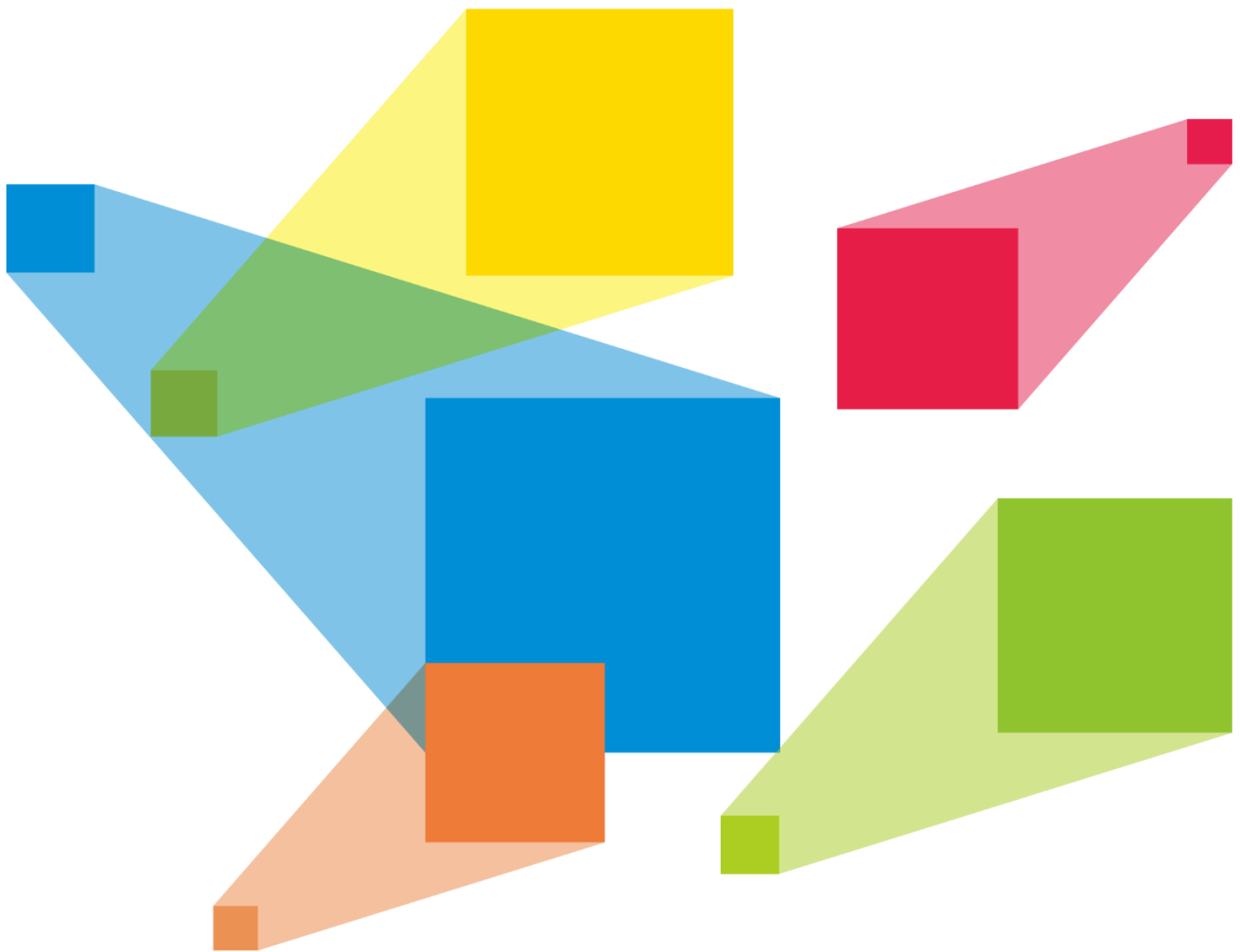


MG Series

Distributed Processors

AV over IP System



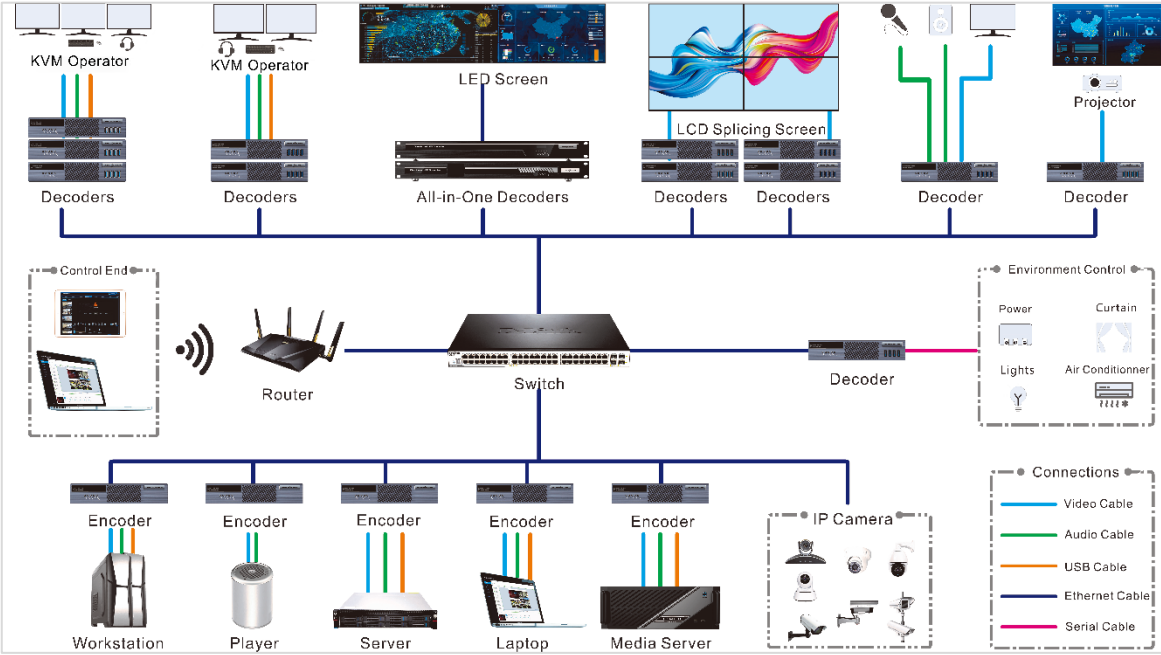
User Manual

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1 System Topology



2 Hardware Connections

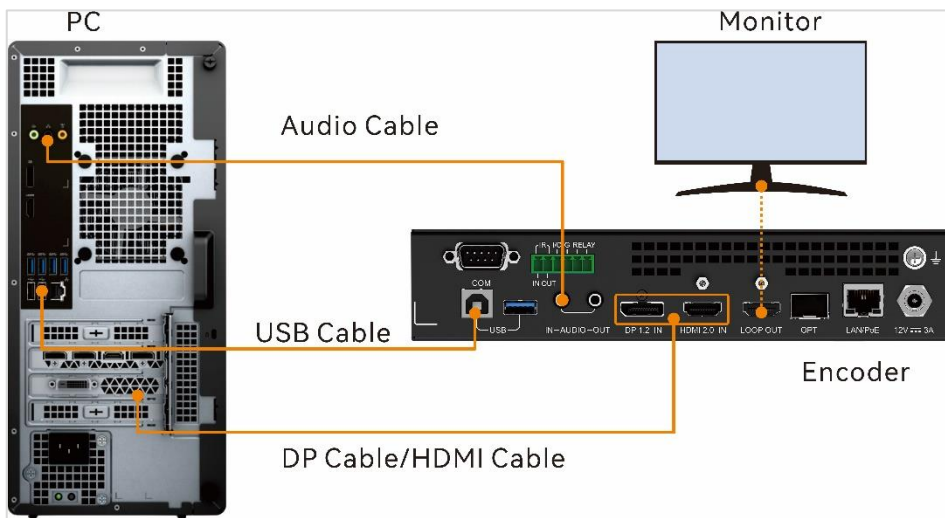
2.1 Encoder Connections

The encoder can be used for encoding and transmitting the input signals. This section takes the MG420 as an example to illustrate.

2.1.1 Input Connections

The inputs include the audio, video and control signals. When the input sources come from the computer or server, the KVM remote control is supported.

Figure 2-1 Connect the input signal to the encoder



Audio Cable

Connect the audio output connector on the computer or server to the AUDIO IN connector on the encoder using a 3.5 mm audio cable.

Video Cable

Note:

Either DP 1.2 or HDMI 2.0 can be used at a time. Before using, you need to configure the connector on the Web page. The default connector is HDMI 2.0.

Connect the output connector on the computer or server to the input connector on the encoder using a DP or HDMI cable.

Connect the LOOP OUT connector with the monitor using an HDMI cable, and then the input image can be viewed on the monitor.

USB Cable

When the input sources come from the computer or server, the KVM operations are supported. Connect the computer or server with the encoder using a USB cable.

Connect the Type-B connector of the USB cable to the Type-B USB connector on the encoder, and then plug the other end to the USB connector on the computer or server.

2.1.2 Network Connections

The encoder is able to encode the input video, audio and USB control signals and transmit them via the network signals. The encoder and switch can be connected in the following two ways.

- PoE switch/Ordinary switch

Connect the LAN/PoE port on the encoder to the Ethernet port on the PoE switch/ordinary switch using an Ethernet cable. After a successful connection, the encoder will automatically start.

When an ordinary switch is connected, the encoder needs to be connected with a power adapter to get powered.

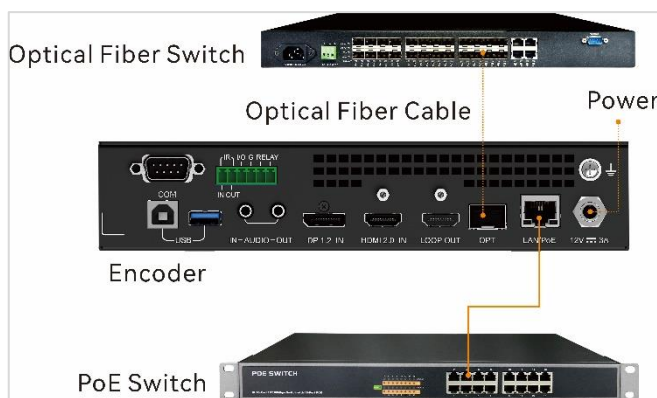
- Optical fiber switch

Connect the OPT port on the encoder to the OPT port on the optical fiber switch using an optical fiber cable, and then connect the power connector on the encoder with a power adapter.

Notes:

- When the LAN/PoE or OPT port is connected to the network and used for the network backup, make sure a power adapter is connected.
- The MG200 does not support PoE power supply, so you need to connect an external power adapter.

Figure 2-2 Network connections of the encoder



2.2 Decoder Connections

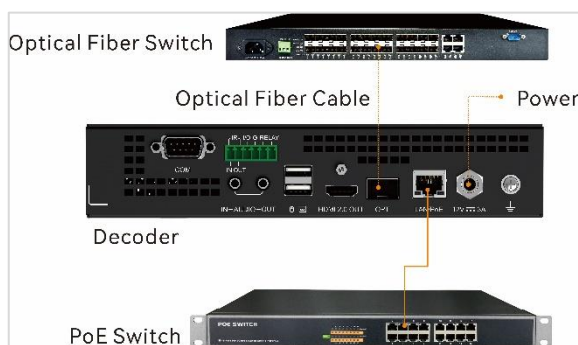
This section takes the MG421 as an example to illustrate.

The MG201 does not support PoE power supply, so you need to connect an external power adapter.

2.2.1 Network Connections

The network connection of the decoder is the same as that of the encoder, please refer to [2.1.2 Network Connection](#) for details.

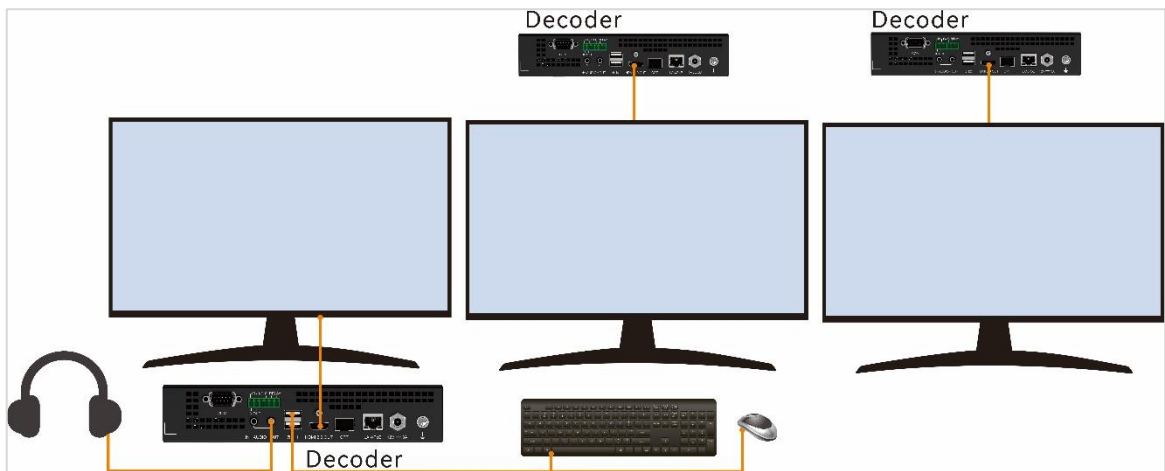
Figure 2-3 Network connections of the decoder



2.2.2 Decoder-KVM Connections

The monitor is connected to the decoder-KVM and each monitor is connected to one decoder-KVM.

Figure 2-4 Decoder-KVM connections



Keyboard and Mouse Connections

Connect the mouse and keyboard to the decoder.

Notes:

- If the decoders are connected to multiple monitors, the keyboard and mouse can be connected to any of the decoders. You need to log in to the KVM operator system on the monitor connected to the decoder with the keyboard and mouse.
- The wireless mouse and keyboard are supported and the USB ports connected to the keyboard and mouse can be shared.

Monitor Connections

Connect the HDMI connector on the encoder to that on the monitor using an HDMI cable.

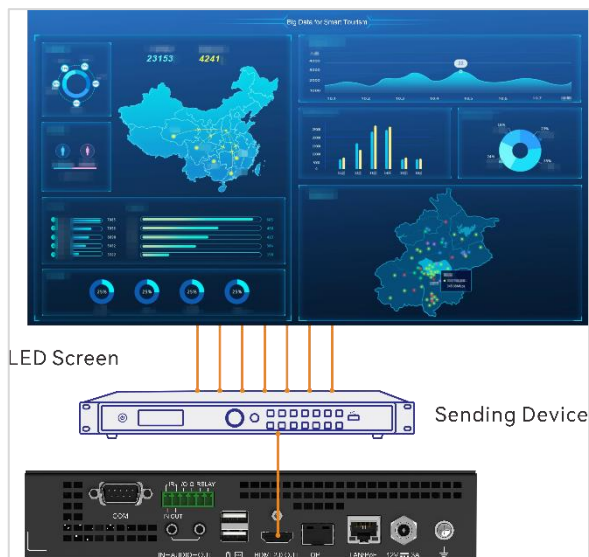
Audio Connections

- Independent microphone, speaker or headphones
Connect the speaker or headphones to the AUDIO OUT connector on the decoder.
- Headphones with microphone
Connect the microphone connector to the AUDIO IN connector and plug the other connector to the AUDIO OUT connector according to the icon on the headphone jacks.

2.2.3 Screen Connections

LED Screen Connections

Figure 2-5 LED screen connections



1. Connect the HDMI connector on the decoder to the input connector on the sending device using an HDMI cable.
2. Connect the sending device and LED screen using Ethernet cables.
3. Configure the screen on the sending device.

LCD Screen Connections

Figure 2-6 LCD screen connections



Connect the HDMI connector on the decoder to the LCD screen using an HDMI cable.

If the screen is configured on the Web page, the screen connection order must be the same as the configuration order.

If the screen is not configured on the Web page, you can directly connect the screen and remember the relationship between the screen and the matched decoder to help the screen configurations on the Web page.

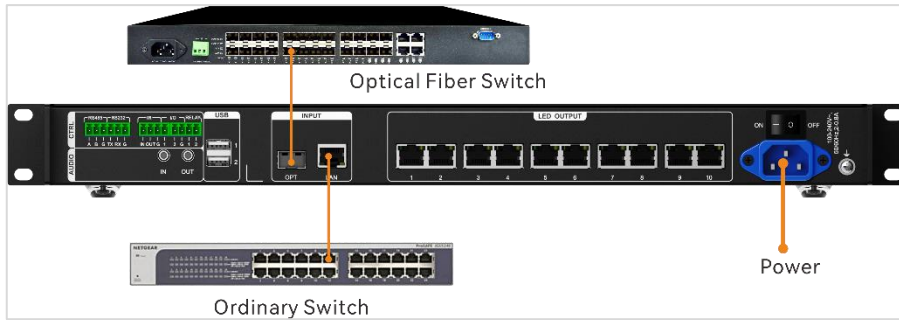
2.3 All-in-One Decoder Connections

This section takes the MGT1000 as an example to illustrate.

2.3.1 Network Connections

The Ethernet port and optical fiber port on the all-in-one decoder can encode the accessed inputs, audio and control signals. The connection method is shown as follows.

Figure 2-7 Network connections



2.3.2 Screen Connections

2.3.2.1 LED Screen

With the sending function, the all-in-one decoder can directly load the LED screen. The connection method is shown as follows.

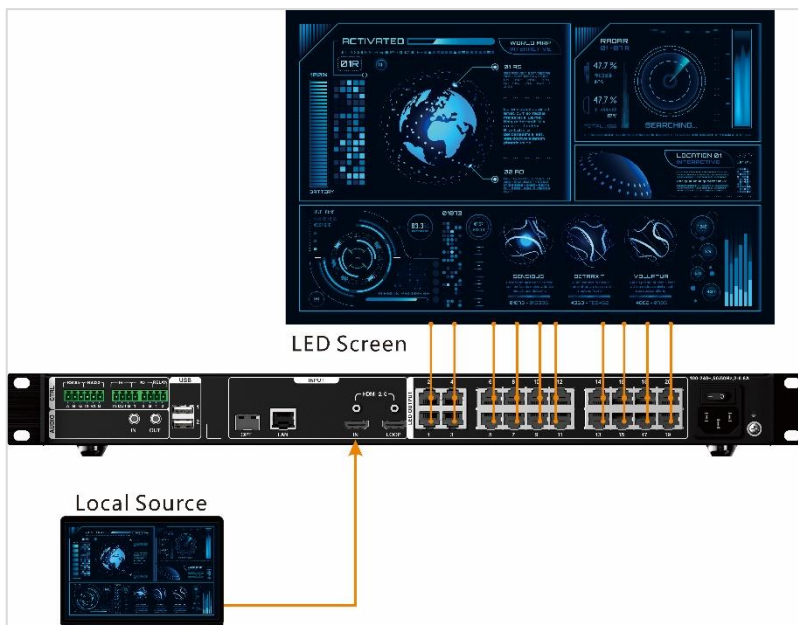
Figure 2-8 LED screen connections



2.3.2.2 Local Input Sources

The MGT2000 is able to connect the local input sources via the HDMI 2.0 and play the local source images on the LED screen.

Figure 2-9 Local source connections



2.3.2.3 Screen Configurations

Configure the LED screen in NovaLCT when the all-in-one decoder is used,

Prerequisites

- The IP address of the primary management node is obtained.
- If the screens are built, you need to obtain the cabinet data flow.
- The control computer is installed with NovaLCT (NovaLCT V5.4.2 or later).

Operating Procedure

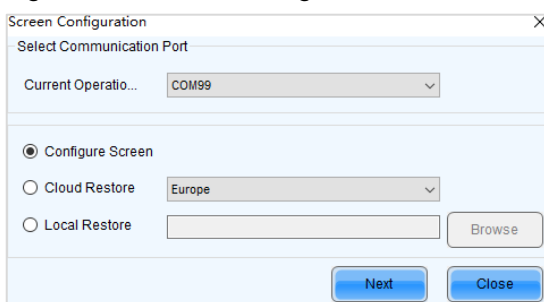
Step 1 Start NovaLCT.

Step 2 In the menu bar, go to **User > Advanced Synchronous System User Login**. Enter the password and click **Login**.

The default password is "admin".

Step 3 Click  or go to **Settings > Screen Configuration** to open the **Screen Configuration** window.

Figure 2-10 Screen configuration

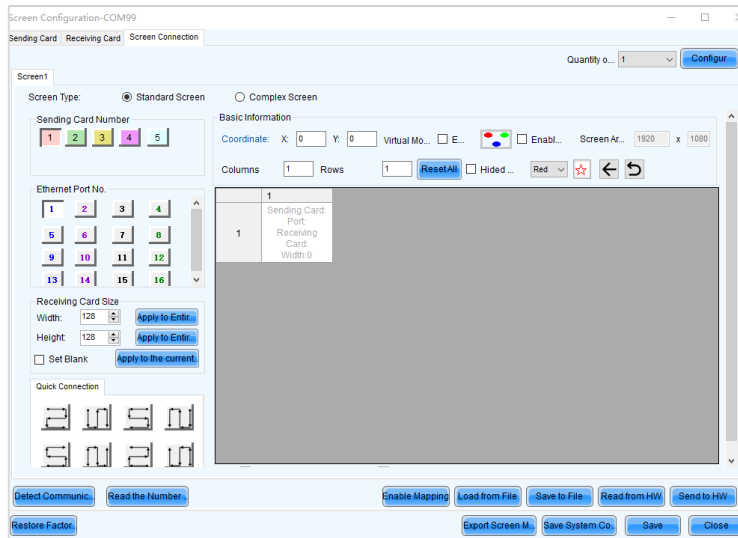


Step 4 Select the IP address of the primary management node and communication port.

Step 5 Select **Configure Screen** and click **Next**.

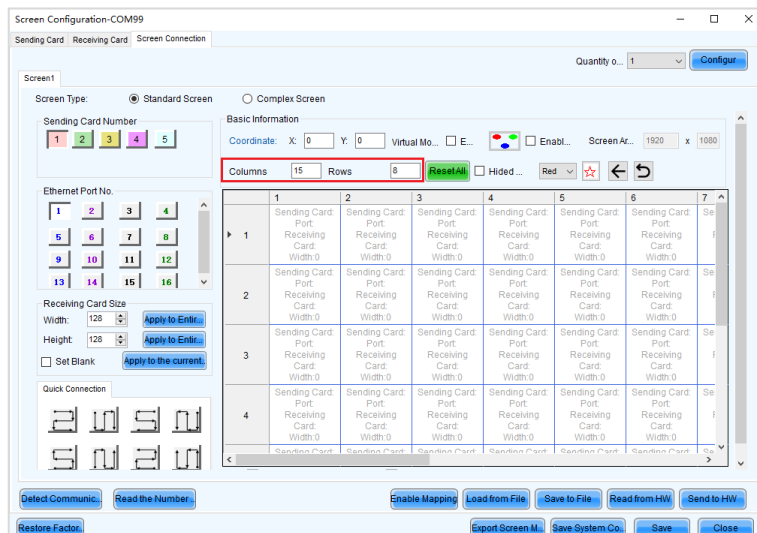
Step 6 Select the **Screen Connection** tab to show the screen configuration settings.

Figure 2-11 Screen configuration



Step 7 On the **Standard Screen** window, set the column and row quantities of receiving cards. As shown in [Figure 2-12](#), the values of **Columns** and **Rows** are set to 15 and 8 respectively.

Figure 2-12 Column and row quantities of receiving cards



Step 8 Select the sending card number which indicates the sequence number of the all-in-one decoder.

The connected all-in-one decoders are automatically linked. Each decoder corresponds to a sending card number in NovaLCT.

Step 9 Select the Ethernet port number.

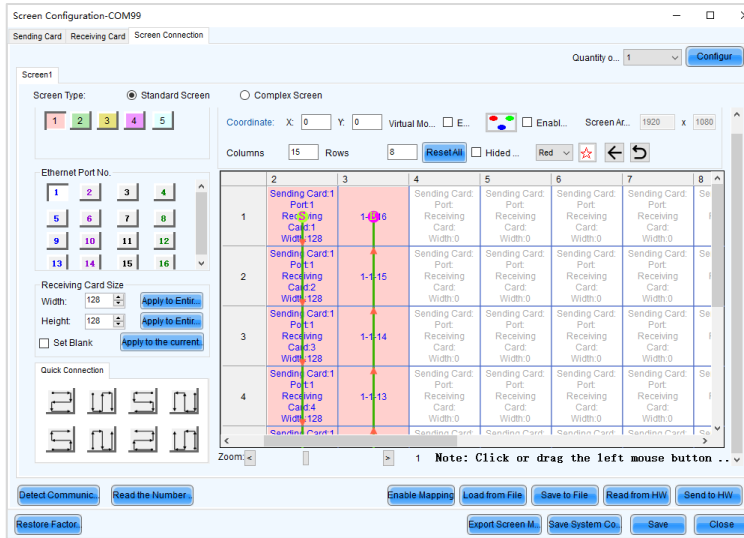
Step 10 Draw lines between cabinets based on the cabinet connection and the connection mode between the device and screen.

- Custom connection: Click the cells or drag the mouse to draw lines.
- Quick Connection: Click a quick connection mode and drag the mouse to select an area in the form.

When you draw lines, the loading capacity is set to the current value by default. If needed, you can change the values of **Width** and **Height** on the left.

The connection rule of the receiving cards loaded by the Ethernet port No.1 is shown as follows. Right click the receiving card to cancel the configuration for this card.

Figure 2-13 Receiving card connection



- Step 11 Repeat Step 8 to Step 10 to complete the connection of the receiving cards loaded by other Ethernet ports.
- Step 12 Click **Send to HW** to send the configuration information to the hardware.
- Step 13 After the settings, click **Save** to save the configuration information to the hardware and complete the screen configuration.

Notes:

- Click **Save to File** to save the configuration information as a local file.
- For configuration for irregular screens, please refer to *NovaLCT User Manual*.

2.3.3 Audio Connection

Directly connect an external speaker via the AUDIO port.

Figure 2-14 Audio output connection



3 Web Control

3.1 Log into Web Page

3.1.1 Configure Primary Management Nodes

For multiple devices in the distributed system, configuring each of them is not efficient and also increases the management difficulty. The primary management node is used for centralized management and distribution of the configuration information to realize the standardized system management.

Prerequisites

The IP address of the device used as the primary management node is obtained.

Operating Procedure

- Step 1 Open the browser, enter the IP address of the primary management node in the address bar, and then press **Enter** to open the primary management node settings page.

Figure 3-1 Primary management node settings

- Step 2 Select **Primary Management Node** from the drop-down list next to **Node Management Type**.
- Step 3 Click **Apply** and all the nodes in the system will automatically restart and be added to the system.

Notes:

- In the **Network Settings** area, you can change the IP information of the primary node. Click **Apply** to complete the editing and the device will automatically restart.
- When you want to change the primary node, go to **Configuration > Device** to open the device management page where you can find the device used as the primary node. Click the device name to show the device detailed information. Select **Common Node** from the drop-down list next to **Node Type** to change the node type of the device used as the primary node, and then reconfigure the primary management node.

3.1.2 Log Into System

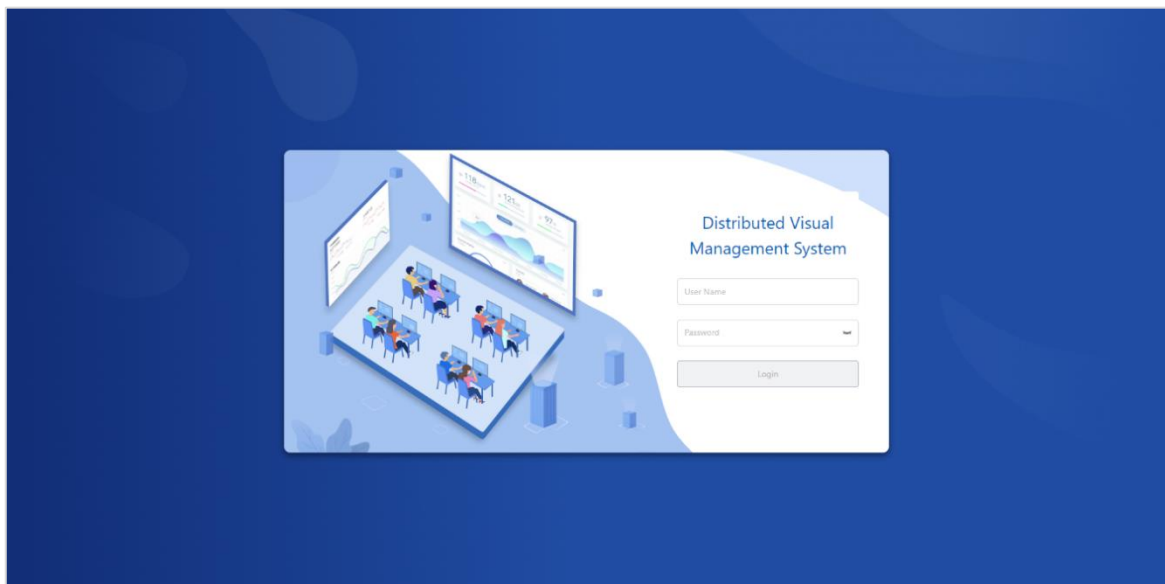
Prerequisites

- The IP address of the primary management node is obtained.
- The user name and password are obtained.
 - The default user name is "admin".
 - The default password is "password123".

Operating Procedure

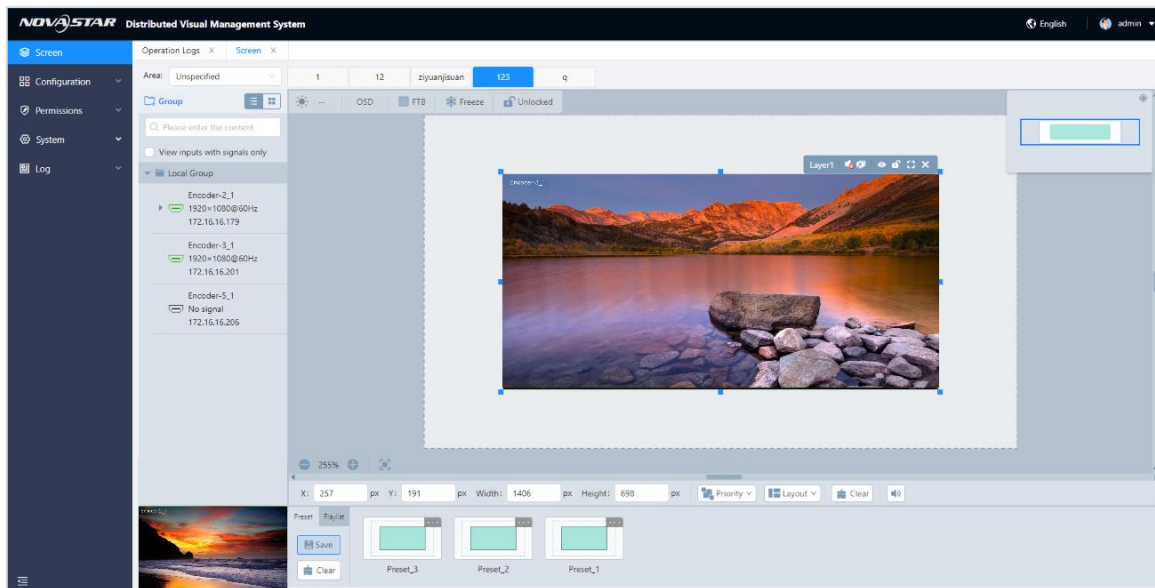
- Step 1 Open the browser, enter the IP address of the primary management node in the address bar, and then press **Enter** to jump to the login interface.

Figure 3-2 Web login page





- Step 2 Enter the user name and password, and click **Login** to log into the primary management node control page. The home page on first login is shown as follows.

Figure 3-3 Home page



Note:

Click  or  at the bottom left to change the main menu style.

3.2 Configure Basic Data

The basic data includes the user, department, role and area configurations.

3.2.1 Configure Areas

The system supports the management of the devices, signal sources and video walls based on different areas.

3.2.1.1 Add Areas

Add the areas where the devices, video walls, IPC sources and other devices are located to the system. When managing the devices and video walls, you can add the area information for future device management.

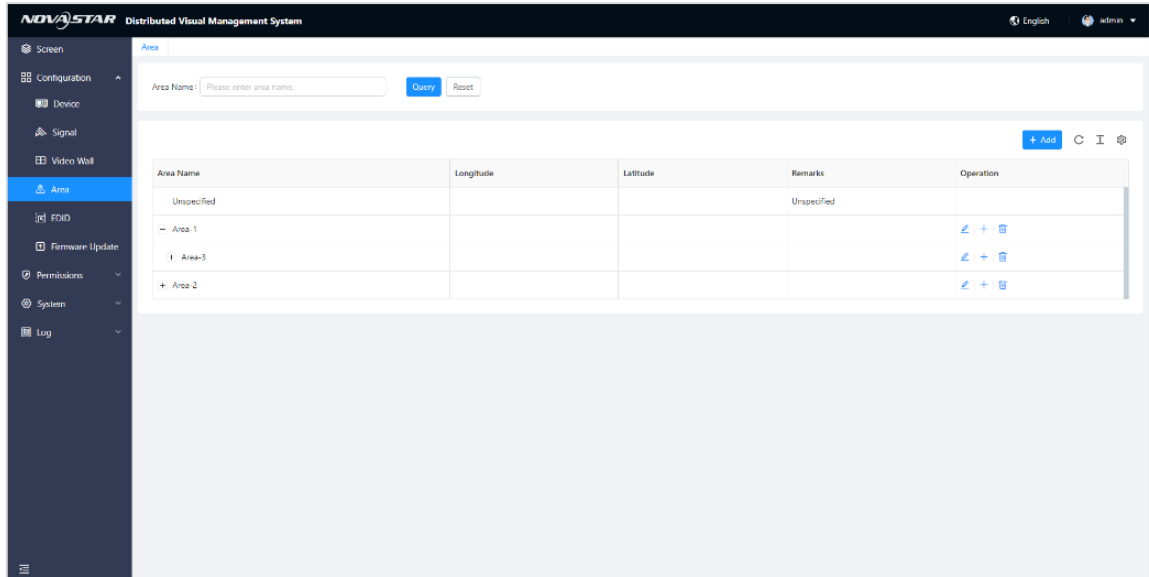
Prerequisites

N/A

Operating Procedure

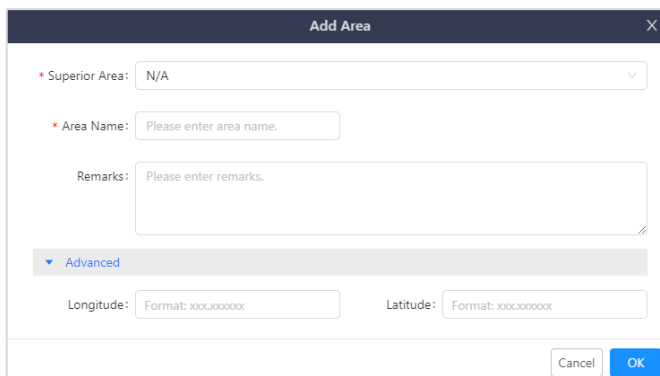
Step 1 In the main menu bar, go to **Configuration > Area** to enter the area management page.

Figure 3-4 Area management



Step 2 Click **Add** to open the area adding window to add a new area.

Figure 3-5 Add new areas



Step 3 Fill the area-related information. If you need to set the precise location for the area, click **Advanced** to expand the settings area and enter the values in the **Longitude** and **Latitude** text boxes respectively.

- Superior Area: Select the superior area for the current area. If you need to add the first-level area, please select **N/A**.
- Remarks (optional): Enter the supplementary area information.

Step 4 Click **OK** to complete the settings.

The added area is shown in the area list after a successful adding.

3.2.1.2 Add Sub-Areas

Multiple-level area management is supported for more detailed area division and device management. The area level is up to 5.

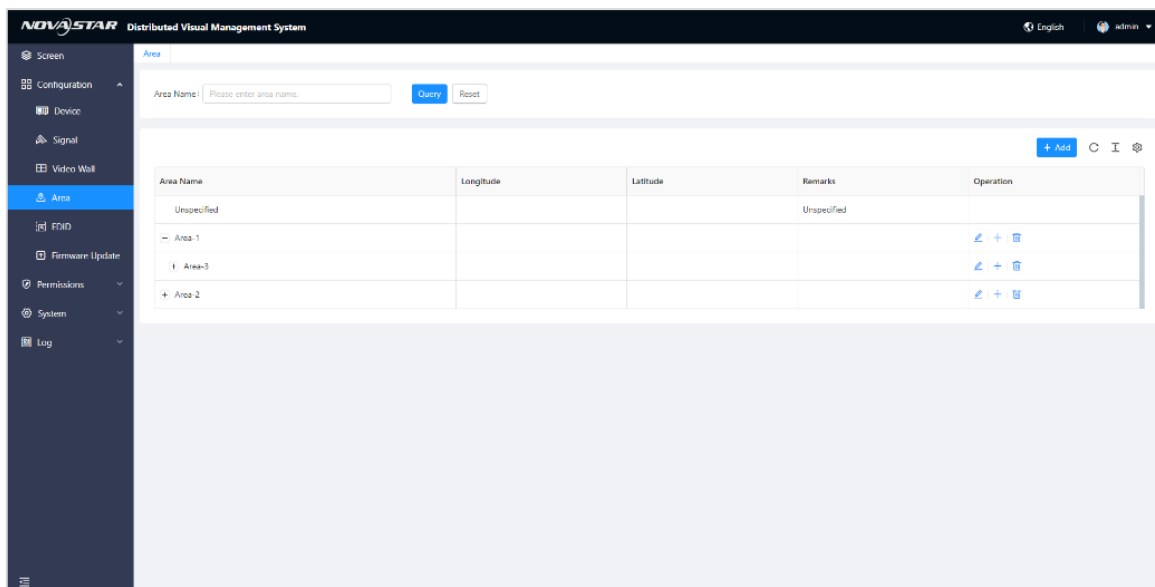
Prerequisites

The superior area is configured.

Operating Procedure

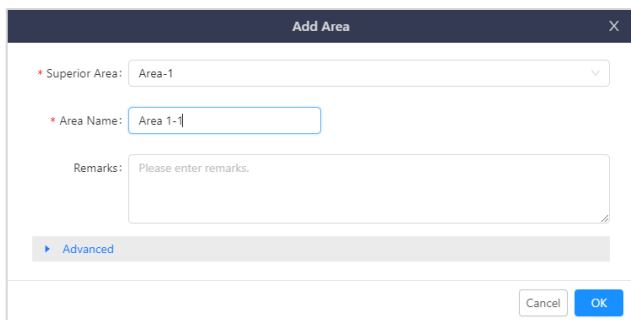
Step 1 In the main menu bar, go to **Configuration > Area** to enter the area management.

Figure 3-6 Area management



Step 2 Click **+** in the column of **Operation** of an existing area to open the sub-area adding window.

Figure 3-7 Add new sub-areas



Step 3 Fill the area-related information. If you need to set the precise location for the area, click **Advanced** to expand the settings area and enter the values in the **Longitude** and **Latitude** text boxes respectively.

Step 4 Click **OK** to complete the settings.

Note:
When adding a sub-area, you can click **Add** to open the area adding window where you can select the desired area from the drop-down list next to **Superior Area**.

3.2.1.3 Edit Areas


You can change the area-related information.

Note:
When the area name is changed, the original area where the devices are located will be changed automatically.


Prerequisites

The area is added.

Operating Procedure

- Step 1 In the main menu bar, go to **Configuration > Area** to enter the area management page.
- Step 2 Click  in the column of **Operation** to open the area editing window.
- Step 3 Change the superior area, area name, remarks and other information.
- Step 4 Click **OK** to complete the editing.

3.2.1.4 Delete Areas

- Step 1 In the main menu bar, go to **Configuration > Area** to enter the area management page.
- Step 2 Select the desired area and click  in the column of **Operation** to open a dialog.
 - Click **OK** to delete the selected area.
 - Click **Cancel** to cancel the deletion.

Note:

When the superior area is deleted, its sub-areas will automatically be deleted.

3.2.2 Add Video Walls

Configure a video wall in the current environment to build the relationship between the wall and the device in the system.

Configure a video wall in advance because its permission needs to be configured for a user.

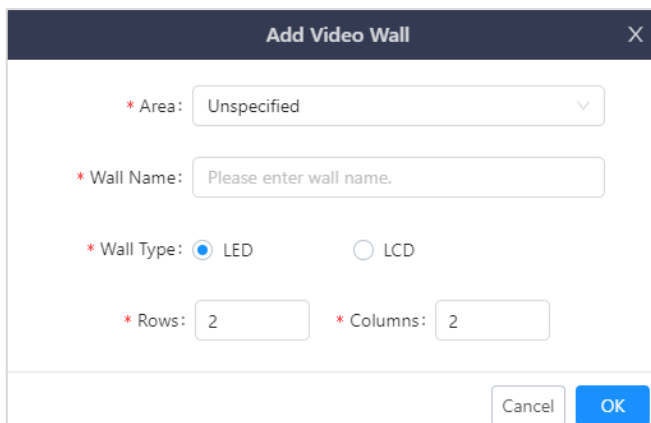
Prerequisites

The area is configured.

Operating Procedure

- Step 1 In the main menu bar, go to **Configuration > Video Wall** to enter the video wall management page.

Figure 3-8 Add new video walls



- Step 2 Select the area where the wall is located from the drop-down list next to **Area**.
- Step 3 Enter the wall name in the text box next to **Wall Name**.
- Step 4 Select the wall type according to the wall loaded by the decoder.

Step 5 Enter the values in the text boxes next to **Rows** and **Columns**.

- When the wall type is the LED screen, set the values according to the number of the mosaic decoders.
- When the wall type is the LCD screen, set the values according to the actual number of rows and columns of the current screen.

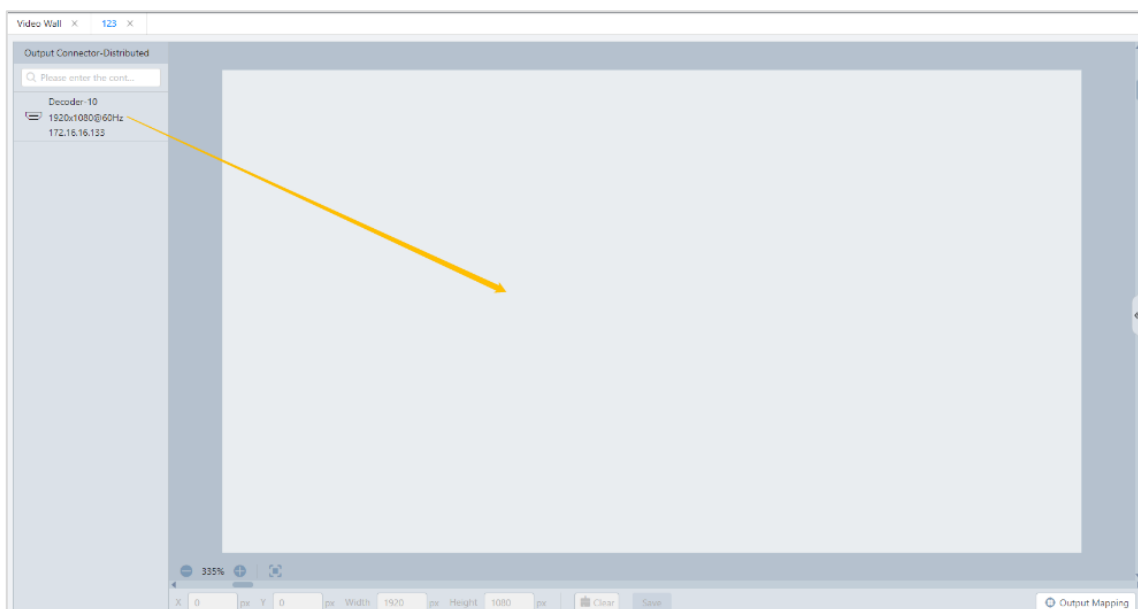
Step 6 Click **OK** to enter the video wall configuration page.

Step 7 Select and drag a decoder node named **Decoder-Screen** on the left to the screen editing area to complete the editing.



Notes:

- If the hardware connection is completed, when configuring the screen, you need to follow the actual connection order. If the screen configurations are completed on the Web page, you need to draw lines based on the configuration order.
- When the MGT1000 is used to load the screen, please refer to [2.3.2.3 Screen Configurations](#) to complete the screen configurations.


Figure 3-9 Screen configurations



Notes:

- The decoding nodes with the same output resolution and frame rate can be configured in the same video wall.
- For quickly locating the screen position in the editing area, select the loaded screen and click  at the top left next to the coordinates to enter the values of **X** and **Y**, and then click . The reference point is at the top left of the editing area.

Step 8 [Optional] Set the LCD bezel compensation.

1. Click  on the right edge to expand the screen properties pane.
2. Check the box next to **LCD Bezel Compensation** to turn on the bezel compensation function.
3. Enter the values in the **H Spacing** and **V Spacing** text boxes based on the LCD edge width.

The rules for setting the **H Spacing** and **V Spacing** values are as follows.

- **H Spacing**: The horizontal spacing value is set to the edge width (H) plus the half spacing (H) between the two screens. The unit is pixel.
- **V Spacing**: The vertical spacing value is set to edge width (V) plus the half spacing (V) between the two screens in pixels. The unit is pixel.

Step 9 Click **Save** to complete the screen configurations.

3.2.3 Configure Departments

The department management is used to maintain and manage the organization flexibly. The multiple department level settings are supported. Each superior department can be configured with multiple sub-departments, and each sub-department can also be configured with subordinate departments. Level relations can be extended infinitely and the department level is up to 5.

Each department has its permissions, and the sub-departments inherit the permissions of their superiors. The department information includes the department name and superior department name.

3.2.3.5 Add Departments

Step 1 In the main menu bar, go to **Permission > Department** to enter the department management page.

Step 2 Click **Add** to open the department adding window.

Figure 3-10 Add new departments

Table 3-1 Department parameters


Parameter	Description	Configuration Method
Superior Department	Superior department name	Required Select the superior department name from the drop-down list.
Department Name	Department name	Required The department name is the only identity information of the department and supports English letters, numbers, en dashes, underlines and spaces.
Sorting	Display rank in the department list	Optional The sorting number refers to the display rank in the department list. You can enter the numbers, such as 1, 2, 3. When the sorting number is set to 1, the department name will be shown in the first row of the list. Notes: The sorting number of the root department is 0 and cannot be changed.
Leader	Leader name	Optional Select an added user to be the department leader

Parameter	Description	Configuration Method
		from the drop-down list.
Phone	Leader phone number	Optional Enter the leader phone number in the text box.
Email	Leader email address	Optional Enter the leader email address in the text box.

Step 3 Configure the department parameters according to [Table 3-1](#).


Step 4 Click **OK** to complete the adding.

Notes:

- When you want to add second-level and third-level departments, please refer to the steps mentioned above.
- Click  in the column of **Operation** to quickly add a sub-department.

3.2.3.6 Edit Departments

When the department-related information is changed, such as the leader and phone number, you can edit them to maintain the department information.

Step 1 Select the desired department and click  in the column of **Operation** to open the department editing window.

Step 2 Change the department-related information.

Step 3 Click **OK** to complete the editing.

3.2.3.7 Delete Departments

When a department is abolished or merged, you need to delete it to avoid the redundant information maintenance.

Select the desired department and click  in the column of **Operation** to open a dialog.

- Click **OK** to delete the selected department.
- Click **Cancel** to cancel the deletion.

3.2.4 Configure Roles

The role is a set label in the system based on the requirement of operational management. Each role has permissions to access and operate the KVM operator system and Web page, and the permissions will not change when a user is added or removed. The role management facilitates the distribution and management of system permission resources, improving the permission distribution efficiency and reducing the workload for repeated permission settings.

3.2.4.1 Add Roles

Step 1 In the main menu bar, go to **Permission > Role** to enter the role management page.

Step 2 Click **Add** to open the role adding window.

Figure 3-11 Add new roles

Table 3-2 Role parameters

Parameter	Description	Configuration Method
Role Name	Role name	Required The role name is the only identity information of a role and supports English letters, numbers, en dashes, underlines and spaces.
Role Status	Enabled status of a role	Required Set the role status. The options include Enable and Disable . <ul style="list-style-type: none"> • Enable: The permissions that the role has will be enabled. • Disable: The permissions that the role has cannot be used.
Sorting	Display rank in the role list	Required The smaller value you set, the higher the role ranks.
Remarks	Supplementary information for a role	Optional Enter other role information in the text box.
Menu Permissions	Set the role permissions. Configure the menu permissions for the current role below the Distributed Integrated Control System and Distributed KVM Collaboration System tabs.	Required Check the boxes next to the desired menus to obtain the matched permissions. Check the box next to the superior menu to obtain all the permissions. Expand the superior menu and check the boxes next to its sub-menus to obtain all the sub-menu permissions. <ul style="list-style-type: none"> • <input checked="" type="checkbox"/>: Obtain all the control permissions. • <input type="checkbox"/>: Obtain some permissions of the current menu.

Step 1 Configure a new role according to [Table 3-2](#).

Step 2 Click **OK** to complete the settings.

3.2.4.2 Edit Roles

When the permissions of a role are changed, you can reselect the permissions below the **Menu Permissions** tab, and the permissions of all the users associated with the role will also be changed.

Step 1 Click  in the column of **Operation** of an existing role to enter the editing page.

Step 2 Grant the desired menu permissions to the role.

Step 3 Click **OK** to complete the editing.

3.2.4.3 Assign Users for Roles

After a role is created, you can assign the users for it, and then the users will obtain the permissions that the role has.

Prerequisites

The user is added.

Operating Procedure


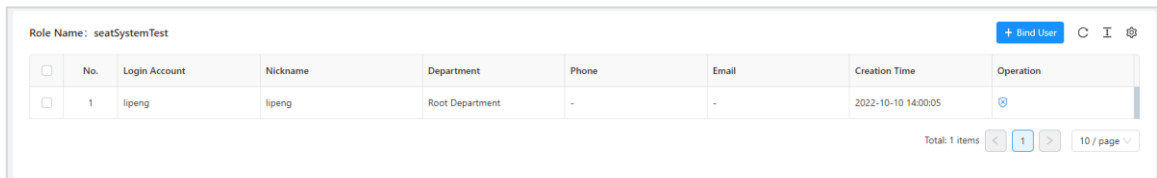

Step 1 Select the desired role and click  in the column of **Operation** to enter the role assignment page.

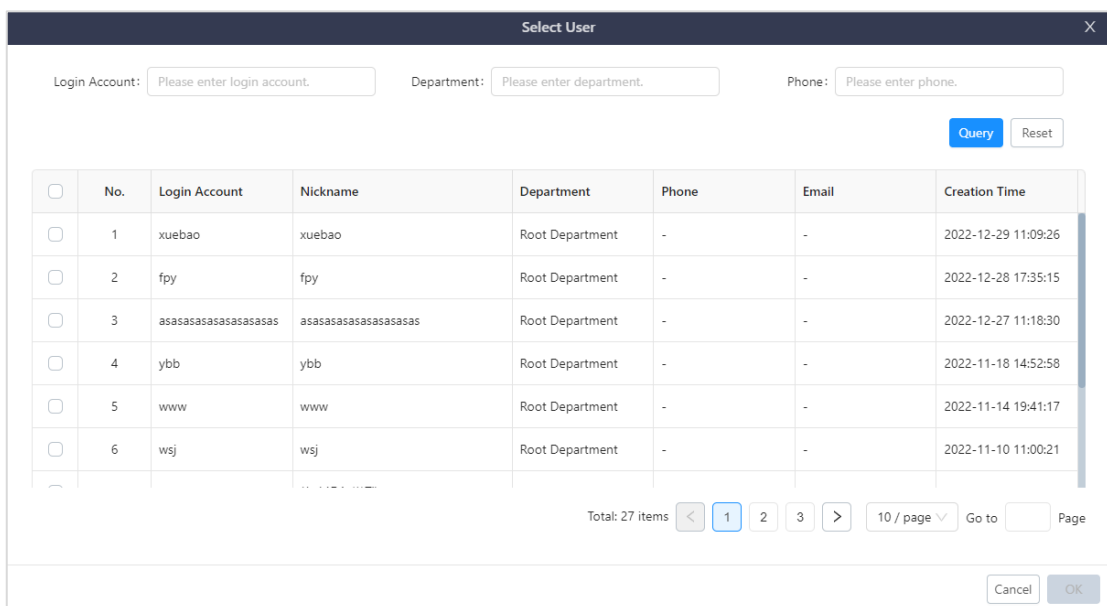
Figure 3-12 Assign users



No.	Login Account	Nickname	Department	Phone	Email	Creation Time	Operation
1	lipeng	lipeng	Root Department	-	-	2022-10-10 14:00:05	

Step 2 Click **Bind User** at the top right to open the user selection page.

Figure 3-13 Select users




No.	Login Account	Nickname	Department	Phone	Email	Creation Time
1	xuebao	xuebao	Root Department	-	-	2022-12-29 11:09:26
2	fpv	fpv	Root Department	-	-	2022-12-28 17:35:15
3	asasasasasasasas	asasasasasasasas	Root Department	-	-	2022-12-27 11:18:30
4	ybb	ybb	Root Department	-	-	2022-11-18 14:52:58
5	www	www	Root Department	-	-	2022-11-14 19:41:17
6	wsj	wsj	Root Department	-	-	2022-11-10 11:00:21

Step 3 Check the boxes next to the user names.


Step 4 Click **OK** to complete the user assignment.

Notes:

- When selecting the user, you can perform a fuzzy or exact search in the **Login Account**, **Department** and **Phone** text boxes.
- On the role assignment page, select the user assigned for a role and click **Batch Remove Permissions** or click  in the column of **Operation** to remove the permissions.

3.2.4.4 Delete Roles

You can delete a role that is not assigned with users or no longer used.

Select the desired role and click  in the column of **Operation** to open a dialog.

- Click **OK** to delete the selected role.
- Click **Cancel** to cancel the deletion.

3.2.5 Configure Users

The user management function is used to manage the basic information of the users in the system. The management dimensions include the administrative relations and business framework. From the two dimensions, the interrelated individuals can be managed in groups. After being grouped based on different dimensions, the users in the corresponding groups have similar function requirements and operation permission levels.

3.2.5.1 Add Users

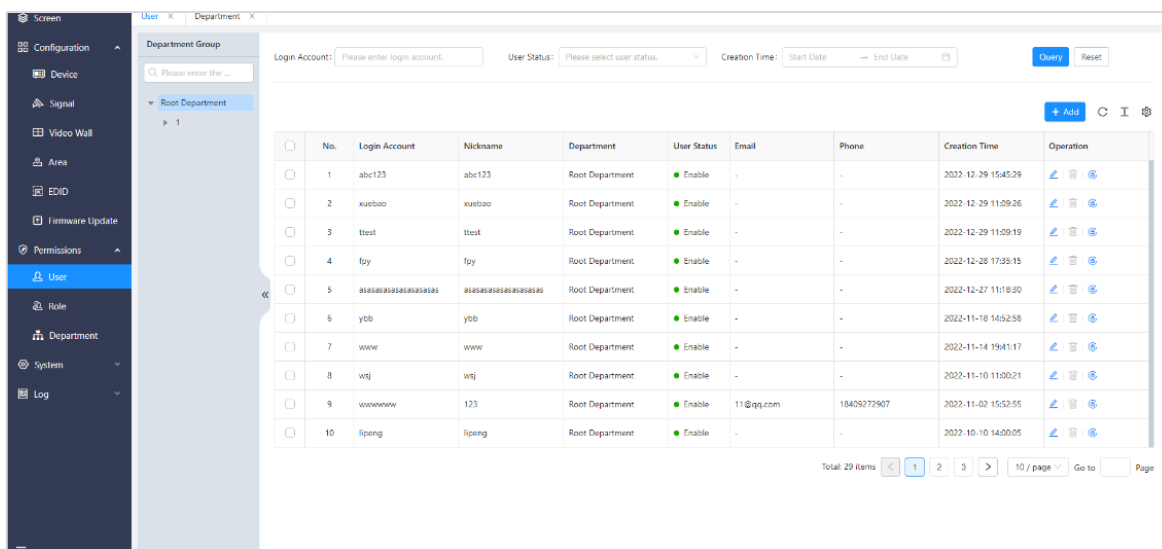
Prerequisites

The role is configured.

Operating Procedure

Step 1 In the main menu bar, go to **Permissions > User** to enter the user management page.

Figure 3-14 User management



No.	Login Account	Nickname	Department	User Status	Email	Phone	Creation Time	Operation
1	abc123	abc123	Root Department	Enable	-	-	2022-12-29 15:45:29	
2	xuebao	xuebao	Root Department	Enable	-	-	2022-12-29 11:09:26	
3	ttout	ttout	Root Department	Enable	-	-	2022-12-29 11:09:19	
4	fpv	fpv	Root Department	Enable	-	-	2022-12-28 17:35:15	
5	asasasasasasasasasas	asasasasasasasasasas	Root Department	Enable	-	-	2022-12-27 11:18:30	
6	ybb	ybb	Root Department	Enable	-	-	2022-11-18 16:52:58	
7	www	www	Root Department	Enable	-	-	2022-11-14 19:41:17	
8	wvj	wvj	Root Department	Enable	-	-	2022-11-10 11:00:21	
9	wwwwww	123	Root Department	Enable	11@qq.com	18409273907	2022-11-02 15:52:55	
10	lipeng	lipeng	Root Department	Enable	-	-	2022-10-10 14:00:05	

Step 2 Click **Add** to open the user adding window.

Figure 3-15 Add new users

Table 3-3 User information

Parameter	Description	Configuration Method
Name	User name displayed in the system	Required The user name is identity information. It is recommended to use a name that is easy to identify.
Status	Enabled status of a user	Required The current user can use the system or not. <ul style="list-style-type: none"> • Enable: The user can log into and operate the system using the current account and password. • Disable: The user cannot log into the system.
Login Account	The account used to log into the system	Required The account used to log into the system is unique. Note: After configuring the login account, it cannot be changed when you edit the user information.
Permission Level	Configure the permission level for a new user.	Optional A popup window is shown when the KVM operator takes over the signal. The smaller value you set, the higher permission the operator has. A user with high permission level can directly take over the signal from a user with low permission level.
Login Password	The password used to log into the system	Required Configure the password for a user.
Confirm Password	Enter again the password to confirm it.	The password you entered must be the same as the login password.
Role	The role information of a configured user	Optional Configure the role information according to the actual job position.

Parameter	Description	Configuration Method
		Select a role from the drop-down list. Please refer to 3.2.4 Configure Roles for the job position configuration.
Department	User department	Optional Select the user department from the drop-down list. Please refer to 3.2.3 Configure Departments for the department configuration.
Phone	User phone number	Optional Enter the user phone number in the text box.
Email	User email	Optional Enter the user email address in the text box.
Remarks	Supplementary information of a user	Optional Enter other user information in the text box.
Data Permissions	Configure user permissions.	The data permission includes the permissions below the Distributed Visual Management System and Distributed KVM Collaboration System tabs. <ul style="list-style-type: none"> • Distributed Visual Management System: Grant the management and operation permissions of the video walls and signals in the system. • Distributed KVM Collaboration System: Grant the operation permissions in the system. <ul style="list-style-type: none"> – Configure permissions for the video walls, output nodes and KVM operators. – Configure permissions for the signals. The option includes View Only, Control and Monopolize.

Step 3 Configure a new user according to [Table 3-3](#).

Step 4 Click **OK** to complete the adding.

3.2.5.2 Edit Users

After a user is added, you can change the relevant information on the user management page.


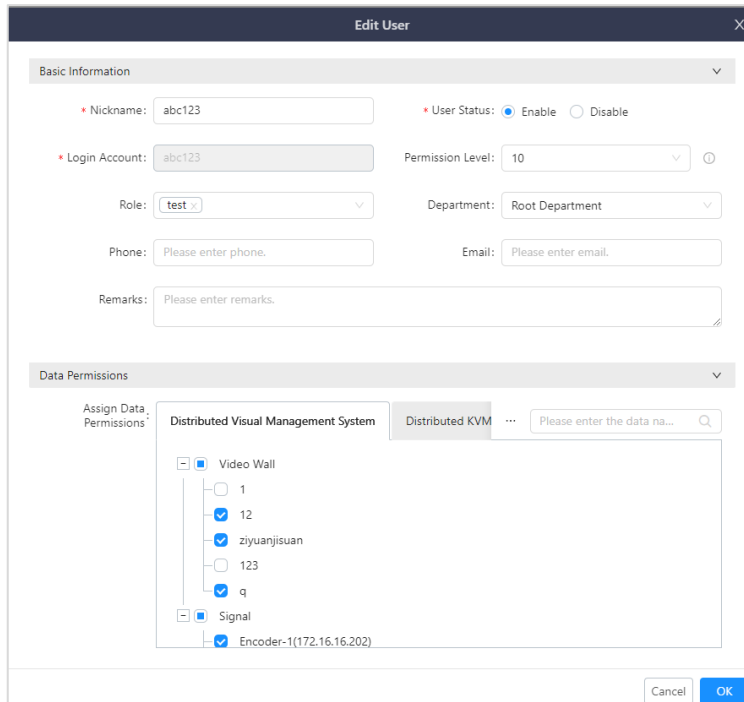
Step 1 Select the desired user name and click  in the column of **Operation** to enter the user editing page.

Figure 3-16 Edit users



Step 2 Change the relevant information, including the role, department and permissions.

- Select a role from the drop-down list next to **Role** to change the user permissions. A user can have multiple role permissions.
- After the user login account is configured for the first time, it cannot be changed.

Step 3 Click **OK** to complete the editing.

3.2.5.3 Reset Passwords

The system administrator can reset the password for a user who forgets the password.


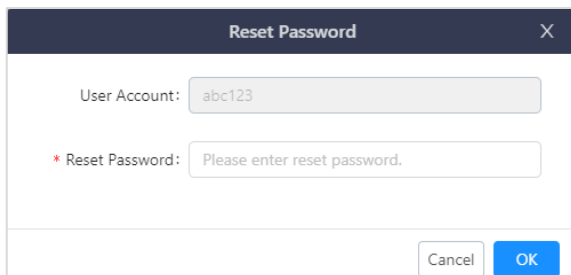
Step 1 Select the desired user and click  in the column of **Operation** to open the password resetting window.

Figure 3-17 Reset passwords




Step 2 Enter a new password in the text box next to **Reset Password**.

Step 3 Click **OK** to complete the resetting.

3.2.5.4 Delete Users

You can delete a user who leaves the system or no longer logs into and operates the system.

Select the desired user and click  in the column of **Operation** to open a dialog.

- Click **OK** to delete the selected user.

- Click **Cancel** to cancel the deletion.

3.3 Manage Devices

You can perform the settings as follows for an encoding node or decoding node.

- Encoding node
 - Change the encoding node name.
 - Set an input connector for an encoding node.
 - Set the video stream encoding mode.
 - Change the IP address of an encoding node.
 - Run diagnostics and restart the device.
- Decoding node
 - Set the decoding node name.
 - Set the decoding node type. The options are **Decoder-KVM** and **Decoder-Screen**.
 - Set the management type for the decoding node. The options are **Primary Management Node**, **Backup Management Node** and **Common Node**.
 - Change the IP address of a decoding node.
 - Run diagnostics and restart the device.
- Device call

In the main menu bar, go to **Configuration > Device** to enter the device management page.

Figure 3-18 Device management

No.	Type	Model	Name	Status	IP Address	Area	Network	Operation
1	Decoder-KVM	SGR200-Z	Decoder-11	Offline	172.16.16.144	Unspecified	-	[Link] [Star] [Refresh]
2	Encoder	MG420	Encoder-11	Offline	172.16.16.111	Unspecified	-	[Link] [Star] [Refresh]
3	Decoder-Screen		Decoder-10	Offline	172.16.16.133	Unspecified	-	[Link] [Star] [Refresh]
4	Decoder-KVM	MG401	Decoder-9	Online	172.16.16.81	Unspecified	[Signal]	[Link] [Star] [Refresh]
5	Decoder-KVM	MG401-Z	Decoder-8	Online	172.16.16.161	Unspecified	[Signal]	[Link] [Star] [Refresh]
6	Encoder	MG420	Encoder-10	Offline	172.16.16.188	Unspecified	-	[Link] [Star] [Refresh]
7	Decoder-KVM	MG401	Decoder-7	Offline	172.16.16.205	Unspecified	-	[Link] [Star] [Refresh]
8	Encoder	MG400	Encoder-9	Offline	172.16.16.177	Unspecified	-	[Link] [Star] [Refresh]
9	Encoder	MG400	Encoder-7	Offline	172.16.16.199	Unspecified	-	[Link] [Star] [Refresh]
10	Encoder	MG400	Encoder-6	Offline	172.16.16.176	Unspecified	-	[Link] [Star] [Refresh]

Online: 8, Offline: 13, Abnormal: 0

Total: 21 items | 1 | 2 | 3 | 10 / page | Go to | Page

All the encoders, decoders and statistic information are displayed on this page.

- Online: The number of the online and running devices
- Offline: The number of the offline devices
- Abnormal: The number of the devices whose working temperature or voltage is abnormal

3.3.1 Search for Devices


You can quickly search for the device by setting the query conditions on the device management page.




- Type: Classify the devices according to the device type.

- Encoder: Display all the encoders in the device list.
- Decoder-KVM: Display all the decoders of the **Decoder-KVM** type in the device list.
- Decoder-Screen: Display all the decoders of the **Decoder-Screen** type in the device list.
- Decoder-All-in-One: Display all the decoders of the **Decoder-All-in-One** type in the device list.
- Name: Query the device name. The fuzzy keywords search is supported.
- Status: Classify the devices according to the device status.
 - Online: Count and display all the online devices.
 - Offline: Count and display all the offline devices.
 - Abnormal: Count and display all the devices whose working temperature or voltage is abnormal.
- IP Address: Perform a precise search according to the IP address or a fuzzy one according to the network segment.
- Query: Click **Query** and the system will search for the device according to its type, name, status and IP address.
- Reset: Delete all the query conditions.

3.3.2 Device Calls

On the device management page, you can use the device call function to quickly and precisely locate the target device.

In the device list, click  in the column of **Operation**. The RUN, LAN, OPT and VIDEO indicators on the front panel of the target distributed device will flash simultaneously.

When the device call function is enabled, the  icon changes to . Click  to disable the call function, and then the indicator status on the device front panel will restore to the corresponding function indicator status.

Note:

The OPT indicator of the 2K encoder and decoder (MG200, MG201, MGT600) is a reserved indicator. When the 2K encoder or decoder is called, this indicator will not flash.

3.3.3 Configure Encoders

Change Encoder Names

When an encoder is connected to the system, the encoder will be named as "Encoder-x" by default. (x indicates the sequence number.) The default name is not easy to be identified. You can change it for quickly locating the encoder and input sources connected to the encoder.


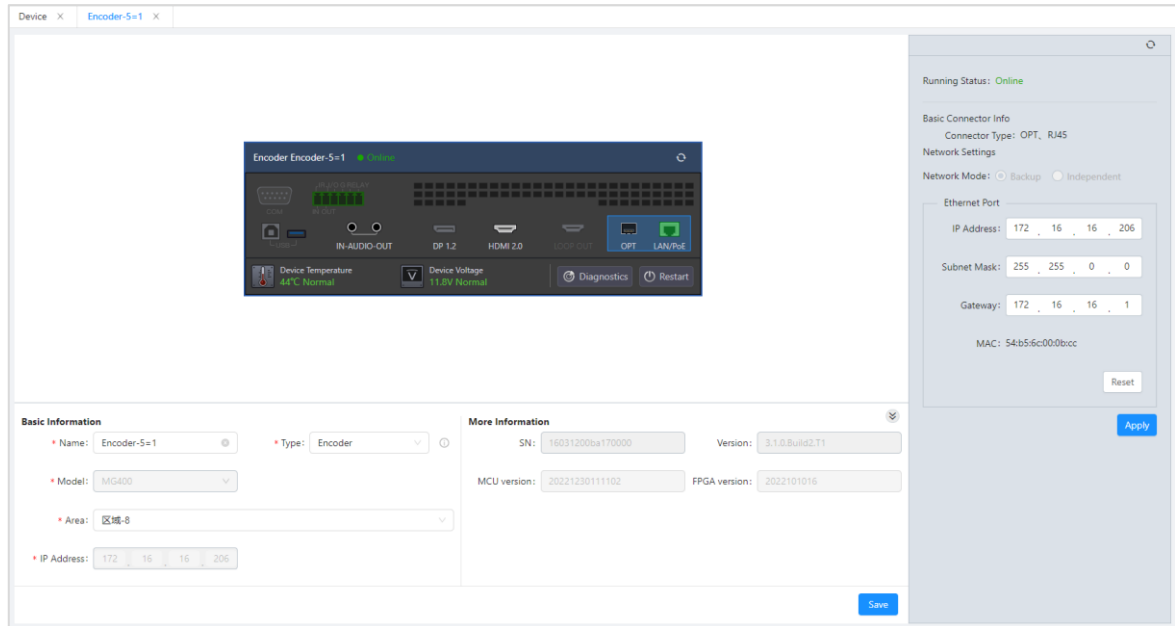
- Step 1** In the main menu bar, go to **Configuration > Device** to enter the device management page.
- Step 2** In the device list, click  in the column of **Operation** or click the desired encoder name to show the device details.

Figure 3-19 Device details




Step 3 Enter a new name in the text box next to **Name**.

Step 4 Click **Save** to complete the editing.

Edit Encoder Connectors

For the 4K encoder, either DP 1.2 or HDMI 2.0 can be used at a time. When using the device, you need to configure the connector first. The default input connector is HDMI 2.0.

For the 2K encoder, only one input is supported. Instead of selecting the input connector, you need to configure the connector mode.

Step 1 On the device management page, click  in the column of **Operation** or click the desired encoder name to show the device details.

Step 2 Click a connector shown on the device rear panel.

Step 3 In the **Connector Information** area, select an input connector.

Step 4 In the **Mode** area, select a video input mode.

The options are **Smooth**, **Clear** and **Custom**.

- Smooth: Ensure the video fluency first.
- Clear: Ensure the video clarity first.
- Custom: Set the desired parameters of the video.
 - Image Quality: Set the quality of the video. The options are **Low**, **Medium**, and **High**.
 - Low: The quality of the video is relatively low compared to the original video quality.
 - Max: Keep the quality of the video nearly the same as the original video quality.
 - Medium: The quality of the video is between the max and low quality.
 - Code Rate Type: Set the code rate type of the video. The options are **Constant Code Rate**, **Variable Code Rate**, and **Low Latency**.
 - Constant Code Rate: The code rate of the output code stream is constant, which influences the output video quality.
 - Variable Code Rate: The system automatically distributes the code stream according to the quantity of the signal information to effectively use the information resources.
 - Low Latency: Ensure the video output in low latency.

- Code Rate Limit: Set the code rate limit of the video. The higher the code rate, the better the video quality.
- Encoding Mode: The supported encoding modes include **H.264** and **H.265**.
- Keyframe Interval: The keyframe intervals, also called I-frame intervals, are the distance in time between two keyframes.

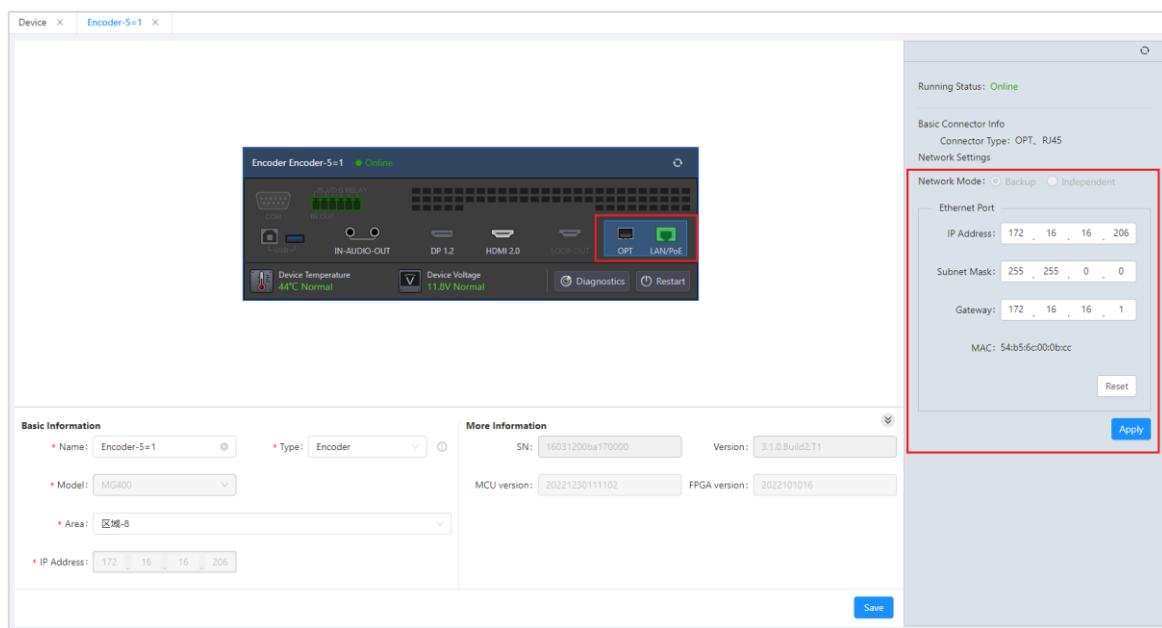
Step 5 Click **Apply** to complete the configurations.

Change IP Information

On the device details page, click the Ethernet port area on the rear panel to open the **Network Settings** pane where you can change the device IP information.

Click **Apply** to complete the editing and the device will automatically restart.

Figure 3-20 Change IP information

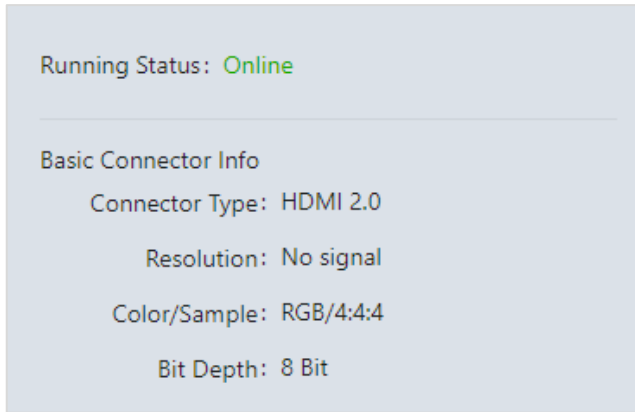


- IP Address: Set the device IP address. On each network segment, the IP address is unique. When you change it, it cannot conflict with the IP addresses of other devices.
- Subnet Mask: Set the subnet mask. On the same network segment, the subnet masks are the same.
- Gateway: Set the IP address of the gateway.

View Device Status

At the top right of the device details page, you can view the device status and basic connector information.

Figure 3-21 Device status information



- Running Status: Show the running status of the current device.
 - Online: The device is running normally.
 - Offline: The device is offline.
 - Abnormal: The device temperature or voltage is abnormal.
- Basic Connector Info: View the related-connector information, including the connector type, resolution of the accessed video, color/sample and bit depth.

3.3.4 Configure Decoders

Change Decoder Names

When a decoder is connected to the system, the decoder will be named as "Decoder-x" by default. (x indicates the sequence number.) The default name is not easy to be identified. You can change it for quickly locating the decoder when you manage the decoder-KVM and create the screens.


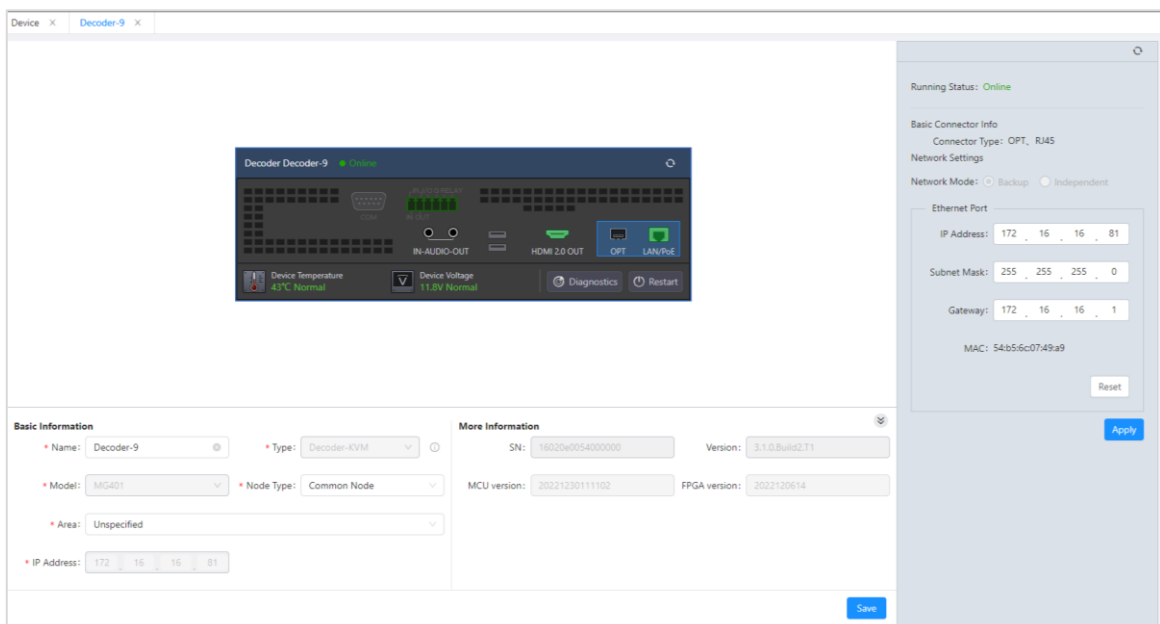
- Step 1 In the main menu bar, go to **Configuration > Device** to enter the device management page.
- Step 2 In the device list, click  in the column of **Operation** or click the desired decoder name to show the device details.

Figure 3-22 Device details



Step 3 Enter a new name in the text box next to **Name**.

Step 4 Click **Save** to complete the editing.

Set Decoder Types

The decoding node is classified into the screen node and KVM node based on different functions. When the decoder node is used as the screen node, it can be only used to load the screens and does not have the KVM operator menu. When the decoding node is used as the KVM node, it can be only used for the KVM operators and cannot load the screens.

On the device details page, select the desired decoder type from the drop-down list next to **Type**.

- Decoder-KVM: Set the decoder as the KVM node.
- Decoder-Screen: Set the decoder as the screen node.
- Decoder-All-in-One: Set the decoder as the all-in-one control node. The all-in-one node cannot be changed.

Note:

You cannot change the type of the device being used.

Set Decoder Management Types

The system adopts a decentralized design. Because no central node is configured, you need to set a management node and configure the data on the Web page. After a successful configuration, the data will be synchronized to other nodes automatically.

Only the decoder can be set as the primary management node and backup management node. The primary management node needs to be configured on first login.

On the device details page, select the node management type from the drop-down list next to **Node Type**.

- Common Node: Set the node as the common node. The common node is not used for Web operations.
- Backup Management Node: Set the node as the backup management node. When the primary management node is offline or faulty, the backup management node will automatically become the primary management node.

Set Device Areas

On the device details page, select the area from the drop-down list next to **Area** to manage the devices based on different areas.

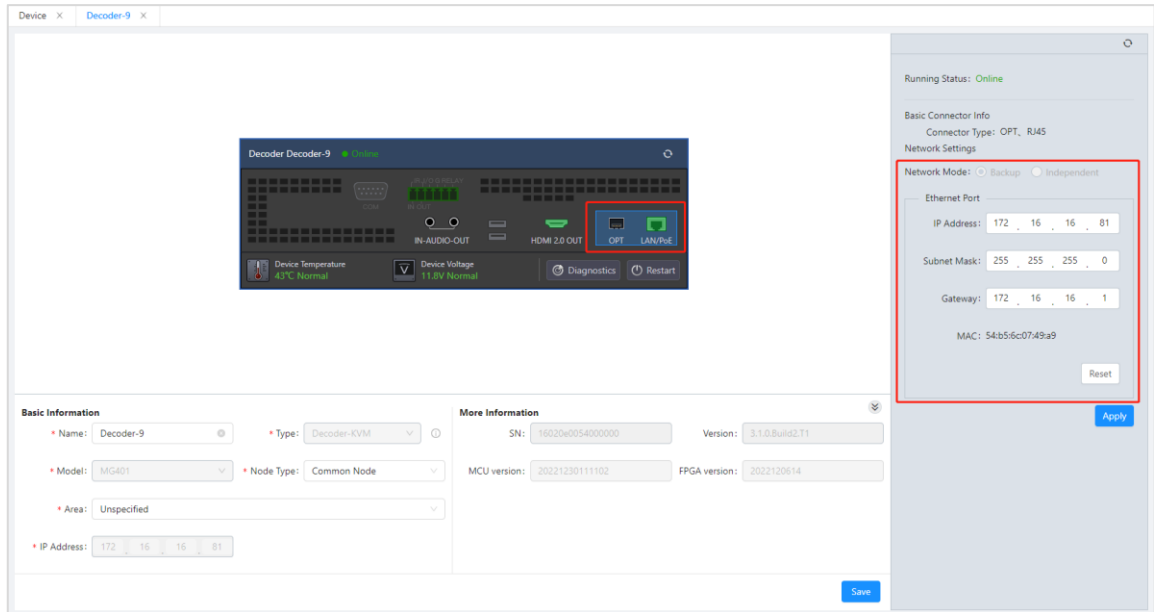
Change IP Information

On the device details page, click the Ethernet port area on the rear panel to open the **Network Settings** pane where you can change the device IP information.

Click **Apply** to complete the editing and the device will automatically restart.

The IP information of the primary management node cannot be changed.

Figure 3-23 Change IP information



- IP Address: Set the device IP address. On each network segment, the IP address is unique. When you change it, it cannot conflict with the IP addresses of other devices.
- Subnet Mask: Set the subnet mask. On the same network segment, the subnet masks are the same.
- Gateway: Set the IP address of the gateway.

3.3.5 Run Diagnostics

Diagnose the device components through the device programs for troubleshooting.

On the device details page, click **Diagnostics** on the rear panel to diagnose the device.

In the process of the device diagnostics, the input and output may be temporarily abnormal and will be restored after the diagnostics is completed.

Figure 3-24 Run diagnostics

Diagnostics		Category	Status
FPGA	Normal	Version	✓
ARM	Normal	DdrInitComplete	✓
		DispPllLock	✓
		SysMonTemp	✓
		SysMonVccInt	✓
		SysMonVccAux	✓
		SysMonVccBram	✓
		SysMonAux0	✓
		SysMonAux1	✓
		SysMonAux2	✓
		SysMonAux3	✓
		Clk100Mvid	✓
		Clk100Mfreq	✓
		ClkDdrVid	✓
		ClkDdrFreq	✓
		ClkPsSysVid	✓
		ClkPsSysFreq	✓
		ClkPISysVid	✓
		ClkPISysFreq	✓

3.3.6 Restart Devices

When a device is faulty, you can restart it to remove the faults first.
On the device details page, click **Restart** on the rear panel to power off the device and restart it.

3.4 Manage Signal Sources

In the main menu bar, go to **Configuration > Signal** to enter the signal source management page. All the input sources connected to the encoders and the added IPC sources are shown in the signal list.

Figure 3-25 Signal source management

No.	Name	Type	IP Address	Status	Access Device	Area	Operation
1	Encoder-11_1	Local Source	172.16.16.111	No Signal	Encoder-11	Unspecified	[Edit] [Delete] [Star]
2	Encoder-10_1	Local Source	172.16.16.188	No Signal	Encoder-10	Unspecified	[Edit] [Delete] [Star]
3	Encoder-9_1	Local Source	172.16.16.177	No Signal	Encoder-9	Unspecified	[Edit] [Delete] [Star]
4	IPC-208	Network Source	172.16.16.208	With Signal	--	Area-1	[Edit] [Delete] [Star]
5	Encoder-7_1	Local Source	172.16.16.199	No Signal	Encoder-7	Unspecified	[Edit] [Delete] [Star]
6	Encoder-6_1	Local Source	172.16.16.176	No Signal	Encoder-6	Unspecified	[Edit] [Delete] [Star]
7	Encoder-5_1	Local Source	172.16.16.206	No Signal	Encoder-5=1	区域-8	[Edit] [Delete] [Star]
8	Encoder-4_1	Local Source	172.16.16.203	No Signal	Encoder-4	Unspecified	[Edit] [Delete] [Star]
9	Encoder-1_1	Local Source	172.16.16.202	No Signal	Encoder-1	区域-4	[Edit] [Delete] [Star]
10	Encoder-2_1	Local Source	172.16.16.179	With Signal	Encoder-2	Area-7	[Edit] [Delete] [Star]

3.4.1 Add Signal Sources

When an encoder is connected, the system will automatically add the input sources connected to the encoder, whereas the IPC sources need to be added manually.

- Step 1 On the signal management page, click **Add** to open the signal source adding window.

Figure 3-26 Add IPC sources

Add Signal Source ✕

Basic Information

* Name: * Type:

* Area:

Communication

* Config Method:

After a source is added successfully, the config method cannot be changed. If required, delete the source and add it again.

Add Multiple: Off

* Main Stream:

* Sub Stream:

User Name: Password:

Table 3-4 Basic signal information

Parameter	Description	Configuration Requirement
Name	Enter a name for the added signal source.	Required It is recommended to use a name that is easy to identify.
Type	Set a type for the added signal source. The IPC source can only be added manually.	The type is fixed to Network Source and cannot be changed.
Area	Select an area for the signal source.	Required Add an area where the signal source is located.
Config method	Select a protocol used by the IP camera. The options include RTSP and ONVIF .	RTSP <ul style="list-style-type: none"> • Add multiple: Add all the cameras on the same network segment. • Main stream: The main stream is used to transfer the high-definition video and monitoring images. It requires a high transmission bandwidth. Config format: rtsp://IP address:port number/path • Sub stream: The sub stream is used to transfer the standard-definition video and monitoring images. It requires a relatively low transmission bandwidth. Config format: rtsp://IP address:port number/path • User name: The administrator account of the camera • Password: The password matched with the administrator account of the camera
		ONVIF <ul style="list-style-type: none"> • Adding method: The supported options include Manual and Scan. <ul style="list-style-type: none"> – Manual: Enter the IP address, user name, password of the camera. – Scan: The system will automatically scan all the IP addresses of the cameras on the current network. Select the target IP address, and then enter the user name and password to add the camera. • IP address: The IP address of the camera • User name: The administrator account of the camera • Password: The password matched with the administrator account of the camera


Step 2 Configure the basic information of the added signal according to [Table 3-4](#).

Step 3 In the **Communication** area, select the configuration method and fill in the relevant information according to [Table 3-4](#).

Step 4 Click **OK** to complete the adding.

3.4.2 Change Signal Names

When the signal is connected to the encoder, it will be named as "Encoder-x" by default. (x indicates the sequence number.) The default name is not easy to be identified in the screen and KVM operator system. You can change it for quick identification, so that the work efficiency can be improved.

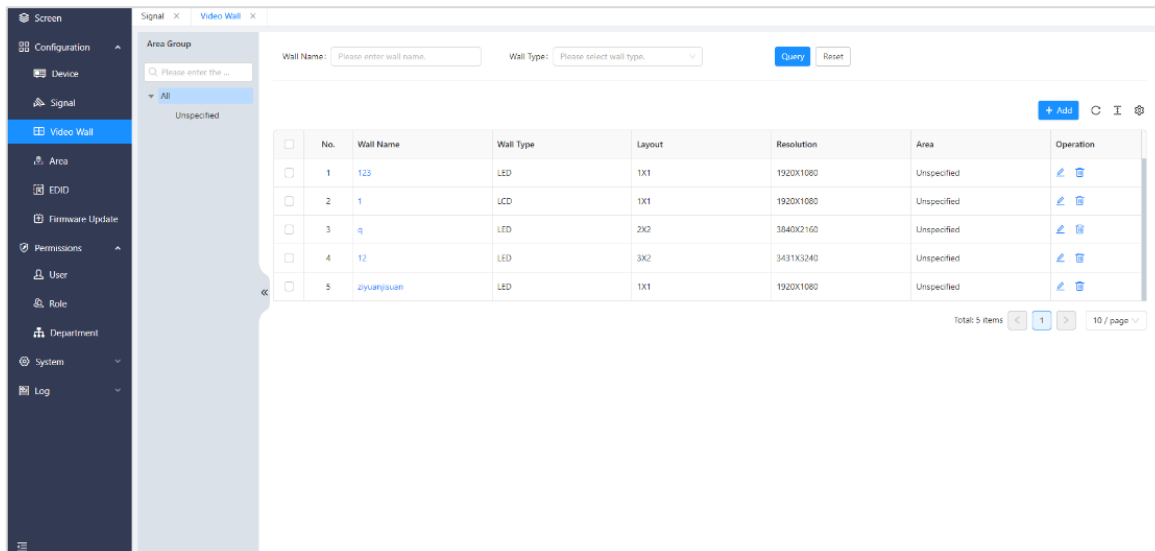
Step 1 On the signal source management page, hover the mouse over the desired signal name. The  icon appears next to the signal name.

3.5 Manage Video Walls

The video wall is the screen loaded by the Decoder-Screen nodes. The wall in the distributed system is mainly used to display the decision information.

In the main menu bar, go to **Configuration > Video Wall** to enter the video wall management page.

Figure 3-29 Video wall management



3.5.1 Add Video Walls

For detailed operations, please refer to [3.2.2 Add Video Walls](#).

3.5.2 Change Video Wall Properties

After adding the video wall, you can change the wall name, structure and output image quality in the wall property pane, and also use the test patterns to check whether the display is normal.


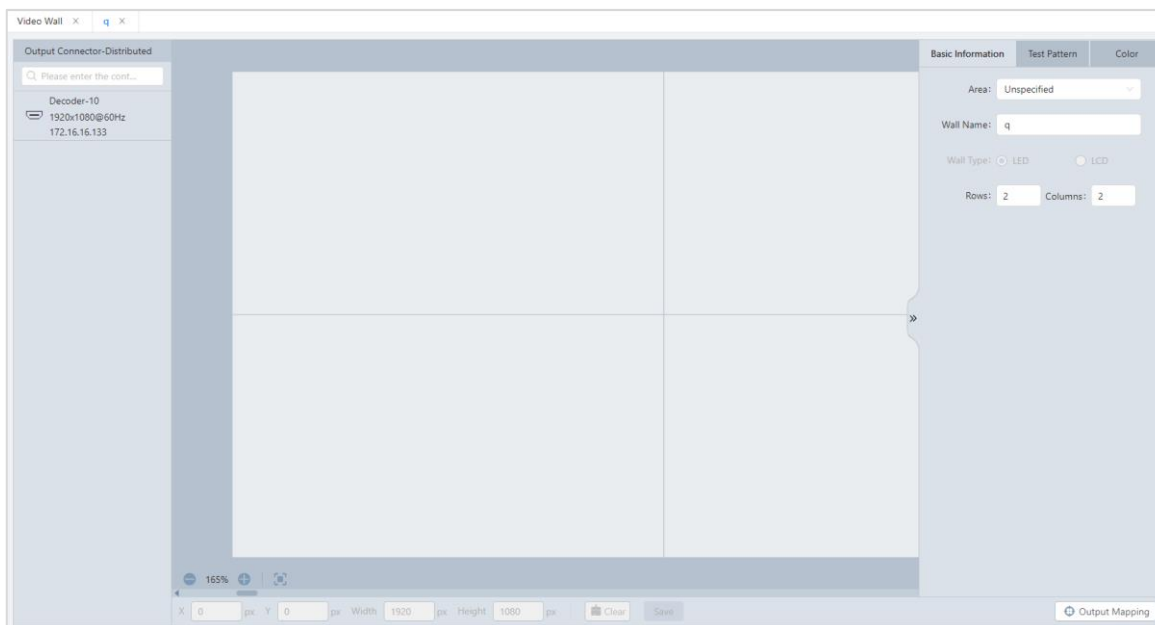
On the video wall management page, click  in the column of **Operation** to enter the wall editing page.


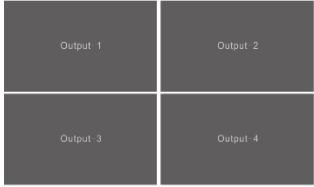
Figure 3-30 Video wall information



Basic Information



Click  on the right edge to expand the wall properties pane. The **Basic Information** tab is shown by default.

Table 3-5 Basic information

Function	Description
Video wall information	<p>Wall name: Enter a name for the video wall to easily manage it.</p> <p>The name supports English letters, numbers, spaces, underlines and en dashes, and cannot contain only spaces. The length cannot be greater than 20 characters.</p> <p>You can set the values of Rows and Columns to change the wall structure.</p> <p>Note:</p> <p>In the wall properties pane, when you set the values of Rows and Columns to change the wall structure, the current configured wall will be deleted and you need to configure it again.</p>
LCD bezel compensation	<p>Check the box next to LCD Bezel Compensation to enable the bezel compensation function.</p> <ul style="list-style-type: none"> • H spacing: The value is set to the edge width (R+L) plus the half spacing (H) of the two screens. • V spacing: The value is set to the edge width (T+B) plus the half spacing (V) of the two screens. <p>The compensation effect displayed on the physical LCD screens and Web page is as follows.</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>LCD Splicing Screen</p>  </div> <div style="text-align: center;"> <p>Screen Displayed on Web Page</p>  </div> </div>

Test Patterns


After configuring the screen, you can set the test patterns to check the screen display effect.


- Step 1 In the main menu bar, go to **Configuration > Video Wall** to enter the video wall management page.
- Step 2 Click the wall name or click  in the column of **Operation** to enter the wall editing page.
- Step 3 Click  on the right edge to expand the wall properties pane.
- Step 4 Click the **Test Pattern** tab.
- Step 5 Check the box next to **Enable**, select the desired test pattern and set the relevant parameters.

Observe the image displayed on the wall and compare it with the test pattern to check the order, color and brightness of the screen.

Color

You can set the contrast, brightness, saturation, hue and gamma of the image displayed on the wall to improve the image quality.

- Step 1 In the main menu bar, go to **Configuration > Video Wall** to enter the video wall management page.
- Step 2 Click the wall name or click  in the column of **Operation** to enter the wall editing page.

Step 3 Click  on the right edge to expand the wall properties pane.

Step 4 Click the **Color** tab.

Step 5 Drag the slider to set the values of the **Contrast, Brightness, Saturation, Hue, and Gamma**.

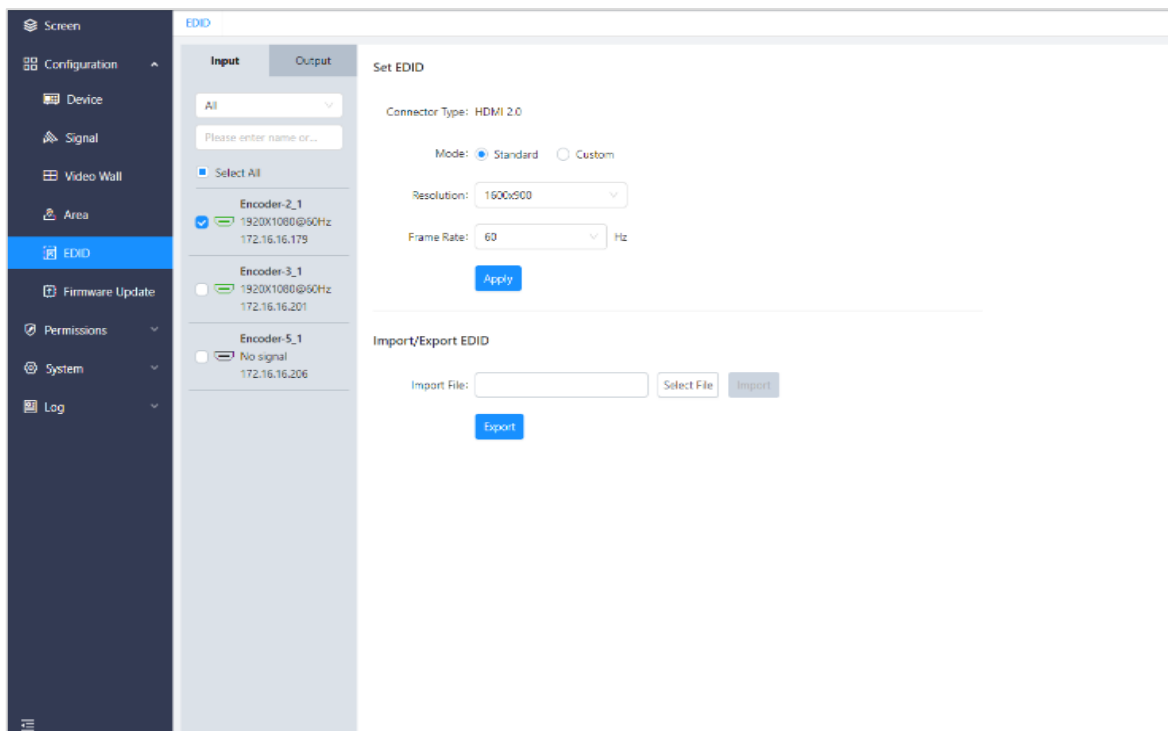
In the process of adjusting the color, the image is displayed in real time. You can adjust and observe the image till the display effect meets your requirements. Click **Reset** to restore to the default values.

3.6 Set Input and Output EDID

Set the resolutions of the input and output connectors of the encoder and decoder.

Step 1 In the main menu bar, go to **Configuration > EDID** to enter the EDID settings page.

Figure 3-31 EDID management



Step 2 Click the **Input** or **Output** tab to view the input connector resolution of the encoder or output connector resolution of the decoder.

Step 3 Check the box next to the desired input connector or output connector. You can change the EDID information in the following three ways.

- **Standard**

Select a standard resolution from the drop-down list.

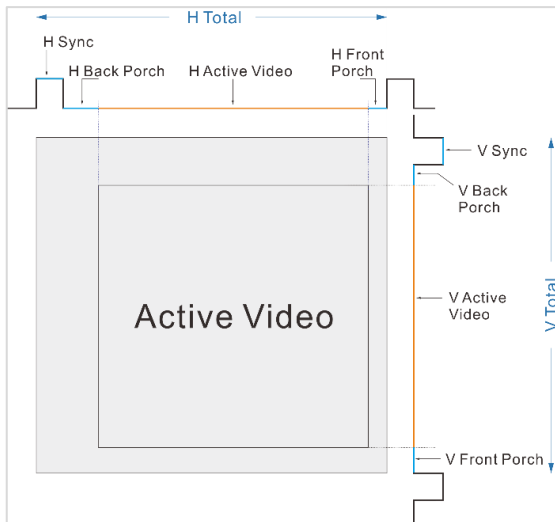
- **Custom**

Set the width, height and frame rate for the input or output connector, and then click **Apply** to complete and apply the settings.

- **Advanced**

Under **Custom** mode, select **Advanced** to enable the advanced EDID settings function. The professional familiar with the EDID settings is advised to adopt this method. The parameters for the advanced EDID settings are shown as follows.

Figure 3-32 Parameters for advanced EDID settings



- Import/Export EDID

Export the configured resolution parameters file for future use, or import an existing EDID configuration file.

- Export EDID: Only the input or output resolution of a single connector can be exported.
- Import EDID: The configuration file can be imported to multiple connectors of the same type.

Step 4 Click **Apply** to complete and apply the EDID settings.

3.7 Update Firmware

Updating the firmware for all the devices is supported in the system.

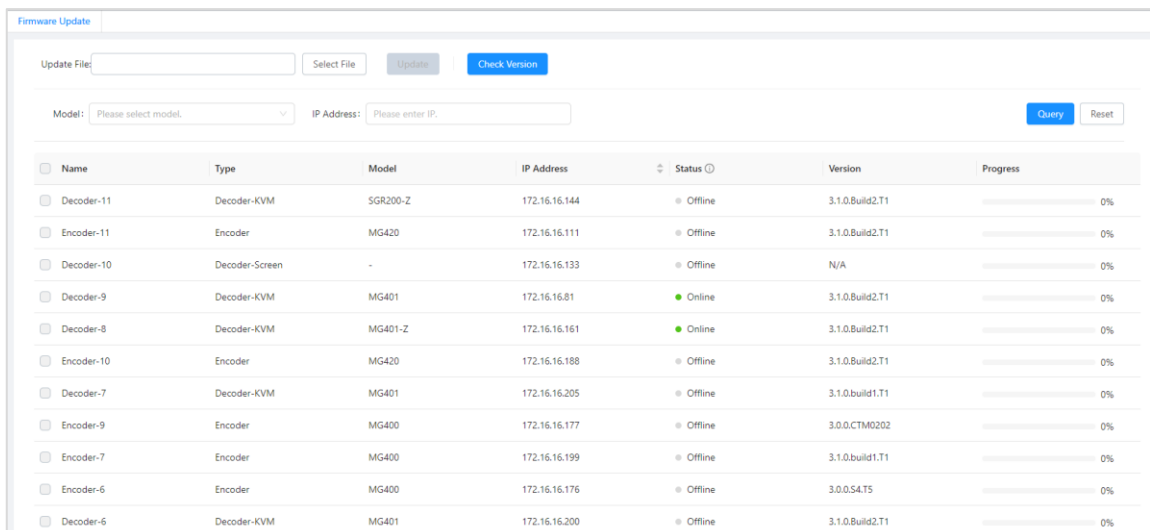
Prerequisites

You have obtained the needed firmware packages.

Operating Procedure

Step 1 In the main menu bar, go to **Configuration > Firmware Update** to enter the firmware update page.

Figure 3-33 Update the firmware



- Step 2 Click **Select File** and select the target update file in the popup window.
- Step 3 Select the desired device model from the drop-down list next to **Model**.
- Step 4 In the device list, check the boxes next to the desired devices.

Notes:

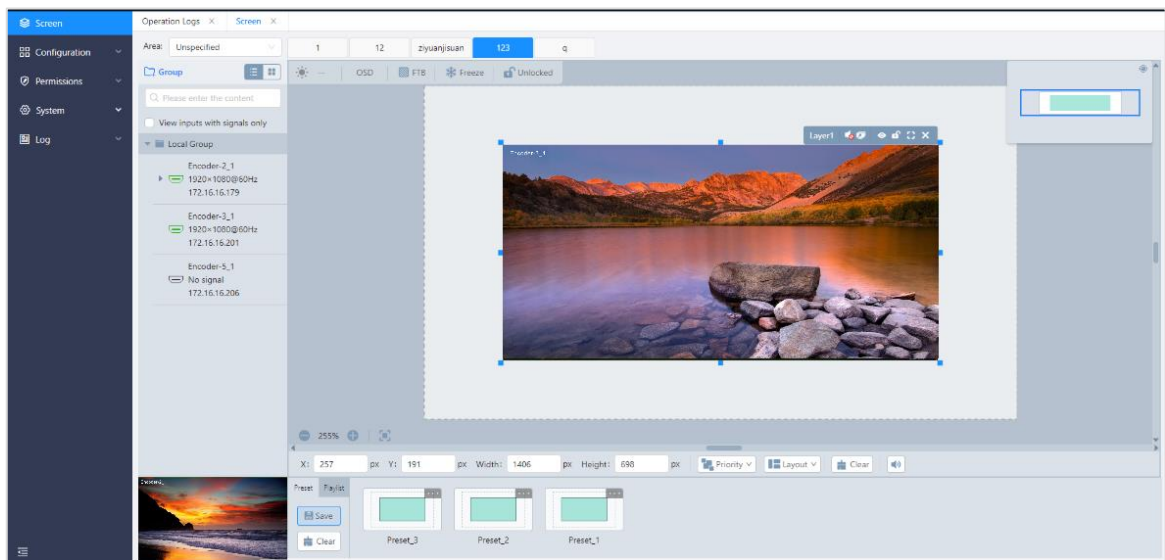
- Check the box next to **Name** in the title bar of the device list to select all the devices shown below.
- Click **Check Version** to check the hardware versions of the devices in the system.

- Step 5 Click **Update** to update all the selected devices.

3.8 Manage Screens

After configuring the video wall, you can add and delete the layer, change the layer properties, switch the layer input sources, save and load the presets and perform other operations on the screen management page. In the main menu bar, click **Screen** to enter the screen management page.

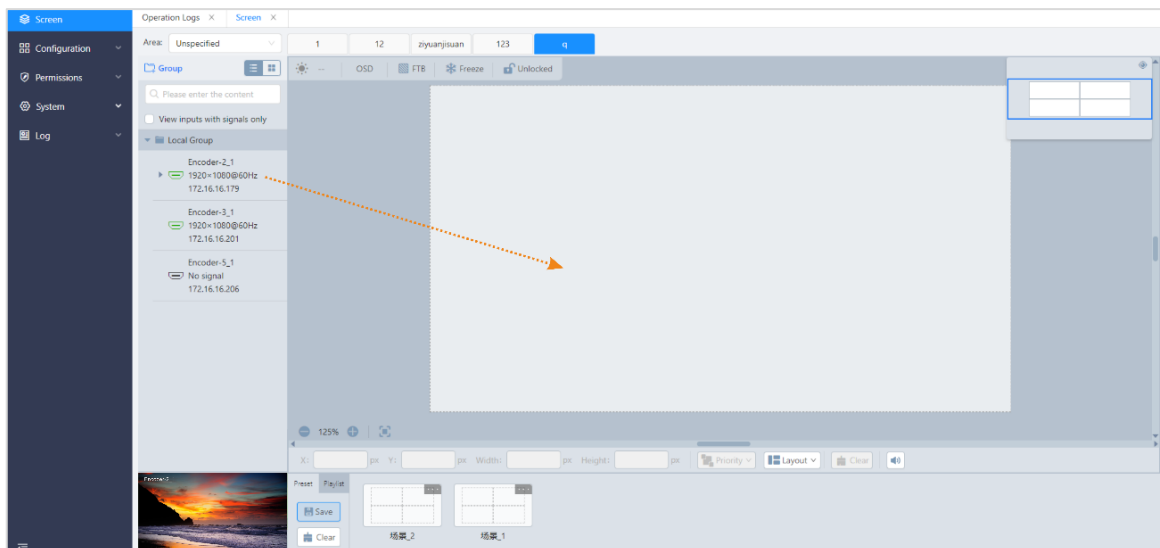
Figure 3-34 Manage screens



3.8.1 Add Layers

- Step 1 On top of the screen management page, select the video wall that you will operate.
- Step 2 Click an input source in the signal list on the left and drag it to the editing area to add a layer.

Figure 3-35 Add layers



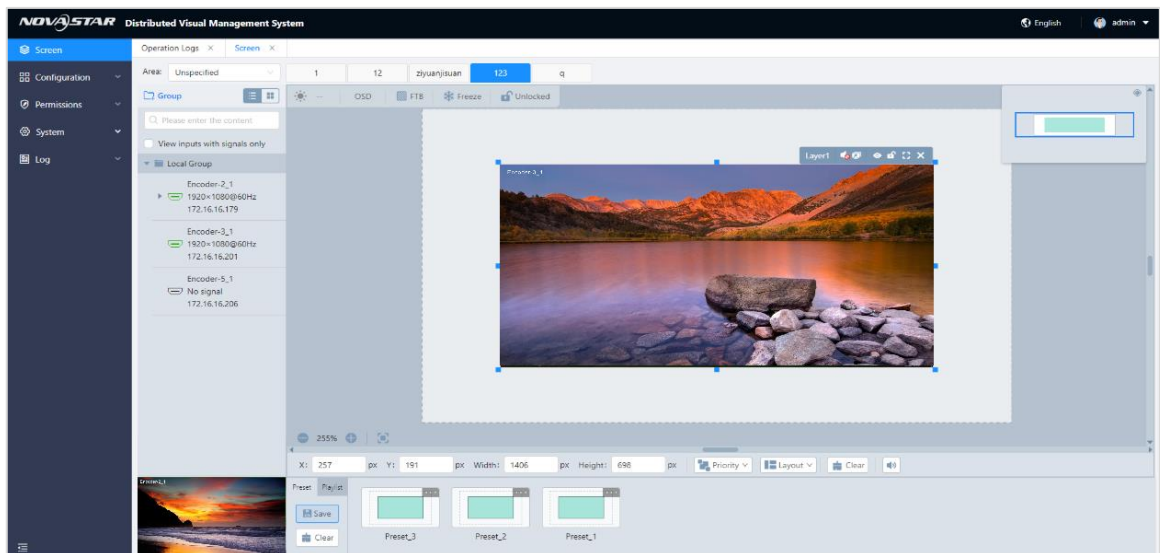
3.8.2 Adjust Layers

Click a layer to select it, and then you can adjust its size and position.

Quick Adjustment

- Adjust the layer size: Click the small square on the layer edge, and drag the square when the cursor turns to a double-sided arrow to quickly adjust the layer size.
- Adjust the layer position: Click and drag the layer to quickly move the layer.

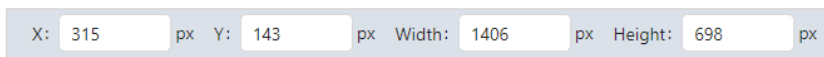
Figure 3-36 Quick adjustment



Precise Adjustment


- Adjust the layer size: Enter specific numbers in the **Width** and **Height** text boxes below the layer editing area to precisely adjust the layer size.
- Adjust the layer position: Enter specific numbers in the **X** and **Y** text boxes below the layer editing area to precisely adjust the layer position. The adjustment reference is the top corner of the layer. If the **X** and **Y** values are both 0, the layer's top left corner locates at the top left corner of the screen.

Figure 3-37 Precise adjustment




Layer Priorities Adjustment

Step 1 Click the desired layer to select it.

Step 2 Click  below the layer editing area to adjust the layer priorities.

- Bring to Front: Bring the selected layer to the front, and the layer image will be displayed completely.
- Send to Back: Send the selected layer to the back, and the layer will be partially covered by other overlapping layers.
- Bring Forward: Bring the selected layer forward.
- Send Backward: Bring the selected layer backward.

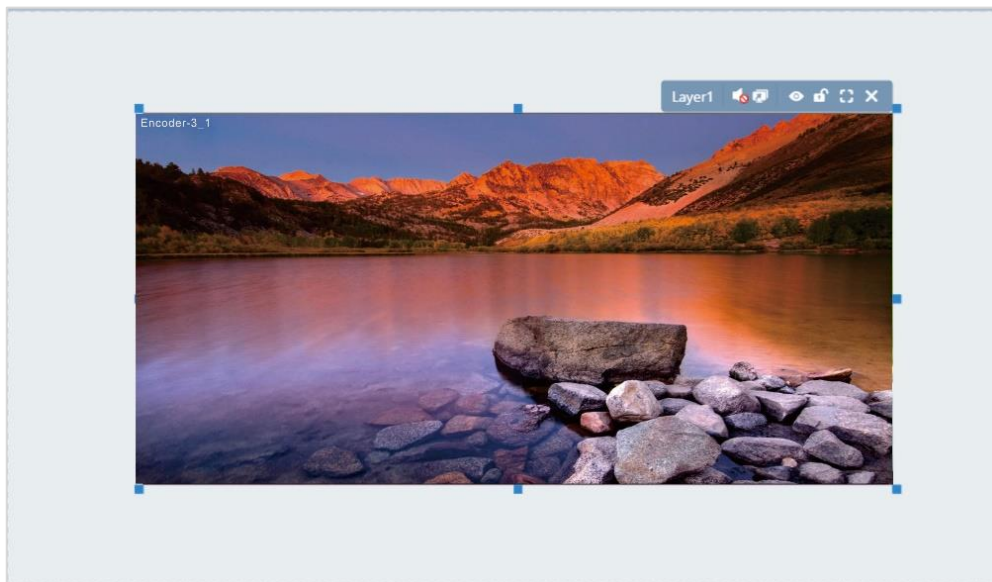
Layer Layout






Click  below the layer editing area to select the desired layout. The system will quickly add the layers, and the added layers will fill the whole screen according to the layout you selected.





Layer Control

Click a layer to select it, and then the following control icons will be shown at the top right of the selected layer.

Figure 3-38 Layer control





- : Turn on the layer output volume.
- : Turn off the layer output volume.
- : Start the layer playback on the Web page.
- : Stop the layer playback on the Web page.
- : Unlock the layer.


-  : Lock the layer.
-  : Make the selected layer fill the screen.
-  : Restore to the original layer size.
-  : Delete the selected layer.

Layer Volume Adjustment

Step 1 Click the desired layer to select it.

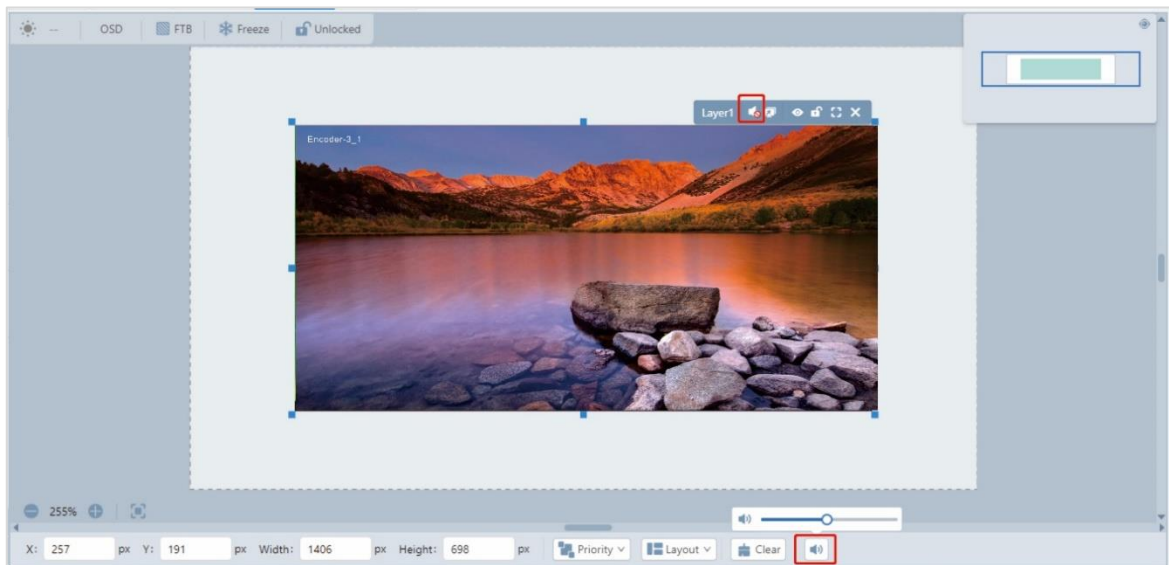
Step 2 Check whether the layer volume is turned on.

- If turned on, the  will be shown at the top right of the selected layer, and then follow the next step.
- If turned off, the  will be shown at the top right of the selected layer. Click the icon to turn on the layer volume.

Step 3 Click  below the layer editing area to enable the volume adjustment function.

Step 4 Drag the slider block to adjust the volume.

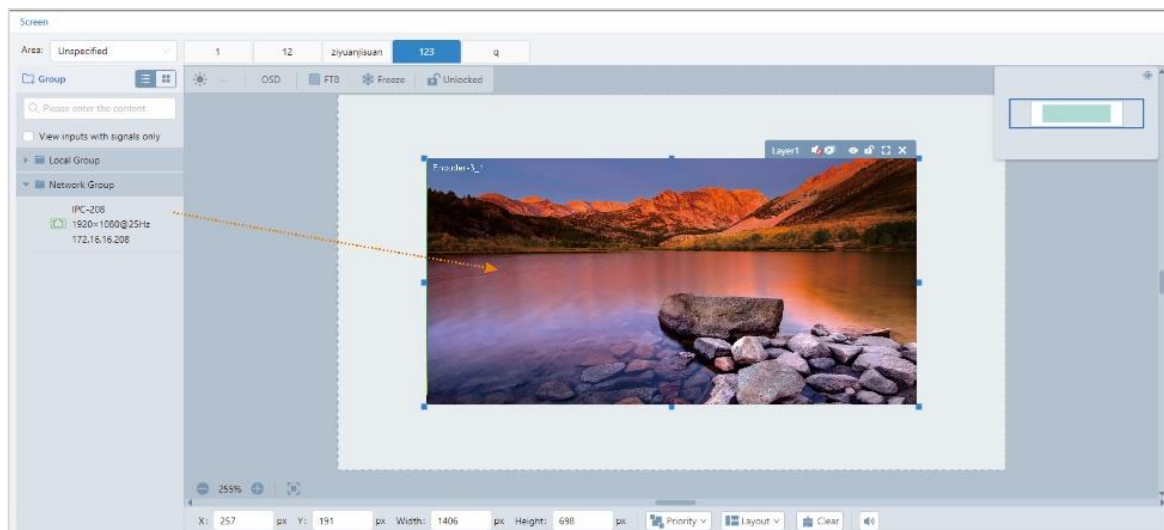
Figure 3-39 Adjust volume



3.8.3 Switch Layer Input Sources

Click an input in the signal list on the left and drag it to an added layer to quickly switch the layer input source. The layer size and position remain the same.

Figure 3-40 Switch layer input sources



3.8.4 Save Presets

The preset is used to save all the layer-related information in the current screen. After saving the preset, you can directly load it for future use, and there is no need to configure and operate a layer.

- Step 1 On the screen management page, click **Save** below the **Preset** tab and the system will automatically add a new preset.
- Step 2 After saving the preset, you can enter a new name for the added preset.
- Step 3 Click the blank area to save the preset.

3.8.5 Load Presets

After saving the preset, you can click the desired preset in the preset list to load it.

Figure 3-41 Preset list



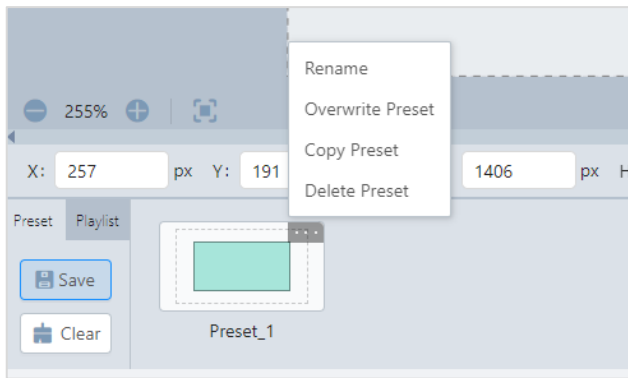
The green area indicates the layer layout.

3.8.6 Delete Presets

Delete Single Preset

In the preset list, select the desired preset and click  at the right corner to expand the preset operations menu. Click **Delete Preset** to delete the selected preset.

Figure 3-42 Delete single preset




Delete All Presets


Click **Clear** below the **Preset** tab to clear all the presets saved in the current screen.

3.8.7 Rename Presets

Rename the saved preset to ensure that the preset can be correctly identified.


- Step 1 Click  at the top right of the selected preset thumbnail to expand the preset operations menu, and then click **Rename**.
- Step 2 Enter a new name in the text box.

3.8.8 Copy Presets

Click  at the top right of the selected preset thumbnail to expand the preset operations menu, and then click **Copy Preset**. The system will automatically add a preset whose layer info is the same as the selected preset.

3.8.9 Overwrite Presets

By overwriting the preset, you can directly change the layer info in the saved preset.

- Step 1 Change the layer info in the editing area.
- Step 2 Click the **Preset** tab to show the preset list.
- Step 3 Select the desired preset and click  at the top right.
- Step 4 Click **Overwrite Preset** to complete the overwriting.

3.8.10 Set Preset Playbacks

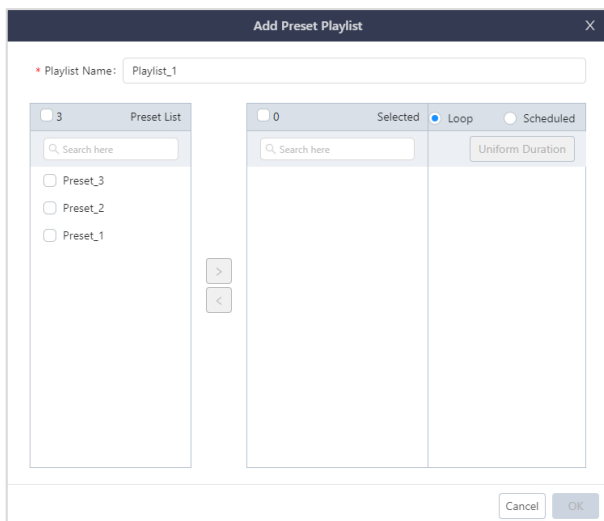
Prerequisites

The presets have been saved.

Add Preset Playbacks

- Step 1 On the screen management page, click the **Playlist** tab to show the preset playback list.
- Step 2 Click **Add** below the **Playlist** tab to open the preset playlist adding window.

Figure 3-43 Add preset playlists




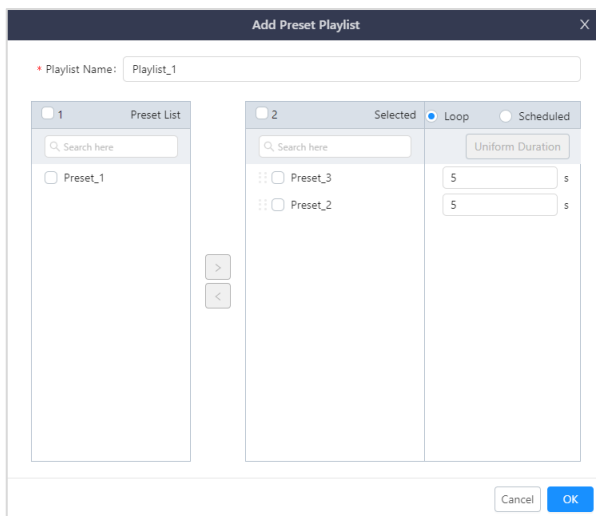
- Step 3 Enter a name for the new playback.
- Step 4 Select the desired presets in the **Preset List** area on the left.
- Step 5 Click  to add the selected presets to the **Selected** area.


Figure 3-44 Add presets to playback list




- Step 6 Set the preset playback mode. The options include **Loop** and **Scheduled**.
 - Loop: The preset playback is performed according to a set duration.
 - a. Check the box next to **Loop** to set the playback mode to **Loop**.
 - b. Select the presets in the **Selected** list.
 - c. Enter the playback duration in the text box next to the preset name.
When you want to set the same playback duration for all the presets, select all the presets in the **Selected** list and then click **Uniform Duration** to set the desired duration.
 - Scheduled: The preset playback is performed according to a set schedule.
 - a. Check the box next to **Scheduled** to set the playback mode to **Scheduled**.
 - b. Select the presets in the **Selected** list.
 - c. Enter the playback start time in the text box next to the preset name.
- Step 7 Click **OK** to complete the settings.

Play Presets

Step 1 On the screen management page, click the **Playlist** tab to show the preset playback list.

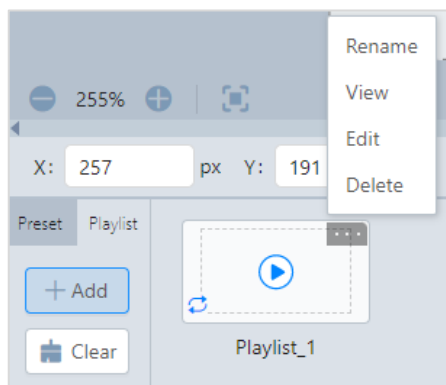
Step 2 Click  to play the selected preset playlist. The screen is locked during the playback.

Click  to pause the playback.

Other Playback Operations

Click  at the top right of the selected preset playlist thumbnail to expand the playback operations menu.

Figure 3-45 Preset playbacks



- **Rename:** Change the playlist name.
- **View:** View the playlist name, mode, duration, and also start time of each preset.
- **Edit:** Open the playlist editing window where you can change the playlist name, playback list, playback mode, duration, and also start time of each preset.
- **Delete:** Delete the selected preset playlist.

3.8.11 Crop Input Sources

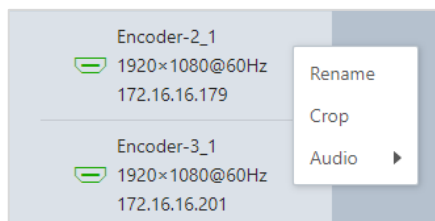
Crop a partial area of the input source image. The cropped image can be used as a new input source.

Step 1 On the screen management page, select an input source in the signal list on the left and ... appears next to the input source name.

- The image of the selected input source is shown at the bottom of the signal list.
- The green connectors are accessed with signal sources.

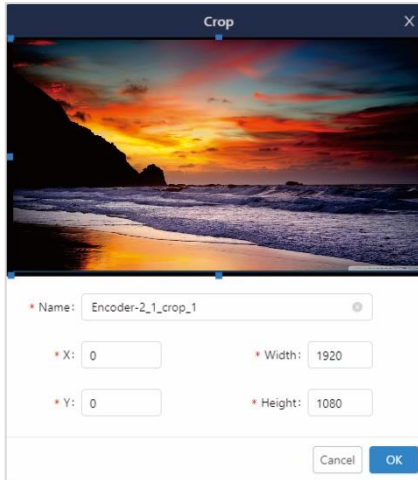
Step 2 Click ... to open the input source operations menu.

Figure 3-46 Input source operations menu



Step 3 Click **Crop** to open the input source cropping window.

Figure 3-47 Crop input sources



Step 4 Name the cropped input source image.

Step 5 Enter the values in the **X** and **Y** text boxes to set the horizontal and vertical start positions respectively for the cropping. The cropping reference is the top left corner of the input source image.

Step 6 Enter the values in the **Width** and **Height** text boxes to set the width and height of the left area after cropping.

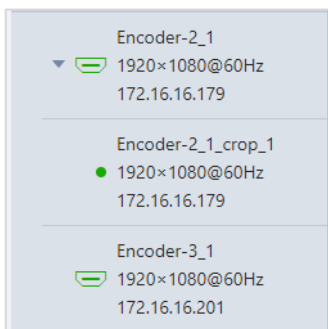
Note:

After the width and height values are set, click and drag the highlighted frame in the input source area to quickly adjust the start position for the cropping.

Step 7 Click **OK** to complete the cropping.

After the cropping, the new input source appears below the original input source in the signal list. You can rename, delete and edit the new input source.

Figure 3-48 Cropped input sources



3.8.12 Set Signal Audio

The signal connected to the encoder supports the accompanied and analog audio. You can select the desired audio based on different application scenarios.

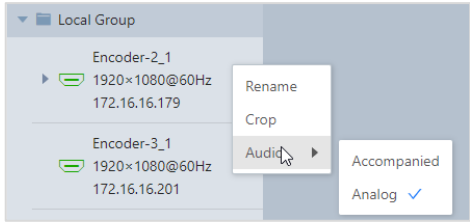
The IPC source does not support audio settings.

- Accompanied audio: The input audio connected to the HDMI connector or DP connector of an encoder
- Analog audio: The input audio connected to a 3.5 mm audio connector

Step 1 On the screen management page, select an input source in the signal list on the left and ... appears next to the input source name.

Step 2 Click ... to open the input source operations menu.

Figure 3-49 Input source operations menu



Step 3 Go to **Audio > Accompanied** or go to **Audio > Analog** to change the input audio to the accompanied or analog audio.

3.8.13 Add OSD

The OSD text is supported and you can configure the scrolling OSD text. The OSD text has the highest priority which cannot be adjusted.

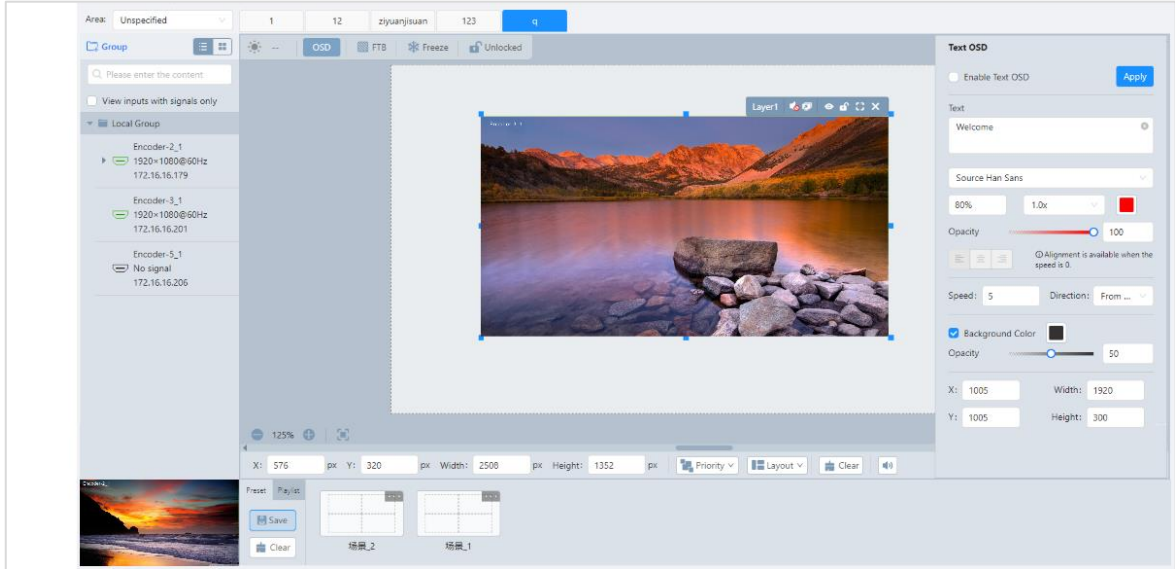
Prerequisites

The screen is configured.

Operating Procedure

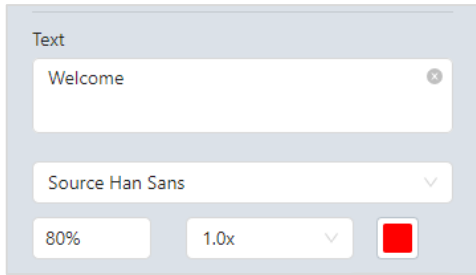
- Step 1 On the screen management page, select a screen in the screen list at the top to enter the screen editing page.
- Step 2 Click **OSD** below the screen list area to expand the OSD settings pane.

Figure 3-50 OSD settings



- Step 3 In the text box below **Enable Text OSD**, enter the OSD text content.
- Step 4 Set the OSD text properties, including the font, size, spacing and color.

Figure 3-51 OSD text properties



- The text size is shown in percentage that indicates the ratio of the text size to the text area height.
- Set the spacing between two letters or characters.
- Click the color block icon to select an existing color or enter the RGB values to define a custom color in the window that appears. After the settings, click **OK** to apply the color.

Step 5 Set the opacity of the OSD text.




The opacity ranges from 0% (totally transparent) to 100% (nontransparent).

You can change the opacity in the following three ways.

- Drag the opacity slider block.
- Click the up or down arrow button next to the text box.
- Enter an opacity value in the text box.

Step 6 Set the text alignment method.

When the text is static which means the text scrolling speed is set to 0, the alignment item is available. Three alignment options are provided.

-  (Align left): Align the text content with the left margin of the OSD area.
-  (Center): Center the text content in the OSD area.
-  (Align right): Align the text content with the right margin of the OSD area.

Step 7 Set the OSD text scrolling properties.

- Speed: Set the scrolling speed. The value ranges from 0 (static) to 10 (fastest).
- Direction: Set the scrolling direction. The options are **From Right to Left** (default) and **From Left to Right**.

Step 8 Set the background color of the OSD text.

Solid color is supported.

1. Check the box next to **Background Color** to turn on the background for OSD text.
2. Click the color block icon next to **Background Color** to open a window where you can select or customize the color.
3. Select an existing color or enter the RGB values to define a custom color in the displayed window.
4. Set the opacity for the OSD background.


Step 9 Set the OSD position and size.

- Position: The position of OSD text displayed on the screen
 - X: Set the horizontal distance from the top left corner of the OSD to that of the screen.
 - Y: Set the vertical distance from the top left corner of the OSD to that of the screen.
- Size: The size of OSD area displayed on the screen
 - Width: Set the OSD area width. The value ranges from 64 to 19200 pixels.
 - Height: Set the OSD area height. The value ranges from 64 to 3240 pixels.

Step 10 Click **Apply** at the top right corner of the OSD settings pane to complete the OSD text settings and display the OSD text on the screen.

3.8.14 Other Operations

Adjust Screen Brightness

For the splicing screen loaded by the all-in-one decoders, click  and drag the slider block to adjust the screen brightness. Click **Save** to complete the adjustment.

Enable/Disable FTB

Click  to enable the **FTB** function and click  to disable it. If enabled, the output image will fade to black and the input image is displayed normally.

Enable/Disable Freeze

Click  to enable the **Freeze** function and click  to disable it. If enabled, the current frame of the output image is frozen and the input image is displayed normally.

Lock/Unlock

Click  to lock the layer editing area, and click  to unlock the area.

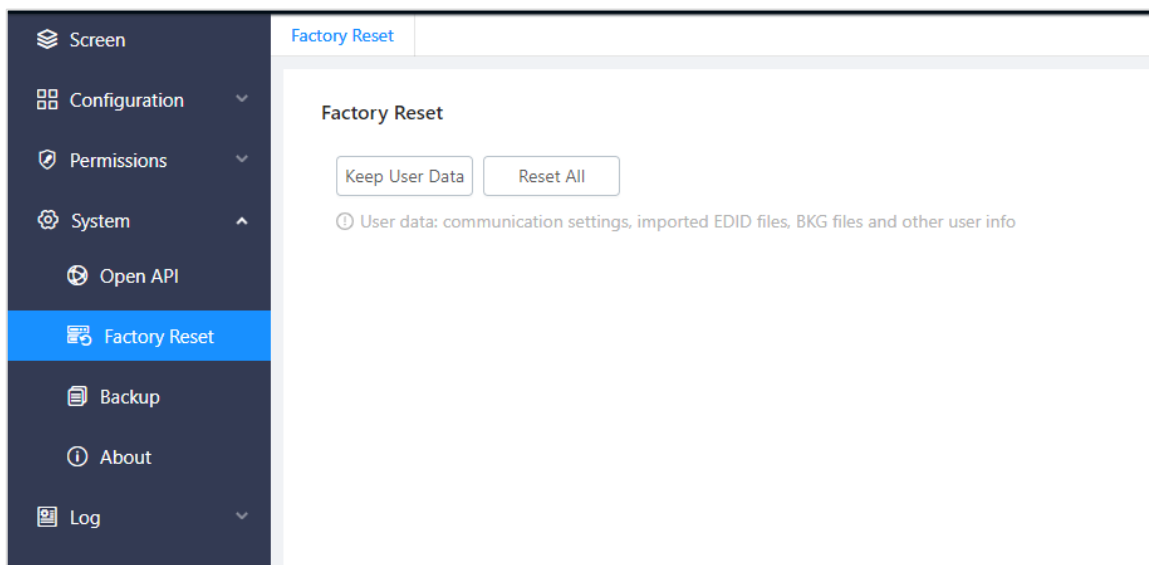
3.9 System Management

You can restore the device to the factory default settings, import and export the backup files and view the device-related information.

3.9.1 Factory Reset

In the main menu bar, go to **System > Factory Reset** to enter the factory reset page.

Figure 3-52 Factory reset



- **Keep User Data:** When you click **Keep User Data**, some configured information will still be kept in the system and other parameters are restored to the default values. The kept information is shown in [Table 3-6](#).

Table 3-6 Kept info after factory reset

Module	Kept info
Screen	Imported pictures
EDID	Imported EDID files Note: The EDID parameters configured via EDID files will not be restored to the default values, while the parameters configured manually will be restored.
Permissions	User basic info (user account, password, status and nickname), department configurations, role configurations and permission configurations

- Reset All: Click **Reset All** to restore all the parameters to the default values.

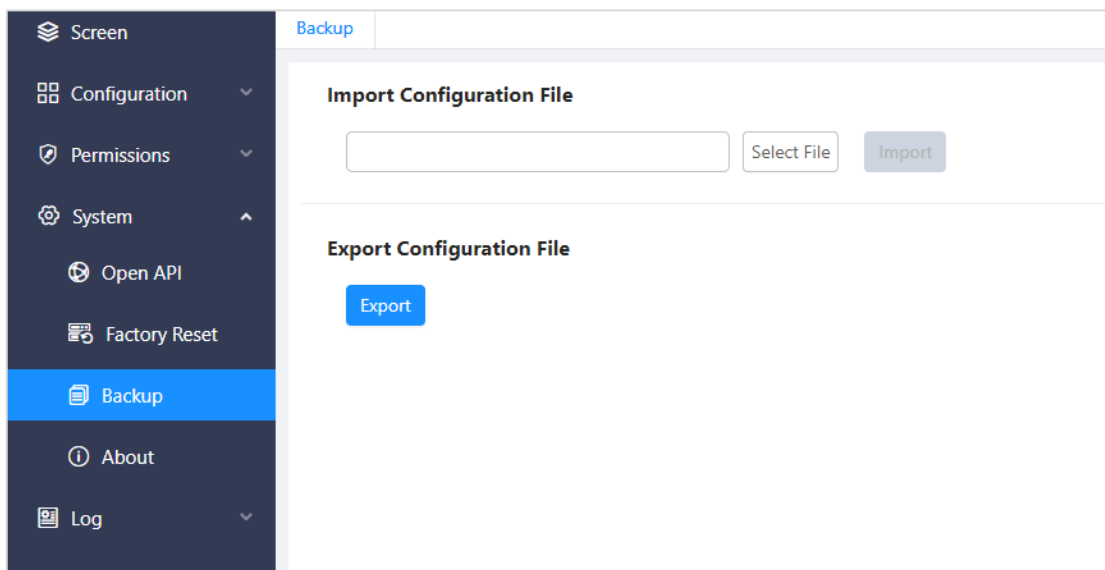
Note:

During factory reset, some configuration info will be cleared. Please be careful to perform the operation.

3.9.2 Backup Management

The system supports exporting the configuration info saved in the primary management code to your local computer. After resetting the system, you can import the local backup file to quickly configure the system. In the main menu bar, go to **System > Backup** to enter the backup management page.

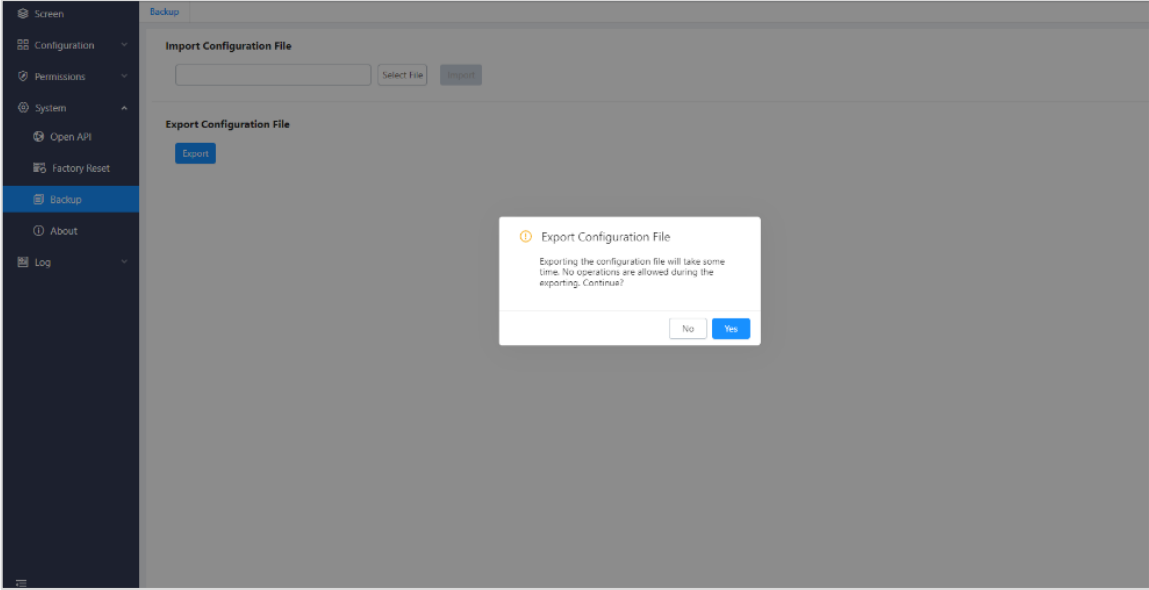
Figure 3-53 Backup management



Export Configuration Files

On the backup management page, click **Export** and then click **Yes** in the popup window. The system will automatically export the configuration file to your local computer.

Figure 3-54 Export configuration files



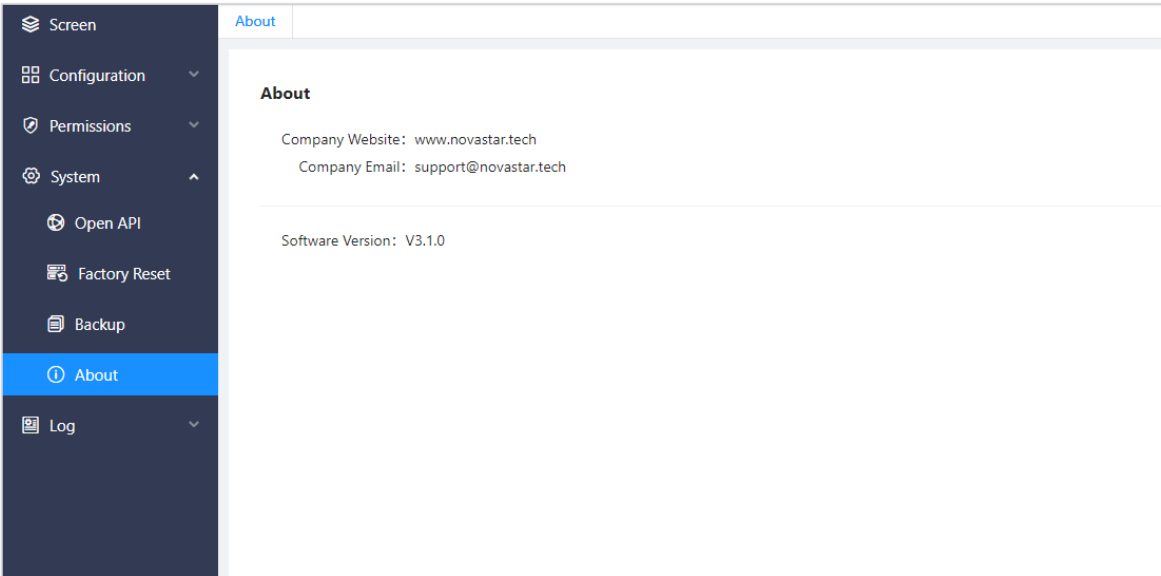
Import Configuration Files

On the backup management page, click **Select File** in the **Import configuration File** area. Select the configuration file saved locally in the popup window.
Click **Import** and the system will automatically import the configuration file.

3.9.3 About

View the company website (www.novastar.tech), email address and software version.
In the main menu bar, go to **System > About** to enter the company and software information page.

Figure 3-55 About



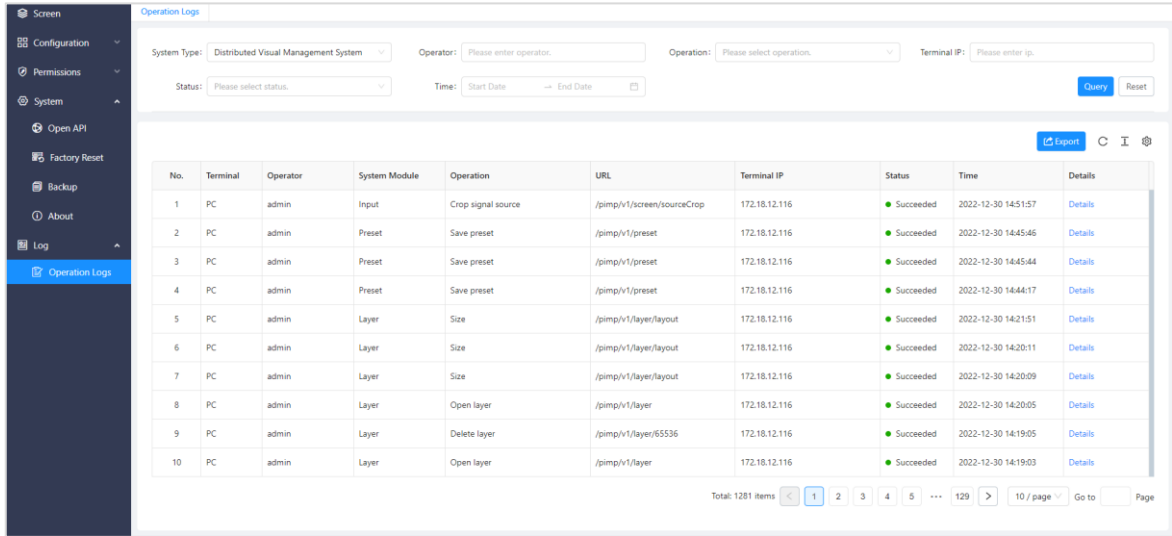
3.10 Manage Logs

The system records the operations performed by the users to track the problems.

Step 1 In the main menu bar, go to **Log > Operation Logs** to enter the operation logs page.

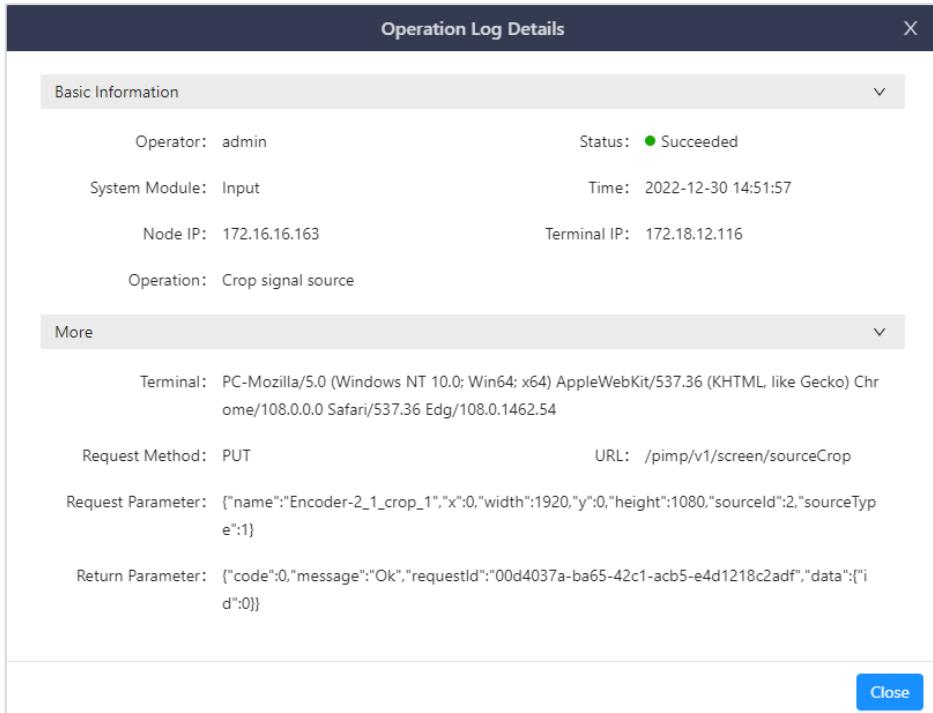
All the operation logs are displayed by default.

Figure 3-56 Operation logs



- Step 2 Set the query conditions and click **Query** to display all the operation logs according to the set conditions. Click **Reset** to clear all the query conditions.
- Step 3 Click **Details** to view the operation log details in the popup window.

Figure 3-57 Log details



4 KVM Operator System

4.1 Log into System

Prerequisites

- The user information is configured on the Web page.
- All the KVM connections are completed.

Operating Procedure

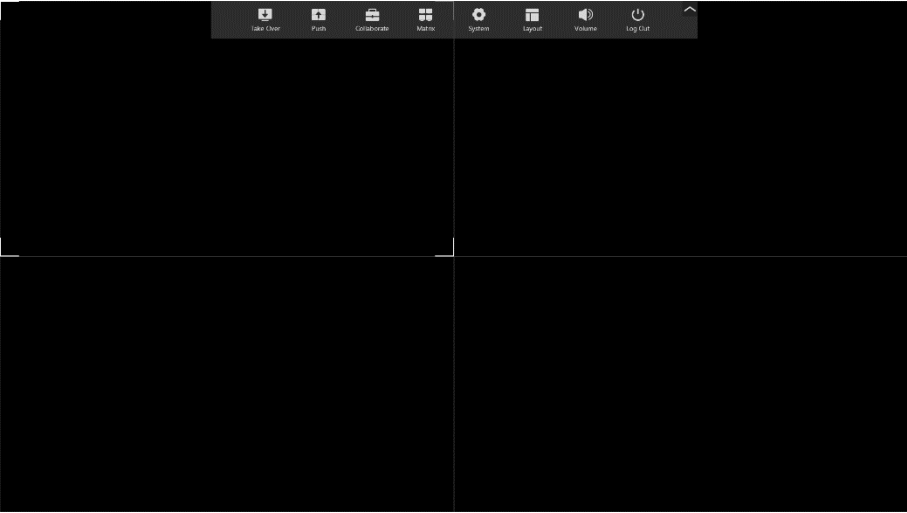
After all the KVM connections are completed, the login page will be displayed on the screen connected to the decoder with the keyboard and mouse.

Figure 4-1 Login page



- Step 1 Enter the user name and password in the text boxes respectively.
- Step 2 Click **Login** to log into the system.

Figure 4-2 Main interface



Notes:

- If you are not the "admin" user, you must change the password on first login. Please follow the prompt to change it.
- If the menus shown in [Figure 4-2](#) are not shown completely after login, please go to the role and user management page to check whether you have the corresponding permissions.

You can quickly switch to the target the menu via the following shortcut keys on the OSD operations interface.

Table 4-1 Default shortcut keys on the OSD menu

Menu	Shortcut Key
Take Over	F1
Push	F2
Collaborate	F3
Matrix	F4
User	F5
Role	F6
System	F7
Layout	F8
Log Out	Shift+Esc

4.2 Add Decoder-KVM Matrixes

The decoder-KVM matrix is composed of multiple monitors and controlled by one operator member.

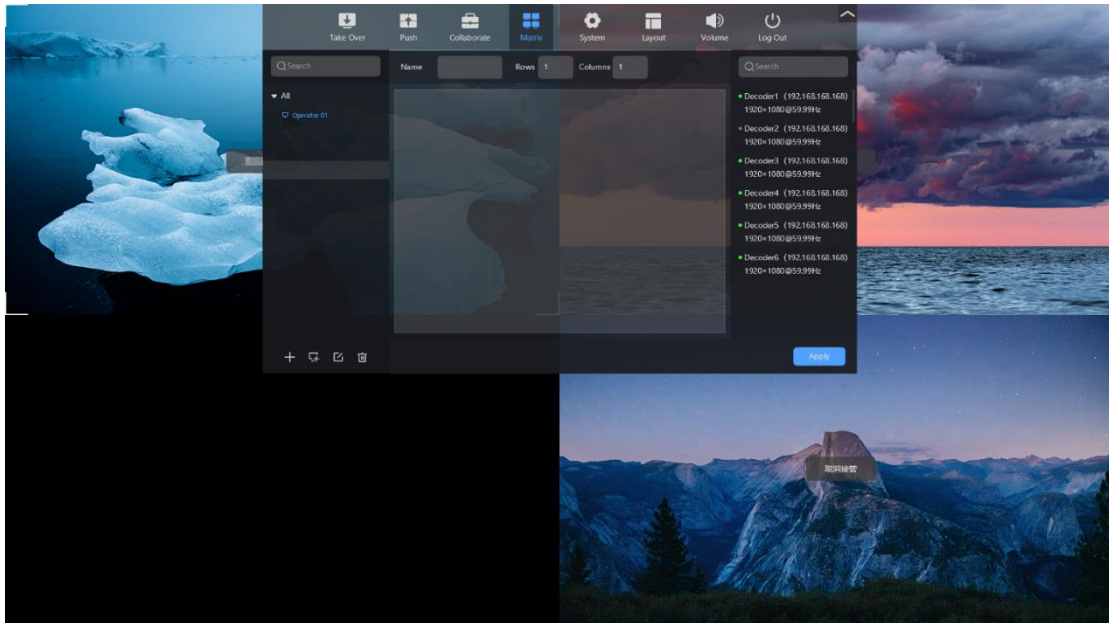
Prerequisites

- The operator manage multiple monitors and decoders.
- The system administrator has granted the matrix operation permissions to all the operators.
- The decoders has been connected with the network and monitors.
- The keyboard and mouse have been connected with the decoder.
- You have logged into the KVM operator system.


Operating Procedure

- Step 1 Click **Matrix** in the menu bar at the top.

Figure 4-3 Decoder-KVM matrixes



Step 2 Click **All** on the left to expand all the operator and operator group lists.

Step 3 Click  at the bottom to create a new matrix.

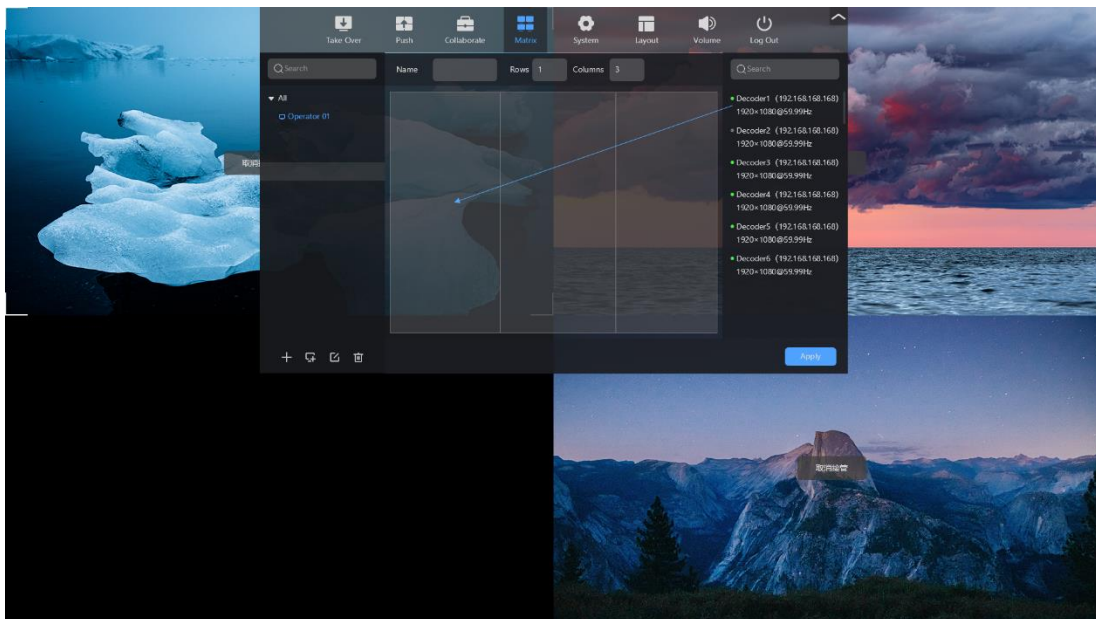
Step 4 Click the created matrix in the list on the left to enter the matrix editing interface.

Step 5 Enter a matrix name in the text box next to **Name**.


Step 6 Set the values of **Rows** and **Columns** based on the node quantity and monitor layout.



Step 7 Click and drag a decoder on the right to the editing area to complete the matrix configurations.

Figure 4-4 Decoder-KVM matrixes



Notes:

- Click  to create a matrix group.

- Click  to delete an operator group and matrix. After the group is deleted, the matrix will be automatically added to the previous group.
- Click  to change the name of a matrix or group shown in the list on the left.

Step 8 Click **Apply** to complete the matrix configurations.

4.3 Change Layout

After login, the default layout is 2×2 which means four images can be displayed on each monitor. You can adjust the layout based on your habit or requirements.

8 layout options are provided.



Notes:

- If an operator controls multiple decoder-KVMs, the layout of each monitor can be adjusted separately if needed.
- After the layout is adjusted, the image in each layout area will be automatically re-arranged.

Step 1 In the menu bar at the top, click **Layout** to expand the layout menu.

Step 2 Select a layout icon to set the image layout.

4.4 Take Over Signals

Switch a signal to a layer displayed on your computer, and then you have the signal-related permissions. When you take over a signal, there are three kinds of permission requests, including **View**, **Control** and **Monopolize**.

- View: When taking over a signal by **View** mode, you can only view it and cannot remotely operate it.
- Control: When taking over a signal by **Control** mode, both you and others can remotely operate it.
- Monopolize: When taking over a signal by **Monopolize** mode, you can remotely operate it but others cannot view and remotely operate it.

In the menu bar at the top, click **Take Over** to enter the signal taking over interface where all the signals for which you have the permissions are displayed.

Figure 4-5 Take over signals

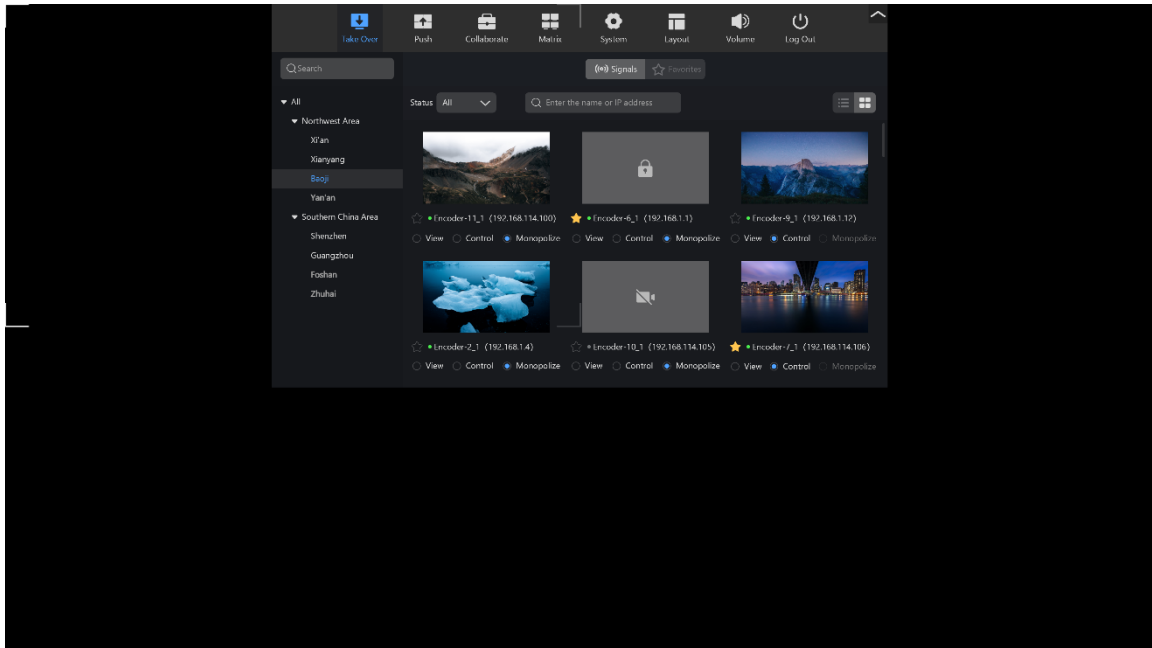
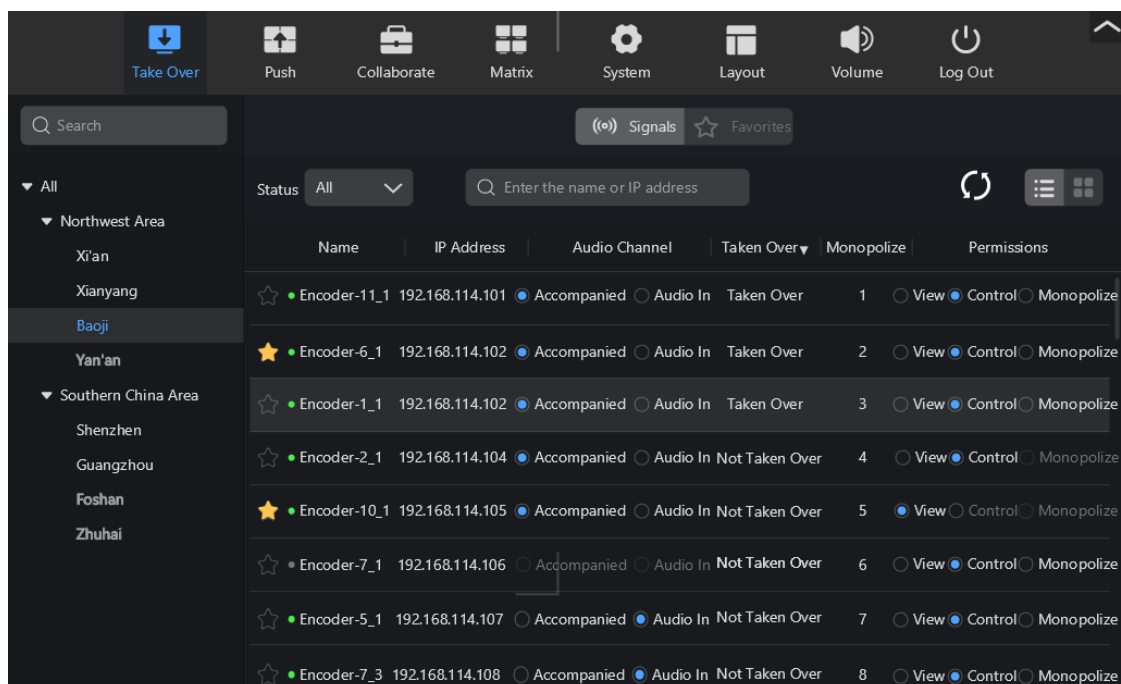


Table 4-2 Status descriptions

Status Icon	Description	Status Icon	Description
	The input source is online.		The input source is offline and cannot be used.
	The signal is not added to favorites. Click the icon to add the signal to favorites.		The signal is added to favorites and can be quickly searched from favorites.
	The signal is monopolized by other operator.		The signal is offline and there is no image.


The signals configured with the permissions on the Web page will be displayed on the signal taking over interface.

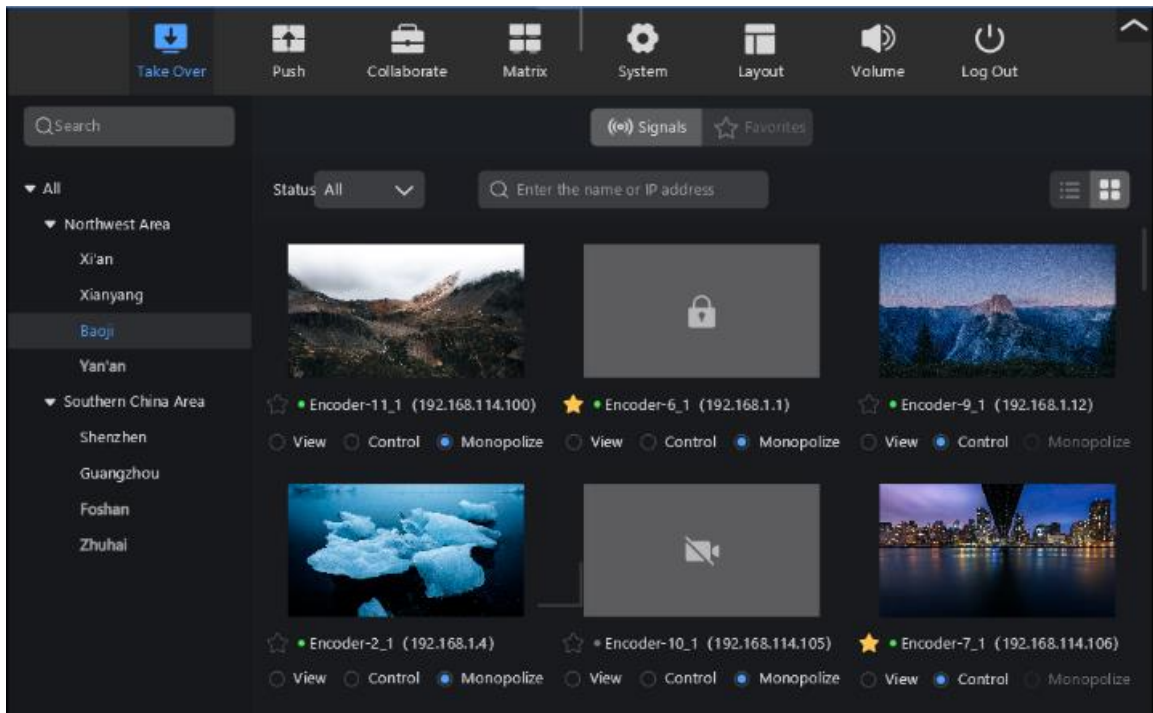
- Click to view the signal information in the signal list.



You can set the input source audio in the signal list.

- Accompanied: Use the input audio connected to the HDMI or DP connector as the signal audio.
- Audio In: Use the input audio connected to the AUDIO connector on the encoder, and the encoder is connected with the selected signal as the signal audio.

- Click  to view the signal information in the thumbnail view mode.



4.4.1 Take Over Signals

Prerequisites

The current operator is configured with the signal operation permissions.

Operating Procedure

Step 1 On the signal taking over interface, select the desired signal.

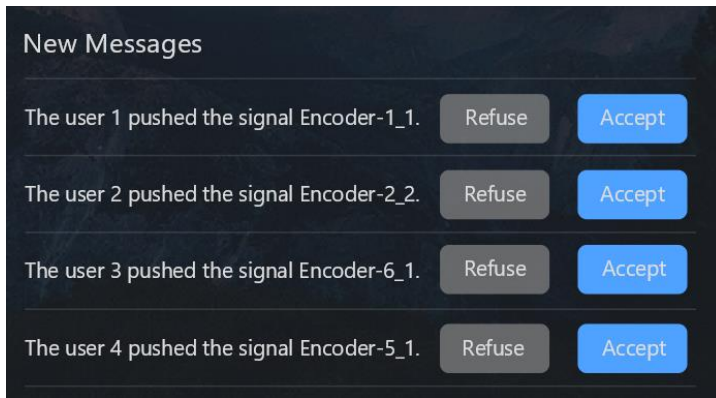
You can enter the signal name or IP address to search for the signal. The fuzzy search is supported.

Step 2 Select the operation permission for the signal.

Step 3 Click the signal and drag it to the editing area. The system will automatically send a request to all the operators taking over this signal.

The request prompt is shown at the bottom right on all the operators taking over the signal. After they agree the request, the signal can be taken over. If one of the operators does not respond within 60 seconds or directly click **Refuse**, the signal taking over will fail.

Figure 4-6 Signal taking over prompts



Rules for Taking Over Signals

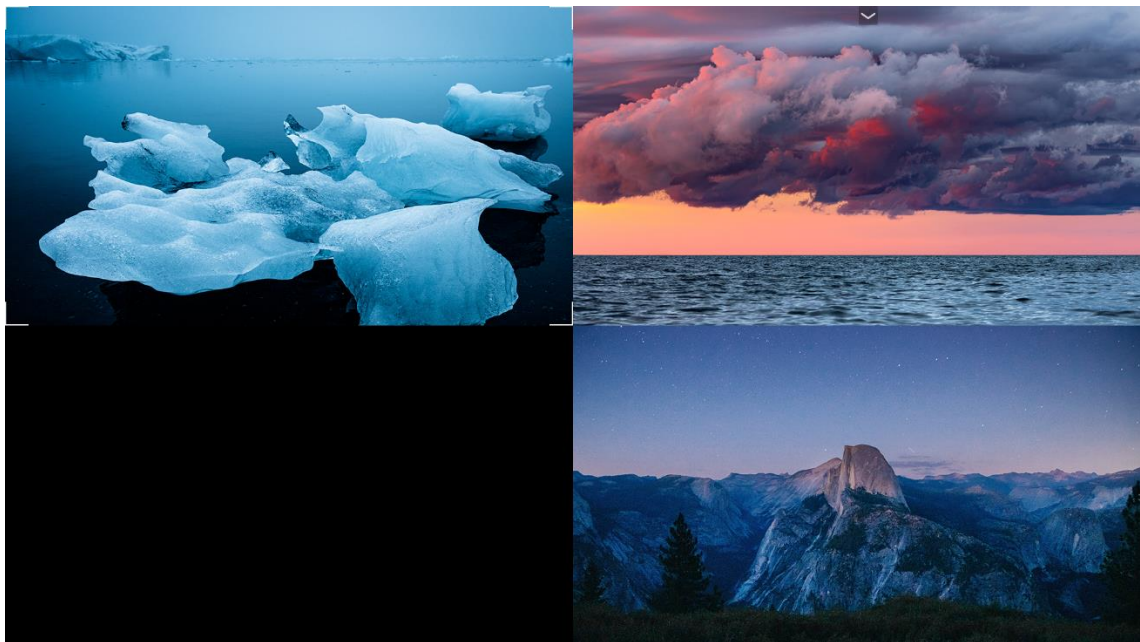
- One signal can be monopolized by one user only, but can be controlled or viewed by multiple users.
- When a user of the same level wants to change the signal permissions, the request must be agreed by the user who has controlled or monopolized the signal before.
- A superior leader can directly control or monopolize the signals controlled by the user in the subordinate department without the consent, but the system will send a message to the user.
- A subordinate user can control or monopolize the signals controlled by the superior user after the request is agreed.

4.4.2 KVM Operations

When the KVM operator is able to control or monopolize the signal provided by the computer or media server, the remote operations are supported.

- Step 1 On the signal taking over interface, click  at the top right to collapse the menu bar.

Figure 4-7 Interface without the menu bar



- Step 2 Move the mouse to the desired image to enable the KVM remote editing status.

Notes:

- Expand the menu bar at the top to finish the KVM operations, or press **Ctrl** twice to exit the KVM control.
- When an operator has the permission to control the signal, and other operator is operating it, wait for other operator to complete the operations, and then this operator can operate the signal.

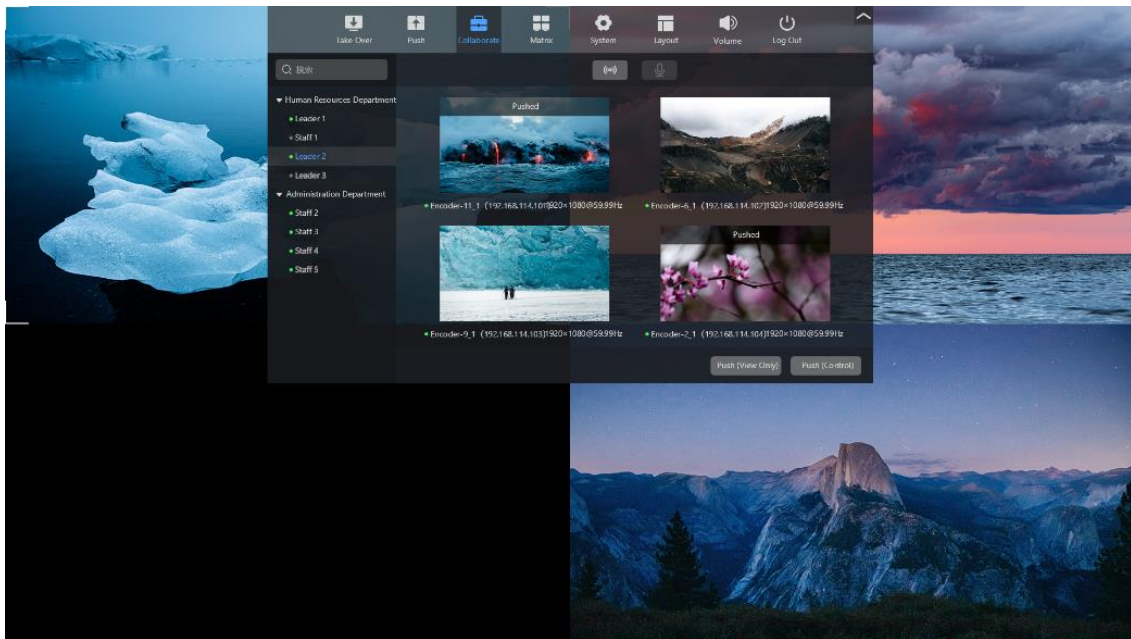
4.5 Push Signals

Push the signal controlled by the current operator to other operator or to the LED screen with the operation permissions, allowing the problem to be discussed and handled together.

4.5.1 Push Signal to KVM Operators

Step 1 In the menu bar at the top, click **Collaborate** to enter the collaboration page.

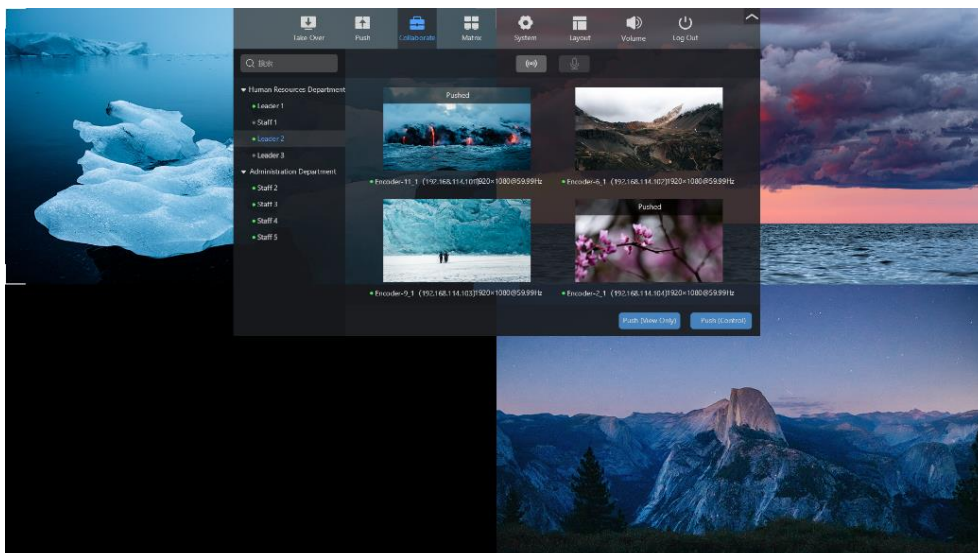
Figure 4-8 Collaborate



Step 2 Select the desired KVM operator on the left.

Step 3 Select the desired signal to be pushed.

Figure 4-9 Push signal to KVM operators

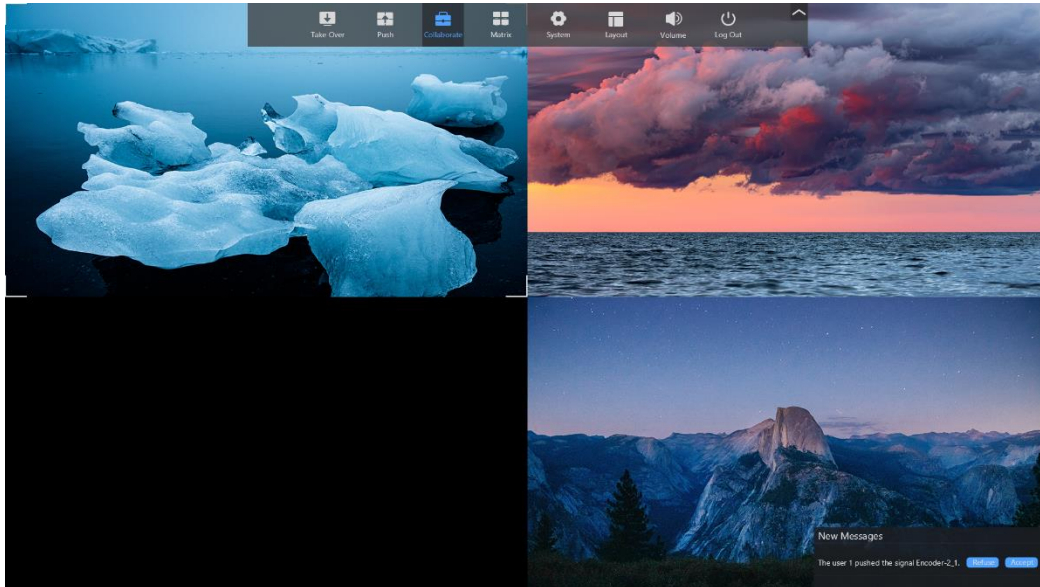


Step 4 Click **Push (View Only)** or **Push (Control)** to push the signal to the selected KVM operator.

- **Push (View Only):** The selected KVM operator only has the permission to view the pushed signal.
- **Push (Control):** The selected KVM operator has the permission to control the pushed signal. Only the KVM operator who has the permission to control or monopolize the signal is able to push the signal with control permission to the selected KVM operator.

After the selected KVM operator receives the pushed signal, the pushing request will be displayed at the bottom right.

Figure 4-10 Pushing requests



- **Receive:** Select the desired image and click **Receive**, and then the selected image will be replaced by the pushed signal image.
- **Refuse:** Click **Refuse** to refuse the pushed signal.
- If the selected KVM operator does not respond within 60 seconds, the signal pushing will fail.

4.5.2 Push Signals to LED Screens

The operator can push the signal to the LED screen, allowing the problem to be discussed and handled together.

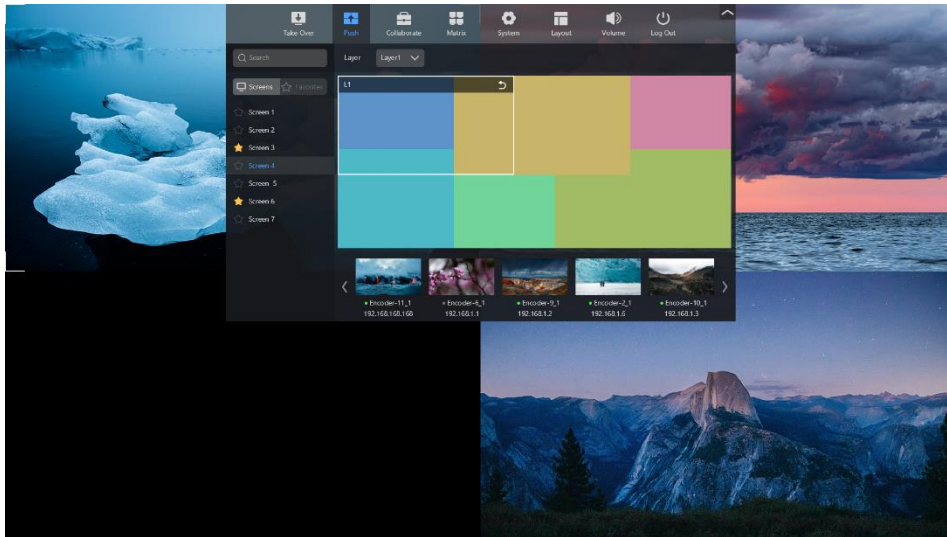
Prerequisites

- The screen and layers are configured on the Web page.
- The current operator is configured with the screen operation permissions.

Operating Procedure

Step 1 In the menu bar at the top, click **Push** to enter the screen pushing page.

Figure 4-11 Push signals to LED screens



- Step 2 Select the desired screen from the list on the left.
- Step 3 Select the desired layer from the drop-down list next to **Layer**.
The selected layer is highlighted with a frame.
- Step 4 Click the controlled signal at the bottom to complete the screen pushing.

Note:

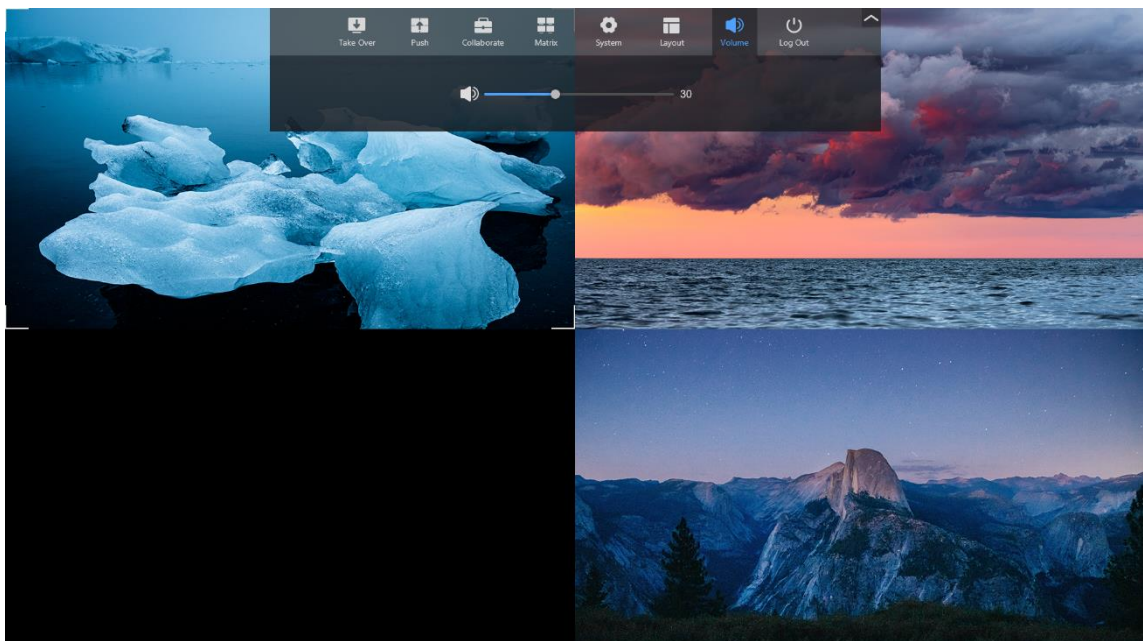
When there are multiple layers displayed on the screen and the pushed signal image needs to be displayed in full screen, you need to log into the Web page to make the layer fill the whole screen.

4.6 Adjust Output Volume

When the decoder-KVM is connected with the headphones or external speakers, the volume can be adjusted in the system.

- Step 1 In the menu bar at the top, click **Volume** to enter the volume adjustment interface.

Figure 4-12 Volume

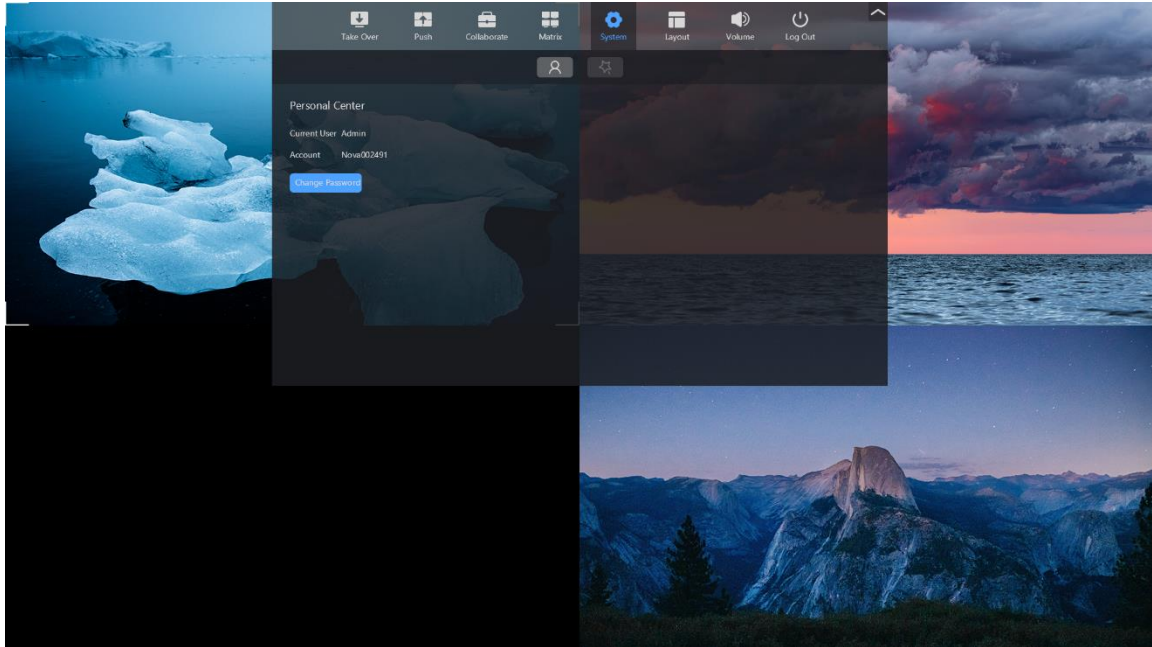


Step 2 Drag the slider block to adjust the volume.

4.7 Change Operator Passwords

Step 1 In the menu bar at the top, click **System** to enter the system settings page.

Figure 4-13 System settings



Step 2 Click **Change Password** to enter the password changing interface.

Step 3 Enter the old and new passwords respectively and confirm the new one.

Step 4 Click **OK** to complete the editing.


4.8 Log out

After logout, all the controlled signals will be released. The signals need to be controlled again on next login. In the menu bar at the top, click **Log Out** and the system will return to the login interface.

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Official website
www.novastar.tech

Technical support
support@novastar.tech