All Linkage
V HDMI				
Input 2-1				
Input 2-2				
Input 3-1				
Input 3-2				
Input 3-3				
Input 3-4				

Figure 3-32 Add a Joint Signal Source

3.2.4 Configure Subtitles

Step 1 Go to Video Wall Operation, click Subtitle, press and hold the left mouse button to drag subtitles to the video wall.



To add multiple subtitles, you can drag the remaining subtitles.

Figure 3-33 Add a Subtitle

Step 2 Edit 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.

Subtitle Type	Text & Background	
Text Time	Font Size	
Content	1 ~	
491 Window	Font Color #fa3239 Font Direction	Background Color #000000 Background Transparency Cover \checkmark
Location X 1920 Y 535 V	microsoft_yahei ~	Move
Size W 1920 🔆 H 480 🖒	Font Style B Alignment	Speed

Figure 3-34 Add a Text Subtitle

Step 3 Edit 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.

Subtitle Type	Time Format	Text & Background
Text Time	Display Date	Font Size
Mindau		1 ~
window	Date Format	Font Color
	yyyy-mm-dd 🗸 🗸	#fa3239
X 1920 V Y 535 V	Display Week	> Font
Size		microsoft_yahei ~
W 1920 🗘 H 480 🗘	Time Format	Font Style
	hh:mm:ss ~	В
	Time Format	Alignment
	12-Hour 🗸	
		Background Color
		#000000
		Background Transparency
		Cover ~

Figure 3-35 Add a Time Subtitle

Step 4 (Optional) You can click **Hide Subtitle** as required.

3.2.5 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 3-36 Save Scene

- Click **Scene** and hover over a scene name. Click the following icons as required:
 - Click (b) to call the scene.
 - Click 🖉 to edit the scene name.
 - Click $\overline{\blacksquare}$ to delete the scene.

VideoWall1	<u>/</u> \	Video Wall 2		
Source	Scene	Plan		
		Q		
<u></u> 1_1		∠ ⊚ Ū		

Figure 3-37 Manage Scene

3.2.6 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.

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

VideoWall1 🖉 Video Wall 2	Add Plan X
Source Scene Plan	Plan Name*
Q	Task + Add Task 🔟 Delete
	No. Task Scene Name Interval(S) Sort Operation
No Data	No data.
hobutu	Execute Plan Automatically
	Save Cancel

Figure 3-38 Add a Plan

- Click a plan and then click 🖉 to edit the plan.
- Click a plan and then click \bigcirc to call the plan.
- Click a plan and then click $\overline{\blacksquare}$ to delete the plan.

VideoWall1 🖉	Video Wall 2			
		Plan in	Progress	Stop Operation
+∠⊚ ⊡		After adding a signal source, you can display it on the video wall.	Operation Guide	×
	Q			
plan 1		source82-1	Input 2-1 Subtitle	Open a window first.

Figure 3-39 Call a Plan

Chapter 4 Other Parameters

4.1 Configure System Parameters

Go to **Configuration** \rightarrow **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.

*Device Name	Video Wall Controller
MAC Address	
Model	
Device Serial No.	
Short Serial No.	
Main Control	Upgrade
Web Version	
	Save

Figure 4-1 View Basic Information

- Go to System Settings → Time Settings, and set the time sync mode and DST.
 - If you select **NTP Sync**, enter the NTP server address, NTP port number, and interval.

Device Time	09:31:20
Time Zone	(GMT+00:00) Dublin, Edinburgh, London
Time Sync Mode	NTP Sync O Manual Time Sync
* Server Address	
*NTP Port	123
* Interval	60 min

Figure 4-2 Select NTP Sync

• If you select Manual Time Sync, you can enter the time or click Sync with Computer.

Device Time	09:32:40
Time Zone	(GMT+00:00) Dublin, Edinburgh, London
Time Sync Mode	○ NTP Sync ● Manual Time Sync
Set Time	09:29:42 🛱 Sync With Computer

Figure 4-3 Select Manual Time Sync

• If you enable DST (Daylight Saving Time), enter the start time, end time, and bias time.

Enable								
Start Time	Apr.	~	First	~	Sun.	~	02:00	~
End Time	Oct.	~	Last	~	Sun.	~	02:00	~
Bias Time	30min							~
	Save							

Figure 4-4 Enable DST

- Go to System Settings \rightarrow Font Settings to set the font of OSDs and subtitles.
 - Use the default font.
 - Click **Add** to import a new font and enable the new font.

Fonts fit all, including input OSD and subtitles. Only T	TF file of no more than 15 MB can be added.			×
+ Add				
No.	Font Name	Enable/Disable	Operation	
1	microsoft_yahei		Ū	
	Add Font Font Package* Font package should be a TTF file within	n 15 M.		

Figure 4-5 Set Font

- Go to User Management → User Management to add, edit, or delete the users.
 You can only edit the password of the admin user and you cannot edit its user name or delete it.
 - To add a new user, click **Add**, and enter user name, admin password, password, and confirm password.
 - To edit the name or password of a user, click 🖉 of the user.
 - To delete a user, click 🔟 of a user, click **OK**, and enter the password of the admin user.

User Management	Online User		
+ Add			
No.	User Name	User Type	Operation
1	admin	Administrator	∠ □
		Add User X	
		User Name*	
		User Type	
		Administrator v	
		Password*	
		Confirm Password*	
		OK Cancel	

Figure 4-6 Manage Users

• Go to User Management \rightarrow Online User to view the information of online users. To refresh the information, click **Refresh**.

User Management	Online User			
← Refresh				
No.	User Name	User Type	IP Address	User Login Time
1	admin	Administrator		11:08:08

Figure 4-7 View Online Users

4.2 Configure HTTP(S) Parameters

Step 1 Go to **Configuration** \rightarrow **Network** \rightarrow **Network Service** \rightarrow **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.

iNote

Only the admin user can select a digest algorithm type.

Step 5 Click Save.

HTTP(S)	
нттр	
*HTTP Port	80
НТТРЅ	
Enable	
* HTTPS Port	443
Redirect to HTTPS Automatically	
HTTP(S) Authentication	
*Authentication Mode	digest ~
* Digest Algorithm Type	MD5/SHA256 ~
	Save

Figure 4-8 Configure HTTP (S) Parameters

4.3 Configure Events

Go to **Configuration** \rightarrow **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.

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
	Save	

Figure 4-9 Set Device Exception Alarm

4.4 Set Other Parameters of Device

Go to **Configuration** \rightarrow **Other Settings** to set the following parameters:

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

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

Enable		
Division Threshold	6 ~]
	Save	

Figure 4-10 Set Sub-Stream Auto-Switch

- Click **Display Settings** to enable special resolution or configure the content displayed when streaming fails.
 - To set an LED video wall that uses varied height of the same row or varied width of the same column, enable the special resolution and set the special resolution on the Video Wall Configuration page.
 - If you select **Connection Exception**, the specific streaming failure reason will be shown on the screen.

Special Resolution ()	Special Res
Enable	
Display Content	Display Co
When Streaming Fails O Connection Exception Last Frame 	W
Save	

Figure 4-11 Set Display Content

- Click Scene Change to enable Change Subtitle as Scene Changes.
- Click **Decoding Delay** and select a default decoding delay level.
- When the preview board is in the device, you can display the image of a video wall on the connected screen(s). Click **Display a Video Wall Image on Screen**, select a video wall and then enable this function.

iNote

When a video wall is bound to an LED controller board, displaying a video wall image on screen is not supported.

Displa	ay a Video Wall Image	VideoWall1	·
	Enable		
		Save	

Figure 4-12 Display a Video Wall Image on Screen

• Click **Sub-board Mode Settings** to configure sub-board mode:

When the DS-D60S-02HO/4K sub-board is inserted into the device, you can configure the sub-board mode.

If you select Copy Mode, the output port 2 will copy the image of the output port 1, only the output port 1 can be bound with the video wall, and the maximum resolution is 4K 60 fps.

• If you select **Independent Mode**, the output port 1 and output port 2 can be bound with the video wall and the maximum resolution of each port is 4K 30 fps.

Sub-board Slot No.	Board_3	~
Output Mode	Copy Mode Independent Mode	
	Save Сору То	

Figure 4-13 Configure Sub-board Mode

• Click **No Signal Image** to use the default image or upload a new image.

No Signal Image	Custom Default
Custom Image	+
	Upload Image
	Please upload an image in format BMP with resolution of 1920 × 1080 and bit depth of 24
	Save

Figure 4-14 Configure No Signal Image

Chapter 5 Device Maintenance

5.1 View Device Status

Go to **Overview** to view the device status. You can click a board to view its basic information and its usage.



Figure 5-1 View Device Status

5.2 View Status of LED Controller Board

Go to Screen Maintenance \rightarrow Specific Video Wall \rightarrow 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 $\stackrel{\bigcirc}{\hookrightarrow}$ to view its signal port connection.
- Click **Refresh** to obtain the latest status of the LED controller board.



Figure 5-2 View Receiving Card Status

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

		.
Receiving Card Details	✓ Refresh	Basic Information
Output 6-1 🛛 🔟		LED Controller Model
		LED Controller Serial No.
		LED Controller Version
display		
		Loading Mode
/		Mini Loading
<		Hardware Version
Displaying the screen on the web page is not allowed. The configured screen contains various types of cabinets		Receiving Card Model
Reconfigure		Same
		Receiving Card Version
		Inconsistent
Network Interface Usage		Screen Model
	Normal	
	Exception	Driver Type
	Not Used	
		Screen Refresh Rate
		3840Hz
		Punning Status
		Numing Status
		Ambient Temperature
		Not Connected
		Ambient Humidity
		Not Connected

Figure 5-3 Reconfiguration Prompt on Overview Page

5.3 Test Condition of Directly Connected LED Screens

Step 1 Go to Screen Maintenance \rightarrow Specific Video Wall \rightarrow Screen Test.

Step 2 Enable the screen test.

- Step 3 Select an image to check whether the screen color is normal or whether the dead pixels exist.
 - Select an existing color, or add a new color and select the new color. You can edit the newly added color as required.
 - Select a gray scale.
 - Select a line.



Figure 5-4 Test Screen Condition

5.4 Quickly Maintain a Receiving Card

If the display is installed with a new receiving card, you can use this function to copy the configuration of the reference receiving card to the new receiving card. Make sure the newly installed receiving card is connected with the LED controller.

Step 1 Go to Screen Maintenance \rightarrow Specific Video Wall \rightarrow Receiving Card Quick Maintenance.

- Step 2 Select a receiving card and click **Set as Reference Card**. The configuration of the reference receiving card can be copied to the new receiving card.
- Step 3 Select a receiving card and click Set as New Card.

Step 4 Click **Copy** to copy the configuration file of the reference card to the new card.



Figure 5-5 Quickly Maintain Receiving Cards

Step 5 (Optional) You can perform the following operations as required:

- Click **Export** to export the receiving card program file or receiving card configuration file.
- Click **Show Connections** to view the signal connection of the LED controller.
- Enable **Open Circuit Detection** to repair the cross phenomenon caused by damaged lamp beads. Before repairing the damaged lamp beads, disable open circuit detection.
- Click **Cancel** to cancel the copy operation.

5.5 Maintain Screens

5.5.1 Control Screen via Serial Port

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

Main Node Serial Port		
Select Serial Port	1 2	
Serial Port Type	● RS232	
Duplex Mode	Full-Duplex ~	
Baud Rate	115200 ~]
Data Bit	8 ~]
Stop Bit	1 ~]
Checking Type	None ~]
Flow Control Type	None ~]
Working Mode	Screen Control V]
Serial Port Protocol	~ ~]
		1
	Save	

Figure 5-6 Configure Serial Port

iNote

- 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.
| | | | | | AddSource | × |
|-----------------------|------------------|---------------------------|--------------|-----------|---------------------------------|---|
| Main Node Serial Port | | | | | Device Name* | |
| Select Serial Port | 1 2 | | | | | |
| Serial Port Type | • RS232 | | | | IP Address * | |
| Duplex Mode | | | | | | |
| Baud Rate | 115200 | ~ | | | Port No.* | |
| Data Bit | 8 | ~ | | | User Name * | |
| | | | | _ | | |
| Stop Bit | 1 | ~ | | | Password* | |
| Checking Type | None | ~ | | | | Ø |
| Flow Control Type | None | | | | Number of Channels* | |
| Working Mode | Keyboard Control | | | | | |
| Cineral Courses No. | | | | | Transmission Protocol | |
| Signal Source No. | + Add Signal Sou | urce Delete Signal Source | al Source | 1.5.1 | ТСР | ~ |
| | No. \$ | Source | Type 🗧 | Operation | Stream Type | |
| | | Input 2-1 | Local Source | | Main Stream | ~ |
| | | Input 2-2 | Local Source | | Device Manufacturer | |
| | 4 | Input 2-4 | Local Source | | Private Protocol | ~ |
| | | - | | | Get Stream via Streaming Server | |
| | Save | | | | Save Cancel | |

Figure 5-7 Control Serial Keyboard

- Step 2 Use a serial port cable to connect a screen and the device RS-485 or RS-232 port.
- Step 3 Go to Screen Maintenance \rightarrow Specific 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 **Screen On** to power on the connected LCD screen.
 - Click Screen Off to power off the connected LCD screen.

- 100% +	්ය ්ස Screen On Screen Off
×	Screen Information Show
	Input Source Type
	HDMI ~
	Image Param Copy to All Screens
	$ \begin{tabular}{lllllllllllllllllllllllllllllllllll$
	Image Mode
	Please select. V
	> Adjust Backlight
	0
	Image Position
	Position Adjustment
	*
	< >>
	¥

Figure 5-8 Control LCD Screen via Serial Port

5.5.2 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 Screen Maintenance \rightarrow Specific 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:

- Click **Show** 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 Screen On.
 - The LED screens exit the sleep mode after you click Screen On.

- Power off the connected screens through the HDMI cables:
 - The LCD screens are powered off after you click Screen Off.
 - The LED screens enter the sleep mode after you click Screen Off.
- Click Copy to All Screens to copy the image parameters of the current screen to all screens.



Figure 5-9 Show Screen Information

5.6 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.

Restart	Upgrade	Backup and Reset	Log	Device Debugging
Restart R	Receiving Card	LEDSendCard_Output 4-1 ∨	Restart	
	Restart	Restart		

Figure 5-10 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 is 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.

iNote

You need to get the upgrade file in advance and save it locally.

1) The upgrading process will take 1 to 10 minutes. Do not power off. The device will restart automatically after upgrading.				
Upgrade Device				
Current Version				
Please select an upgrade file.		Upgrade		
Upgrade Receiving Card				
Select Sub-Board	LEDSendCard_Output 4-1 V			
Please select an upgrade file.		Upgrade		

Figure 5-11 Upgrade Page

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

Backup		
Receiving Card Debug File	LEDSendCard_Output 4-1 V Export	
Receiving Card Configuration File	LEDSendCard_Output 4-1 V Export	
LED Controller Configuration File	LEDSendCard_Output 4-1 V Export	
Device Parameters	Export	
Scene Parameters	Export	
Import Parameters		
Import LED Controller Configur	LEDSendCard_Output 4-1 ∨	Import
Import Device Parameters		Import
Scene Parameters		Import
Reset		
Restore Default	Restore Default All data except network parameters and user accounts will be cleared.	
Restore Factory	Restore Factory All functions and parameters will be restored to factory settings.	

Figure 5-12 Backup and Reset Page

● 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	00:00:00 - 23:59:59	E Search Reset
No. Time	Main Type	Sub Type	Remote Host IP	Description
1	Operation	Remote: Login		[admin] login device from web
2	Exception	DSP Signal Change	-	slot[2] chan:0, in_state:1, W:1980, H:1400, fps:30, color:1, aud:0
3	Exception	DSP Signal Change	-	slot[2] chan:0, in_state:1, W:1980, H:1400, fps:30, color:1, aud:0
4	Exception	DSP Signal Change	-	slot[2] chan:0, in_state:1, W:1980, H:1400, fps:30, color:1, aud:0
5	Exception	DSP Signal Change	-	slot[2] chan:0, in_state:1, W:1980, H:1400, fps:30, color:1, aud:0



● 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 **Export** to export the device information.
- Select a sub-system, click **Start Capturing** and then you can download the obtained packet capture file.
- Send a shell command and then check the response message.

SSH	
Enable	
Export Device Info	
Device Information	Export
Export Network Switching	Packet
Subsystem	Board0_SubSys0 \checkmark Start Capturing
Packet Capture File	Please click Start Capturing.
Shell Command Operation	
Shell Command	Send
Status	
Response Message	Please send command first.

Figure 5-14 Debug the Device

5.7 Maintain the Device Security

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

• On the **IP Address Filter** page, configure the IP addresses that are allowed to or forbidden to access the device.

					Add List	×
IP Address Filter	HTTPS Certificate	SADP	Syslog Websocket		IP Address*	
	Enable					
Filter	ring Type 🔵 Blocklist 🤅	Allowlist			Description *	
			red to access.			
L	List Table 🕂 Add 💼 I				Save Cancel	
	No.	IP Address	Description	Operation		
	1		LOCAL IP	∠ ū		
	Save					

Figure 5-15 Configure IP Address Filter

• On the HTTPS Certificate page, import the locally saved HTTPS certificate and secret key.

Device will be restarted after the second seco	ne certificate and secret key are imported.	
*Import Method	Certificate and Secret Key	~
Certificate		
Secret Key		
	Save	

Figure 5-16 Import HTTPS Certificate and Secret Key

- On the **SADP** page, enable SADP as required. With SADP enabled, you can use the SADP software to search the online device that is in the same network segment with the computer.
- On the **Syslog** page, 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	×
	Save

Figure 5-17 Enable Syslog

• On the **Websocket** page, enable Websocket as required. With Websocket enabled, you can export stream.



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