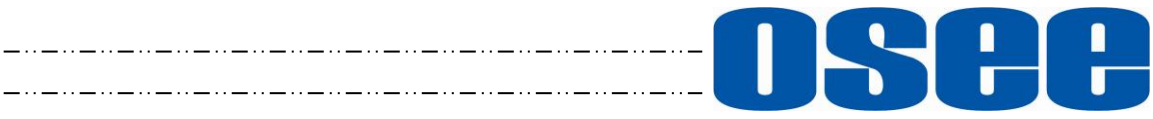
Aurora Multi-image System Control Software

User Manual



OSEE TECHNOLOGY CO., LTD.

Product Information

Model: Aurora Controller Software
Version: V010200
Release Date: January 18th, 2017

Company

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About this manual

Important

The following symbols are used in this manual:

Tips

- The further information or know-how for described subjects above which helps user to understand them better.

Warning

- The safety matters or operations that user must pay attention to when using this product.

Contents

The user manual applies to the following device types:
Aurora9600
Aurora1600

The images of Aurora multi-image system editor are adopted in the following descriptions.
Any of the different specifications between the device types are elaborated. Before reading the manual, please confirm the device type.

Contents

Chapter 1 Overview

Aurora1600 and Aurora9600 are controlled using Aurora control software which is running in the remote control computer using Windows system software. Aurora is simple to use and easy to learn, through its use of simple drag and drop control.

The Aurora controller and its inner control software compose the Multi-view system, the device integrates an internal control software to connect to and configure the controller. You can configure multi-windows and multi-scene with the input video sources, and set them at any position and in arbitrary size in the operating interface of the software. Each video window has adequate resolution to show very high quality frame effects. The software is a WYSIWYG editor and easy to use.

It is widely used in the following fields: educational and research, public announcement, publication and information, administrative management, military command system, exhibition and presentation, security surveillance system, appliances sales etc.

Figure 1 A Diagram of Display Wall

Features

- Image can be displayed anywhere, any size, within or cross screens. The window of a video source can be moved from one screen to another screen in real time
- Supports various customized scene models, including position, size and stacked relationship of the input video windows.
- Support several types of timers: analog clock timer, digital clock timer, countdown timer, and digital data timer.
- Supports MARKER, Time Code, MET display

Chapter 2 Startup and Software Interface

2.1 Device Connection

1. Multi-image Processor and Lines

According to the customer's requirements, connect the signal sources with the input interfaces, and connect the signal outputs to the target display screens. The AURORA9600 and AURORA1600 configured full are respectively shown as in ***Figure 2.1-1*** and ***Figure 2.1-2***.

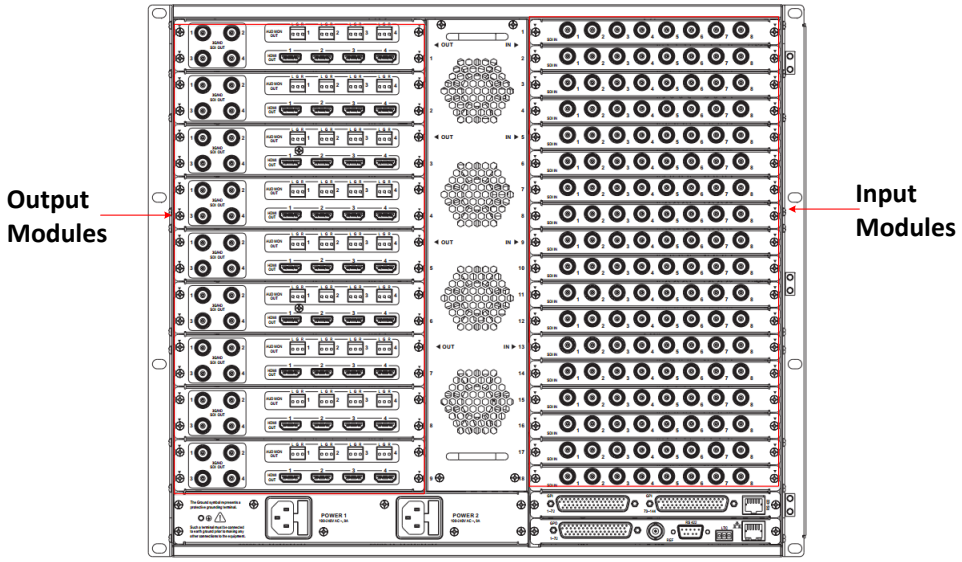


Figure 2.1-1 The Rear Panel of AURORA9600 in Full Configured

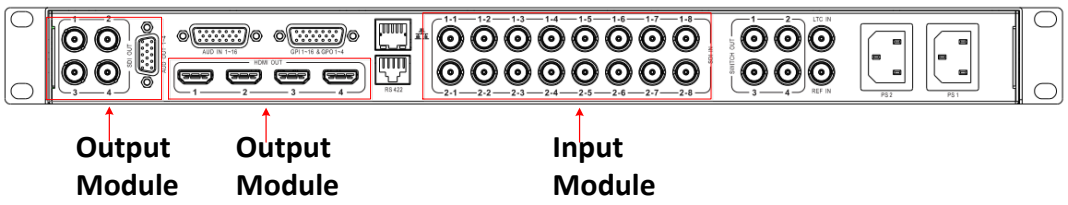


Figure 2.1-2 The Rear Panel of AURORA1600 in Full Configured

Tips

- The slots for the input modules and the output modules are different, so they can't be inserted mixed, and the interfaces of the display screens and the signal sources should be corresponding in sequence.

2. Multi-image Processor and Control Computer

Connect the multi-image processor and its control computer with twisted-pair cable.

Tips

- The multi-image processor and its control computer must be at the same network segment.
- The default IP address of AURORA1600 multi-image processor is 192.168.1.70, and the default IP address of AURORA9600 multi-image processor is 192.168.1.80.

3. Software Operating Environment

- Supports these operating systems: Windows XP, Windows7 or above
- Java Environment: JDK(Java Development Kit) 1.7 or above

2.2 Startup Aurora

2.2.1 Startup Interface

Connect to the control computer, and navigate to the Aurora.exe file under the folder where the multi-image processor software installed. Double click Aurora program aurora.exe to start up Aurora multi-image system editor, and connect to a multi-image processor. It will pop up **User Login** dialog box, as shown in Figure 2.2-1:

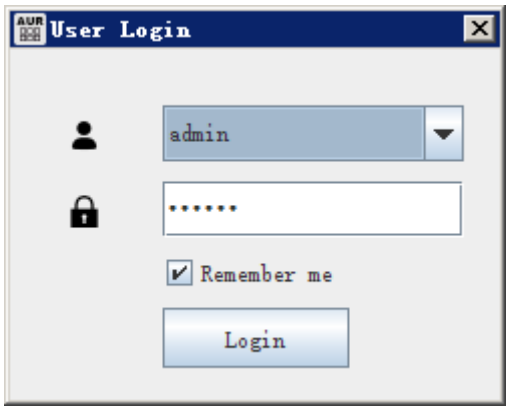


Figure 2.2-1 User Login Dialog Box

Input the user name and the password, then click **Login** button to confirm

the inputs, it will pop up the **Device Connect** dialog box, as shown in Figure 2.2-2, select the target device in the device list in this dialog box, then click **Connect** button to confirm the selection, it will connect to the device.

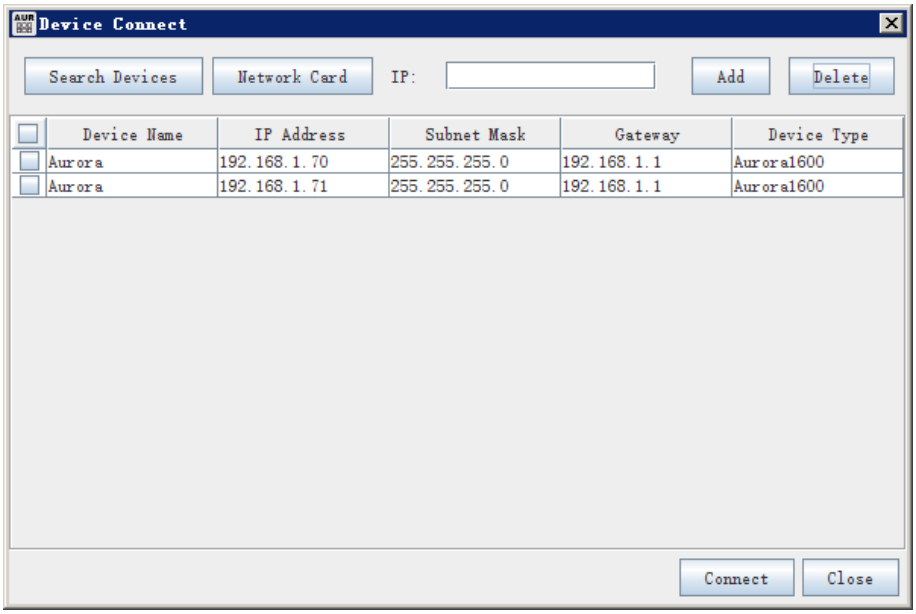


Figure 2.2-2 Device Connect Dialog Box

After successful connecting, the interface of Aurora Multi-image System Editor is as shown in Figure 2.2-3:

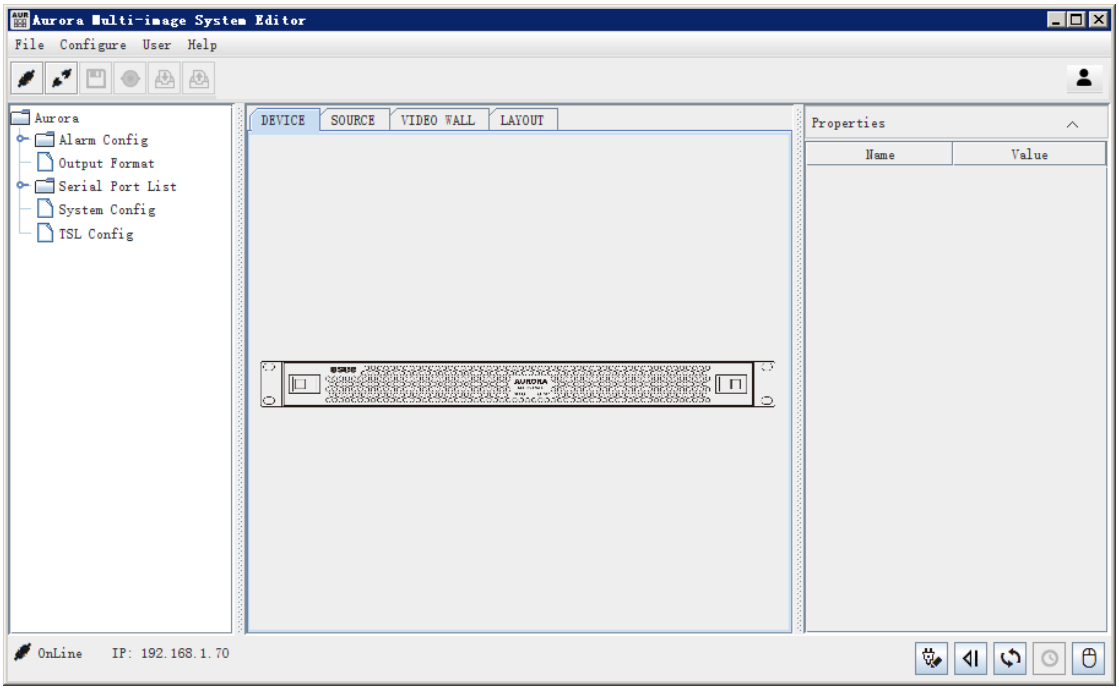


Figure 2.2-3 The Interface of Aurora Multi-image System Editor

Tips

- Start Aurora multi-image system editor up 30s later after the multi-image processor powered on, or do the refresh operation in Aurora multi-image system editor 30s later after the multi-image processor powered on, thus to ensure the software has read the correct and the newest devices information.
- The last connected device will be listed at the first line of the device list in the device connect dialog box.
- If there are more than one Network Interface in the control computer, it will pop up the **Set Network Card Devices** dialog box, please select a Network Interface for the control computer through which you will connect to a multi-image processor.
- The aurora multi-image system editor will read the information of the input modules and the output modules connected with the control computer.

The interface of Aurora multi-image system editor is divided into the following areas, as shown in ***Figure 2.2-4***:

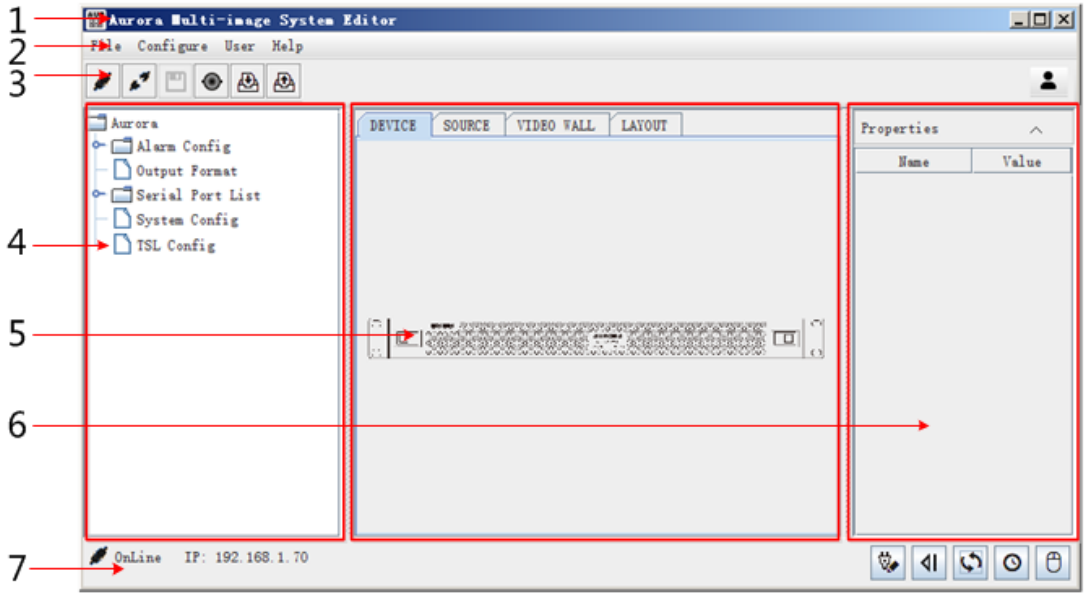


Figure 2.2-4 The Operation Areas in Aurora Multi-image System Editor

1. **Title Bar**: it contains the icon, the name of the software, and a group of

system buttons from left to right separately. These control buttons at the right end of the title bare are used to minimize/maximize window, restore window and close window.

2. **Menu Bar**: it provides the operation commands for multi-image system configuration. The menu items are **File, Edit, View, Tools, Elements**, **Configure, User** and **Help**, each contains its sub-menu items in its drop-down menu:

- **File**: it provides the common commands used for multi-image system configuration, such as **Open**, **New**, **Save** and so on.
- **Edit**: it provides the common edit commands for the Model configuration, such as **Copy**, **Paste**, **Select All** and so on.
- **View**: it provides the viewing commands for Video Wall and Model configuration to control the display size and add auxiliary lines, such as **Zoom in**, **Zoom Out**, **Grid** and so on.
- **Configure**: it provides the commands on device connection, timing, and model switching.
- **Tools**: it provides the commands to align elements, assist model arrangement and drawing.
- **Elements**: it provides the elements for model, such as monitor, clock and so on.
- **User**: it provides users with different operating rights for entering and using this software, the commands containing User Management, Switch User and so on.
- **Help**: it provides the assist commands, such as restore factory default, check device information and software version, and switching software languages and so on.

3. **Tool bar**: it provides the shortcuts for menu commands, and click the shortcut button to activate the corresponding command. The tool bar shows different shortcuts according to the editing contents in working area at the center of the software interface.

4. **System Pane**: it is at the left side of the software interface, providing the system sources for the content showing in working area.

5. **Working Area**: it is at the center of the software interface, providing the workplace for different configuration objects. The configuration objects are **DEVICE**, **SOURCE**, **VIDEO WALL** and **LAYOUT**, click the tab labeled

the object name at the top of the working area to switch to the target configuration object. The configuration objects achieve the following functionalities:

- **DEVICE**: it is used to configure the device information on network, alarm settings, communication interfaces, output formats and so on. The alarm configuration are divided into video alarm and audio alarm: video loss, video freeze, video black, audio loss, audio low and audio high.

- **SOURCE**: it is used to configure the signal source information, including signal source name, audio meter mapping, UMD source and TALLY source.

- **VIDEO WALL**: it is used to configure the video wall, including create, modify, delete, output mapping and configuring video wall properties.

- **LAYOUT**: it is used to configure the model, including adding display elements, elements arrangement and properties assignment. Particularly, there is a layout bar at the top of layout working area for model drawing and editing.

6. **Property Pane**: it is at the right side of the software interface, providing the properties settings for device, video wall and model.

7. **Status Bar**: it shows the connection status and address information of the current multi-image processor, and it provides status tool bar, including **Enable Offline Editor, Restore To Last Auto-saved Configuration, Refresh Manual Timing** and **Control** shortcuts.

- **Enable Offline Editor**: Switch to the offline editor window.

- **Restore To Last Auto-saved Configuration**: Click this **Restore** button to prompt for restoring operation, click **Yes** button to confirm the operation, and it will restore to the last settings to the current project. The configuration file is saved in the software installation directory as "..\AURORA\xml\data\backup".

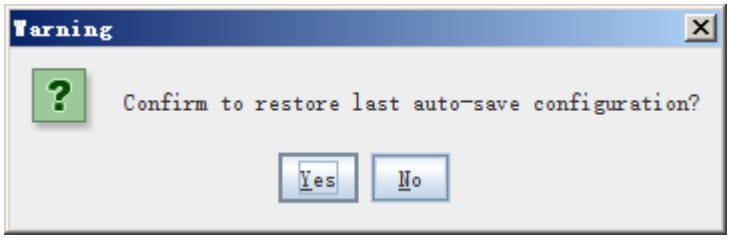


Figure 2.2-5 Prompt for Restore

- **Refresh**: click this button to reload the newest device information.

- **Manual Timing**: click this button to timing the multi-image processor manually. It displays the timing window, as shown in ***Figure 2.2-6***:

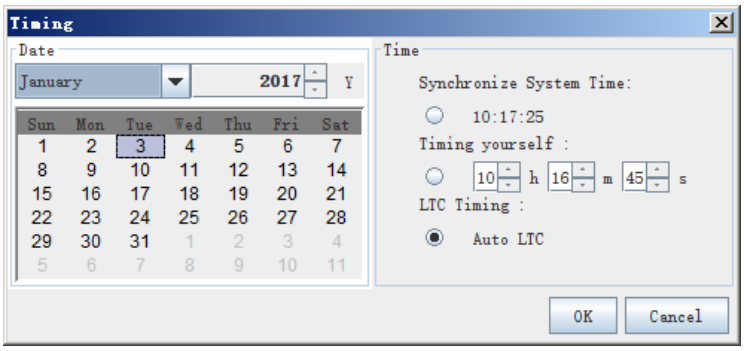


Figure 2.2-6 Timing Dialog Box

There are three timing methods provided in this dialog box: **Synchronize System Time**, **Timing yourself** and **LTC Timing**. The first is to time with the system time, the second is to time with a customized time set at the left time table in the timing dialog box, and the last is to time with the LTC time.

Click **OK** or **Apply** button to confirm the timing operation, the timing successful prompt is as shown in ***Figure 2.2-7*** , and the timing failed prompt is as shown in ***Figure 2.2-8***:

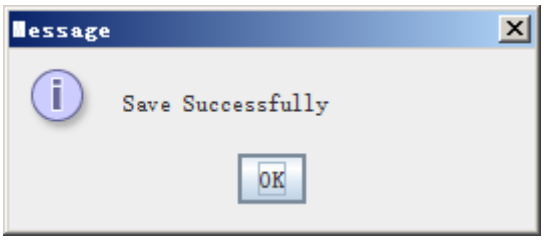


Figure 2.2-7 Prompt for Timing Successfully

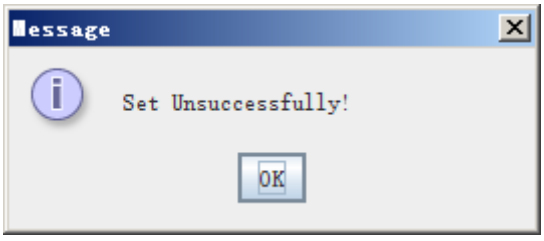


Figure 2.2-8 Prompt for Timing Failure

Click **Cancel** or the close button ✕ to close the timing dialog box.

- **Control**: Switch to the online controller window.

Tips

- The content displayed in Menu bar, tool bar, system pane, working area or property pane will be different according to the configuration object displayed currently in working area, refer to "2.3 Software Interface" for the details.

2.2.2 Device Connection

Use **Connect** command in the **Configure** menu to set up the connection between the control computer and the target multi-image controller, and use the **Disconnect** command to cut down the connection.

The details are described as follows:

1. **Device connection status**

The aurora multi-image system editor will pop up the device connect dialog box to set up the connection during startup process. You can check the connection status and its IP address directly at the Status Bar. There are two kinds of status:

- **ONLINE**: When detecting and setting up the connection with the target device during startup process, it will show the Online keyword and its IP address in Status Bar, as shown in ***Figure 2.2-9***:

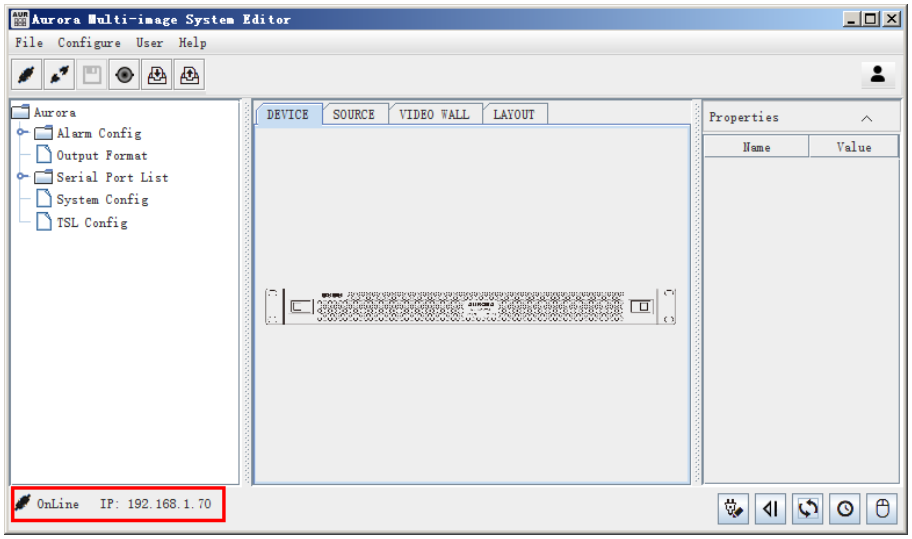


Figure 2.2-9 Set up Connection

- **OFFLINE**: When not detecting the connection, it will show the Offline

keyword and its IP address in Status Bar, as shown in ***Figure 2.2-10***:

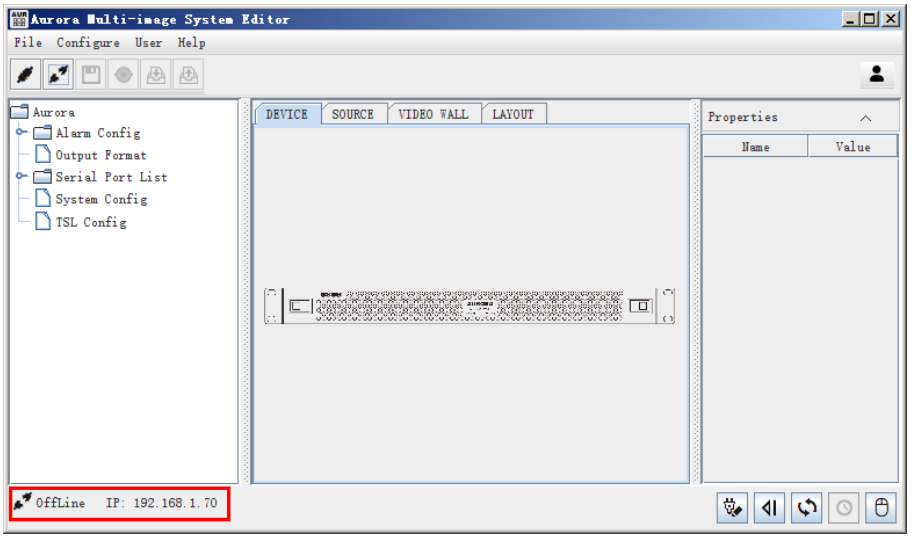


Figure 2.2-10 Disconnection

Tips

- Make sure all of the operations should be done in online mode, in case of data lost.

2. Device connection

Using the **Device Connect** dialog box to set up the connection. The device connection is divided into two methods: automatic connection and manual connection. The automatic connection is used during the startup process, and then when the device address is changed, you need reset the device connection by manual connection method.

- **Automatic connection**

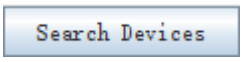
The aurora multi-image system editor will detect and try to set up the connection with the latest connected device during startup process. You can check the connection status and its IP address directly at the Status Bar. The latest connected device information will display in the first line.

- **Manual connection**

Using manual connection when the automatic connection is not successful or the connection is broken off.

Using the **Device Connect** dialog box to set up the connection when the connection is not successful, or the connection is broken off.

Select "**Configure**"→"**Connect**" command in menu bar, or click connect button  in tool bar, it will pop up the **Device Connect** dialog box, as

shown in Figure 2.2-11. Click **Search Devices** button 

to find out the available devices information in the current network.

It lists the following information: **Device Name, IP Address, Subnet Mask, Gateway** and **Device Type**.

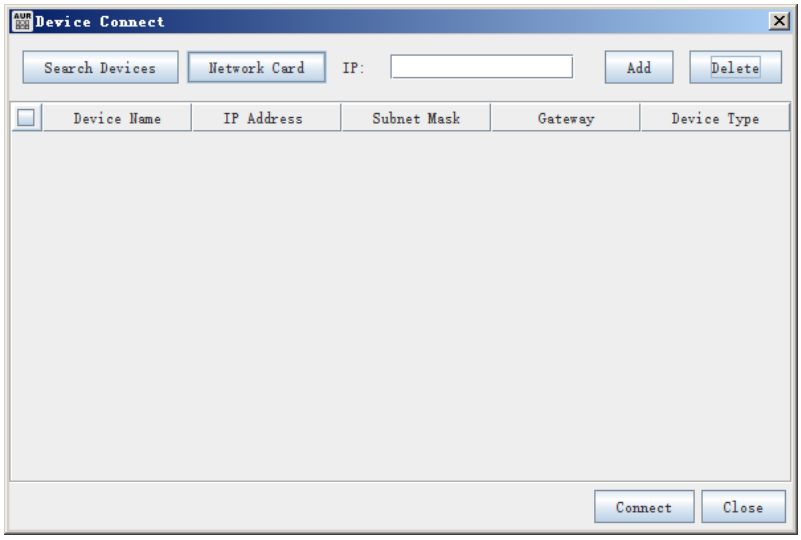
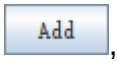


Figure 2.2-11 Device Connection Dialog Box

You can check a device, select a device or add a new device in the **Device Connect** dialog box, the operations are as below:

- ☐ Add a new device

Input a new IP address in the field of IP input, then click **Add** button 

, the new will be add into the device list, as shown in ***Figure 2.2-12***. For example, add 192.168.1.70.

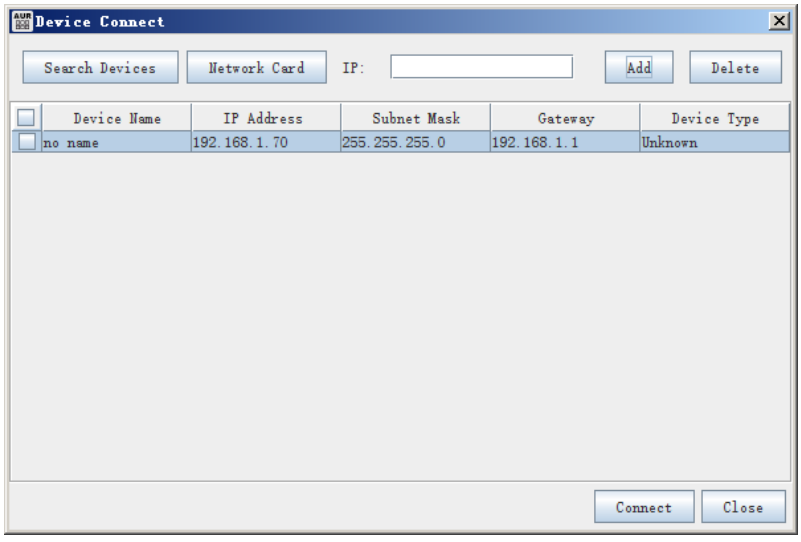


Figure 2.2-12 Add a New Device

If the format of the IP address is wrong, it will pop up the prompt as shown in ***Figure 2.2-13***:

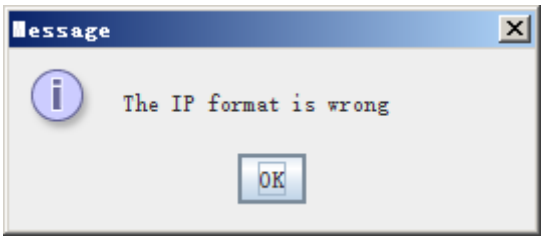


Figure 2.2-13 Prompt for Error IP Format

If the new IP address is reduplicated, it will pop up the prompt as shown in ***Figure 2.2-14***:

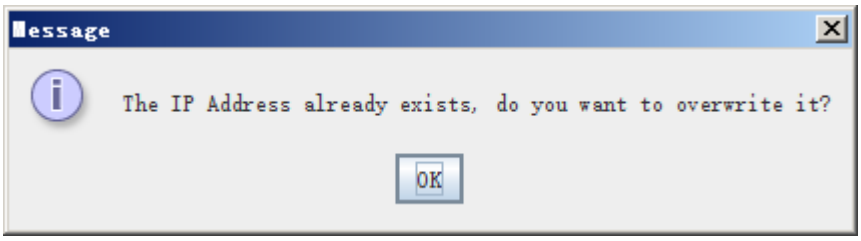
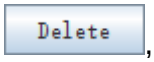


Figure 2.2-14 Prompt for Reduplicated IP Format

☐ Delete a device

Click one or more selection icon in front of the device in device list, then click **Delete** button 

, it will pop up the confirm prompt, as shown in ***Figure 2.2-15***, click **OK** to delete the device, or click **Cancel** to give up the delete operation.

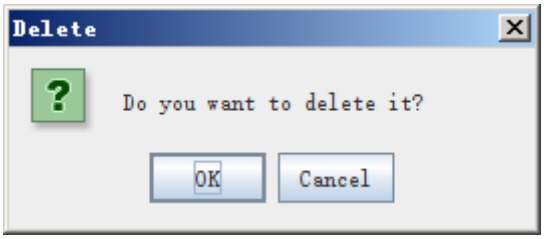
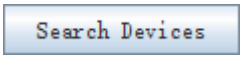


Figure 2.2-15 Prompt for Delete Device

■ Add device automatically

Click **Search Devices** button 

, it will search the available multi-image processor in the network automatically, and it will list the available device information in the device list. For example:

click **Search Devices** button, and the results list as shown in ***Figure 2.2-16***:

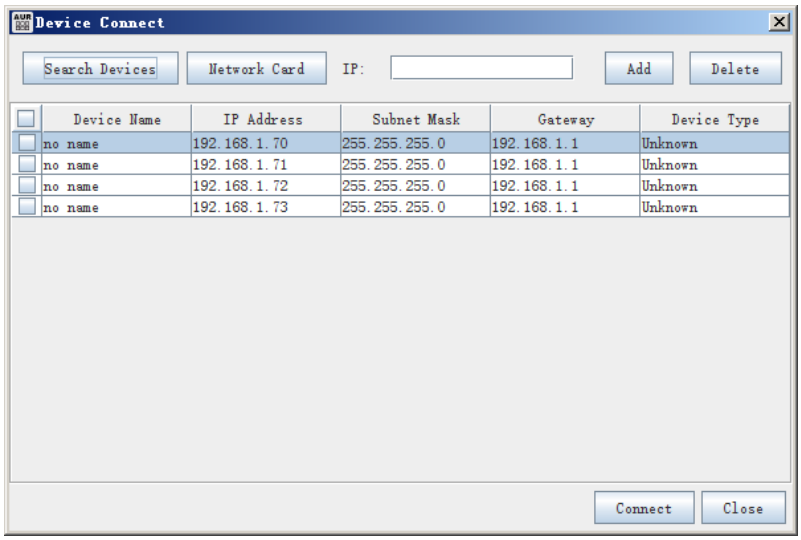
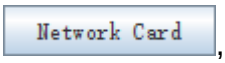


Figure 2.2-16 Search Result

Tips

- If there are more than one Network Interface in the control computer, it will pop up a prompt “Please choose the Network Interface and try again” at the first time when you click the **Search Devices** button. Click **OK**, and it will pop up the Device Search Network Interface Config dialog box, please select a Network Interface for the control computer through which you will connect to a multi-image processor. And if you want to change the default selection which you will use to connect to the multi-image processor, click **Setting** button, and modify it in the Device Search Network Interface Config dialog box.

■ Select network interface for the control computer

Click **Network Card** button 

, it will pop up the Set Network Card dialog box, as shown in ***Figure 2.2-17***, tick to select a Network Interface for the control computer through which you will connect to a multi-image processor. Click **OK** to confirm the selection and close this dialog box.

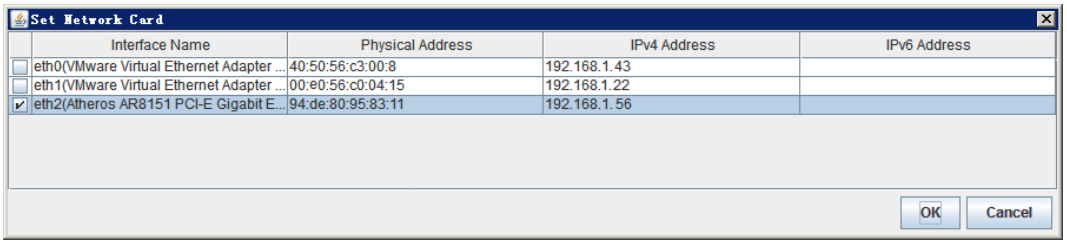
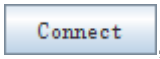


Figure 2.2-17 Device Search Network Interface Config

- Select and connect

  Click the device information line, it will be chosen, then click **Connect** button 

, or double-click the device information line, it will connect to the selected device.

  If the connection is successful, it will pop up a prompt, as shown in ***Figure 2.2-18***, click **OK** to confirm the connection. If the connection is failed, it will pop up a connection failure prompt, as shown in ***Figure 2.2-19***, click **OK**, please select another device or check the connection link.

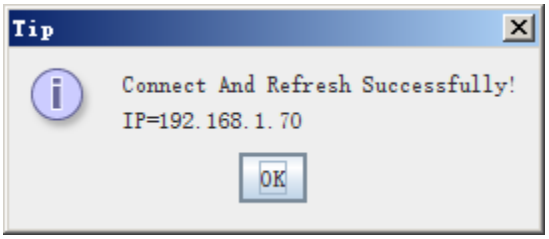


Figure 2.2-18 Connect Successful Prompt

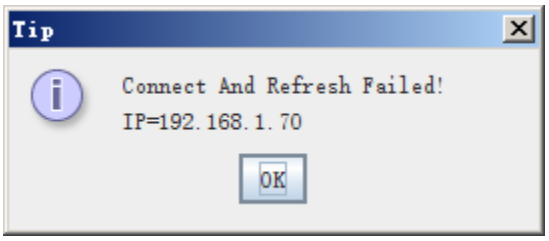


Figure 2.2-19 Connect Failed Prompt

Tips

- The device information line can't be restored even if you do the Undo(CTRL+Z) operation after you delete it. Please make sure the deletion operation.

3. Device Disconnect

Use the Disconnect command to cut off the connection between the control computer and the target multi-image controller.

Select "**Configure**"→"**Disconnect**" command in menu bar, or click connect button  in tool bar, it will cut off the connection with the current multi-image controller. You can see **Offline** in the status bar.

4. Refresh Device Information

Click the **Refresh** button  at the bottom right corner of the software interface as shown in Figure 2.2-20, it will reload the device information especially when the device changed.

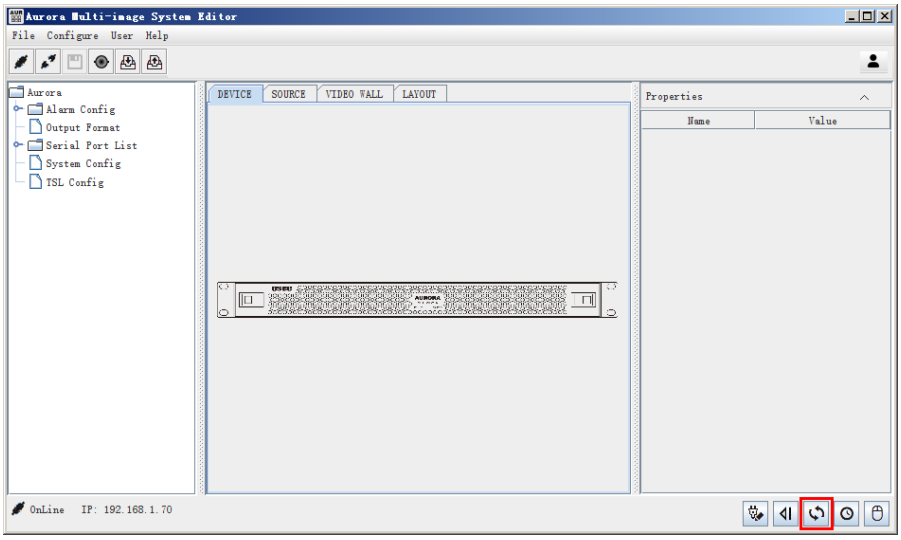


Figure 2.2-20 Refresh Shortcut Button

Click the **Refresh** button  , or select **Configure→Refresh** command, it will pop up a prompt, as shown in ***Figure 2.2-21***, click **OK** to confirm the refresh operation, or click **Cancel** to cancel the refresh operation.

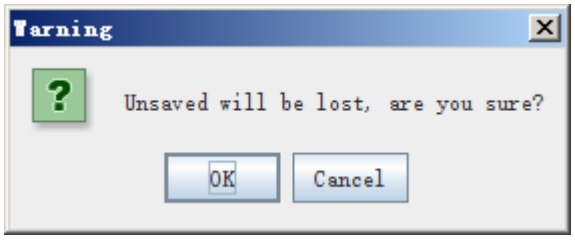


Figure 2.2-21 Prompt for Refresh Operation

Do the refresh operation in the following situations:

- Refresh to reload the device information if the software has been started up when device is offline.

- Refresh to reload the device information after device changed.
- Refresh to reload the device information after the device configure has been changed, such as change the input or output module numbers, change the slot and so on.

2.3 Software Interface

The section will introduce the contents and functionalities of the operation windows.

The Aurora multi-image system editor provides several interfaces for different purpose: Configuration Editor, Offline Editor and Control Editor. They will be described separately as follows.

2.3.1 Configuration Editor

The Configuration window is used to configure device, signal source, video wall and model.

You can do four kinds of configuration operations in Configuration window: Device configuration, Source configuration, Video wall configuration and Layout configuration, click the corresponding tab at the top of the working area to display the configuration contents.

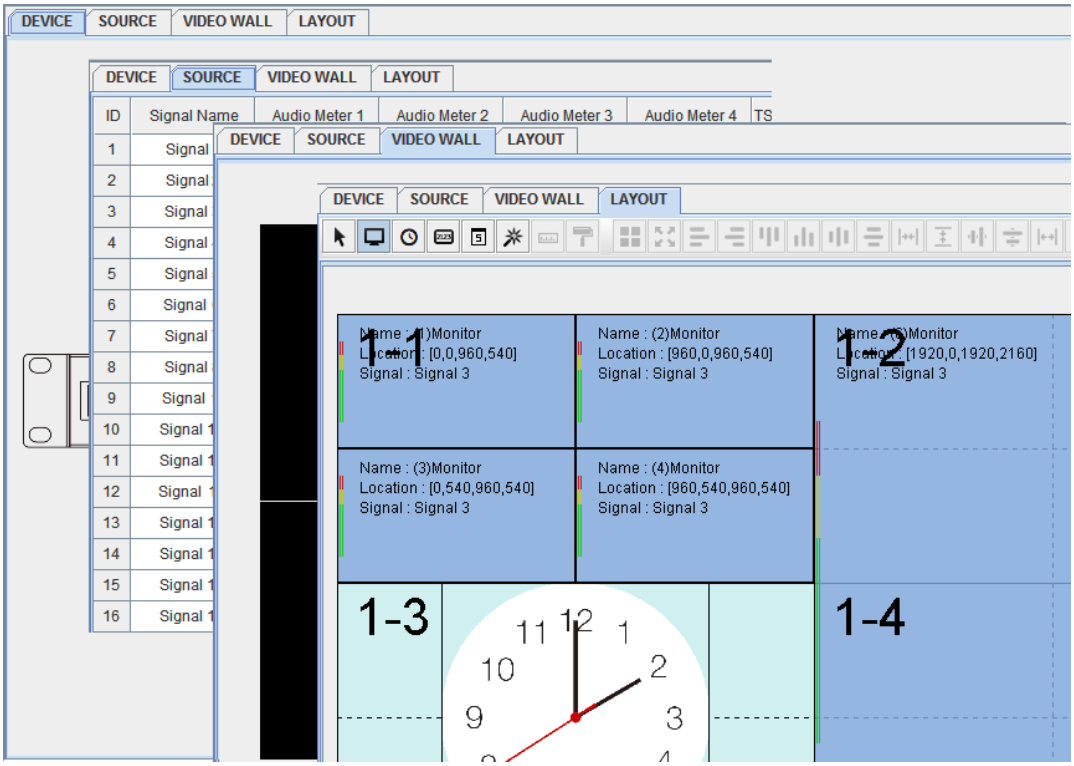


Figure 2.3-1 Configuration Window

The buttons in tool bar and the menu items in menu bar are different according to the contents in working area, the details are as follows.

2.3.1.1 Device Configuration Window

Click **Device** tab 

at the top of the working area, it will display the device configuration workplace, as shown in ***Figure 2.3-2***. The device configuration window is the default window when start up the software. It is used to set the alarm information, output format, serial parameters, network information, timing and so on.

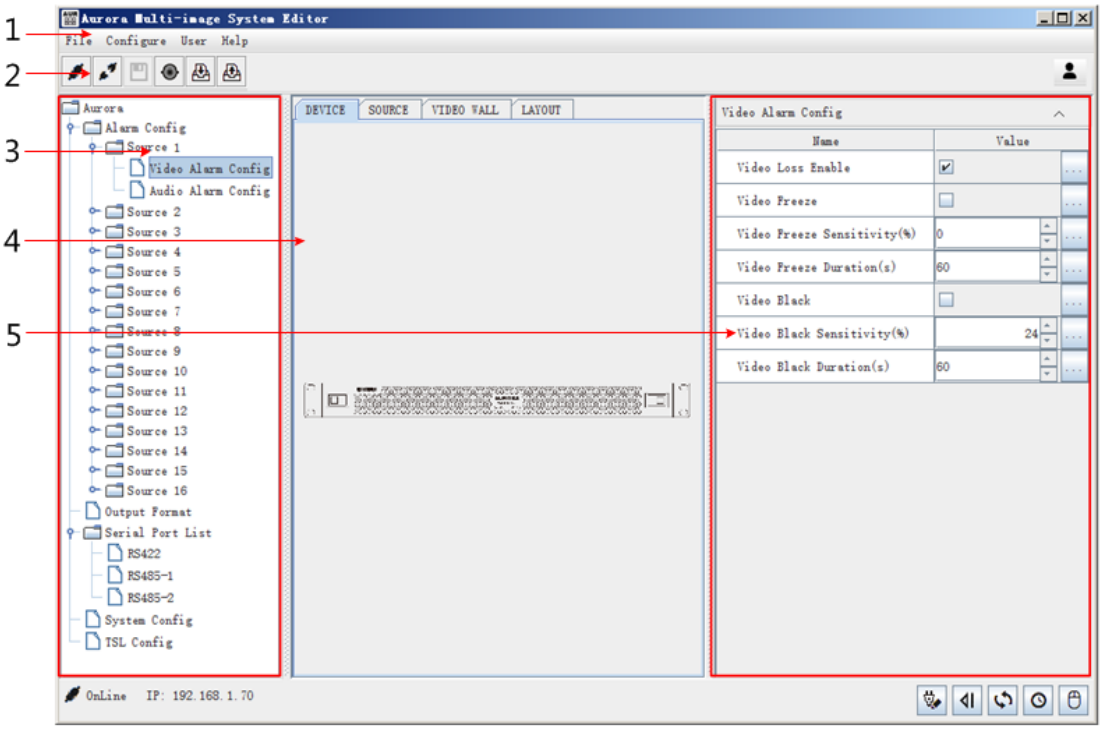


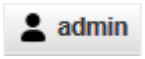
Figure 2.3-2 Device Configuration Window

Configure the device in the device configuration window, the details are as follows:

1. **Menu Bar**

It lists the commands used for device configuration.

Menu	Command	Shortcut Button	Description
File	Save		It is used to save the device configuration changes.
	Import		It is used to import the monitor or model data.

Menu	Command	Shortcut Button	Description
	Export		It is used to export the monitor or model data to the destination folder.
	Exit	-	It is used to shut down the Aurora multi-image system editor.
Configure	Connect		It is used to open the device connection dialog box, select a device and connect to it.
	Disconnect		It is used to cut down the connection with the current device.
	Refresh		It is used to reload the current connected device information.
	Time Setting		It is used to timing the multi-image processor manually.
	Matrix Configuration		It is used to configure the signal source for the matrix output.
User	User Management		It is used to create and manage users with various privileges.
	Switch User	-	It is used to switch to another user.
	Update Password	-	It is used to modify the password of the current user.
	Sign Out	-	It is used to sign out from the current user.
Help	Restore Factory Default	-	It is used to restore the factory default to this software.
	Device Information	-	It is used to display the basic device information of the current connected multi-image processor.
	Language	-	It is used to switch an interface language for this software, selecting from Chinese and English.
	Change Authorization Code	-	It is used to change the authorization code to the multi-image processor.
	Hardware Update	-	It contains Zip File and Update commands. The former is used to pack files, the latter is used to upgrade.

Menu	Command	Shortcut Button	Description
	About…	-	It is used to display the basic and version information about this software.

2. Tool Bar

It lists the shortcut commands used for device configuration, the commands from left to right are save and connect.

Shortcut icon	Menu command
	Connect
	Disconnect
	Save
	Matrix Configuration
	Import
	Export

- Device Connect: refer to "2.2.2 **Device Connection**" for the operation.
- User: There is a user shortcut button at the right side of the tool bar. The current user name is displayed on this button, click this button to display the drop down list of the user control, as shown in Figure 2.3-3, select the command to execute the corresponding operation. Refer to “3.1.1 User Management” for the details about user commands.

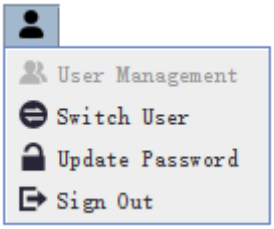


Figure 2.3-3 User Commands List-Tool Bar

Tips

- The function of the shortcut button in tool bar will not be described further

more, for it has already been described in the corresponding menu command in menu bar, the same as in source configuration, video wall configuration and model configuration.

- Refer to “3.1.1 User Management” for the details about user commands in tool bar, the same as in source configuration, video wall configuration and model configuration.

3. System pane for device configuration

It provides the system sources for device configuration.

It displays the device information as a tree diagram. The root is Aurora, and the branches are: **Alarm Config**, **Output Format**, **Serial Port List**, **System Config** and **TSL Config**, as shown in ***Figure 2.3-4***.

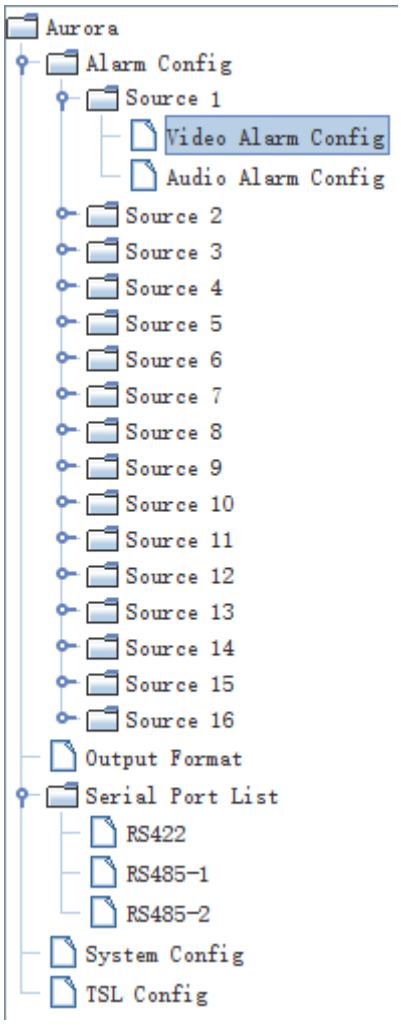


Figure 2.3-4 Device Tree

4. Working area for device configuration

It displays an illustration of device tree and other configurations.

5. Property pane for device configuration

It provides the property list for device configuration. Click the branch node in the device tree, it will display the corresponding the property parameters in this pane.

The parameters are shown in a table list, and you can expand or collapse the parameters list by click the up and down arrow ⌃/⌄ in property pane.

- Display property parameter

The parameters are different according to the branch node.

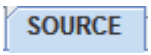
For example: click to select the node " Source01"→"Video Alarm Config", the video alarm list is as shown in ***Figure 2.3-5***:

Figure 2.3-5 Property Pane for Device Configuration

- Set the value for property parameter

There are property name, property value and its operation button in the property list. Set the value according to the project need.

2.3.1.2 Signal Source Configuration Window

Click **SOURCE** tab 

at the top of the working area, it will display the signal source configuration workplace, as shown in ***Figure 2.3-6***, it is used to modify the signal source name, create the mapping relationship between the audio channel and the audio meter, configure UMD and TALLY source.

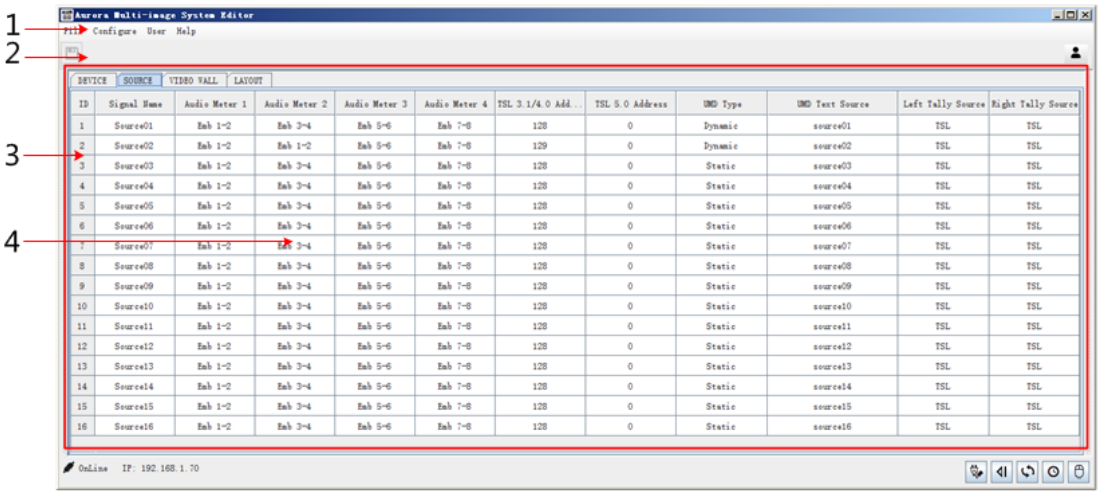


Figure 2.3-6 Source Configuration Window

Configure the source in the source configuration window, the details are as follows:

1. Menu Bar

It lists the commands used for signal source configuration.

Menu	Command	Shortcut Button	Description
File	Save		It is used to save the device configuration changes.
	Import		It is used to import the monitor or model data.
	Export		It is used to export the monitor or model data to the destination folder.
	Exit	-	It is used to shut down the Aurora multi-image system editor.
Configure	Connect		It is used to open the device connection dialog box, select a device and connect to it.
	Disconnect		It is used to cut down the connection with the current device.
	Refresh		It is used to reload the current connected device information.
	Time Setting		It is used to timing the multi-image processor manually.
	Matrix Configuration		It is used to configure the signal source for the matrix output.

Menu	Command	Shortcut Button	Description
User	User Management	admin	It is used to create and manage users with various privileges.
	Switch User	-	It is used to switch to another user.
	Update Password	-	It is used to modify the password of the current user.
	Sign Out	-	It is used to sign out from the current user.
Help	Restore Factory Default	-	It is used to restore the factory default to this software.
	Device Information	-	It is used to display the basic device information of the current connected multi-image processor.
	Language	-	It is used to switch an interface language for this software, selecting from Chinese and English.
	Change Authorization Code	-	It is used to change the authorization code to the multi-image processor.
	Hardware Update	-	It contains Zip File and Update commands. The former is used to pack files, the latter is used to upgrade.
	About…	-	It is used to display the basic and version information about this software.

2. Tool Bar

It lists the shortcut commands used for source configuration, the command is save.

Shortcut icon	Menu command
	Save

3. Working area for source configuration

The signal source information for each interface is listed in a table, including **ID, Signal Name, Audio Meter 1, Audio Meter 2, Audio Meter 3, Audio Meter 4, TSL3.1/4.0 Address, TSL5.0 Address, UMD Type**, **UMD Text Source**, **Left Tally Source**, and **Right Tally Source**, as shown in ***Figure 2.3-8***:

DEVICE | SOURCE | VIDEO WALL | LAYOUT

ID	Signal Name	Audio Meter 1	Audio Meter 2	Audio Meter 3	Audio Meter 4	TSL 3.1/4.0 Add...	TSL 5.0 Address	UMD Type	UMD Text Source	Left Tally Source	Right Tally Source
1	Source01	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128	0	Dynamic	source01	TSL	TSL
2	Source02	Emb 1-2	Emb 1-2	Emb 5-6	Emb 7-8	129	0	Dynamic	source02	TSL	TSL
3	Source03	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128	0	Static	source03	TSL	TSL
4	Source04	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128	0	Static	source04	TSL	TSL
5	Source05	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128	0	Static	source05	TSL	TSL
6	Source06	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128	0	Static	source06	TSL	TSL
7	Source07	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128	0	Static	source07	TSL	TSL
8	Source08	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128	0	Static	source08	TSL	TSL

Figure 2.3-7 Signal Information for Source Configuration

Refer to for "3.3 Source Configuration" the details.

2.3.1.3 Video Wall Configuration Window

Click **VIDEO WALL** tab VIDEO WALL at the top of the working area, it will display the video wall configuration workplace, as shown in ***Figure 2.3-8***, it is used to configure the video wall.

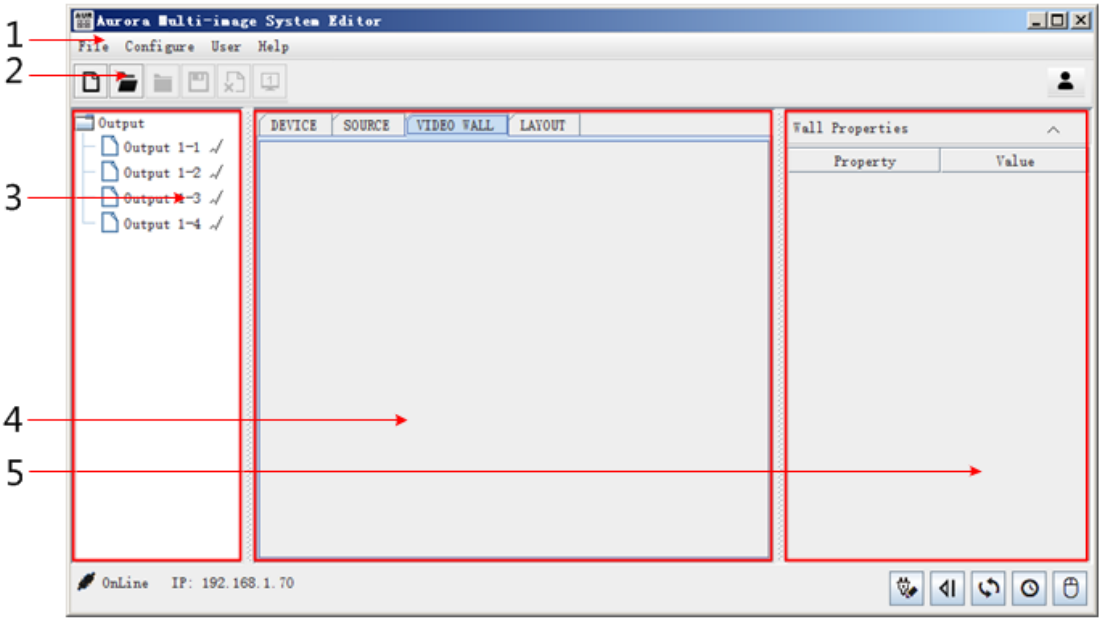


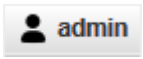
Figure 2.3-8 Video Wall Configuration Window

Configure the video wall in the video wall configuration window, the details are as follows:

1. **Menu Bar**

It lists the commands used for video wall configuration.

Menu	Command	Shortcut Button	Description
File	New		It is used to create a monitor.

Menu	Command	Shortcut Button	Description
	Open		It is used to select and open an existed monitor.
	Save		It is used to save the configuration changes to the current edited monitor.
	Close		It is used to close the current monitor window in working area.
	Delete		It is used to delete the current monitor window in working area.
	Import		It is used to import the monitor or model data.
	Export		It is used to export the monitor or model data to the destination folder.
	Exit	-	It is used to shut down the Aurora multi-image system editor.
Configure	Connect		It is used to open the device connection dialog box, select a device and connect to it.
	Disconnect		It is used to cut down the connection with the current device.
	Refresh		It is used to reload the current connected device information.
	Time Setting		It is used to timing the multi-image processor manually.
	Matrix Configuration		It is used to configure the signal source for the matrix output.
User	User Management		It is used to create and manage users with various privileges.
	Switch User	-	It is used to switch to another user.
	Update Password	-	It is used to modify the password of the current user.
	Sign Out	-	It is used to sign out from the current user.
Help	Restore Factory Default	-	It is used to restore the factory default to this software.
	Device Information	-	It is used to display the basic device information of the current connected multi-image processor.

Menu	Command	Shortcut Button	Description
	Language	-	It is used to switch an interface language for this software, selecting from Chinese and English.
	Change Authorization Code	-	It is used to change the authorization code to the multi-image processor.
	Hardware Update	-	It contains Zip File and Update commands. The former is used to pack files, the latter is used to upgrade.
	About…	-	It is used to display the basic and version information about this software.

2. Tool Bar

It lists the shortcut commands used for monitor configuration, the commands from left to right are: **New, Open, Close, Save, Delete, Open/Close Monitor Label**.

Shortcut icon	Menu command	Shortcut icon	Menu command
	New		Save
	Open		Delete
	Close		Monitor Label

- Monitor Label

Click this button to display or hide the monitor label. The monitor label is as shown in ***Figure 2.3-9***, it is displayed a black rectangle at the center of a monitor, labeled its output interface number. For example, if the output for the monitor is OUTOUT1, the label is "1-1 wall", it represents the first output interface of the first output module.

Figure 2.3-9 Monitor Label

Tips

- Monitor label is used during the monitor assembly. Display the monitor label, and you could locate the monitor quickly.

3. System pane for monitor configuration

It provides the sources for monitor configuration, as shown in ***Figure 2.3-10***:

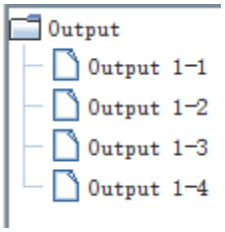


Figure 2.3-10 System Pane for Monitor Configuration

- **Output**: It provides the available output interfaces for the monitors. Click and drag an output interface from the output list in system pane to a target monitor in working area, thus to establish the one to one relationship, as shown in ***Figure 2.3-11***:

Figure 2.3-11 Output Interface for a Monitor Panel

Tips

- Do the refresh operation to reload the output interfaces when the device has been changed.

4. Working area for monitor configuration

It displays the video wall editing area. When you have created a few monitors, the opened monitors will be displayed as tabs at the bottom area in working area. Click the tab to switch it as the current editable monitor, as shown in ***Figure 2.3-12***:

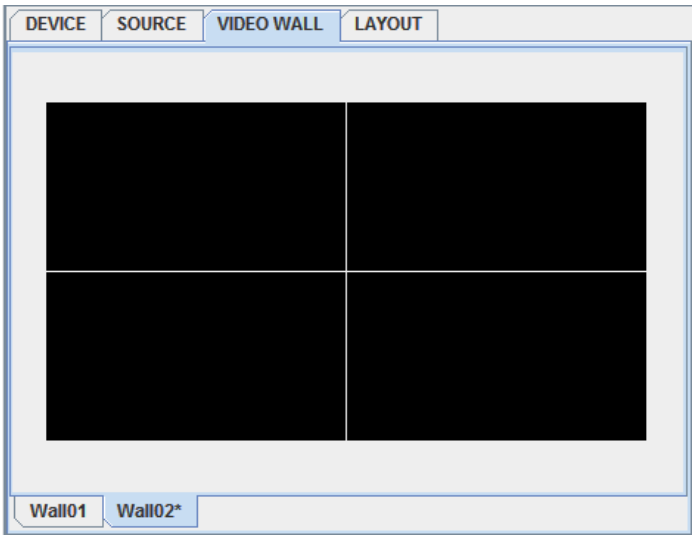


Figure 2.3-12 Working Area for Monitor Configuration

Tips

- Limitation for wall amounts: for an AURORA1600 1U device, there is only one wall allowed, but for an AURORA9600 9U device, there could be

multiple walls.

- Scroll the mouse wheel up or down when the mouse cursor in the working area of monitor configuration, it will zoom in or zoom out the display area convenient for checking, as shown in ***Figure 2.3-13***:

Figure 2.3-13 Zoom In and Zoom Out the Working Area for Monitor Configuration

5. **Property pane for monitor configuration**

It provides the property list for monitor configuration. It displays the monitor property parameters in this pane, including **Name**, **Horizontal Monitor Number**, **Vertical Monitor Number**, **Horizontal Gap**, **Vertical Gap**, and **Audio Output Card**, as shown in ***Figure 2.3-14***:

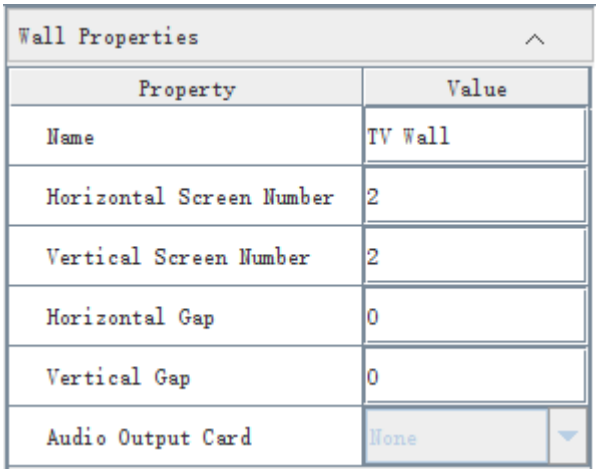


Figure 2.3-14 Property Pane for Monitor Configuration

Refer to "3.4 Video Wall Configuration " for details.

2.3.1.4 Model Configuration Window

Click **LAYOUT WALL** tab LAYOUT at the top of the working area, it will

display the model configuration workplace, as shown in ***Figure 2.3-15***, it is used to configure the model.

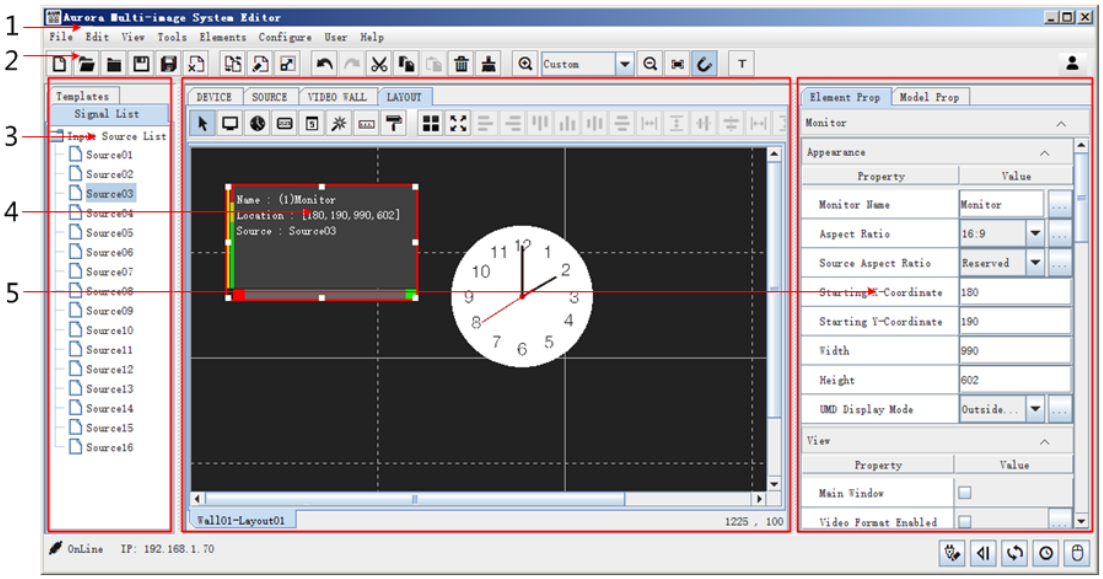


Figure 2.3-15 Layout Configuration Window

Configure the model in the layout configuration window, the details are as follows:

1. Menu Bar

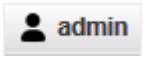
It lists the commands used for model configuration.

Menu	Command	Shortcut Button	Description
File	New		It is used to create a model.
	Open		It is used to select and open an existed model.
	Save		It is used to save the configuration changes to the current edited model.
	Save All		It is used to save the configuration changes to all models opened in working area.
	Close		It is used to close the current model window in working area.
	Delete		It is used to delete the current model window in working area.
	Import		It is used to import the monitor or model data.
	Export		It is used to export the monitor or model data to the destination folder.

Menu	Command	Shortcut Button	Description
	Exit	-	It is used to shut down the Aurora multi-image system editor.
Edit	Undo		It is used to cancel the recent operation.
	Redo		It is used to restore the latest undo operation.
	Cut		It is used to cut the selected components to the clipboard.
	Copy		It is used to copy the selected components to the clipboard.
	Paste		It is used to copy the components recorded lastly in the clipboard to the working area.
	Delete		It is used to delete the current selected components in working area.
	Clear		It is used to delete all the components in current model in working area.
	Select All	-	It is used to select all the components in current model in working area.
	Select None	-	It is used to cancel the selection of all components in current model in working area.
View	Zoom In		It is used to zoom in the display area of the monitor in working area.
	Zoom Out		It is used to zoom out the display area of the monitor in working area.
	Fitting With Screen		It is used to zoom the display area of the monitor to fitting with screen.
	Ratio		It is used to control the display ration of the monitor, providing these ratios: 50%, 75%, 100%, 125%, 150%, 250%, 300%.
	Docking		It is used to set whether to enable the docking function. When enable docking, you will be easy to resize the element window to align to the grid line, there will be a red guideline docking to the nearest grid line.
	Show Output Information		It is used to enable/disable to highlight the output interface information and the brim of the display screens on the layout editing

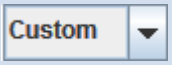
Menu	Command	Shortcut Button	Description
			area.
Tools	Copy Size From Selected Monitor		It is used to copy the size of the current selected element window to the next selected one.
	Copy Properties From Selected Monitor		It is used to copy the properties of the current selected element window to the next selected one.
	Split Monitor		It will divide the current selected monitor window into desired parts according to the ratio. Usually cooperated with the magic wand tool.
	Expand Monitor		It will make the current selected monitor window to be magnified and aligned to the nearest grid line.
	Align Left		It is used to align all selected element windows to the leftmost one.
	Align Right		It is used to align all selected element windows to the rightmost one.
	Align Top		It is used to align all selected element windows to the topmost one.
	Align Bottom		It is used to align all selected element windows to the bottommost one.
	Align Vertical Center		It is used to align all selected element windows to the average vertical center of these windows.
	Align Horizontal Center		It is used to align all selected element windows to the average horizontal center of these windows.
	Horizontal Docking		It is used to remove the gap among all selected element windows in horizontal direction. The reference point is the top left corner of the leftmost window among all selected element windows, they will line next to each other in horizontal direction.
	Vertical Docking		It is used to remove the gap among all selected element windows in vertical

Menu	Command	Shortcut Button	Description
			direction. The reference point is the top left corner of the leftmost window among all selected element windows, they will line next to each other in horizontal direction.
	Horizontal Equal Spacing		It is used to reallocate the horizontal distance between every two center points of the adjacent selected elements to be the same.
	Vertical Equal Spacing		It is used to reallocate the vertical distance between every two center points of the adjacent selected elements to be the same.
	Equal Width		It is used to redistribute the width of all selected element windows to the average width of these windows.
	Equal Height		It is used to redistribute the height of all selected element windows to the average height of these windows.
Elements	Select		It is used to select an element window.
	Monitor		It is used to add a monitor element.
	Analog Clock		It is used to add an analog clock element.
	Digital Clock		It is used to add a digital clock element.
	Date		It is used to add a date element.
	Magic Wand		It is used to add a big enough monitor window to full fill the blank where you have clicked the mouse.
Configure	Connect		It is used to open the device connection dialog box, select a device and connect to it.
	Disconnect		It is used to cut down the connection with the current device.
	Refresh		It is used to reload the current connected device information.
	Time Setting		It is used to timing the multi-image processor manually.

Menu	Command	Shortcut Button	Description
	Matrix Configuration		It is used to configure the signal source for the matrix output.
	Layout Editor		It is used to rearrange the created models in model list.
	Switch Current Layout		It is used to apply the current layout to the connected device.
User	User Management		It is used to create and manage users with various privileges.
	Switch User	-	It is used to switch to another user.
	Update Password	-	It is used to modify the password of the current user.
	Sign Out	-	It is used to sign out from the current user.
Help	Restore Factory Default	-	It is used to restore the factory default to this software.
	Device Information	-	It is used to display the basic device information of the current connected multi-image processor.
	Language	-	It is used to switch an interface language for this software, selecting from Chinese and English.
	Change Authorization Code	-	It is used to change the authorization code to the multi-image processor.
	Hardware Update	-	It contains Zip File and Update commands. The former is used to pack files, the latter is used to upgrade.
	About…	-	It is used to display the basic and version information about this software.

2. Tool Bar

It lists the shortcut commands used for model configuration, the commands from left to right are: **New, Open, Close** and so on.

Shortcut icon	Menu command	Shortcut icon	Menu command
	New Layout		Cut
	Open Layout		Copy
	Close Current Layout		Paste
	Save Layout		Remove Elements
	Save All Layouts		Clear Layout
	Delete Current Layout		Zoom In
	Display Current Layout		Ratio
	Layout Sorting& Switching		Zoom Out
	Full Screen		Fit Screen
	Undo		Snap
	Redo		Show Output Information

3. System pane for model configuration

It provides the Sources and Templates for model configuration, as shown in ***Figure 2.3-16***:

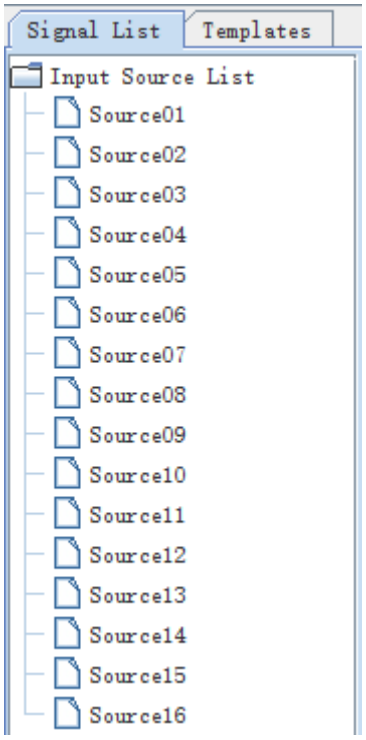


Figure 2.3-16 System Pane for Layout Configuration

- **Input Source List**: It provides the available signal sources for the monitor elements. Click and drag a signal source from the sources list in system pane to a target monitor element in working area, thus to establish the one to one relationship, as shown in ***Figure 2.3-17***:

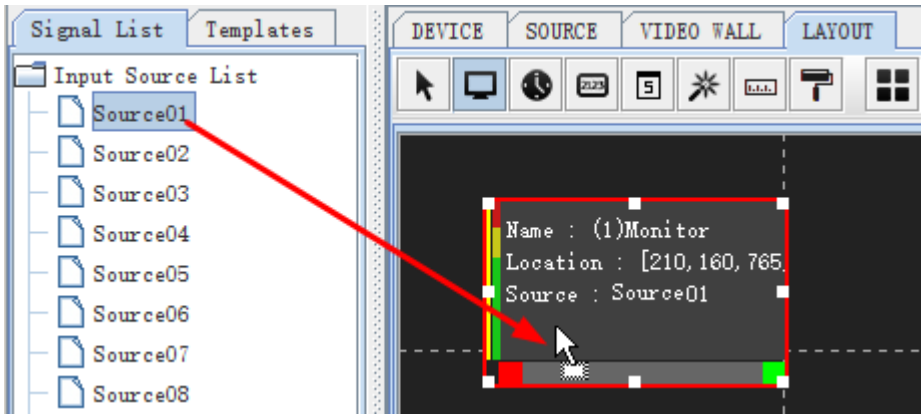


Figure 2.3-17 Signal Source for a Monitor Element

- **Templates**: It provide some templates in the Templates pane, including default templates and customized templates, as shown in ***Figure 2.3-18***:

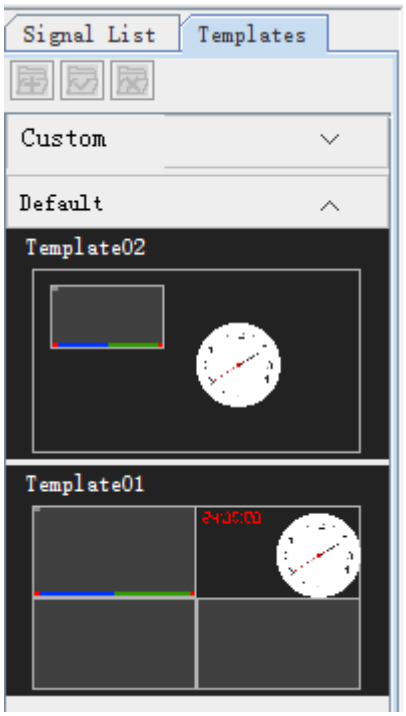


Figure 2.3-18 Templates for a Layout

4. Working area for model configuration

It provides a workplace for adding, arranging and editing all element windows for model layout.

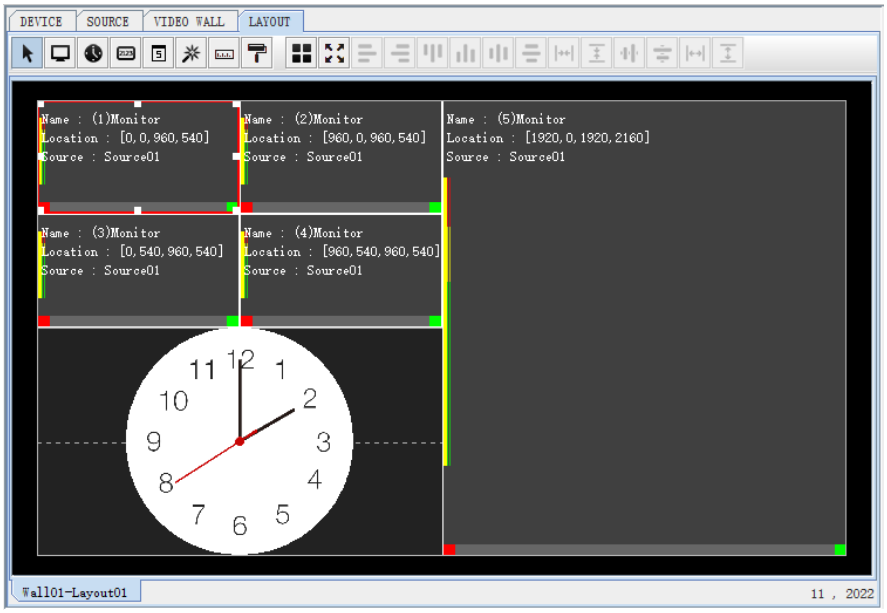


Figure 2.3-19 Working Area for Model Configuration

When you have created a few models, the opened models will be display as tabs at the bottom area in working area. Click the tab to switch it as the

current editable model.

- **Arrange tools**: it provides various elements and align tools for arranging the model layout.

Shortcut icon	Menu command	Shortcut icon	Menu command
	Select		Align Right
	Monitor		Align Top
	Analog Clock		Align Bottom
	Digital Clock		Align Vertical Center
	Date		Align Horizontal Center
	Magic Wand		Horizontal Docking
	Copy Size From Selected Monitor		Vertical Docking
	Copy Properties From Selected Monitor		Horizontal Equal Spacing
	Split Monitor		Vertical Equal Spacing
	Expand Window		Equal Width
	Align Left		Equal Height

5. Property pane for model configuration

It provides the property list for model properties and element properties. Modify the value for a property, click **Enter** key to confirm modification, and click save command to save the changes.

- **Model Properties**: Show the properties list for the current model.

- **Element Properties**: Show the properties list for the selected element, as shown in ***Figure 2.3-20***:

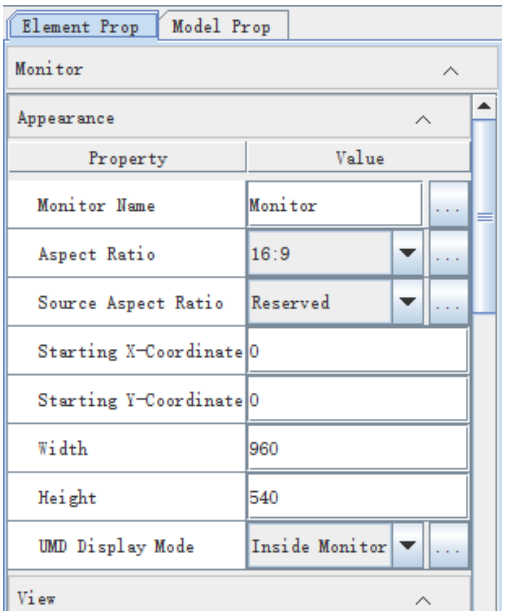


Figure 2.3-20 Properties Pane for Model Configuration

Tips

- The parameters list in elements properties pane are different according the type of the selected element in working area.

2.3.2 Offline Editor

The offline editor is used to edit offline.

1. **Enter offline editor**

Click the "**Enable offline editor**" button  in the right bottom of the status bar to enter the offline editor.

The offline editor must be used under the offline status. If the device is in online status, it will prompt to cut down the connection with the current device.

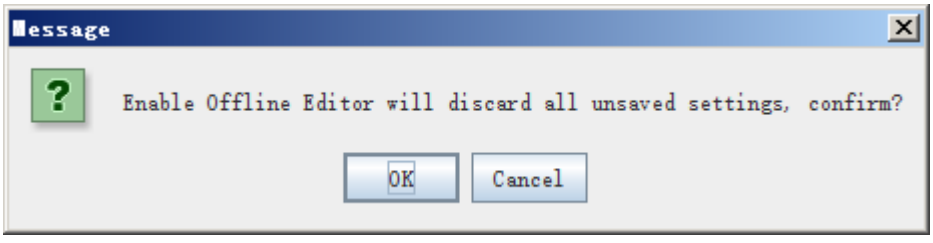


Figure 2.3-21 Prompt for Entering Offline Editor

First, save the modification to the current connected device, then click **Disconnect** button in tool bar, or select the "**Configure→Disconnect**" command in menu bar, thus to disconnect with the current device, and there is Offline keyword in the left bottom of the status bar.

Click the "Enable offline editor" button to enter the offline editor. It will pop up the data selecting dialog box, as shown in Figure 2.3-22, click **New** button or **Import** button to select the target data.

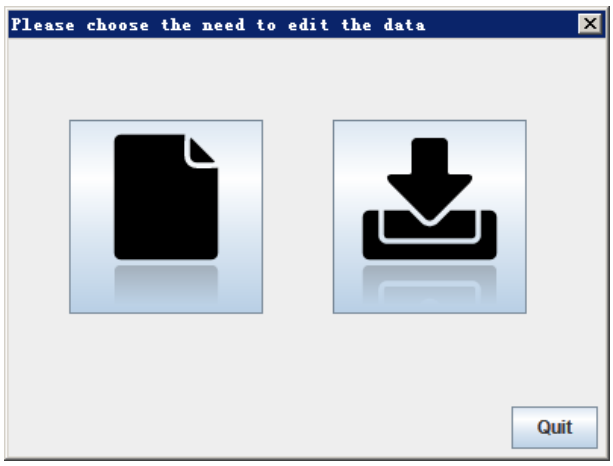


Figure 2.3-22 Select the Editing Data

- New

Click **New** button, it will prompt the new dialog box, as shown in Figure 2.3-23, selecting **Aurora1600** or **Aurora9600**, click **OK** button to confirm the new operation, and it will load the offline editor interface.

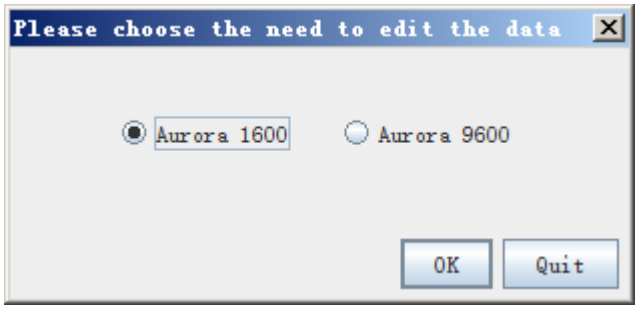


Figure 2.3-23 Select the Editing Data

If selecting Aurora1600, it will display an illustration for Aurora1600 at the working area of Device configuration window, as shown in Figure 2.3-24, and the input components of this device will be displayed in the system pane at the left area of the offline editor window.

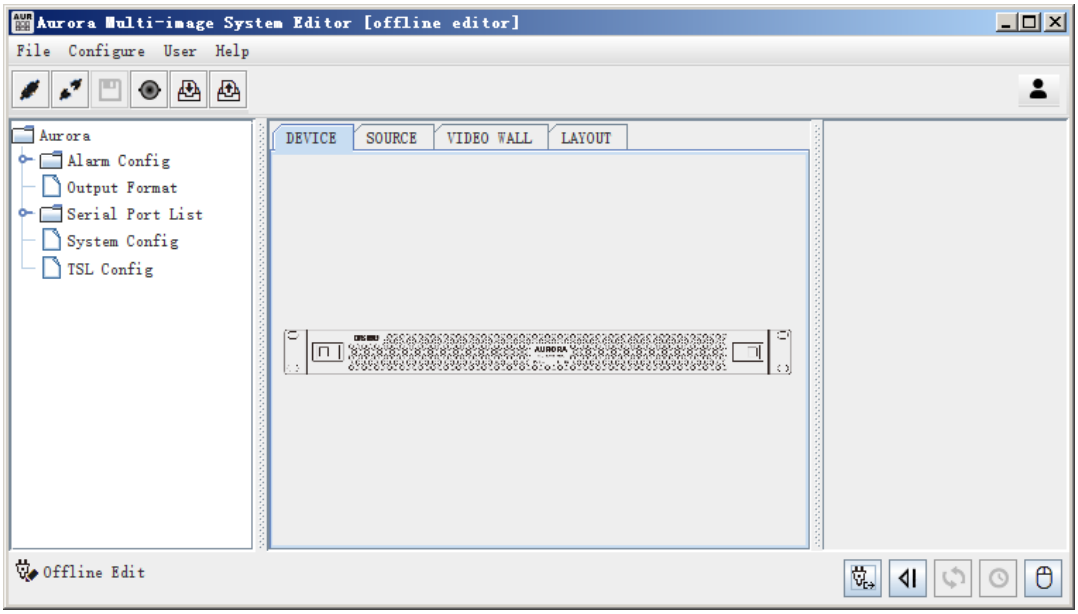


Figure 2.3-24 Offline Editor-Aurora1600

You can see the keyword **Offline Edit** and its icon  in the status bar at the bottom of the window.

If selecting Aurora9600, it will pop up the Device Configuration window for Aurora9600, as shown in Figure 2.3-25. The window provides an intuitional illustration for configuring input module and output module for Aurora9600. Please assign the module type from the selection drop down list in each selected module slot according to your actual requirements.

The module positions of Aurora9600 are consistent with the actual positions. **For example**: click the down arrow of No.1 Input module to assign its module type to be **SDI** or **None**, as shown in Figure 2.3-26, click **OK** button at the right bottom of the window to confirm the assignment.

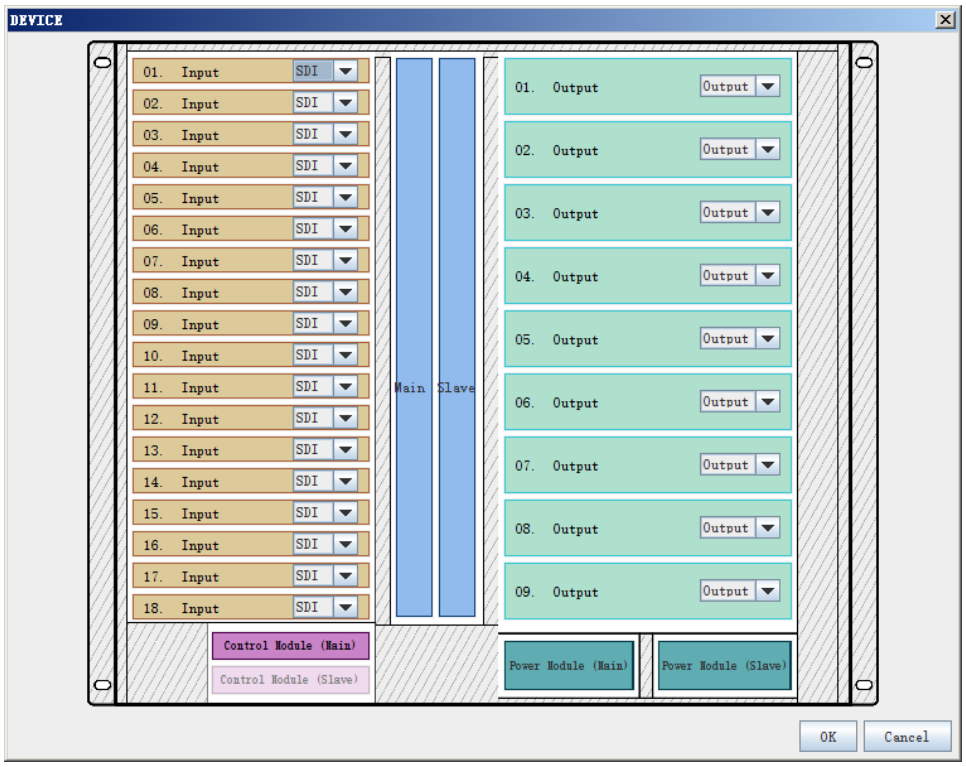


Figure 2.3-25 Device Configure-Aurora9600

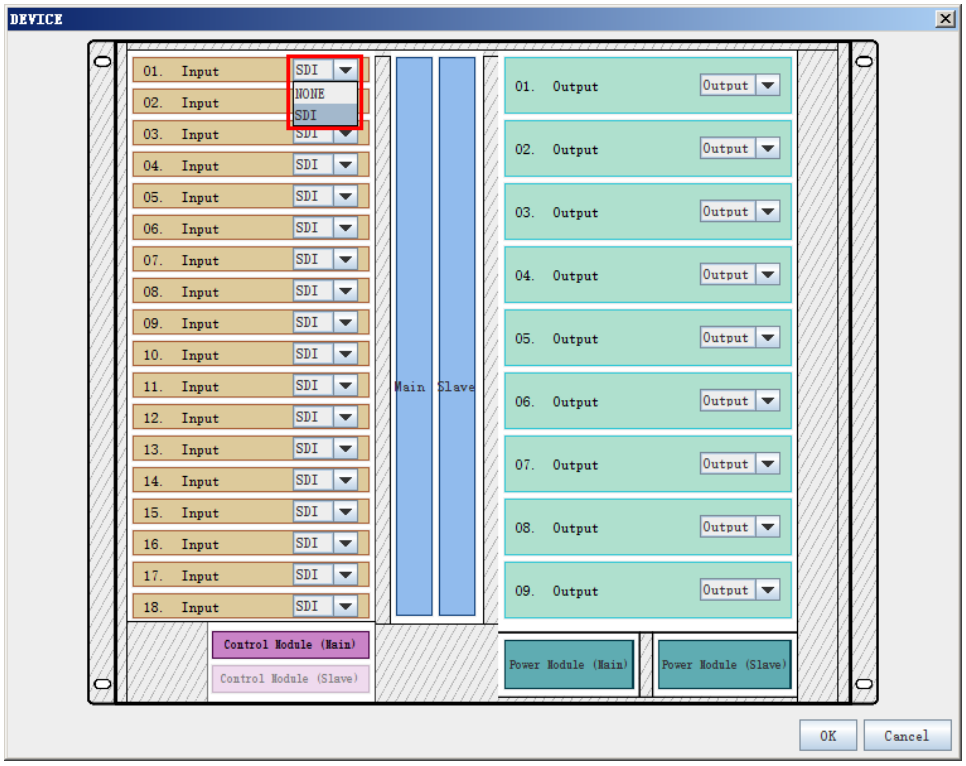


Figure 2.3-26 Set Device Type-Aurora9600

As shown in Figure 2.3-27, it displays the offline editor interface of AURORA9600. The input sources below the Alarm Config node are

displayed at the system pane. The source name is as the format of “Source”+”Module Slot number” +”.”+ ”Interface number”, each input module contains 8 input interfaces, and each output module contains 4 output interfaces.

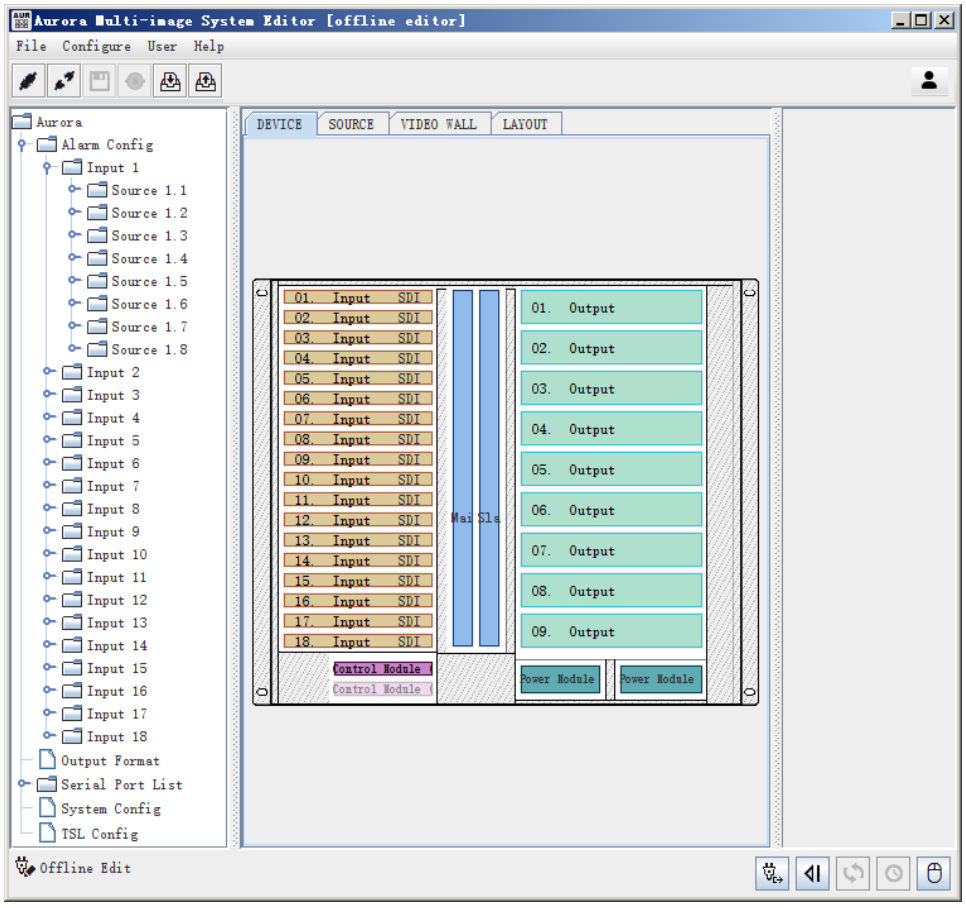


Figure 2.3-27 Offline Editor -Aurora9600

The other operations are the same as in online editor, please refer to the following descriptions, it will not descript in this section further more.

- Import

Click **Import** button  , it will prompt the new dialog box, as shown in Figure 2.3-28, press **Browse** button to import the backup data.

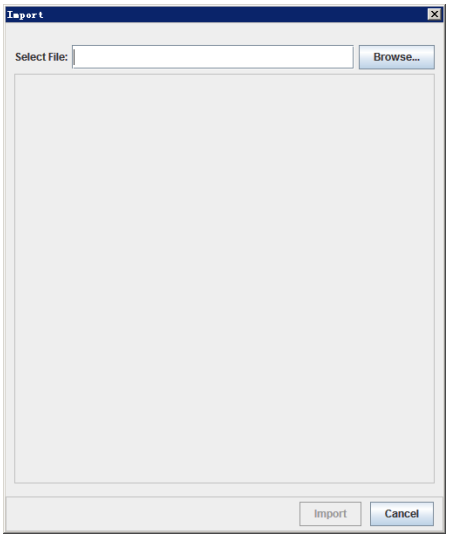


Figure 2.3-28 Import the File Data

After entering the offline editor, the operations in offline aurora control software are as the same as in online mode.

2. Exit Offline Editor

Click the “Exit the offline editor” button in the right bottom of the status bar to quit from the offline editor. It will prompt for exporting the offline data, as shown in Figure 2.3-29, click **OK** to save the data.

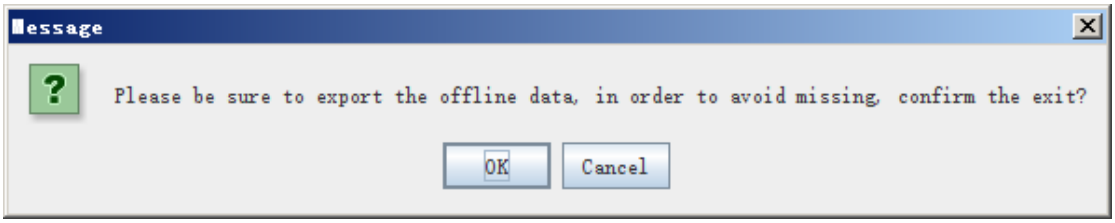


Figure 2.3-29 Prompt for Exiting the Offline Editor

First, save the modification to the current device, and then click **Export** button in tool bar, or select the “**File→Export**” command in menu bar, thus to export the project data to a data file.

Then, you can connect the device to be online again and enter the online mode.

Tips

- The operations in offline editor of aurora control software are as the same as in online mode, you can refer to the following chapter, there will be no descriptions in this section further more.

2.3.3 Online Control Editor

The online control editor is mainly used to observe, preview and switch the online display content, and you can switch on or off the alarm, display or hide the markers, or selecting a desired audio to be output.

1. Enter online control editor

Click **Control** button in the right bottom of the status bar to enter the online control editor. It will prompt a dialog box, as shown in Figure 2.3-30,click **OK** to confirm entering Aurora Multi-image System Controller, as shown in Figure 2.3-31:

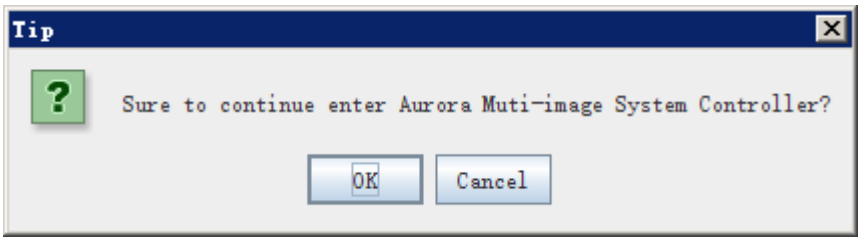


Figure 2.3-30 Prompt for Entering the Online Controller

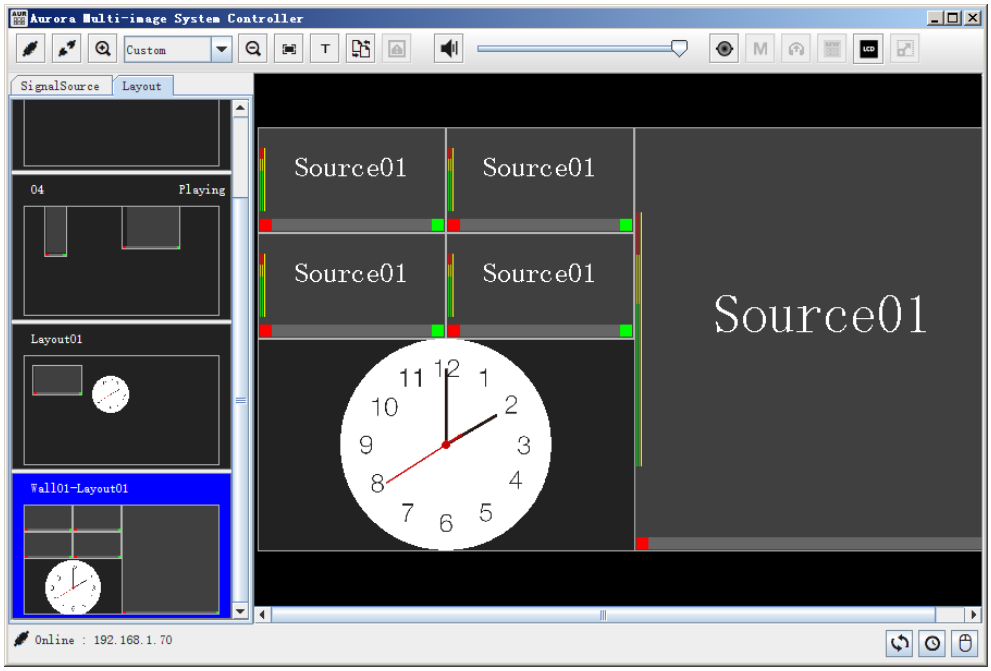


Figure 2.3-31 Online Controller

2. Exit online control editor

Click the “Control” button in the right bottom of the status bar at the Online Controller interface to exit the online control editor, it will prompt as shown in Figure 2.3-32:

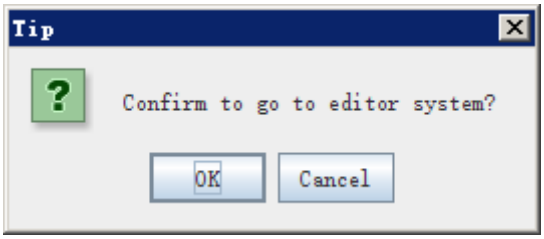


Figure 2.3-32 Prompt for Exit the Online Controller

Click **OK** button to exit from the online controller, it will be back to the Configuration editor.

Refer to “3.7 Online Control” for the details about Online Controller.

Chapter 3 Functionalities and Operations

This chapter is used to introduce the functionalities and operations in Aurora multi-image system editor.

3.1 Basic Function

3.1.1 User Management

The User menu contains the following commands: **User Management**, **Switch User**, **Update Password** and **Sign Out**. Click **User** menu in the menu bar, or click the User shortcut button at the right side of the tool bar to activate the corresponding user command, as shown in Figure 3.1-1. The current user name is displayed at the top position of the User menu list, and on the User shortcut button.

Figure 3.1-1 User Commands

1. **User Management**

The system contains two levels of operating rights according to the operating requirements, the privileges of these accounts:

- Administrator: it has the entire operating rights.
- Common: it has only the basic operating rights without modification right.

Create several accounts by User Management command, and the privileges of these accounts are different according to their levels, thus to be convenient for different levels of operators.

Operation: select **User Management** command, it will pop up the **User Management** window, as shown in Figure 3.1-2:

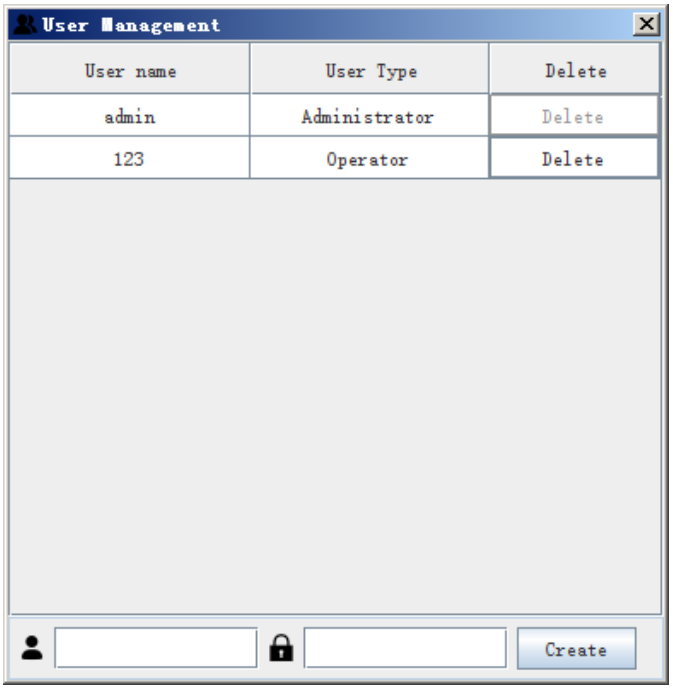


Figure 3.1-2 User Management Window

The users list in the User Management window displays **User name** and **User Type** information. Input a new user name and the corresponding user password at the bottom field of the window, and click **Create** button to add a new user to the list above.

Tips

- Only the user with the administrator level can create new users.

2. Switch User

Select **User Login** command, it will pop up the **User Login** window, as shown in Figure 3.1-3:

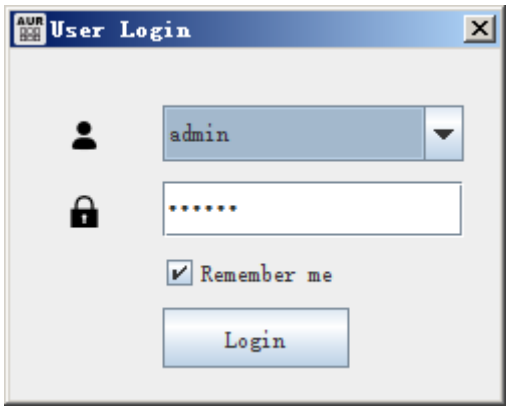


Figure 3.1-3 User Login Window

- **Switch user**: it is used to switch to another user. Click the down arrow in the field of user name, it will show the user name list. Select the user which you want to login in.
- **Input password**: input the password matched with your selected user, then press **Login** button. If the password matches the user, you will login in successfully, otherwise, if they are mismatched, it will pop up a prompt, as shown in Figure 3.1-4, press **OK** button, and re-input your password.

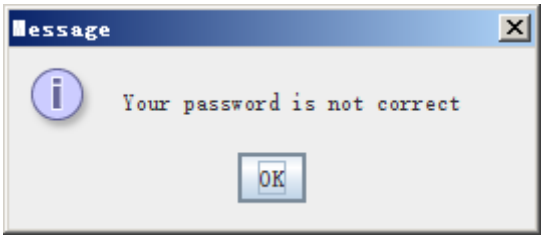


Figure 3.1-4 Prompt for Input Error Password

Tick off the “Remember me” selection, then you don’t need to input your password next time.

Tips

- The two default accounts are “admin” and “123”, the former is a user of administrator privilege, the latter is a user of common level, their passwords are both “123456”. The default “admin” account should not be deleted.

3. Update Password

Set password for your user to sign in, and you could modify the password to be a new one.

Operation: Select **Update Password** command, it will pop up the **Update Password** window, as shown in Figure 3.1-5:

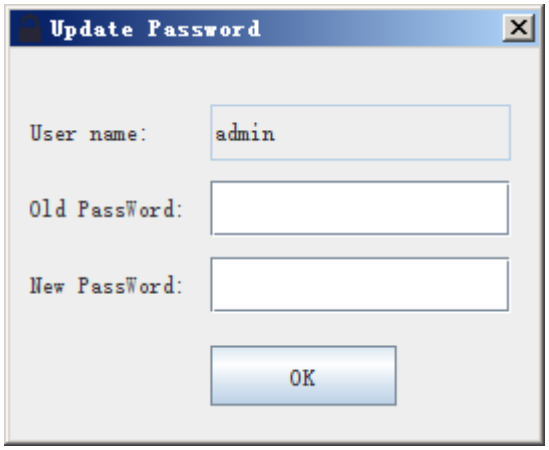


Figure 3.1-5 Update Password

At first, input the old password in the field of **Old PassWord**, then input the new password in the field of **New PassWord**, then click **OK** button to confirm the modification, it will pop up a successful prompt , as shown in Figure 3.1-6:

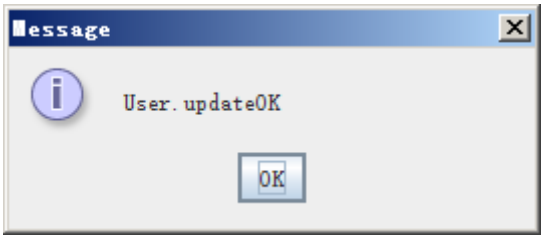


Figure 3.1-6 Update Password Successfully

Tips

- Only the account itself can modify its own password.

4. Sign Out

Use the **Sign Out** command to quit from the current account.

Select **Sign Out** command, it will prompt the **User Login** window, as shown in Figure 3.1-7, you can choose another account to re-sign in.

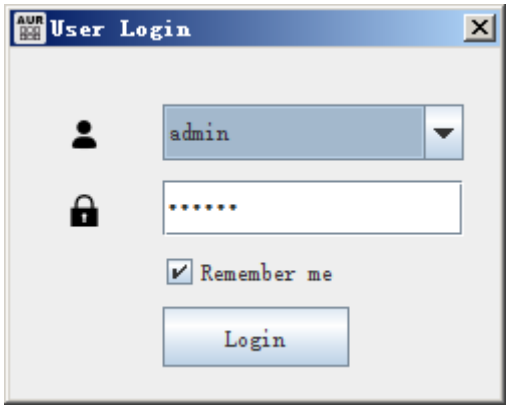


Figure 3.1-7 Sign Out

Select a user name, and input the correct password, click **Login** button to sign in.

Tips

- Switch to a different account by the **User Login** window.

3.1.2 Network Setting

Network setting is used to appoint the network parameters for setting up the connection.

■ Operation

Step 1 Connect a Device

Select "**Configure**"→"**Connect**" command in menu bar, or click connect button in tool bar, it will pop up the **Device Connect** dialog box. Input the target IP address in IP field, as shown in ***Figure 3.1-8***. Click **Add** button to add this device, and then click **Connect** button to establish connection with it.

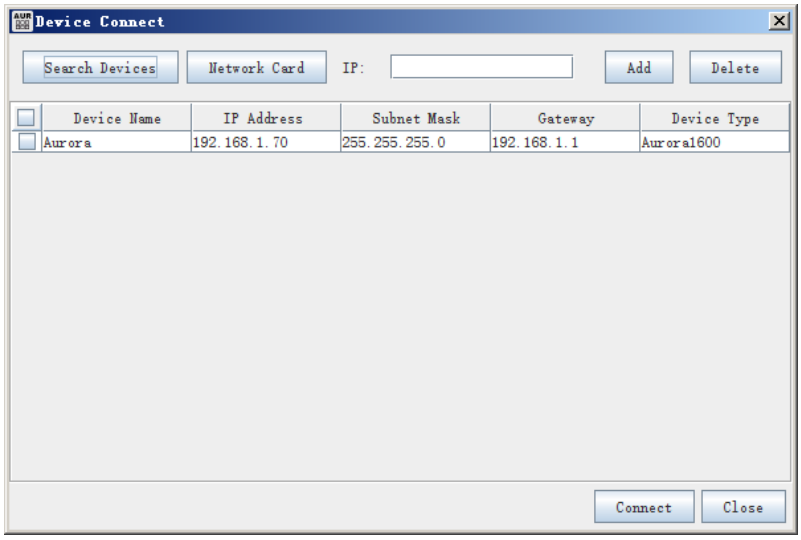


Figure 3.1-8 Connection Dialog Box for Device Connection

Step 2 Modify IP Address

Select "**DEVICE**"→"**System Config**" node in the working area of device configuration, the parameters about the device network are listed in its property pane, as shown in ***Figure 3.1-9***:

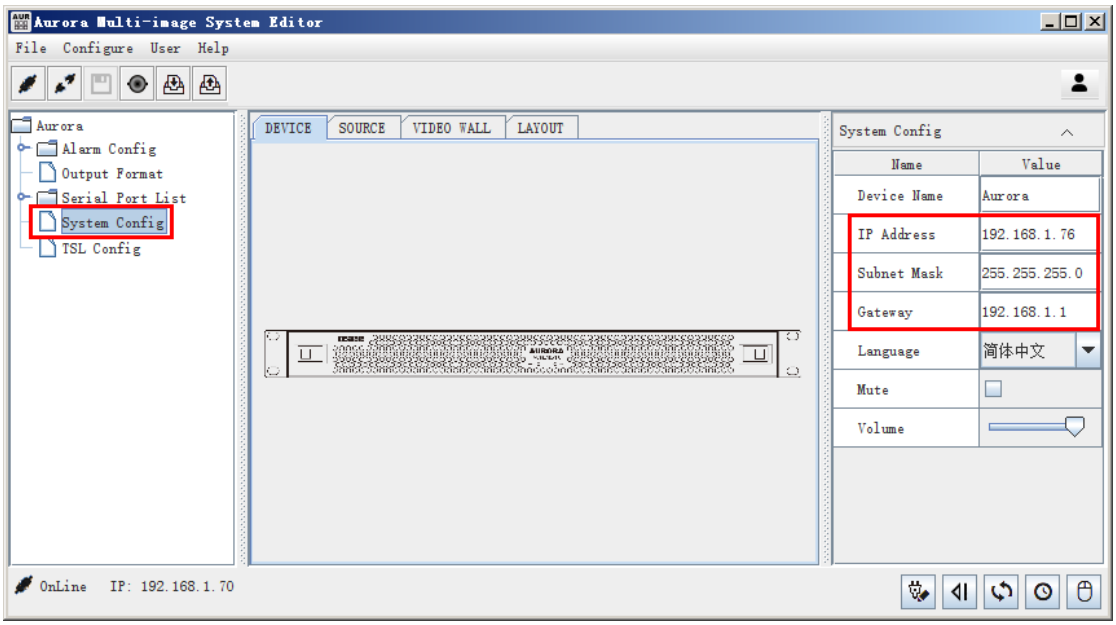


Figure 3.1-9 Modify IP Address

The parameters in its property pane are: **IP Address**, **Subnet Mask** and **Gateway**, click the save button or save command in File menu after you have modified these parameters. Then click Refresh button to reconnect the device.

Tips

- Rename the device in **Device Name** field in the property pane of "**DEVICE**"→"**System Config**" node.

3.1.3 Window Switch

3.1.3.1 Switch Between Online Window and Offline Window

The Aurora multi-image system editor provides two kinds of interfaces: Online Window and Offline Window. It will introduce how to switch between them.

1. Online Window → Offline Window: click the “Enable offline editor” button  in the right bottom of the status bar to enter the offline editor.
2. Offline Window → Online Window: click the “Exit the offline editor” button  in the right bottom of the status bar to quit from the offline editor.

3.1.3.2 Internal Switch in Configuration Window

There are four configuration windows in Configuration window: Device configuration, Source configuration, Monitor configuration and Model configuration, the contents are different.

Click the configuration window tab to switch among these configuration windows, and the auxiliary pane for the corresponding configuration window are also changed.

For example: Switch from model configuration window to device configuration window, the operation instructions are as below:

The current window is model configuration window, click the **DEVICE** tab in the top of working area, thus switching to device configuration window, as shown in ***Figure 3.1-10***:

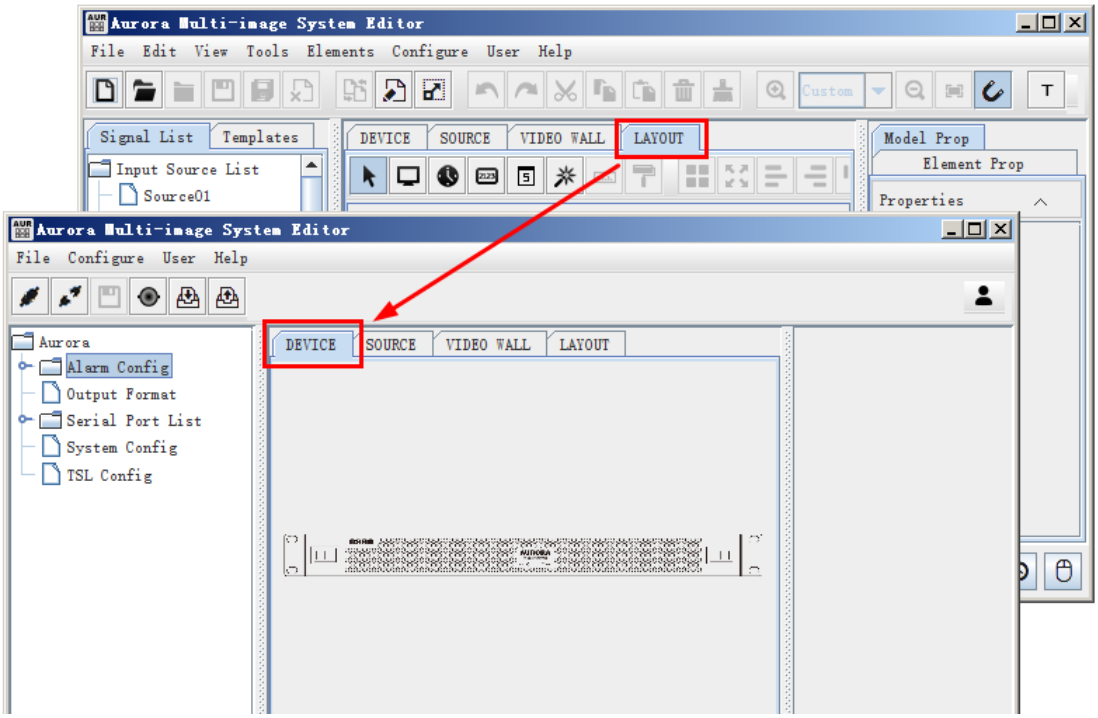


Figure 3.1-10 Switch from Model Configuration to Device Configuration

The switch operation between the other windows are the same, refer to "2.3 Software Interface" for the details about each window.

3.2 Device Configuration

The device information of the multi-image processor connected currently are displayed in device configuration window.

1. Device Tree

Click **DEVICR** tab in the top of working area, it will display the device tree in working area, as shown in ***Figure 3.2-1***, it includes the following devices information:

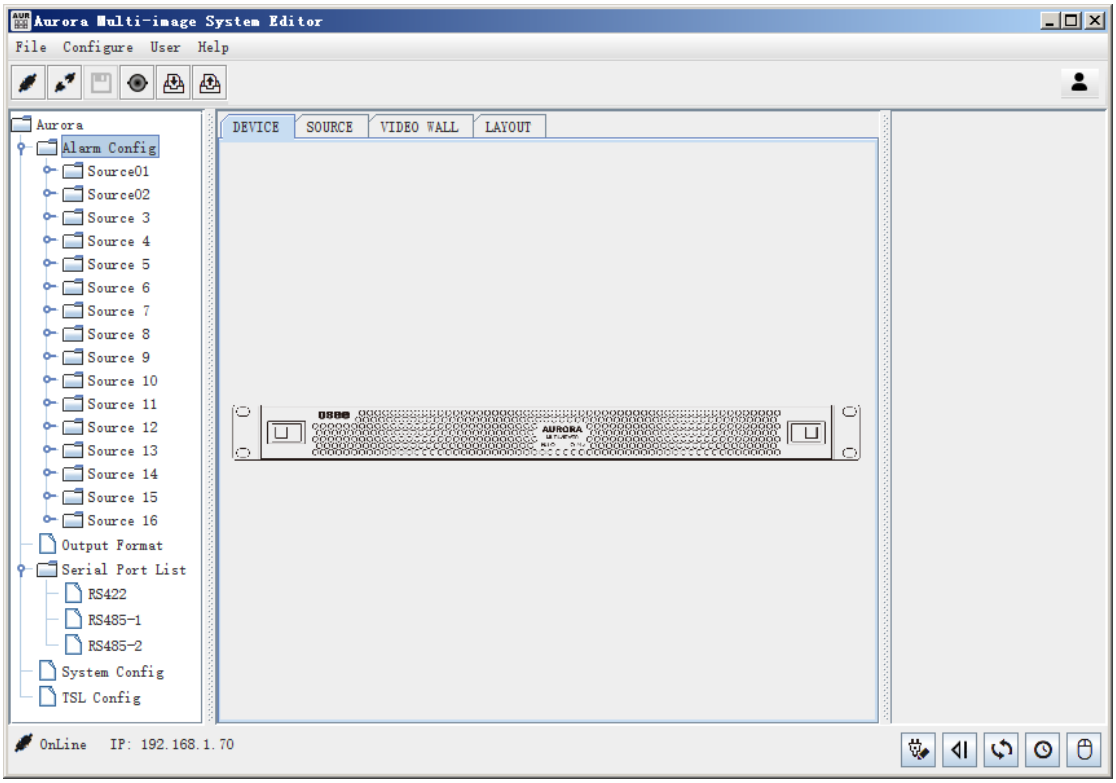


Figure 3.2-1 Device Tree

- Alarm Config
- Output Format
- Serial Port List
- System Config
- TSL Config

Double click the device node in device tree, it will expand or collapse the details, as shown in ***Figure 3.2-2***. Double click each node to display the corresponding parameters in property pane.

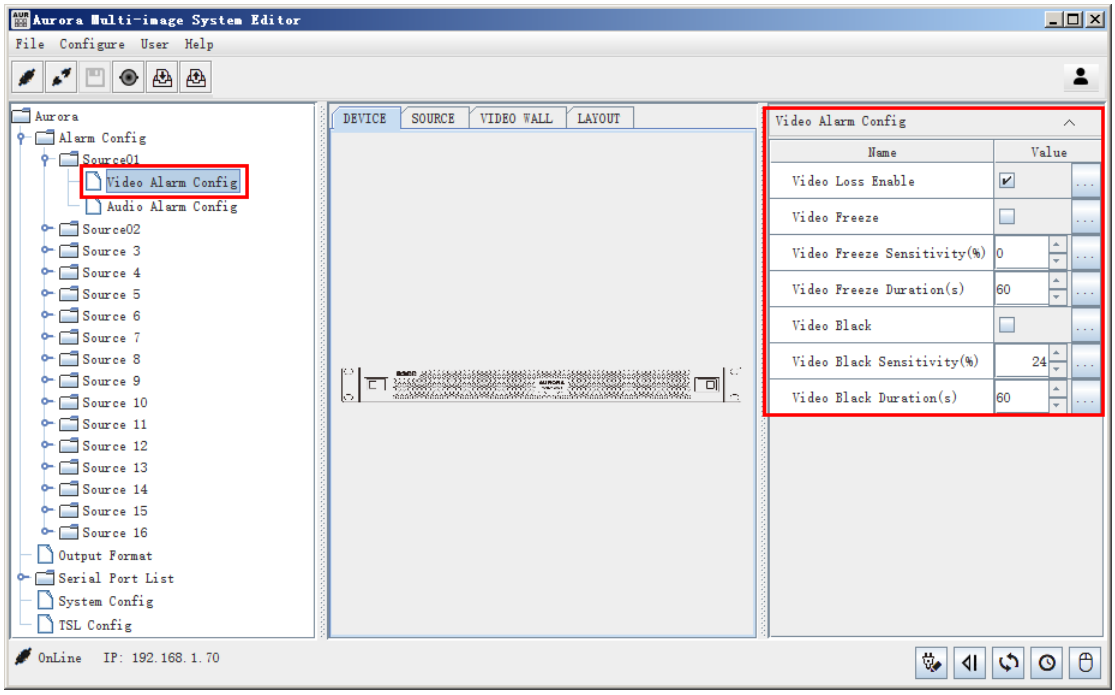


Figure 3.2-2 Property Pane for Device Configuration

2. Alarm Config

Double click each input module node in device tree, it will expand the interfaces including in this module. Each input module contains 8 interfaces, the No.1 input module contains Signal1 to Signal8 interfaces, and the No.2 input module contains Signal9 to Signal16 interfaces, as shown in ***Figure 3.2-3***, and each interface contains two sub-nodes: Video Alarm Config and Audio Alarm Config.

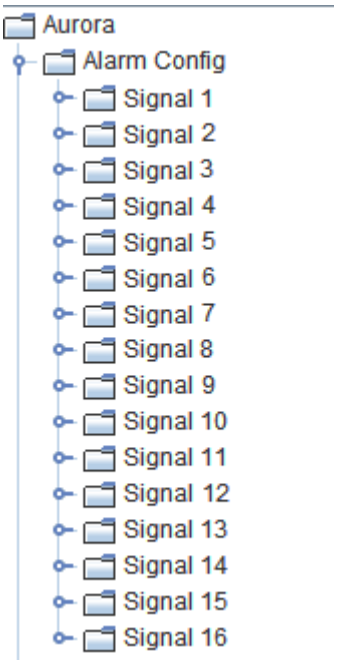


Figure 3.2-3 Alarm Config

The default name for each interface is "Signal"+ "Interface number", the name of the interface is the same as the signal source's. Particularly, when you modify the name of the signal source in source configuration window, the interface name is changed synchronously.

3. Apply to All

There are **Apply to All** buttons ... in the last column in Video Alarm and Audio Alarm property panes. Click this button, and the value setting in the former column will apply to the same property of all the other interfaces.

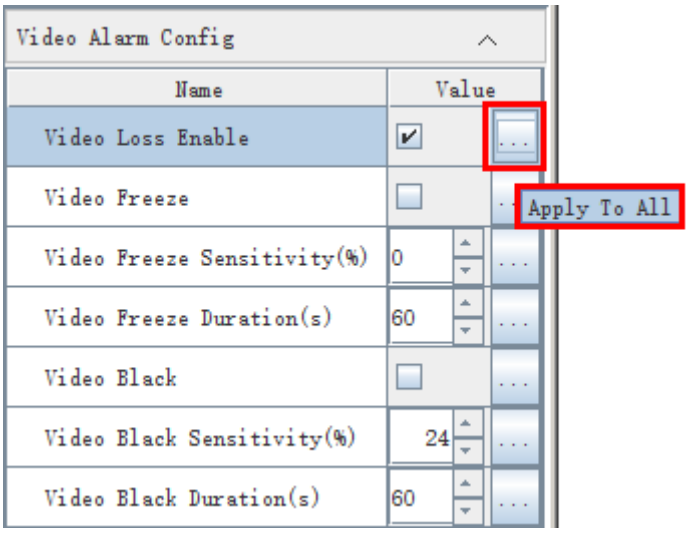


Figure 3.2-4 Apply to All Buttons

4. Save the device configuration

Click the save button in tool bar, or select the save command in file menu, it will confirm the saving for the device properties changes.

It will introduce the sub-nodes in device tree as below.

Tips

- For AURORA1600 1U, the signal name is as the format of “Signal”+”Interface number”.
- For AURORA9600 9U, the signal name is as the format of “Signal”+”Slot Interface number”

3.2.1 Alarm Setting

1. Video alarm and audio alarm

The alarm is divided into video alarm and audio alarm according to the

alarm contents.

- Video Alarm: supports video loss, video freeze and video black.
- Audio Alarm: supports audio loss, audio high and audio low.

Each input interface has video alarm and audio alarm, and when the value of the alarm parameter meets the alarm condition, it will generate the alarm event.

2. Alarm Switch

The alarm switch is divided into alarm action switch and alarm display switch according to the alarm function. The former is used to decide whether to detect the alarm that has happen or not, the latter is used to decide whether the alarm information will be display or not. The differences are as below:

(1) Alarm Action Switch

The alarm action switch is used to set whether the multi-image processor processes and collects the selected alarm or not. If the settings are positive, it will process and collect the alarm information of the selected alarm event, then record the alarm data, otherwise, if the settings are negative, or it will not process and collect the alarm information, and there will be no alarm data.

In device configuration window, click the **Video Alarm Config/ Audio Alarm Config** node to display the corresponding properties in the property pane.

- Setting for Alarm Action Switch

Click **"Interface of Input node"→Video Alarm Config/ Audio Alarm Config** in **Device** page, the property pane is as shown in ***Figure 3.2-5***:

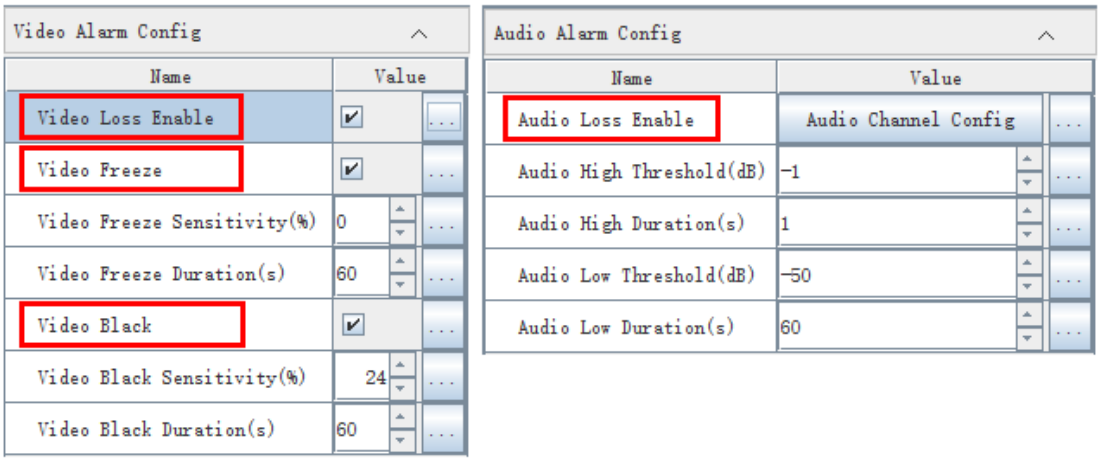


Figure 3.2-5 Alarm Switches

You can see the alarm action switches for video alarm and audio alarm as shown in ***Table 3.2-1***.

■ Setting for Alarm Action Parameters

Click **"Interface of Input node"→Video Alarm Config/ Audio Alarm Config** in **Device** page, the parameters for video alarm is as shown in ***Figure 3.2-6***, and the parameters for video alarm is as shown in ***Figure 3.2-7***:

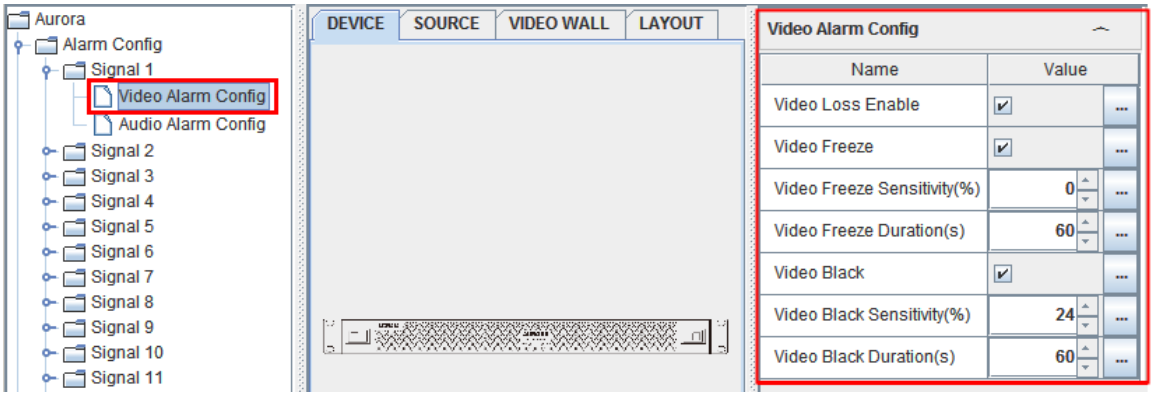


Figure 3.2-6 Video Alarm Parameters

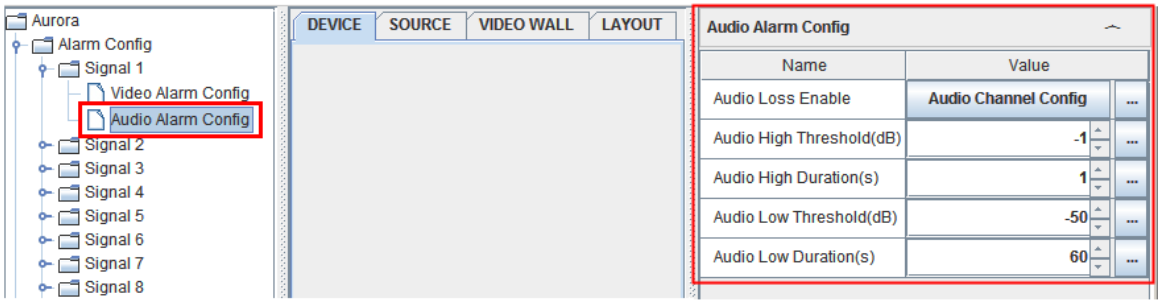


Figure 3.2-7 Audio Alarm Parameters

The relationship of the alarm action switches and the corresponding parameter are shown as in ***Table 3.2-1*** :

Table 3.2-1 The Alarm Action Switches and Alarm Parameters

Alarm Type	Alarm Property	Value Range	Default	Description
Video Alarm	Video Loss	Yes/No	Yes	Enable/Disable video loss alarm
	Video Freeze	Yes/No	No	Enable/Disable video freeze alarm
	Video Freeze Sensitivity(%)	0~100	0	Set the sensitivity for video freeze
	Video Freeze Duration(s)	0~120	60	Set the duration for video freeze
	Video Black	Yes/No	No	Enable/Disable video black alarm
	Video Black Sensitivity(%)	0~100	24	Set the sensitivity for video black

Alarm Type	Alarm Property	Value Range	Default	Description
	Video Black Duration(s)	0~120	60	Set the duration for video black
Audio Alarm	Audio Loss	Yes/No	Yes	Enable/Disable audio loss alarm, audio high alarm, audio low alarm
	Audio High Threshold(dB)	-50~0	-1	Set the threshold for audio high alarm
	Audio High Duration(s)	0~120	1	Set the duration for audio high alarm
	Audio Low Threshold(dB)	-50~0	-50	Set the threshold for audio low alarm
	Audio Low Duration(s)	0~120	60	Set the duration for audio low alarm

Tips

- The alarm parameters whose value should be set as Yes or No are the corresponding alarm action switches. When the alarm action switch is set to Yes, it will process and collect the alarm information, and the other parameters (sensitivity, duration, threshold, and limitation) are valid.
- The threshold for video alarms(Video Freeze Threshold, Video Black Threshold): the higher percentage the threshold is, the easier the corresponding alarm happens.

Especially, you can set audio alarm switch for each audio channel. Click **Audio Channel Config** button in the value column, it will all pop up the audio channel setting dialog box, as shown in ***Figure 3.2-8***, each alarm is divided into 16 channels, thus you can set **Audio Loss**, **Audio High**, or **Audio Low** alarm in channel.

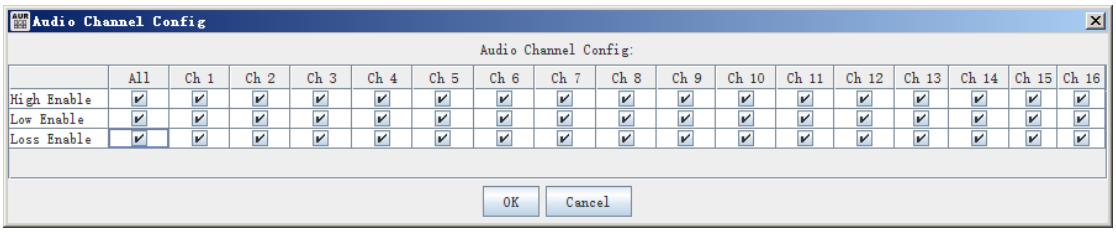


Figure 3.2-8 Audio Channel Alarm Setting Dialog Box

Tips

- In **Audio Channel Config** dialog box, the audio loss alarm is set based on audio group as a unit, the audio high alarm and the audio low alarm are set based on audio channel as a unit. Each audio group is comprised of four adjacent audio channels counted from No.1 channel in ascending order. For example, the No.1~No.4 channels are belonged to No.1 Group, and so on, there are four groups on aggregate. You need to select any one channel belonged to the audio group, then, it will select all the four channels of Audio Loss items automatically.

■ **For example**: Start up the alarm detection

As shown in ***Figure 3.2-9***, set the video loss alarm to Signal1, and audio loss alarm to the first group channels of signal1.

Operation: Double click signal1 sub-node below **Input Module** node, and click **Video Alarm Config** sub-node, it will display the video alarm parameters for Signal1 in the property pane. Choose the Video Loss item, as shown in ***Figure 3.2-9***:

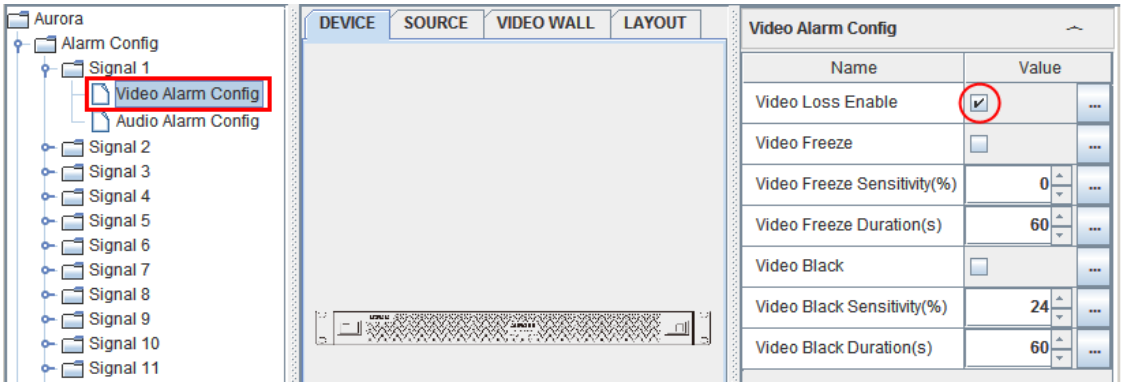


Figure 3.2-9 Set Video Loss Alarm

Then, click **Audio Alarm Config** sub-node to display the audio alarm parameters for Input1 in the property pane, click the value column button for **Audio Loss** item, it will pop up the audio channel config dialog box, as shown in ***Figure 3.2-10***:

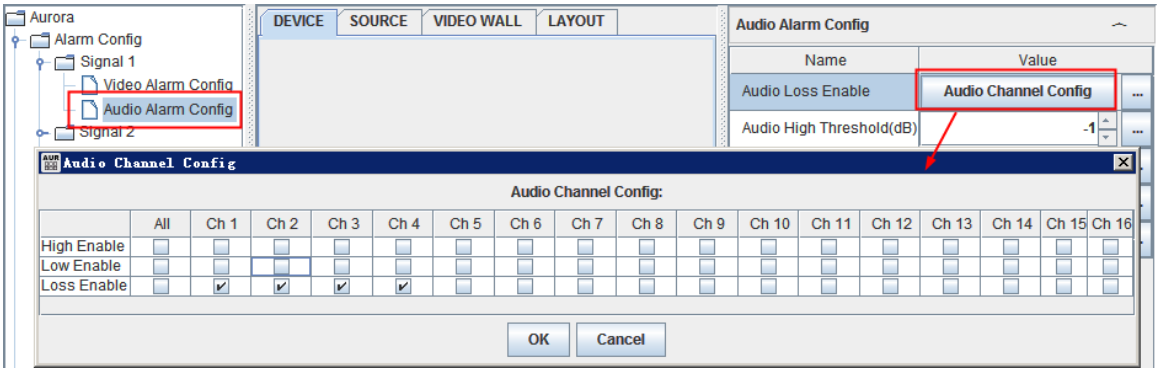


Figure 3.2-10 Set Audio Loss Alarm

Tick the **Loss Enable** item for any channel of group one(Ch1~Ch4), it will select all the four channels automatically, and click **OK** button to confirm the selection and close this dialog box. Then, select save command in file menu to save the alarm settings to the device.

(2) Alarm Display Switch

The alarm display switch must cooperated with the alarm action switch, that is, after the alarm action switch is enabled, if the alarm display switch was enabled, it will display the alarm information on the display screen.

Tips

- The prerequisite for the alarm display switch is the corresponding alarm action switch. When the alarm action switch is enabled, the alarm display switch is effect to the display of the alarm information if it is set as enabled, otherwise, if the alarm action switch is disabled, the alarm display switch will have no effect to the display of the alarm information although it is set as enabled.

According to the different types of the alarm output devices, the alarm display switch contains the following types:

- Alarm display switch about screen show: it is used to control whether to display alarm information on screens.

  Set it at: Layout → monitor's **Element Prop** pane→**Alarm** table, as shown in ***Figure 3.2-11***:

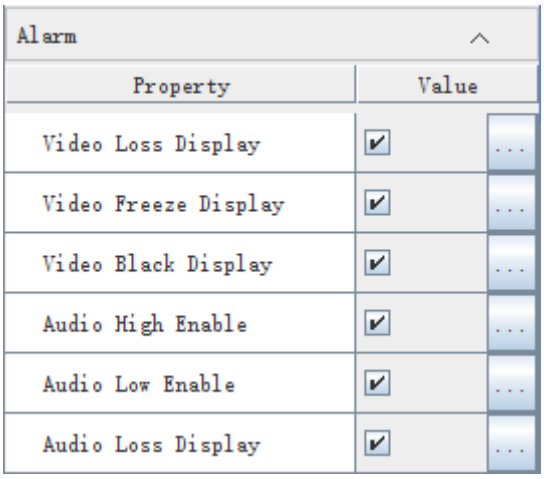


Figure 3.2-11 Alarm Display Switch

Tips

- The audio alarm action switch is divided into 16 selection box for each audio channel, but the audio alarm display switch is only one for the 16-channels audio signal.

The relationship of the alarm action switch and the alarm display switch are listed as below:

Table 3.2-2 The Alarm Display Switches and Alarm Parameters

Alarm Type	Alarm Action Switch	Alarm Display Switch(on screen)	Alarm Broadcast Switch(on speaker)
Video Alarm	Video Loss	Video Loss Display	Video
	Video Freeze	Video Freeze Display	
	Video Black	Video Black Display	
Audio Alarm	Audio Loss	Audio Loss Enable	Audio
		Audio High Enable	
		Audio Low Enable	

- Alarm Broadcast Switch: it is used to control whether to broadcast alarm information on speakers.

The alarm broadcast switch is set in **Aurora MessageSpeech** software to decide whether to broadcast video or audio alarm information, the prerequisite is to enable the corresponding alarm action switch.

The logic relationships among all these alarm switches and configurations are as shown in ***Figure 3.2-12***:

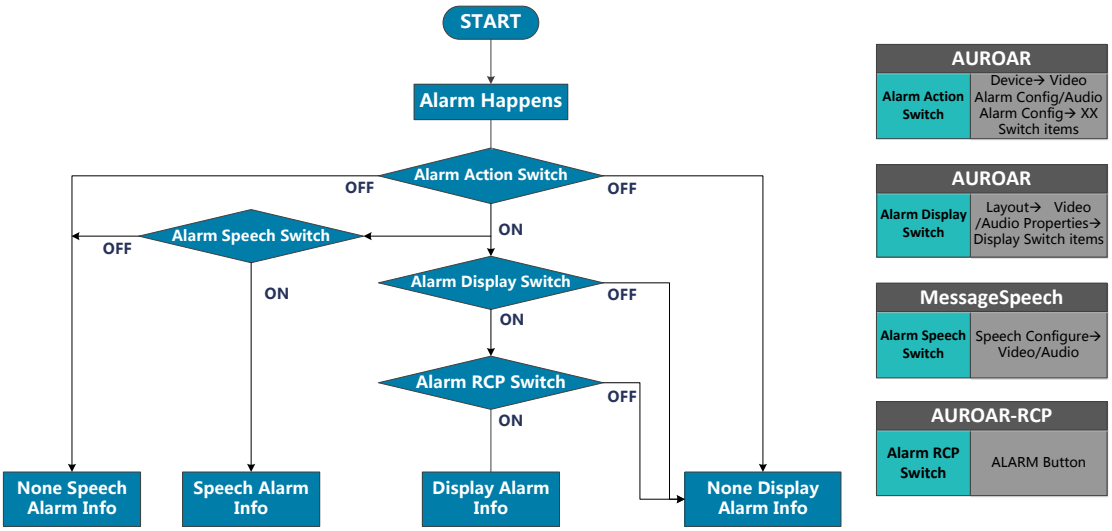


Figure 3.2-12 Alarm Relationships

3.2.2 Output Format

Select the output format through the **Output Format** node.
Click the output format node in device tree, and it will show the drop list for output format in property pane: **1080P50, 1080P60, 1080i50, 1080i60**, as shown in ***Figure 3.2-13***:

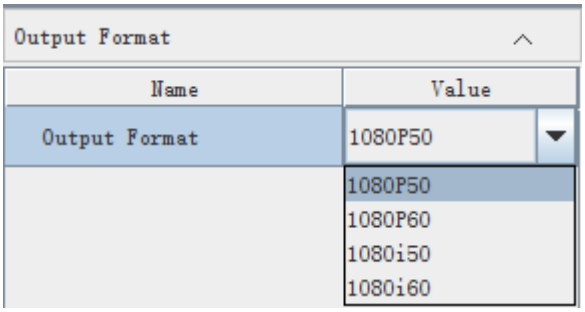


Figure 3.2-13 Output Format

3.2.3 Serial Port List

Set the usage and parameters for serial port.
Double-click the Serial Port List node in device tree, and it will show the serial ports list, including **RS422**, **RS485-1** and **RS485-2**, as shown in Figure 3.2-14.

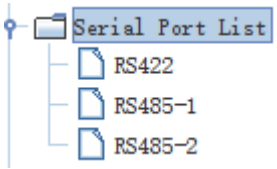


Figure 3.2-14 Serial Port List

Click the each serial port sub-node in the device tree, and the parameters are as shown in ***Figure 3.2-15***:

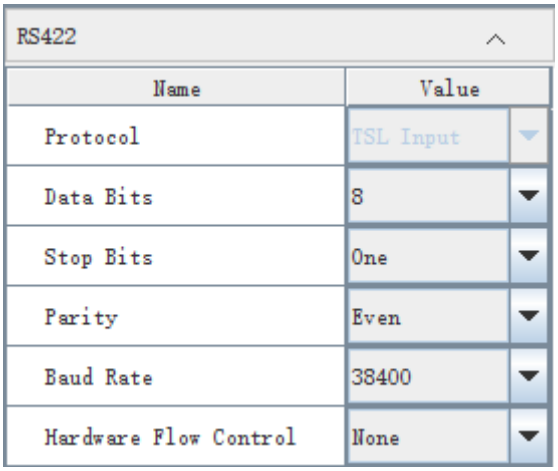


Figure 3.2-15 Serial Port

The parameter items and their values for serial port are as shown in ***Table 3.2-3***:

Table 3.2-3 Parameters for Serial Port

Item	Value Range	Default	Description
Protocol	TSL input	TSL input	Set the usage of the interface
Data Bits	5/6/7/8	8	Set data bits
Stop Bits	One/Two	None	Set stop bits
Parity	None/Odd/Even	Even	Set parity
Baud Rate	2400/4800/9600/19200/ 38400/57600/115200	9600	Set baud rate
Hardware Flow Control	• None • Request to Send • Request to Send X On X Off • X On X Off X On X Off	None	Set communication protocol

Tips

- There is only one serial port for AURORA1600, and the node name is **RS422** used for TSL input.
- There are two serial ports for AURORA9600, and the node name is

RS485-1 and **RS485-2** separately**,** meanwhile, serial port RS485-1 is used for TSL input, serial port RS485-2 is used for customized function.

3.2.4 System Config

Click **System Config** node in the device tree, it will display the system parameters in property pane, including **Device Name**, **IP Address**, **Subnet Mask**, **Gateway**, **Language**, **Mute** and **Volume**, as shown in ***Figure 3.2-16***:

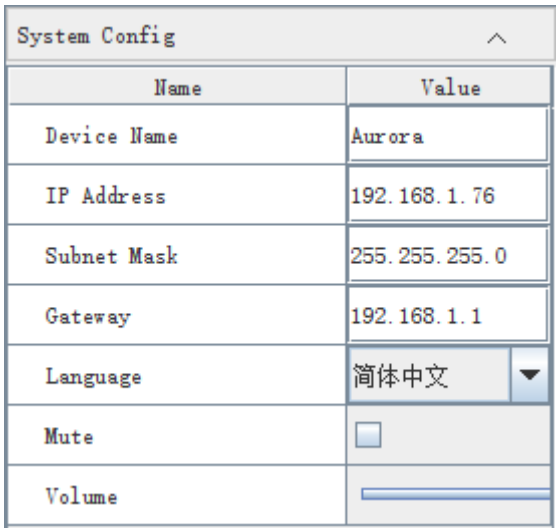


Figure 3.2-16 System Config

The parameter items and their values for System Config are as shown in ***Table 3.2-4***:

Table 3.2-4 Parameters for System Config

Item	Value Range	Default	Description
Device Name	----	Aurora	Set the device name for the multi-image processor
IP Address	----	192.168.1.70	Set the IP address for the device
Subnet Mask	----	255.255.255.0	Set subnet mask
Gateway	----	192.168.1.1	Set gateway
Language	简体中文	English/ 简 体 中 文	Set the language type of software interface
Mute	Yes/No	No	Enable/Disable mute function

Item	Value Range	Default	Description
Volume	15	0~31	Set the volume value

Tips

- The device name can be composed of any characters, and the length of the name should not exceed 16 characters.
- Restart the multi-image processor to reconnect it with the control computer after you have modified its IP address.

3.2.5 TSL Config

Click **TSL Config** node in the device tree, it will display the TSL setting parameters in property pane, including TSL Version and TSL5.0 Port, as shown in ***Figure 3.2-17***:

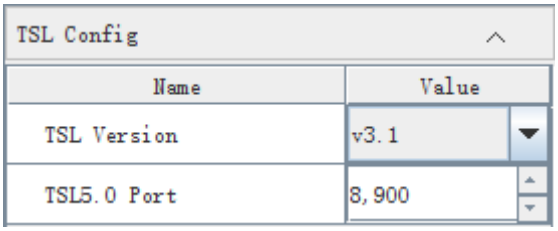


Figure 3.2-17 Other Settings

The parameter items and their values for TSL settings are as shown in ***Table 3.2-5***:

Table 3.2-5 Parameters for TSL Settings

Item	Value Range	Default	Description
TSL Version	v3.1/v4.0/v5.0	v3.1	Set TSL version
TSL5.0 Port	0~65535	8900	Set TSL port

3.2.6 Matrix Configuration

Click Matrix configuration button  in tool bar, or select **Configure** → **Matrix Configuration** menu command, it will pop up the Matrix configuration dialog box, as shown in ***Figure 3.2-18***:

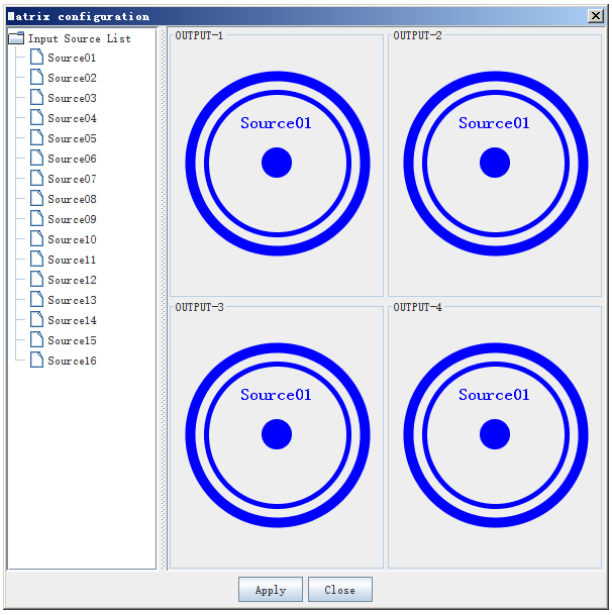


Figure 3.2-18 Matrix Configuration

All of the matrix output interfaces are connected to Input1 by default. Drag a signal source node from the left source list to the matrix output interface at the right area in this dialog box. Then, click **Apply** button to save the modification.

3.3 Source Configuration

The source configuration window shows the signal sources information getting from the connected device.

Click **SOURCE** tab in the top of working area, it will display the source configuration table in working area, and the source list in system pane, as shown in ***Figure 3.3-1***:

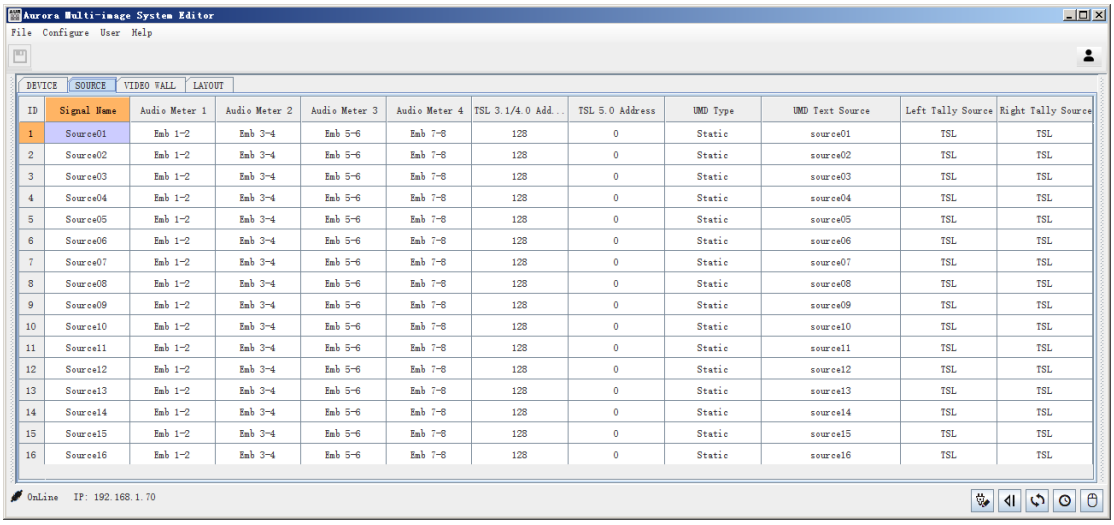


Figure 3.3-1 Source Configuration Window

As shown in ***Figure 3.3-1***, each input signal has these properties: **ID, Signal Name, Audio Meter 1, Audio Meter 2, Audio Meter 3, Audio Meter 4, TSL3.1/4.0 Address, TSL5.0 Address, UMD Type, UMD Text Source**, **Left Tally Source**, and **Right Tally Source**.

Click the Audio Meter* cell to show the drop down list, each audio meter contains 8 groups of audio channels, each group contains two channels. For example: Emb1-2 contains the first and the second channel audio information, and so on.

- **Source Configuration**

  The source items that could be configured are listed in this table, as shown in ***Figure 3.3-2***:

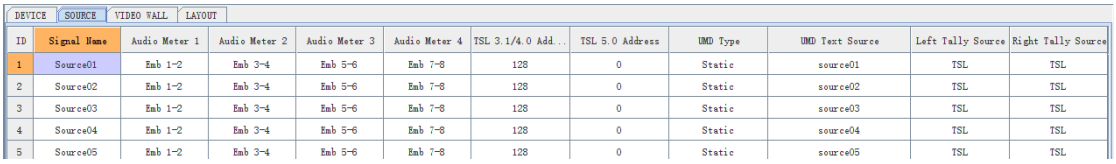


Figure 3.3-2 Source Configuration Table

Items	Description	For example
ID	The ID number of the source interface, it is not editable and allocated by the system, the value is "interface number".	1
Signal Name	The name of the signal source, it is “interface type"+ "ID number" and editable.	Signal1
Audio Meter1	Set the audio channels for this audio meter, you can select among these items: Emb 1-2, Emb 3-4, Emb 5-6, Emb 7-8, Emb 9-10,	Emb 1-2

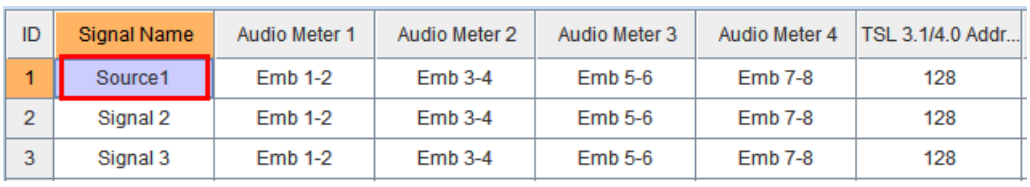
Items	Description	For example
	Emb 11-12, Emb 13-14, Emb 15-16	
Audio Meter 2	The same as above	Emb 1-2
Audio Meter 3	The same as above	Emb 1-2
Audio Meter 4	The same as above	Emb 1-2
TSL 3.1/4.0 Address	Set the address ID for this TSL 3.1/4.0 protocol	TSL: 128
TSL 5.0 Address	Set the address ID for this TSL 5.0 protocol	TSL: 10
UMD Type	Set the type for UMD source as static or dynamic. If it is static, the UMD content will be the value set in UMD text; If it is dynamic, the UMD content will be the value received from the TSL protocol	Static
UMD Text Source	Set the static UMD text	CCTV6
Left Tally Source	Set the interface number through which will receive the left TALLY source	GPI1 or TSL
Right Tally Source	Set the interface number through which will receive the right TALLY source	GPI1 or TSL

Tips

- The TSL Version selection is set in **Source→TSL Config→TSL Version** item.

■ Rename the signal source

Click the name cell to modify the name of the signal source, and the source name in Device configuration will be changed synchronously. For example: modify Signal1 to be "Source 1", as shown in ***Figure 3.3-3***:



ID	Signal Name	Audio Meter 1	Audio Meter 2	Audio Meter 3	Audio Meter 4	TSL 3.1/4.0 Addr...
1	Source1	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128
2	Signal 2	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128
3	Signal 3	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128

Figure 3.3-3 Rename the Signal Source

Tips

- In the Source configuration table, all the cells except ID item support the shortcut operation of Copy(Ctrl+C) and Paste(Ctrl+V) which are convenient for source items edit.

3.3.1 Set Audio Source

Set the audio source for an audio meter, each audio source is a group of audio channels which contains the information of two audio channels.

■ Set audio source

Click each audio meter cell to choose an audio channel group from the audio channel drop down list. For example: click the Audio Meter1 cell in Signal1 information line, and select Emb 1-2 as its value, as shown in ***Figure 3.3-4***:

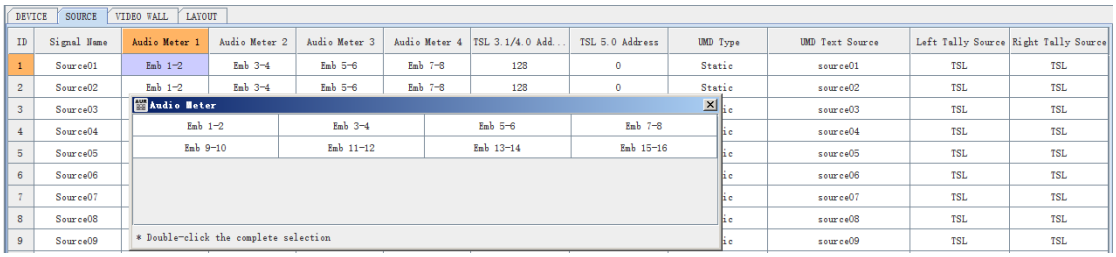


Figure 3.3-4 Set Audio Channels for an Audio Meter

Tips

- Each audio meter in Audio Meter1~ Audio Meter4 contains a group of audio information which has two audio channels, and the Audio Meter1~ Audio Meter4 matches the audio meter on monitor window displayed on video wall from left to right in sequence.

3.3.2 Set UMD

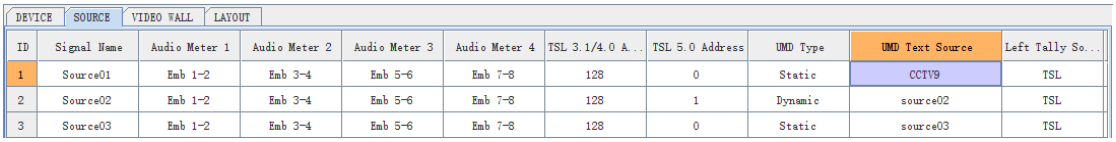
Set the UMD source through UMD Type and UMD Text cell, it could be static word or dynamic content from TSL protocol.

■ Set UMD Source

Set the source for UMD content according to the UMD type as static or dynamic.

- Static UMD: Set the UMD Type as Static, and input word in UMD Text cell. For example: set Static as UMD Type, and input CCTV9 in UMD Text cell, as shown in Figure 3.3-5:

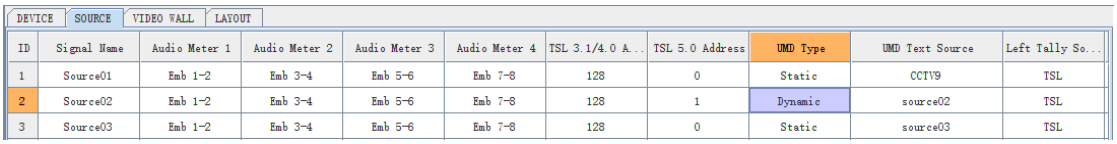
- Dynamic UMD: Set the UMD Type as Dynamic, and input the address ID in TSL 3.1/4.0 Address or TSL 5.0 Address cell which will receive the UMD information from TSL protocol. For example: set Dynamic as UMD Type and input 1 in TSL 5.0 Address cell, as shown in ***Figure 3.3-6***:



DEVICE | SOURCE | VIDEO WALL | LAYOUT

ID	Signal Name	Audio Meter 1	Audio Meter 2	Audio Meter 3	Audio Meter 4	TSL 3.1/4.0 A...	TSL 5.0 Address	UMD Type	UMD Text Source	Left Tally So...
1	Source01	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128	0	Static	CCTV9	TSL
2	Source02	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128	1	Dynamic	source02	TSL
3	Source03	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128	0	Static	source03	TSL

Figure 3.3-5 Static Source for UMD



DEVICE | SOURCE | VIDEO WALL | LAYOUT

ID	Signal Name	Audio Meter 1	Audio Meter 2	Audio Meter 3	Audio Meter 4	TSL 3.1/4.0 A...	TSL 5.0 Address	UMD Type	UMD Text Source	Left Tally So...
1	Source01	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128	0	Static	CCTV9	TSL
2	Source02	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128	1	Dynamic	source02	TSL
3	Source03	Emb 1-2	Emb 3-4	Emb 5-6	Emb 7-8	128	0	Static	source03	TSL

Figure 3.3-6 Dynamic Source for UMD

The range for TSL port is 0~65535.

3.3.3 Set TALLY Source

Set the tally source in Left Tally Source and Right Tally Source cell, it could be from GPI port and TSL port.

- Set Tally Source

  Set the source for left tally and right tally. Tally source could be GPI(0~144), or TSL(0~65534).

  For example: Double click the Left Tally Source cell in Signal1 source information line, it will pop up the GPIO/TSL list, select the source type as GPI or TSL, and select its address ID, as shown in ***Figure 3.3-7***:

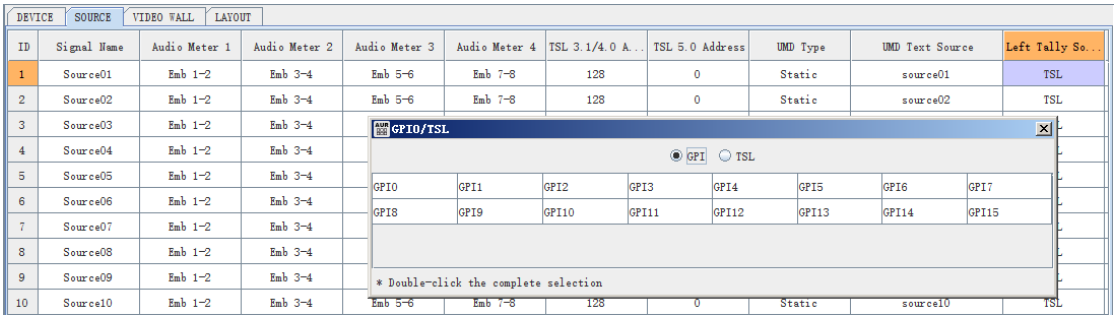


Figure 3.3-7 Set Tally Source

Click **OK** to save the choice.
Then, click **Save** button in tool bar to save the modification.

3.4 Video Wall Configuration

You can define various video walls according to the arrangement, and each arrangement can be set multiple layouts.

3.4.1 Create a Video Wall

Create a video wall at first.

Operations: Click **Video Wall** tab VIDEO WALL to switch to monitor configuration window. Click **New** button in tool bar, or select **File→ New** menu command, it will pop up the **New Wall** dialog box, as shown in ***Figure 3.4-1***:

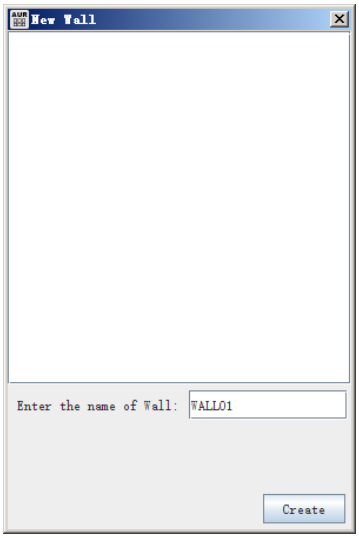


Figure 3.4-1 New Wall Dialog Box

- **Video Wall Name**

Input a name for the monitor in **Enter the name of Wall** field. The name can be composed of any characters, and the length should not exceed 16 characters. Click **Create** button to add a new video wall to the video wall list.

For example: input Wall01 as the name, then click **Create** button at the bottom of the dialog box, it will add Wall01 to the video wall list above, as shown in ***Figure 3.4-2***:

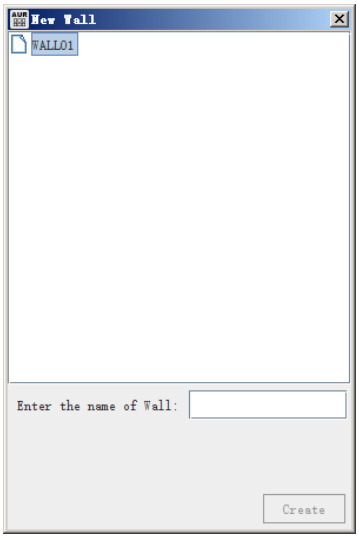


Figure 3.4-2 Video Wall List

■ Video Wall Properties

The video wall properties are listed in its property pane, as shown in ***Figure 3.4-3***:

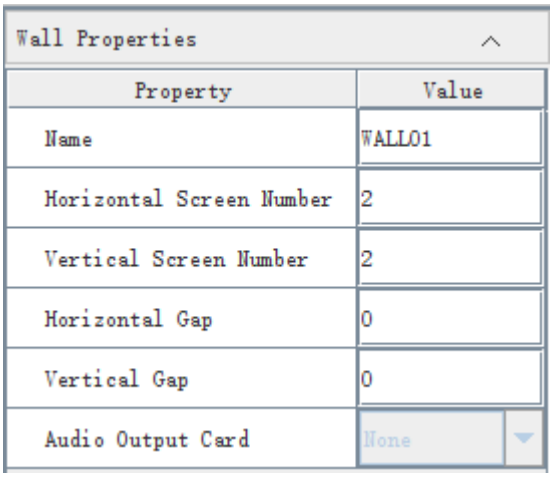


Figure 3.4-3 Property Pane for a Video Wall

Item	Value Range	Default	Description
Name	--	--	Set the name of the video wall.

Item	Value Range	Default	Description
Horizontal Screen Number	0~36	2	Set the screen number in horizontal direction in a video wall. Each screen is a display unit.
Vertical Screen Number	0~36	2	Set the screen number in vertical direction in a video wall. Each screen is a display unit.
Horizontal Gap	0~100	0	Set the gap size at the horizontal direction between screens, the unit is pixel.
Vertical Gap	0~100	0	Set the gap size at the vertical direction between screens, the unit is pixel.
Audio Output Card	None/Outputn	None	Set the position of Audio output card

Tips

- The audio output card function is only supported in **AURORA9600 9U** multi-image processor. One of the output channels will be occupied as the audio output card function, then there will be only 15 channels left for video output.

For example: as shown in Figure 3.4-4, the screens in horizontal direction and vertical direction are both two, the red arrow indicates the gap in horizontal direction, that is called horizontal gap; the green arrow indicated the gap in vertical direction, that is called vertical gap, the unit is pixel.

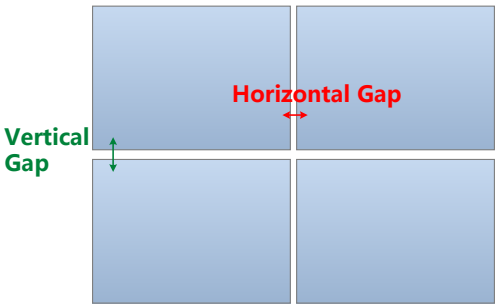


Figure 3.4-4 Gap Illustration for a Video Wall

The available output interfaces and common video walls are listed in the system pane of video wall configuration.

- **Output**: Appoint an output interface for each screen in the video wall.

- **Output interface status**: click the **Outputs** tab, and double click the "Output*" root node, it will show the output interface list, as shown in ***Figure 3.4-5***. Connect an output interface with a screen.

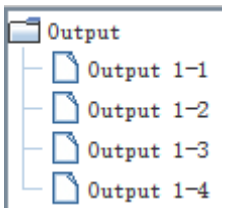


Figure 3.4-5 Outputs for a Video Wall

Tips

- Each output card is composed of four output channels, supports up to 16 video monitors, refer to “3.5.3.1 Monitor” for the details about how to set parameters for video monitor element.

- **Build the connection between the screen of a video wall and an output interface**: Each output interface can only be assigned to one screen of a video wall. Click the output interface from the outputs list, and then press the mouse button down and drag it to the target screen, thus to realize the connection.

For example: allocate output interface
As shown in ***Figure 3.4-7***, assign **Output1-1** to the top left screen in the video wall. Drag the selected output interface to the screen, there will be a "1-1" icon on the screen, and the assignments to other screens are the same.

Figure 3.4-6 Assign Outputs for a Screen

- **Delete the connection between the screen of a video wall and an output interface**: click the close button X at the top right of the screen to delete the connection between the screen of a video wall and its output interface.

For example: Create a 2*2 video wall, and allocate to the output interface 1 to 4 separately, as shown in ***Figure 3.4-7***:

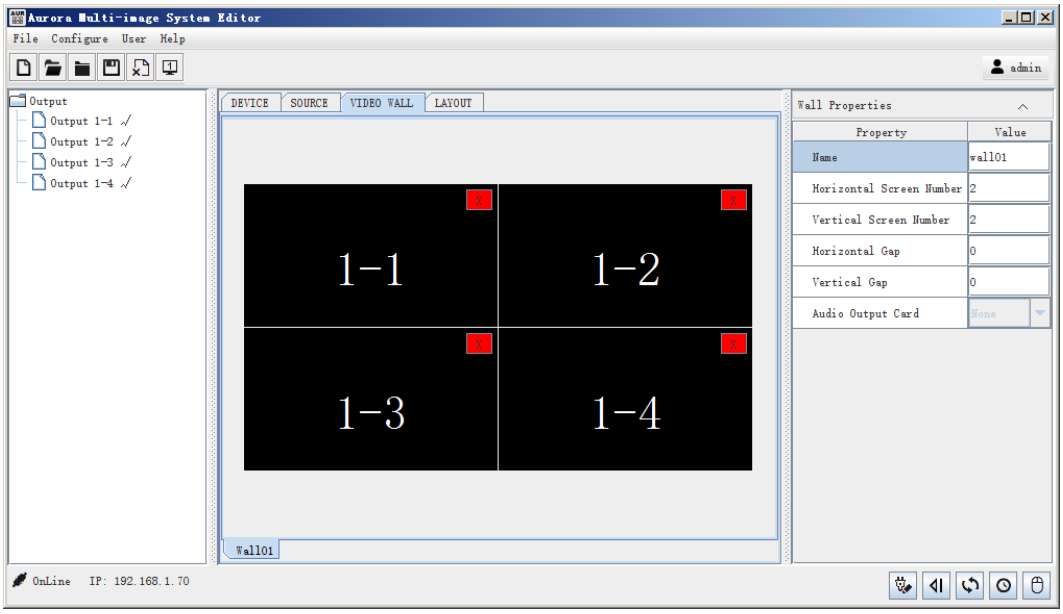


Figure 3.4-7 Create a Video Wall

Tips

- The screen number added in horizontal direction or vertical direction of the video wall can't exceed 36 separately, each screen is a display unit physically.
- The screens of a video wall are divided by white lines, and the name of a video wall is the tab title at the left bottom area of the working area.

3.4.2 Save a Video Wall

Save a video wall to synchronize its information to the current connected multi-image processor.

- Save

Operation: Click **OK** button at the **Create a Video Wall** dialog box, it will pop up the save successfully prompt, as shown in ***Figure 3.4-8***:

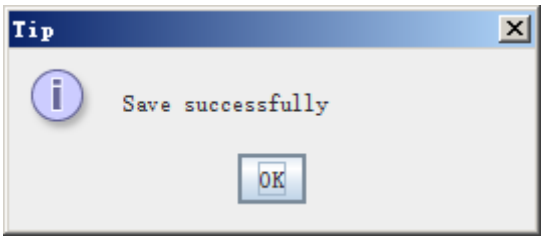


Figure 3.4-8 Prompt for Saving a Video Wall

Click **OK** button to close this prompt, and confirm the saving operation.

If you have modified the properties of a video wall, such as screen number, click the save button in tool bar, or select **File→Save** menu command to save the changes, if save successfully, the prompt is as shown in ***Figure 3.4-8***.

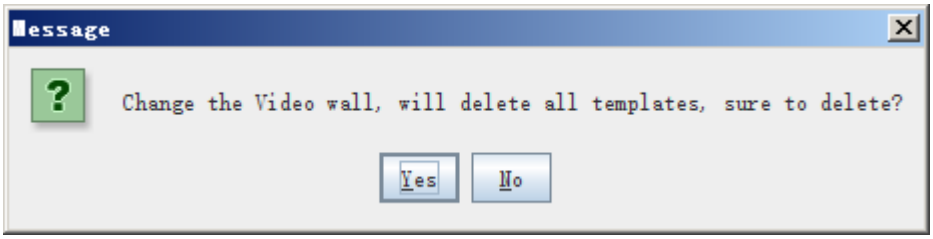


Figure 3.4-9 Prompt When Changing the Video Wall Properties

If you have modify the properties of the video wall, the layouts you have made for the original video wall is no longer fit for the new one, click **Yes** to confirm the save and it will delete all layouts; click **No** to cancel the save operation.

3.4.3 Open a Video Wall

Open an existed video wall from the video wall list, and it will be displayed at the working area.

Operation: Click **Open** button, or select **File→Open** menu command to open an existed video wall from the video wall list, it will pop up the dialog box, as shown in ***Figure 3.4-10***:

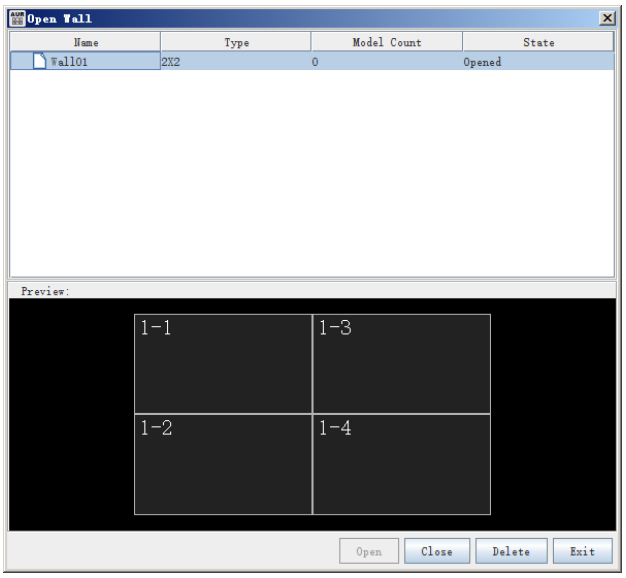


Figure 3.4-10 Open a Video Wall Dialog Box

The video wall list at the top area of this dialog box, including these items: Name, ID, Type, Model Count and State.

- Video Wall Preview

Click a video wall in the video wall list, the preview of the selected video wall will be display at the bottom area of the dialog box, as shown in ***Figure 3.4-11***. Each output interface assigned to the screen of the video wall displays at the top left corner of the screen in the preview. Then, click **Open** button in this dialog box, it will be opened in the working area.

Click **Close** button in this dialog box, it will close the current selected video wall. Click **Delete** button to delete the video wall in the video wall list, and click **Quit** button to close this dialog box.

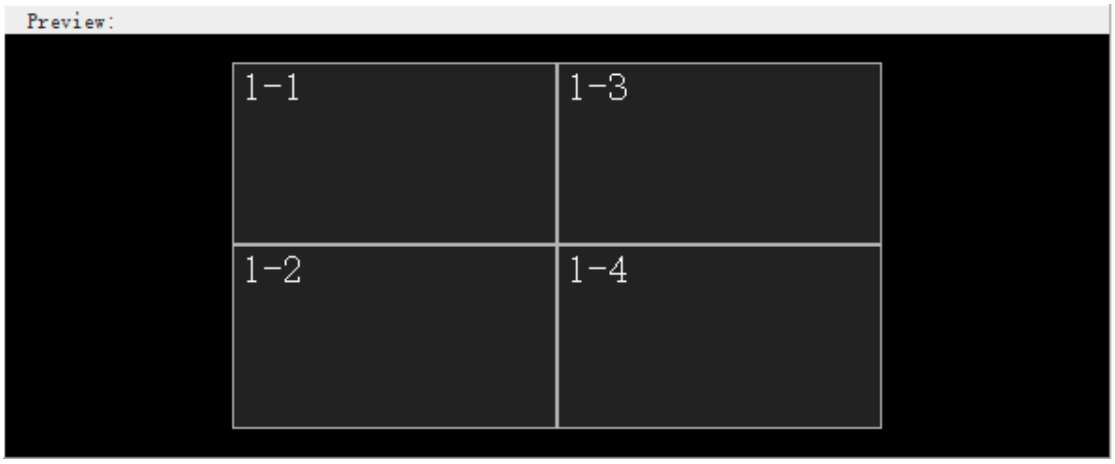


Figure 3.4-11 Open a Video Wall Dialog Box

The name of the opened video wall in the working area will be displayed as its tab name at the bottom of the working area.

3.4.4 Other Operation for a Video Wall

1. Close a Video Wall

It is used to close the current editable video wall in working area.

Operation: Click **Close** button, or select **File→Close** menu command to close the current video wall without any prompt.

2. Delete a Video Wall

It is used to delete the current editable video wall in working area

Operation: Click **Delete** button, or select **File→Delete** menu command to close the current video wall, and it will pop up a prompt for confirm the deletion, as shown in ***Figure 3.4-12***. Click **OK** to delete the video wall, or click **No** to cancel the deletion.

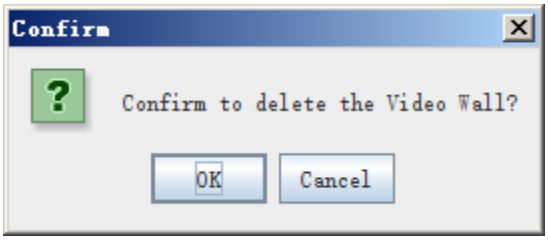


Figure 3.4-12 Prompt for Delete a Video Wall

3. Screen Label

The Screen Label is used to prompt the physical position of the screen for the user when installing the screens. The label will show in the center of a screen as the format of "1-1".

Operation:

- Open Screen Label: the label of a screen is closed by default, click the Open Screen Label button  , it will show all the labels, and the button is pressed down to be in blue  .
- Close Screen Label: after open the screen label, click the Close Screen Label button  , it will hide all the labels, and the button is pressed down to be in gray  .

3.5 Model Configuration

It will introduce the following subjects for Model Configuration:

- Model Configuration
- Tool Bar
- Elements Properties
- Elements Layouts

The details are as below.

3.5.1 Model Configuration

It will introduce the creation, open, deletion and other operations for model configuration.

3.5.1.1 Create a Model

Create a model before your do the layout operation, and it is easy to use this software to customize and realize the desired layout as need.

Operation: click **Layout** tab in the working area to switch to the model configuration window, as shown in ***Figure 3.5-1***, the system pane and the property pane are also changed, the system pane contains **Signal List** and **Templates**, and the property pane contains **Elements Properties** and **Model Properties**.

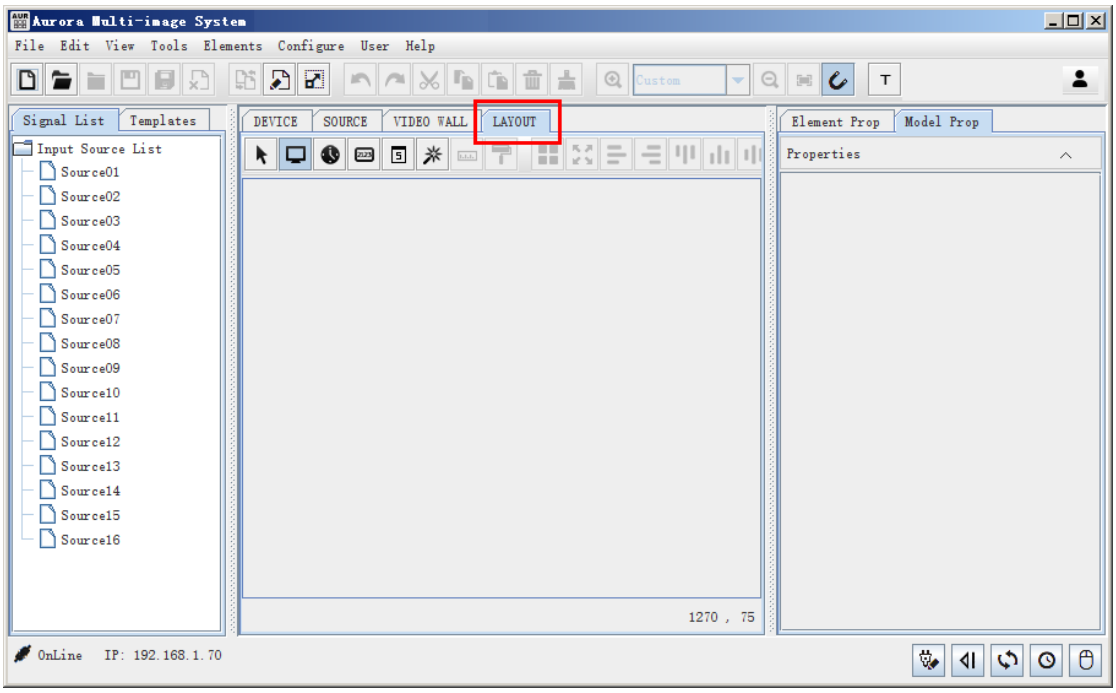


Figure 3.5-1 Layout Configuration Window

Click **New** button to pop up the **New Model** dialog box, as shown in ***Figure 3.5-2***:

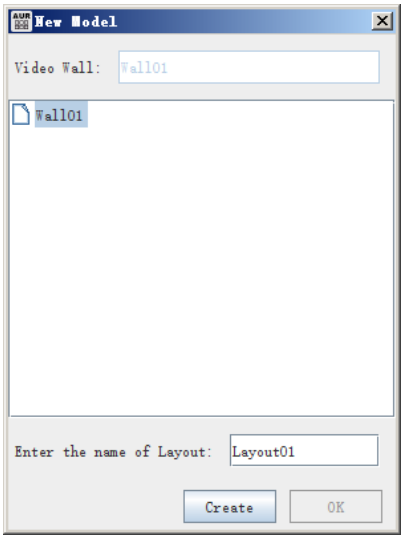


Figure 3.5-2 Create a New Model Dialog Box

You can create multiple layouts for a video wall. Input the model name in the **Enter the name of layout** field, for example, input **Layout01** as the new model name, then click **Create** button to add a new layout to the video wall, and click **OK** button to save the creation, and it pop up a prompt for the save, as shown in ***Figure 3.5-3***:

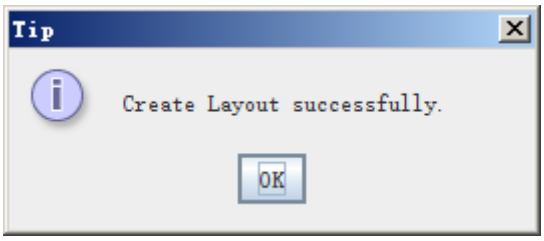


Figure 3.5-3 Prompt for Save Successful

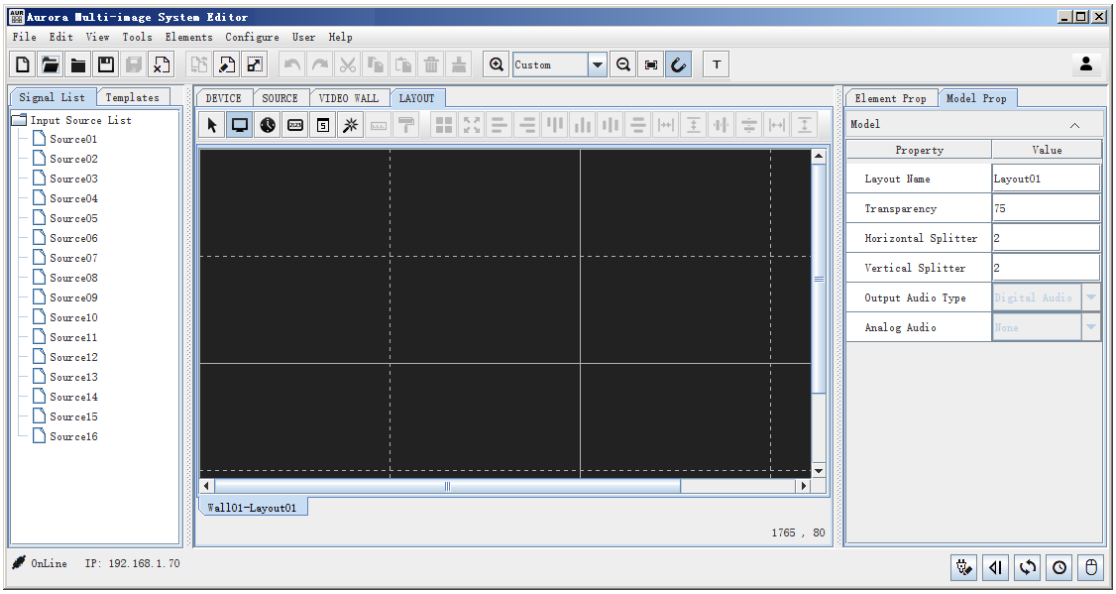


Figure 3.5-4 The New Model

As shown in ***Figure 3.5-4***, open the new model, and its name is shown as the title of the model tab at the bottom of the working area, the format of the tab is "video wall name" +"-"+"model name".

3.5.1.2 Open a Model

You can open, delete and close a model in the **Open Model** dialog box.

Operation: Click **Open** button to pop up the **Open Model** dialog box, as shown in ***Figure 3.5-5***, click the expand icon in the front of the video wall name to expand all of the models.

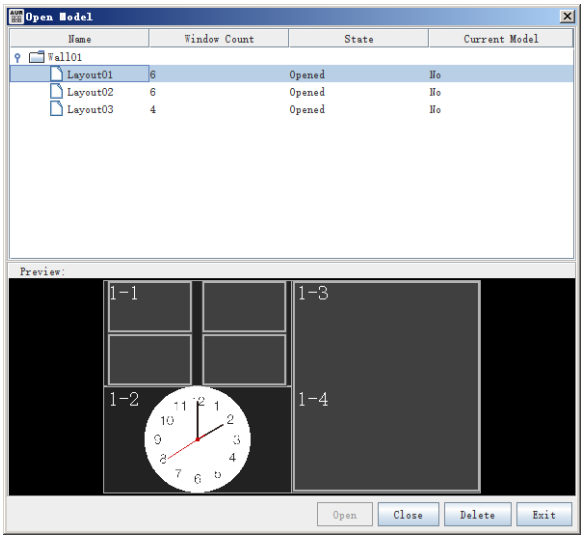


Figure 3.5-5 Open a New Model Dialog Box

The video walls and their corresponding models are listed in the top area of the dialog box, including the following items:

Item	Value Range	Description
Name	---	It shows the name of the video wall and the model.
Window Count	0~36	It shows the number of the sub-windows in the model.
State	Opened/Unopened	It shows whether the model is opened in working area or not.
Current Model	Yes/No	It shows whether the model is used by its video wall currently.

The preview of the current selected model displays at the bottom area of the dialog box

Click **Open** button, or double click the model information line, the selected model will be displayed in the working area, the name is shown as the title of its tab at the bottom of working area, and the background of the tab is highlighted, as shown in ***Figure 3.5-6***:

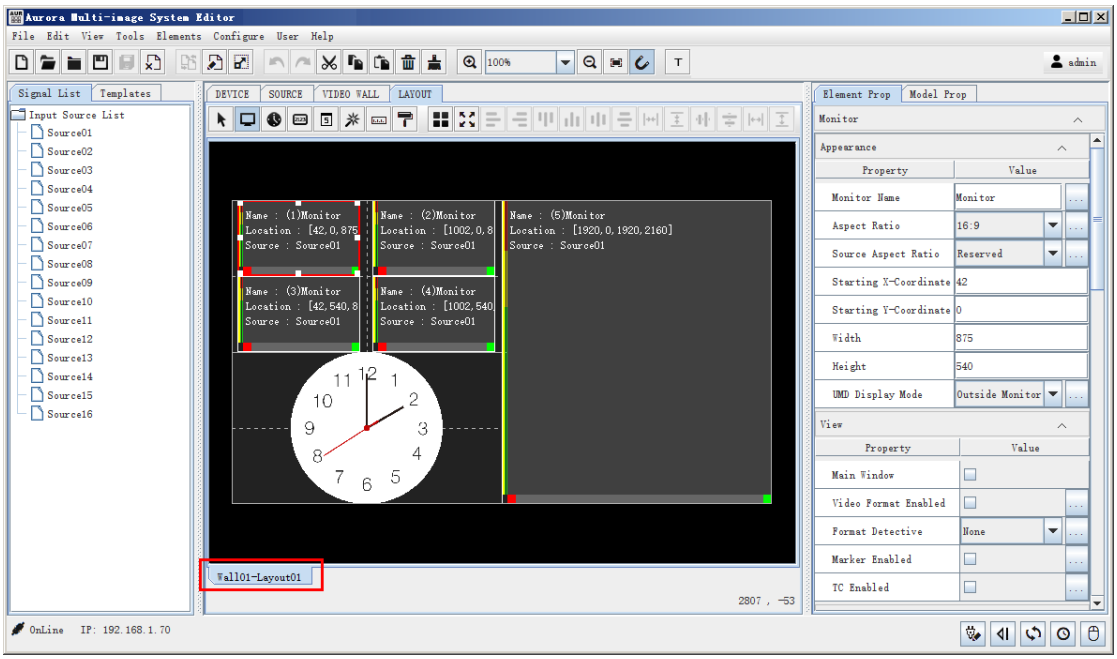


Figure 3.5-6 Open a Model

Click **Close** button to close the opened model in working area; click **Delete** button to the delete the selected model in the model list above; click **Quit** button to close this dialog box.

- Show Output Information

In the layout editing area, press **Show Output Information** T button in the tool bar to be selected status T, it will highlight the output interface information and the brim of the display screens, as shown in Figure 3.5-7, and the other elements windows will be masked, thus you can perceive the brim of the screens, and arrange the position of the elements windows more legibly and equitably.

Then, click **Show Output Information** T button again to disable the display of the output Information, and the elements windows will be displayed as normal, as shown in ***Figure 3.5-6***.

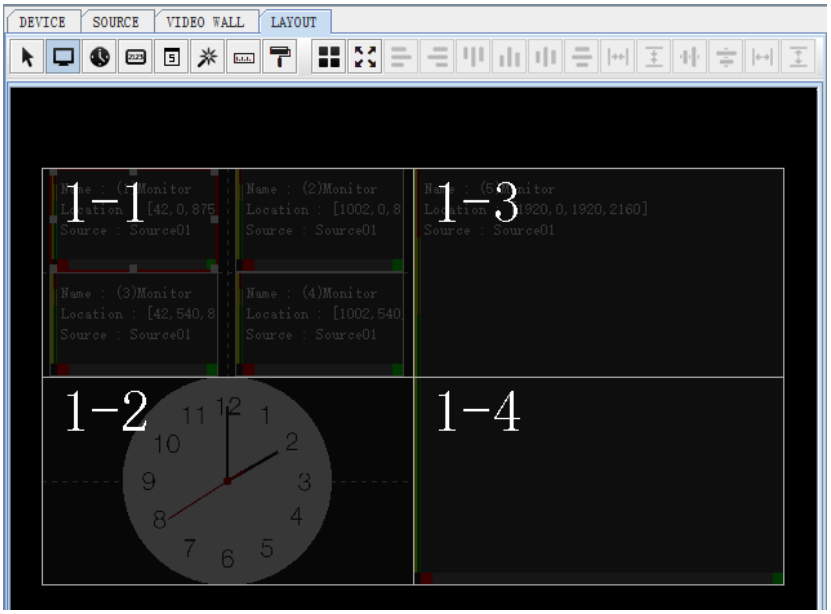


Figure 3.5-7 Show Output Information

3.5.1.3 Save a Model

- Save current model

The name of the current opened models are displayed as tabs at the bottom of the working area, and there will a star icon* after the name of which model has not been saved after modified, as shown in ***Figure 3.5-8***, click **Save** button in the tool bar to save the modification, and the star icon will be disappeared.

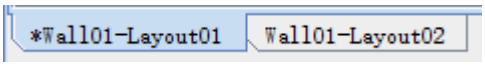


Figure 3.5-8 Tab Name for Models

There will be a save prompt, as shown in ***Figure 3.5-9***. Click **Close** button to confirm the completion.

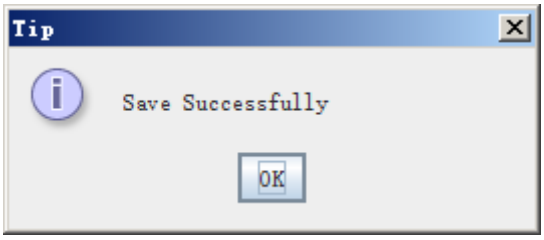


Figure 3.5-9 Save Prompt

- Save All

Click **Save All** button at the tool bar, it will save all the changes to the

models opened currently in the working area, this operation will do a quick save operation to the opened models.

Click **Open** button to display the **Open Model** dialog box, it will show the model list, as shown in ***Figure 3.5-10***:

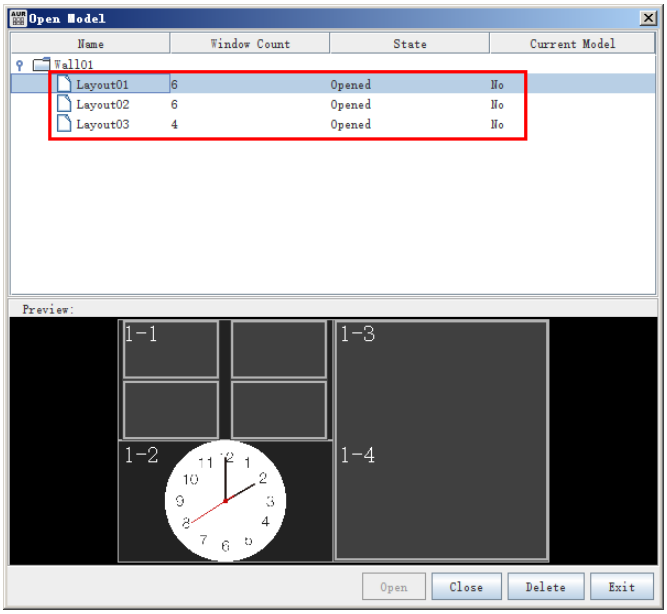


Figure 3.5-10 The Model List in Open Dialog Box

3.5.1.4 Model Properties

You can check or modify the properties of a model in its Model Properties pane.

The property pane at the right area of the software interface contains two tabs: **Elements Prop** and **Model Prop**, click the tab to display the corresponding property pane.

Operation: click Layout tab to display the model properties, as shown in ***Figure 3.5-11***:

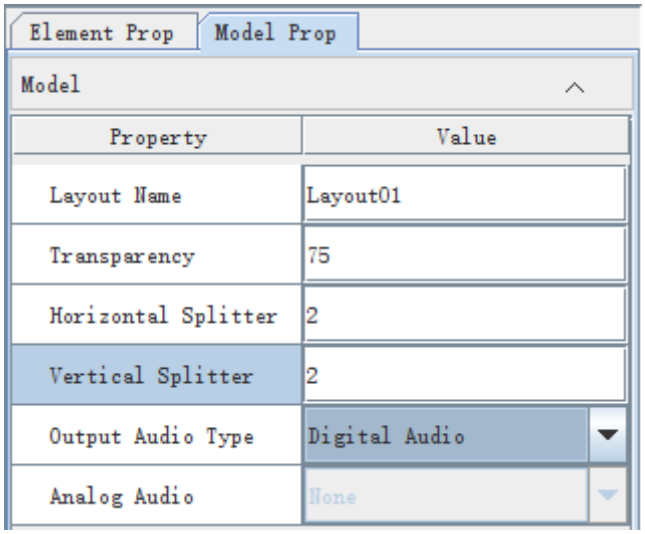


Figure 3.5-11 The Model Properties Tab

The model properties contain the following items:

Item	Value Range	Default	Description
Layout Name	--	--	Set the name of the model.
Transparency	0~100	75	Set the transparency of the overlap area among element windows.
Horizontal Splitter	1~4	1	Set the splitters number for a screen in horizontal direction.
Vertical Splitter	1~4	1	Set the splitters number for a screen in vertical direction.
Output Audio Type	Digital Audio	Digital Audio	Set the digital audio type.
Analog Audio	None	--	Set the digital audio channel.

For example: Set both the **Horizontal Splitter** and the **Vertical Splitter** to be two, the screen in a video wall is as shown in ***Figure 3.5-12***, each screen is divided by the splitter into 2*2 cells.

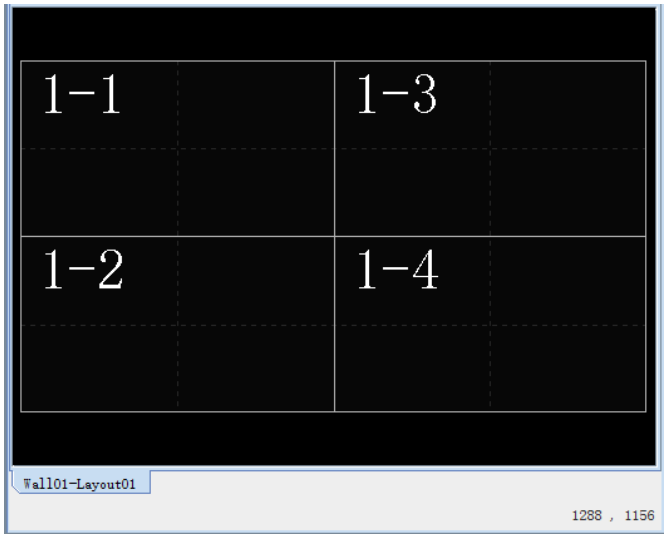


*Figure 3.5-12 The Splitters-4*2*

Tips

- The splitter assists in editing element windows such as move, align, adjust windows and so on.

3.5.1.5 Other Operations to Model

1. Close a Model

Use the close command to close the current active model in working area.

Operation: if the current active model in working area has been modified and saved, then click the **Close** button  in tool bar, the model will be closed and no prompt.

Otherwise, if the current active model in working area has been modified and not jet saved, then click the **Close** button, there will a prompt, as shown in ***Figure 3.5-13***:

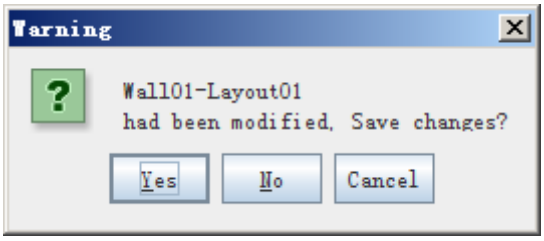


Figure 3.5-13 Prompt for Model Save

Click **Yes** to confirm the save, and close the model.

2. Delete a Model

Use the delete command to delete the current active model in working area.

Operation: click **Delete** button in tool bar to delete the current active model in working area, it will pop up the prompt as shown in ***Figure 3.5-14***, click **OK** to confirm the deletion, and the model will be deleted.

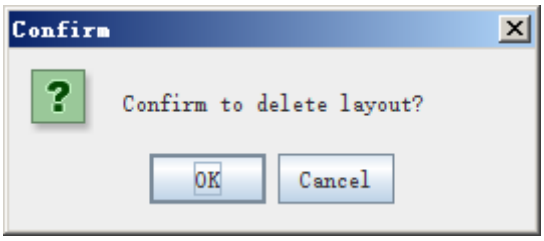


Figure 3.5-14 Prompt for Model Delete

3. Display Current Layout to Device

Use this command to set the current layout in working area to be displayed synchronously to the display device.

Operation: click **Display Current Layout** button in tool bar to make the current layout in working area to be displayed synchronously to the display device.

Besides, click **Switch** button in Model Edit dialog box by selecting **Layout Editor** command, it will also make the current layout in working area to be displayed synchronously to the display device, the details are as below.

4. Layout Editor

Use this command to sort, switch, open the selected model in a video wall and so on. Click **Layout Sorting&Switching** button in tool bar, or select **Configure→Layout Editor** command in menu bar, it will pop up the layout editor window, as shown in ***Figure 3.5-15***:

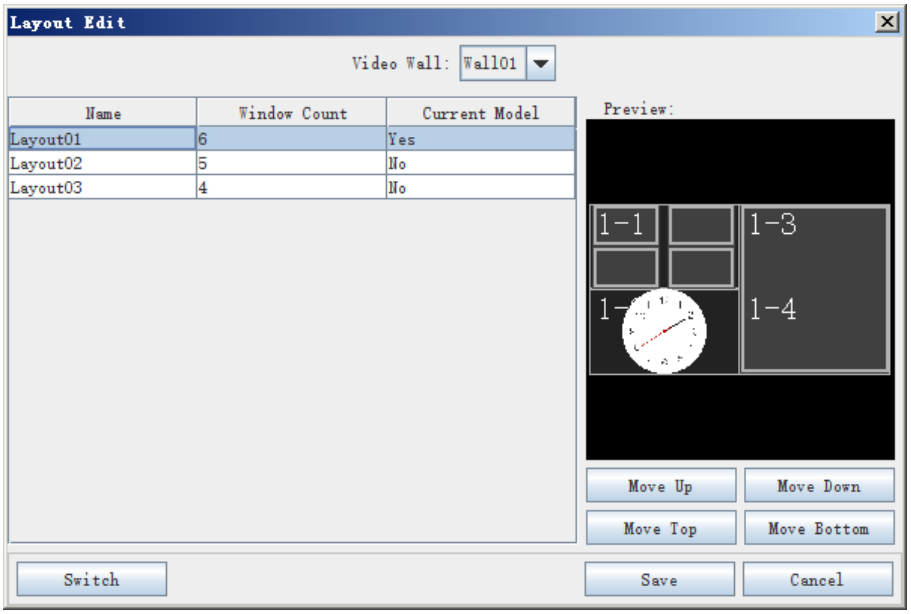


Figure 3.5-15 Layout Edit Window

Choose a video wall from the drop down list of **Video Wall**, it will show all models of this video wall in the Model List area, and each model shows the following items in the table below:

Item	Value Range	Default
Name	---	It shows the ID number of the model.
Window Count	0~36	It shows the number of the sub-windows in the model.
Current Model	Yes/No	It shows whether the model is used by its video wall currently.

- **Model Sequence**

Click to select a model information line in Model List, it will show its layout preview at the right area of this dialog box, now, click **Move UP**, **Move Down**, **Move Top** or **Move Bottom** button to rearrange the sequence of this model in the model list, then click **Save** or **Switch** button to confirm the rearrangement, and the sequence of model in the TV wall list is corresponding to the button in Aurora RCP device.

Tips

- Particularly, for AURORA1600 1U, the model sequence is corresponding to the model selection button of Aurora RCP device in sequence, for example, KEY1 is corresponding to the first model in the model list, and so on.
- For AURORA9600 9U, there is no corresponding RCP device, the model

sequence of AURORA9600 9U has no practical meaning.

For example: set the corresponding relationship between AURORA1600 1U and AURORA-RCP. The original sequence for Layout01 is KEY1 in Aurora RCP, then please modify KEY1 to Layout02.

Operation: Click the **Model Editor** button  in tool bar, it will pop up the model editor dialog box, as shown in ***Figure 3.5-16***. Select Wall01, and choose Layout02 in model list, click **Move Up** button to resort it to the top of the model list.

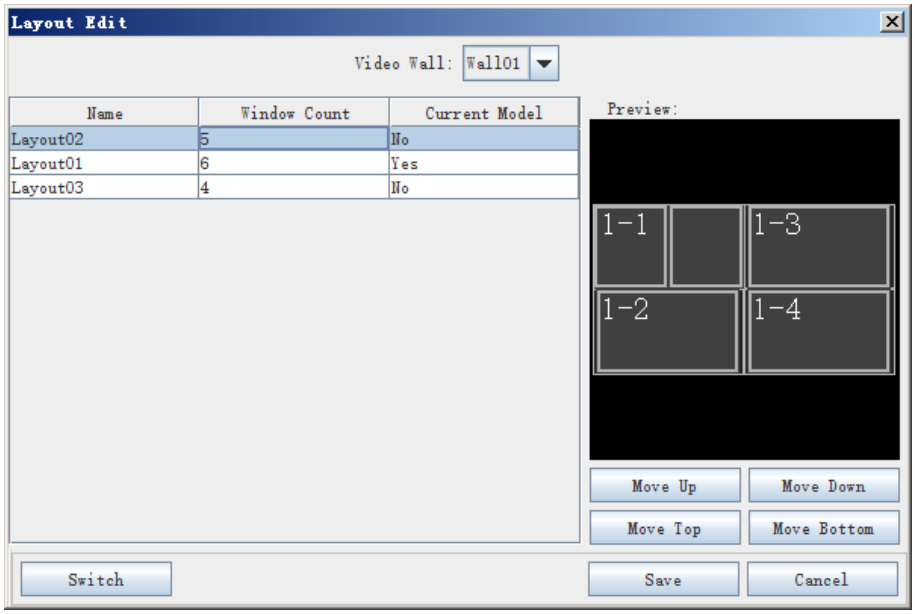


Figure 3.5-16 Move the Sequence of Layout02 in Layout Editor

Layout02 is moved to the first line in the model list of Wall01 video wall, click the **OK** button or **Apply** button to confirm the modification, and you can see the sequence of the model has been changed. Then, if you press KEY1 in Aurora RCP, it will switch to the Layout02 layout.

- Switch

Click the **Switch** button to change the selected model as the output layout for the selected video wall, that is the same as selecting **Display Current Layout** command.

Operation: select a model line, and click the **Switch** button in the dialog box, the selected model will be output as the output layout for the selected video wall.

5. Resource Connection

You should connect a signal resource for the selected monitor window element. Click the **Signal List** in system pane of the Model configuration window, and double click the input model node to expand its signal source sub-nodes. Select a signal source sub-node, and drag the sub-node to a

desired monitor window in working area, release the mouse button to complete the connection.

If you need to reconnect a new signal source to the target monitor window, then select a new signal source sun-node, and drag it to the target monitor window to replace the old one.

For example: select Source01 sub-node, press the left mouse button down, and drag it onto the Monitor(1) window, you can see the Source information in Monitor(1) is changed to Source01, as shown in ***Figure 3.5-17***:

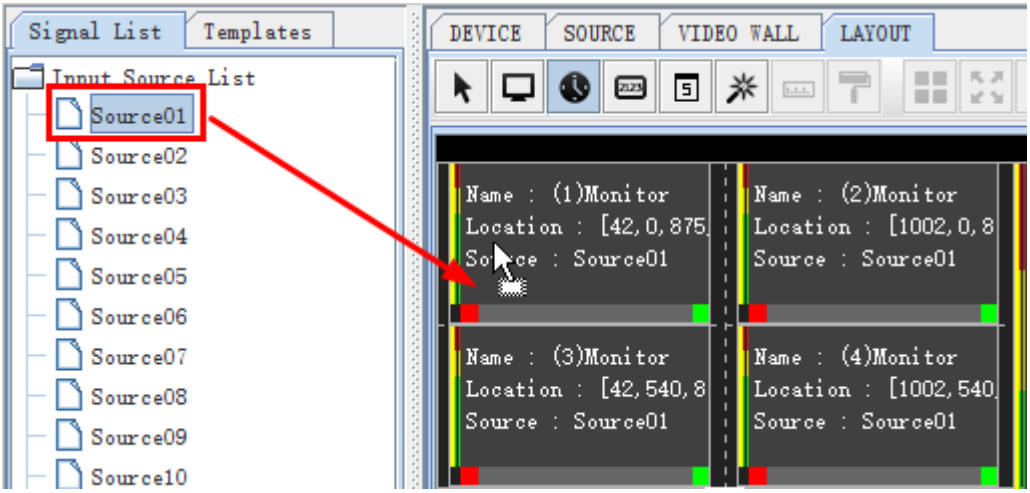


Figure 3.5-17 Connect a Signal Source for a Monitor Window

6. Layout Arrangement

Each output interface is connected with a video screen, keeping one to one relationship. The solid line labeled a rectangle area in the model is corresponding to a physical display screen device.

According to the amount of the output interfaces, **AURORA1600** supports up to 4 pieces of screen arrays, and **AURORA9600** supports up to 36 pieces of screen arrays(4X9). Currently, AURORA control software supports the above two types of multi-image processor, The arrangement of each type of multi-image processor supports the reasonable arrangement types within the maximum screen amounts, recommended adjacent layout pattern.

For example: using an AURORA9600 multi-image processor, and 16 pieces of screens, recommended to be arranged as 4X4 arrangement, as shown in ***Figure 3.5-18***:

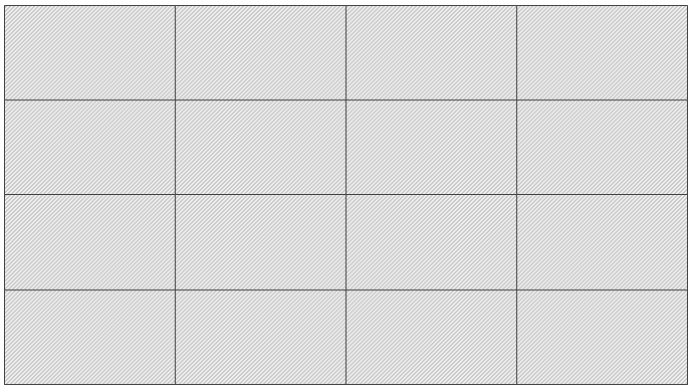


Figure 3.5-18 Screen Array

Each output interface is connected with a video screen, keeping the one to one relationship. The arrangement of each type of multi-image processor recommends to use adjacent layout pattern, in order to arrange wires simply and economically.

For example: using an AURORA9600 multi-image processor with four output interfaces. For each output card connecting a display screen, supports to use the following arrangements, as shown in ***Figure 3.5-19***, ***Figure 3.5-20***, ***Figure 3.5-21***:

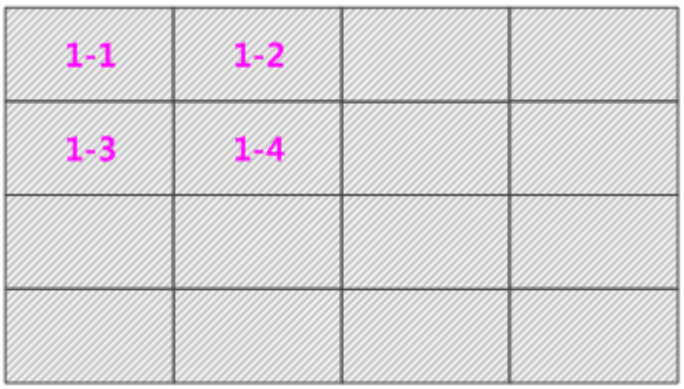


Figure 3.5-19 Screen Array-Arrangement1

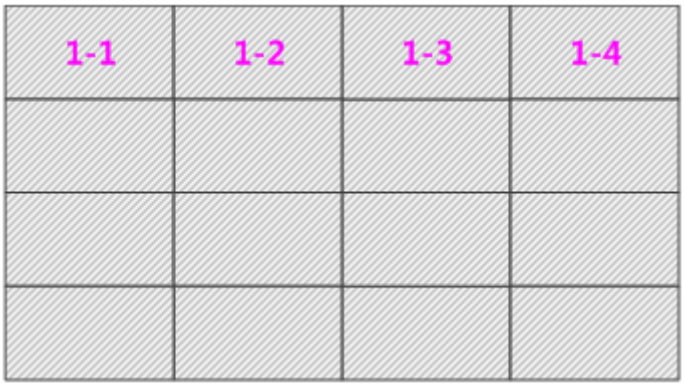


Figure 3.5-20 Screen Array-Arrangement2

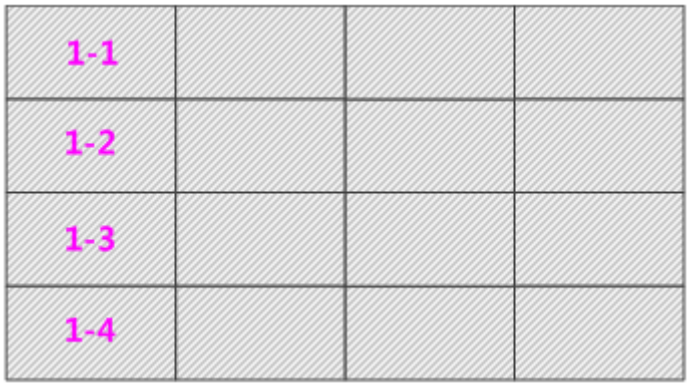


Figure 3.5-21 Screen Array-Arrangement3

As usual, the combination of monitor window, clock window and date window could be distributed arbitrarily on the screen connected with an output interface. According to the position of the monitor window, if the monitor window occupies on two screens or more than two screens, it is called as crossing layout.

Here, each output card supports up to 16 monitor windows with none screen crossing characteristic. When the monitor window has crossed screens, the partial area of the monitor on each screen connected with one output interface is counted as one monitor window nominally.

Tips

- Each output card (each group of interface on an output card) supports up to 16 monitor windows without screen crossing.

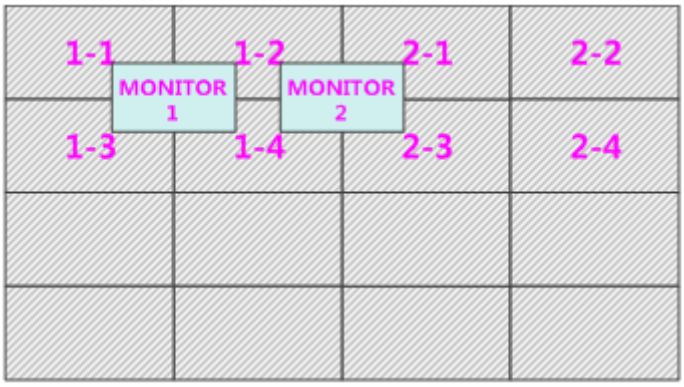


Figure 3.5-22 Screen Array

For example: as shown in Figure 3.5-22, MONITOR1 occupies four partial screens connected with No.1 output interface, No.2 output interface, No.3 output interface, No.4 output interface of No.1 Output card, that is counted as four windows. MONITOR2 occupies also four partial screens

connected with No.1 output interface, No.4 output interface of No.1 Output card, and No.1 output interface, No.3 output interface of No.2 Output card, thus, up to six windows for No.1 output interface, two windows for No.2 output interface.

In this way, there could only be 10 none crossing windows left on the screen array(1-1, 1-2, 1-3, 1-4) of No.1 Output card, the calculation formula is 16-4-2=10, besides, there could only be 14 none crossing windows left on the screen array(2-1, 2-2, 2-3, 2-4) of No.2 Output card, the calculation formula is 16-2=14.

- Specially, please avoid using the crossing layout for analog clock element. Take the following illustration as an example to this point. **For example**: as shown in ***Figure 3.5-23***, the analog clock is arranged between the two screens connected with the first and the second output interface, please do not use this kind of arrangement for the analog clock window.

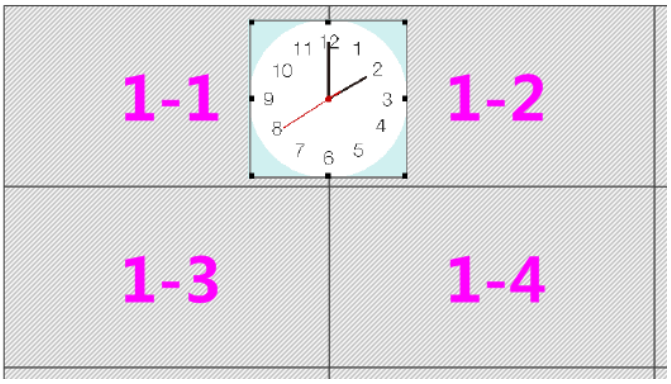


Figure 3.5-23 Screen Array-Analog Clock

3.5.1.6 Templates

For simplify and facilitate the process of model configuration, we provide some templates in the Templates pane, including default templates and customized templates, separately listed.

Click the **Templates** tab at the left pane of the model configuration window, and it lists the templates pane, as shown in ***Figure 3.5-24***:

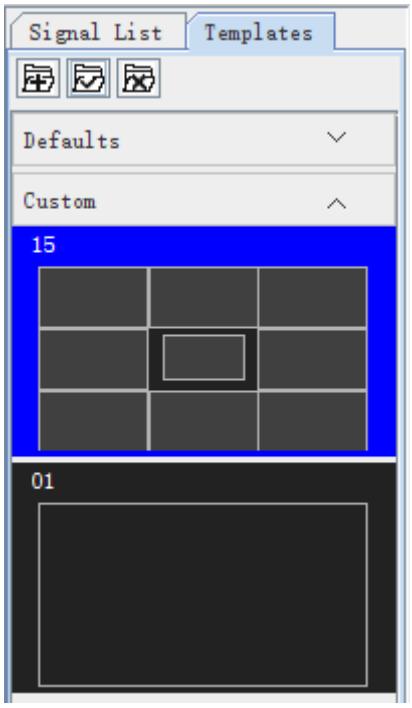


Figure 3.5-24 Templates

The pane is divided into the upper part and the lower part, corresponding to the defaults and the customized separately. The defaults templates are defined by the system, unmodified or deleted, and the customized templates could be defined, modified and deleted by the customers.

1. Create a Template

After creating a new layout, click **Add Template** button, it will prompt the Input dialog box, as shown in ***Figure 3.5-25***, input the new name for the template, click **OK** button to confirm the creation, you will see the new template added into the **Custom** list.

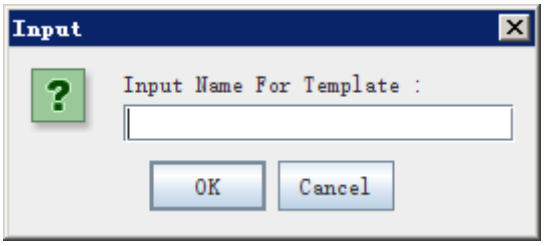


Figure 3.5-25 Dialog Box for Adding a New Template

2. Apply Template to Current Layout

Select a template in the Templates pane, and click **Apply Template to Current Layout** button, it will pop up a prompt, as shown in ***Figure 3.5-26***, click **Yes** button to confirm the application, you will see the template applied to the current layout.

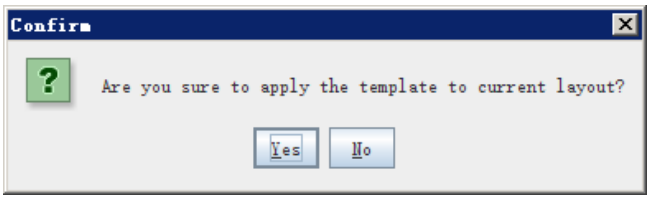


Figure 3.5-26 Prompt for Apply a Template

3. Delete Template

Select a customized template in the Templates pane, and click **Delete** button, it will pop up a prompt, as shown in ***Figure 3.5-27***, click **Yes** button to confirm the deletion, you will see the template deleted from the Templates pane.

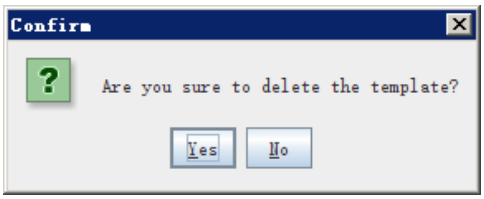


Figure 3.5-27 Dialog Box for Deleting a Customized Template

3.5.2 Tool Bar

1. Tool Sort

Aurora provides various tools for Layout configuration, and the tools are used for drawing and editing for the layout, as shown in ***Figure 3.5-28*** and ***Figure 3.5-29***, the tools are showed as shortcut buttons, click the button to active the corresponding command.

Figure 3.5-28 Common Tool Bar for Model Configuration

Figure 3.5-29 Edit Tool Bar for Model Configuration

There will be a tip besides the tool button when moving the mouse cursor on the button, as shown in ***Figure 3.5-30***:

Figure 3.5-30 Tip on Tool Button

The tool bar is divided to common tool bar and edit tool bar according to the position, as shown in ***Figure 3.5-28***:

- **Common Tool Bar**: as shown in ***Figure 3.5-28***, the tool bar labeled in red rectangle is the common tool bar, it provides the common used command for model configuration, such as **Open**, **Close**, **Copy** and so on, it is at the below of the menu bar by default.
- **Edit Tool Bar**: as shown in ***Figure 3.5-28***, the tool bar labeled in green rectangle is the edit tool bar, it provides the editable used command for model configuration, such as drawing and layout, as shown in ***Figure 3.5-31***, this tool bar is at the top edge of the working area by default.

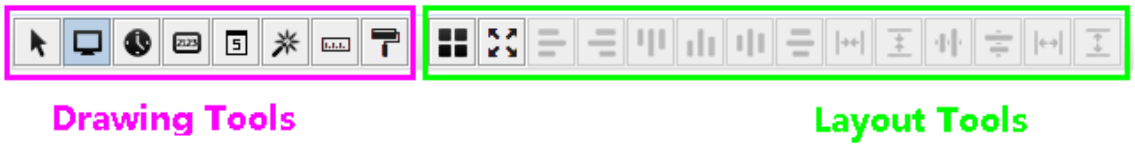


Figure 3.5-31 Edit Tool Bar

Thereinto, the layout tools provide align commands for multiple element windows in working area, such as align left, align right, align top and so on, and the split and expand command are fit for single element window. The drawing tools provide for drawing various elements, such as monitor, digital clock and so on.

Tips

- Particularly, the shape of the mouse cursor will change to the corresponding icon when you click an element tool button in order to remind you what kind of element you are drawing.
- Select another element tool button (monitor, analog clock, digital clock and digital date) or click **Select** button  , or press **ESC** key to cancel the selection for the current element tool button.

2. Tool Button Status

There are following statuses for the tool button:

- **Unavailable**: the tool button is in grey that is the button can't be used, and the condition is not satisfied. For example: if the model is vacant, the **Copy Size** button is grey  , for there is no element window to be copied, so this button is unavailable.
- **Available** but not selected: if the button is in black and the background of the tool button is in white, that is the button is available but not

selected. **For example**: if you have add a monitor element window, the Copy Size button is turn black  , now it can be used.

- **Available but selected**: f the button is in black and the background of the tool button is in blue, that is the button is available and in use currently. **For example**: if you have add a monitor element window, and click the **Copy Size** button, the button is turn black and in blue background  , thus you can copy the selected window to another element window. Click the button again to cancel the selection.

Tips

- if any one of the element tool buttons (monitor, analog clock, digital clock and digital date) is selected, press the **ESC** key will cancel the selection for the button, the mouse cursor will be back to on **Select** tool  , and the selection for the element window in working area will be canceled, too.
- Click the blank area in working area using magic wand, it will add a monitor window large enough in customized aspect ratio to full fill the blank area.
- Refer to "2.3.1.4 Model Configuration Window" for the details about the shortcut tool buttons in tool bar.

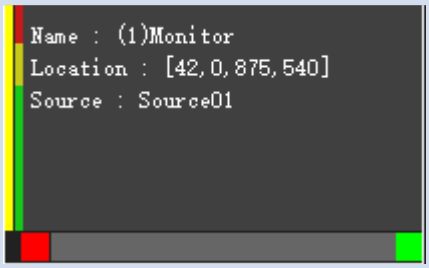
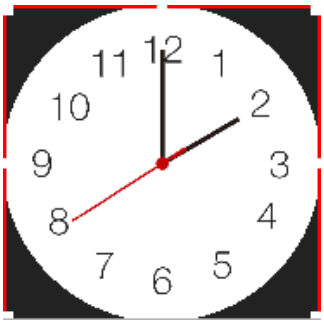
3.5.3 Elements Properties

To complete the layout for a video wall as model configuration, you should add various element windows on the screens.

- Element Type

Use the drawing tool to add rectangle window in working area, each kind of drawing tool adds different type of element. Aurora provides the following element type as shown in ***Table 3.5-1***:

Table 3.5-1 The Element Type

Shortcut button	Element Type	Illustration
	Monitor	
	Digital Date	
	Digital Clock	
	Analog Clock	

■ Element Properties

The Properties are different for various elements.

Select an element in working area, its properties will be displayed in the Property Pane. For example, select an analog clock, its properties are as shown in ***Figure 3.5-32***:

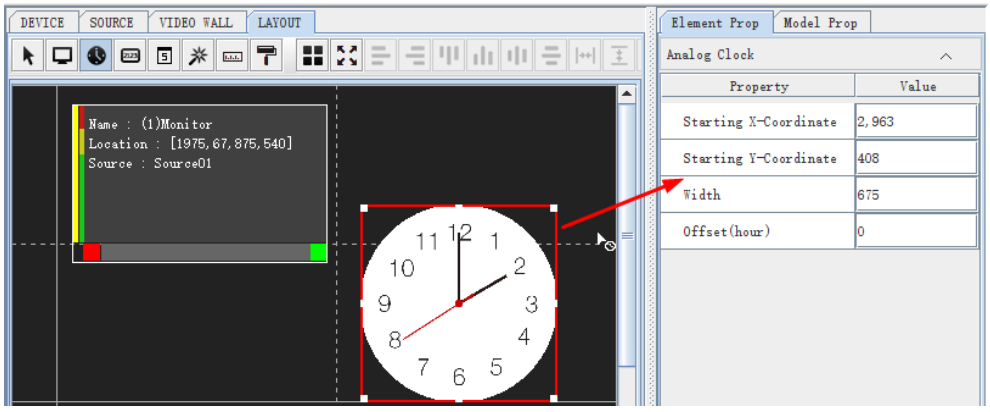


Figure 3.5-32 Model Properties

The property parameters are listed in Properties pane, click the control button ⌣/⌢ to expand or collapse the list.

The properties are as below:

3.5.3.1 Monitor

1. Properties

There are multiple tables for a monitor in its property pane: **Appearance**, **View**, **Alarm**, **Border**, **Audio** and **UMD/TALLY**, the details are as below:

■ **Appearance**

The appearance properties contain the position parameters, the size parameters for a monitor element, as shown in ***Figure 3.5-33***. The appearance is changing with the changes of the appearance properties.

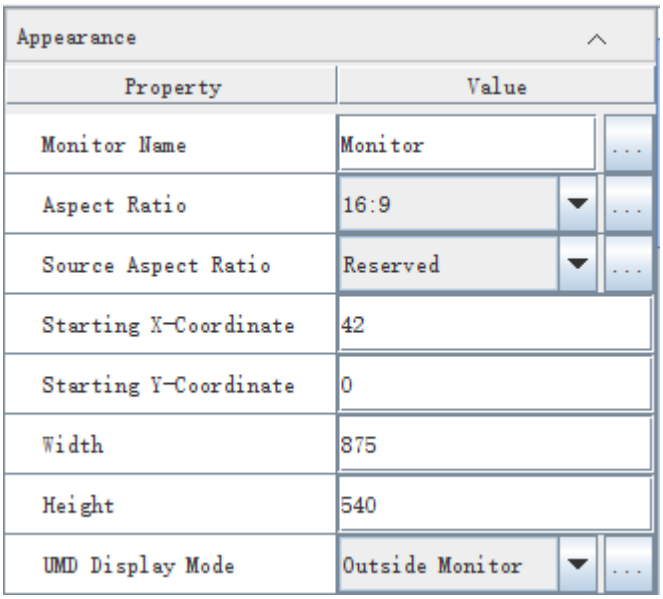


Figure 3.5-33 Appearance Properties

■ **View**

The view properties express the display information for a monitor display, as shown in ***Figure 3.5-34***:

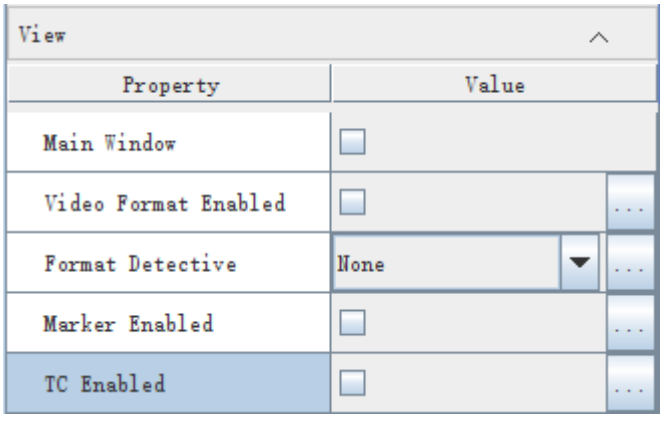


Figure 3.5-34 View Properties

Alarm

The alarm properties express the settings whether to enable the alarm information, as shown in ***Figure 3.5-35***:

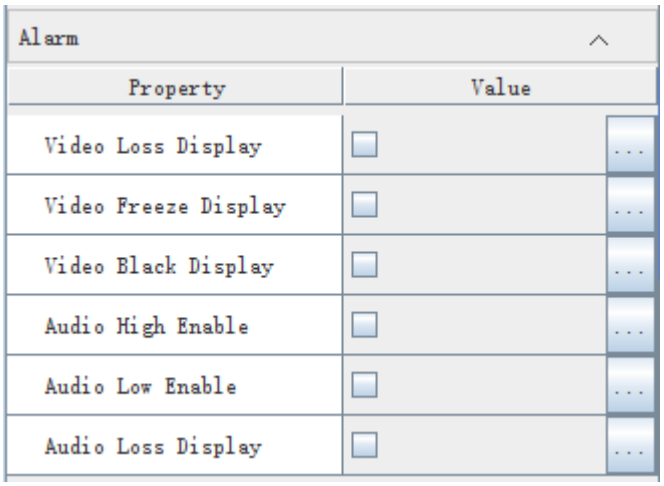


Figure 3.5-35 Alarm Properties

Border

The border properties are used to set the border properties for the monitor display, as shown in ***Figure 3.5-36***:

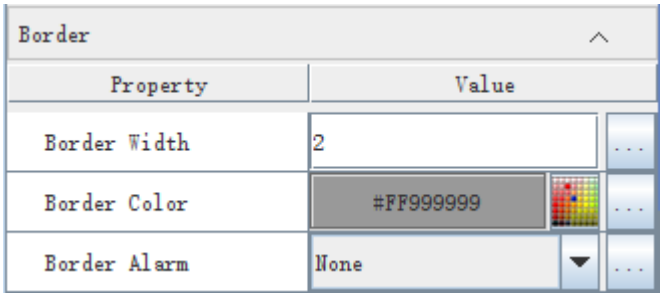


Figure 3.5-36 Border Properties

Audio

The audio properties express the settings about audio meter information, as shown in ***Figure 3.5-37***:

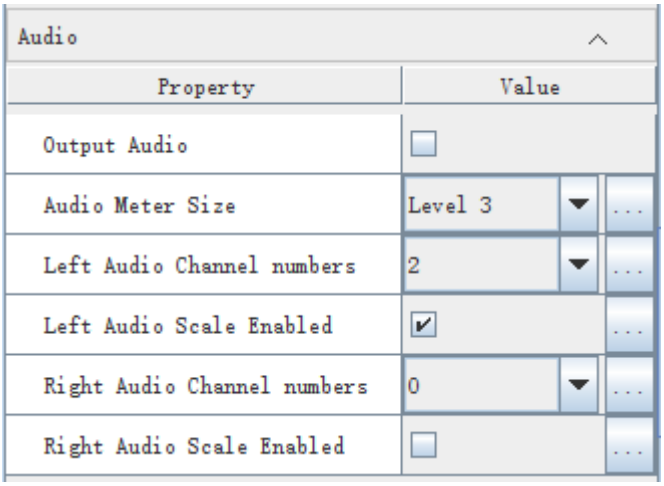


Figure 3.5-37 Audio Properties

■ UMD/TALLY

The UMD/TALLY properties express the settings about audio meter information, as shown in ***Figure 3.5-38***:

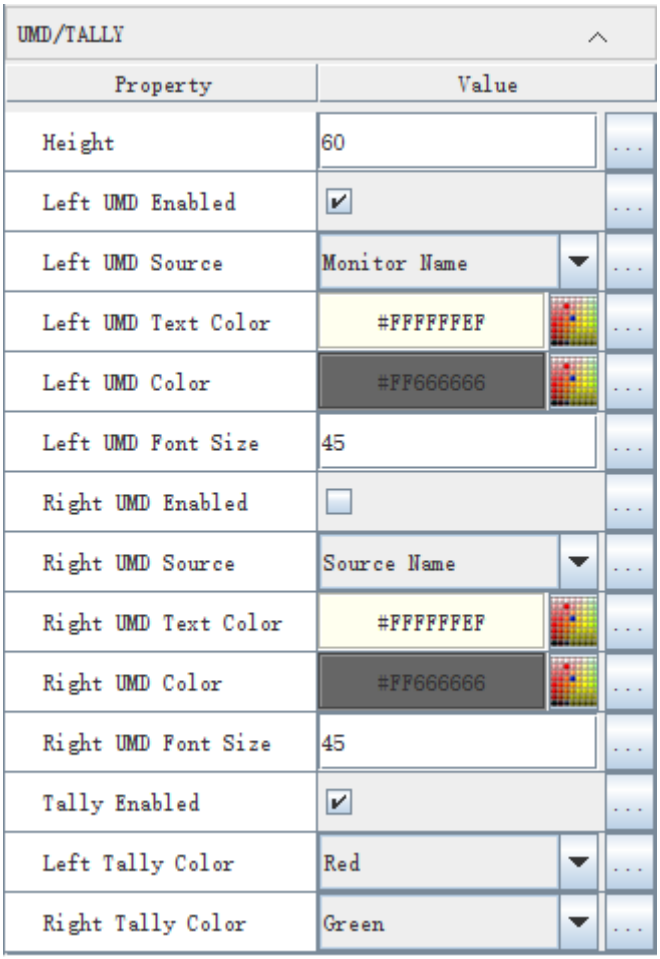


Figure 3.5-38 UMD/TALLY Properties

Property name	Range	Default	Description
Appearance			
Monitor Name	--	Monitor	Set the name for monitor
Aspect Ratio	• Customer • 16:9 • 4:3	16:9	Set the aspect ratio for monitor
Source Aspect Ratio	• Reserved: keep the signal source originally. • Followed: the aspect ratio of the signal source will be consistent with the value of monitor window.	Preserved	Set the display area ratio of the signal source in the monitor window.
Starting X-Coordinate	-	0	Set the starting x coordinate for the monitor, the unit is pixel.
Starting Y-Coordinate	-	0	Set the starting y coordinate for the monitor, the unit is pixel.
Width	-	0	Set the width for the monitor, the unit is pixel.
Height	-	0	Set the height for the monitor, the unit is pixel.
UMD Display Mode	Outside Monitor/ Inside Monitor	Outside Monitor	Set the positions of UMD and audio meter relatively to the monitor frame.
View			
Main Window	Yes/No	No	Set whether to display as the main window.
Video Format Enable	Yes/No	No	Set whether to display video format for the monitor.
Format Detective	None/525I60/625I50/1080I50/ 1080I60/1080SF24/ 1080P24/1080P25/ 1080P30/1080P50/ 1080P60/720P24/ 720P25/720P30/ 720P50/720P60/ 1035I60/525I59.94/ 1080I59.94/1080SF23.98/	None	Set video format alarm, that is using this format to compared with the format of the signal source designated to the current monitor, if the result is uniform, it will not alarm and the video format displayed at the left corner of the monitor window is in normal color, otherwise, it will alarm by flashing the video format displayed at the left

Property name	Range	Default	Description
	1080P23.98/1080P29.97/ 1080P59.94/720P23.98/ 720P29.97/720P59.94		corner of the monitor window
Marker Enable	Yes/No	No	Set whether to display marker for the monitor.
TC Enable	Yes/No	No	Set whether to display time code for the monitor.
Alarm			
Video Loss Display	Yes/No	No	Set whether to display video loss alarm information on monitor window.
Video Freeze Display	Yes/No	No	Set whether to display video freeze alarm information on monitor window.
Video Black Display	Yes/No	No	Set whether to display video black alarm information on monitor window.
Audio High Enable	Yes/No	No	Set whether to display audio high alarm information on monitor window.
Audio Low Enable	Yes/No	No	Set whether to display audio low alarm information on monitor window.
Audio Loss Enable	Yes/No	No	Set whether to display audio loss alarm information on monitor window.
Border			
Border Width	0~40	0	Set the border width outside a monitor window.
Border Color	-	0	Set the border color outside a monitor window.
Border Alarm	• None • Source Video&Audio Alarm • Left Tally • Right Tally	None	Set whether to alarm at the border of the monitor window, the alarm condition could be Source Video&Audio Alarm, Left Tally or Right Tally, the border alarm will flash in red.
Audio			

Property name	Range	Default	Description
Output Audio	Yes/No	No	Set whether to output audio information. Specify the audio source embedded in the signal source of the selected monitor window to the audio output device, there will be an audio icon  at the right corner of the monitor window.
Audio Meter Size	Level 1/Level 2/Level 3/Level 4	Level 3	Set the width of an audio channel
Left Audio Channel Numbers	0/2/4/6/8	2	Set the audio channels displayed as left audio meter.
Left Audio Scale Enable	Yes/No	No	Set whether to display scale in left audio meter.
Right Audio Channel Numbers	0/2/4/6/8	2	Set the audio channels displayed as right audio meter.
Right Audio Scale Enable	Yes/No	No	Set whether to display scale in right audio meter.
UMD/TALLY			
Height	16~120	60	Set the height for UMD.
Left UMD Enable	Yes/No	No	Set whether to display the left UMD.
Left UMD Source	• Monitor Name • Source Name • Format • Format & Scale	Monitor Name	Set the input source for left UMD.
Left UMD Text Color	0,0,0~255,255,255	253,253,153	Set the color for left UMD text.
Left UMD Color	0,0,0~255,255,255	0,51,255	Set the color for left UMD background.
Left UMD Font Size	12~100	45	Set the size for left UMD text.
Right UMD Enable	Yes/No	No	Set whether to display the right UMD.
Right UMD Source	• Monitor Name • Source Name • Format • Format & Scale	Monitor Name	Set the input source for right UMD.

Property name	Range	Default	Description
Right UMD Text Color	0,0,0~255,255,255	253,253,153	Set the color for right UMD text.
Right UMD Color	0,0,0~255,255,255	51,153,0	Set the color for right UMD background.
Right UMD Font Size	12~100	45	Set the size for right UMD text.
Tally Enable	Yes/No	No	Set whether to display the tally.
Left TALLY Color	Red/Green/Yellow	Red	Set the color for left Tally indicator.
Right TALLY Color	Red/Green/Yellow	Red	Set the color for right Tally indicator.

Tips

- For the numerical input-capable value items in the property table, the system will provide the available input-capable value limitation, that is, after click into the target cell of the value item, and docking for a second, it will display a tip with the value range. For example: click the value cell of Height in UMD/TALLY table, the cursor is docking in this cell, after a second, it will display the available value range, as shown in Figure 3.5-39:

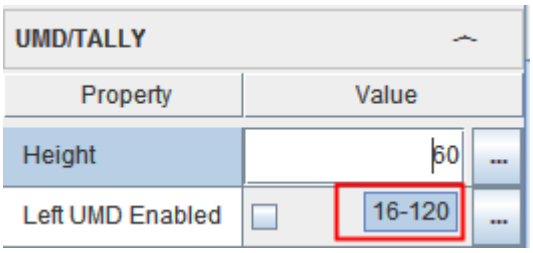


Figure 3.5-39 Tip for Value Range

2. Parameters for monitor

■ **Source Aspect Ratio**

The **Source Aspect Ratio** parameter in video table is related with the **Aspect Ratio** parameter in Appearance table.

Example 1: when the **Aspect Ratio** parameter is set as 16:9 and the aspect ratio of the signal source is 4:3, if the **Source Aspect Ratio** parameter is set as Reserved, the display is as shown in ***Figure 3.5-40***:

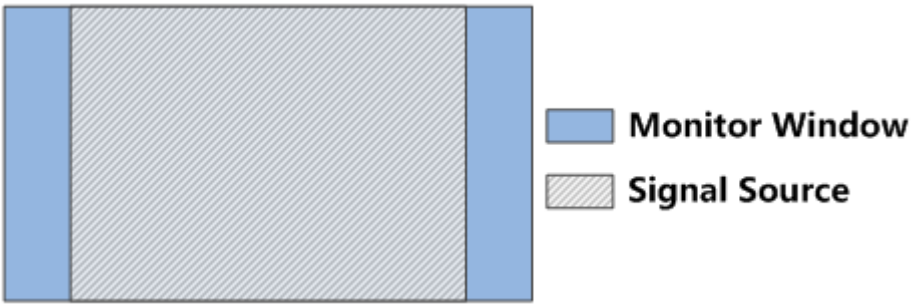


Figure 3.5-40 Example1 for Source Aspect Ratio Set

Example 2: when the **Aspect Ratio** parameter is set as 16:9 and the aspect ratio of the signal source is 4:3, if the **Source Aspect Ratio** parameter is set as Followed, the display is as shown in ***Figure 3.5-41***:

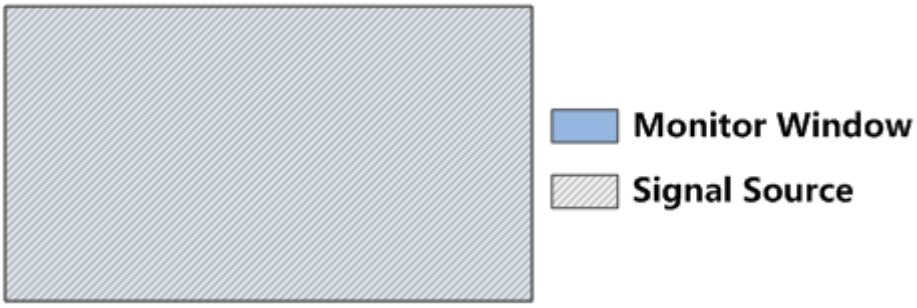


Figure 3.5-41 Example2 for Source Aspect Ratio Set

- **Position of audio meter and UMD**

  Set the position of audio meter and UMD by the **UMD Mode** parameter in **Appearance** table. If select **Inside**, the audio meter and UMD will be displayed inside the **Video Area** of the monitor window, otherwise, If select **Outside**, the audio meter and UMD will be displayed outside the **Video Area** of the monitor window, the comparison are as shown in ***Figure 3.5-42***:

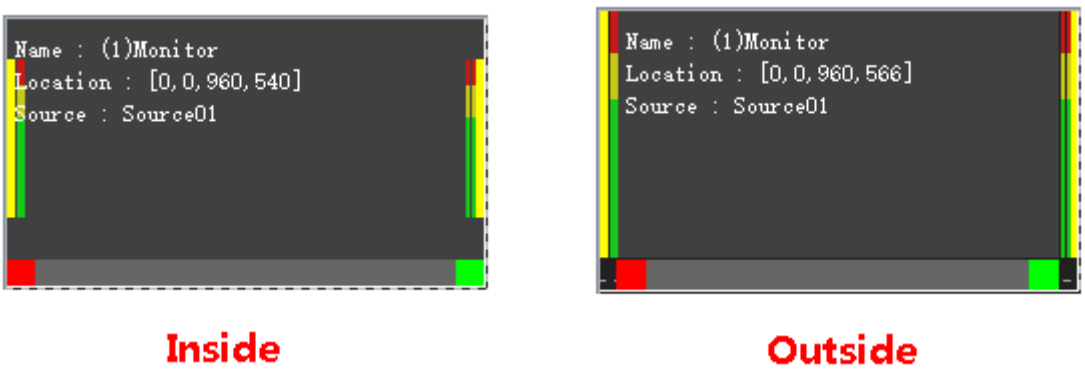


Figure 3.5-42 Position of Audio Meter and UMD

Video Format

The video format of the input signal connected with the monitor window is displayed at the top left corner of the monitor window. Select the **View→Video Format Enabled** property of the monitor window, the video format is displayed as shown in the following figure.

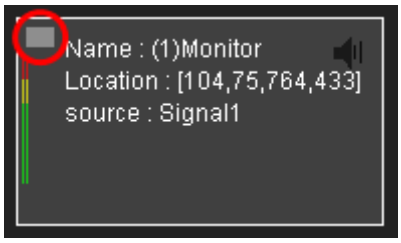


Figure 3.5-43 Video Format Dispaly

Format Detective

The system will compare the format of the signal source with the **Format Detective** property, and the result will conduct the video format alarm, and reflect the alarm on UMD. When the comparison result is consistent, the UMD characters are displayed in white, and when the comparison result is inconsistent, the UMD characters are displayed in red as a warning.

For example: Set **View→Video Format Enabled** property to be selected, and set **UMD/TALLY→Left UMD Enabled** property to be selected. Set **View→ Format Detective** property to be **1080I50**, and set **UMD/TALLY → Left UMD Source** property to be **Format** or **Format&Scale**, as shown in Figure 3.5-43:

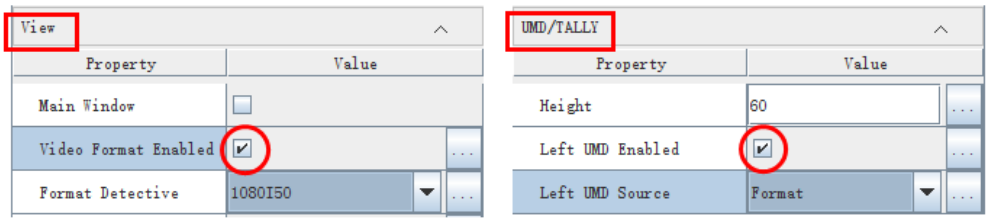


Figure 3.5-44 Format Detective

Then, if the format of the input signal is 720P50, it is inconsistent with the **Format Detective** property, thus, the left UMD characters display 720P50 in red, as shown in , to prompt the inconsistency.

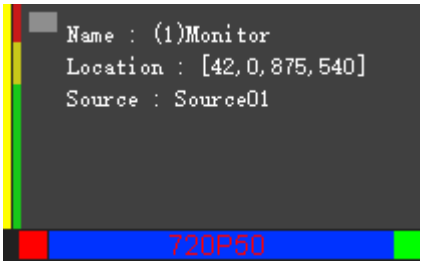


Figure 3.5-45 Format Detective Inconsistency

■ Frame

The illustration for video frame is as shown in ***Figure 3.5-46***, the color is set as RGB (200, 200, 24) by default, select and click the **Border Color** parameter to pop up the color picker dialog box to set a color for the frame.

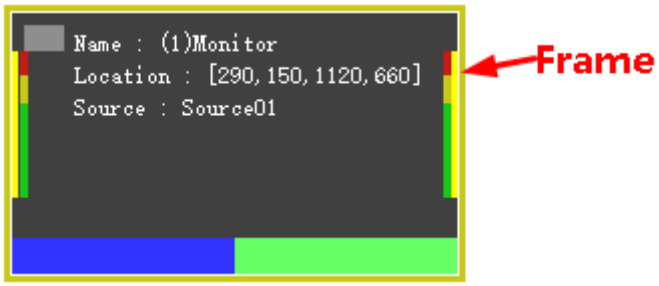


Figure 3.5-46 Illustration for Video Frame

☐ Border Alarm

The border alarm is used to give an alarm in the border of the monitor window with flash red color when meets the alarm condition, meanwhile, the border width should not be 0.

The alarm condition for border alarm could be set as **Source Video&Audio Alarm**, **Left TALLY** or **Right TALLY**. The **Source Video&Audio Alarm** refers to the properties in monitor property→Alarm list, including Video Loss Display, Video Freeze Display, Video Black Display, Audio High Enable, Audio Low Enable, Audio Loss Enable. The **Left TALLY** refers to the **Left TALLY Source** item in **SOURCE** Tab. The **Right TALLY** refers to the **Right TALLY Source** item in **SOURCE** Tab. Refer to “3.3.3 Set TALLY Source” for the TALLY source settings.

For example: as shown in Figure 3.5-47, set the **Border Alarm** as **Source Video&Audio Alarm**, then if the **Video Loss Display** happened, the frame border will flash in red.

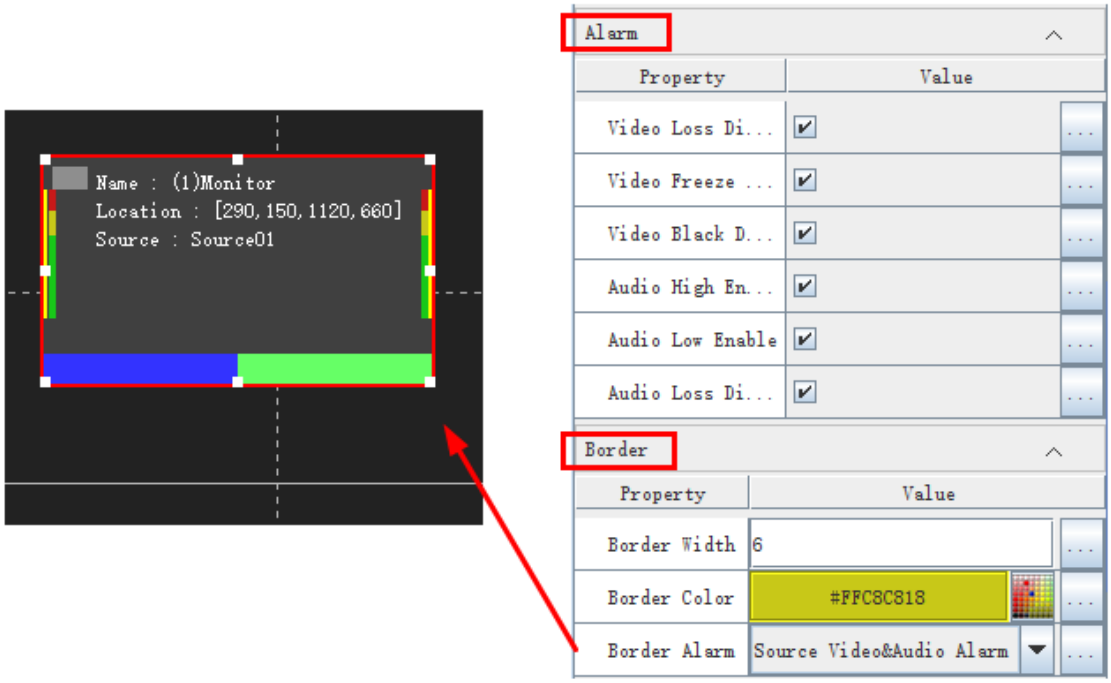


Figure 3.5-47 Border Alarm

Tips

- The frame for a monitor window is translucent, it will be overlapped over the monitor window, and not affect its video area, you can set Border Width and Border Color for the frame.
- Once you want to activate the border alarm function and set the **Border Alarm** item to be **Source Video&Audio Alarm**, **Left Tally**, or **Right Tally**, do not set the **Border Width** item to be 0, otherwise, it will not generate the border alarm.

■ Audio

☐ Audio Output

Designate the audio output, that is, the audio source connected with the designated monitor will be output to an audio device.

Enable the **Output Audio** property, and specify the audio source embedded in the connected signal source with the monitor window. Click the target monitor window in the working area of Layout tab, select its **Audio→Output Audio** property in property pane, as shown in Figure 3.5-48, there will be audio icon at the top right corner of this

monitor window, as shown in Figure 3.5-49:

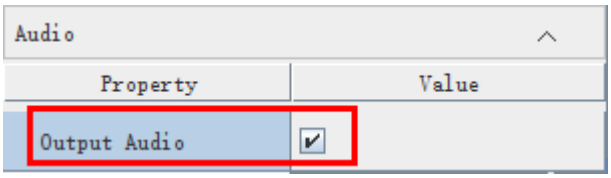


Figure 3.5-48 Output Audio

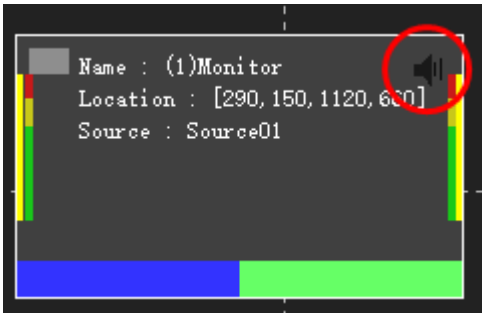


Figure 3.5-49 Output Audio Icon

☐ **Audio Meter Format**

The parameters about audio meter appearance are listed in **Audio** table, including: **Audio Meter Size, Left Audio Channel numbers** and **Right Audio Channel numbers, Left Audio Scale Enable** and **Right Audio Scale Enable**.

Tips

- The total number of the audio channels which are composed of **Left Audio Channel numbers** and **Right Audio Channel numbers** in a monitor window can't exceed 8. Thus, there should be only up to 8 audio channels in a monitor window, and it displays **Audio Meter1** to **Audio Meter4** from left to right in sequence, each **Audio Meter*** contains two audio channels defined in Source configuration, refer to "3.3.1 Set Audio Source" for the details.

For example:
The **Audio Meter1** is set as Emb 1-2, and the **Audio Meter2** is set as Emb 3-4, as shown in ***Figure 3.5-50***, and the audio meter parameters for a monitor window are set, as shown in ***Figure 3.5-51***:

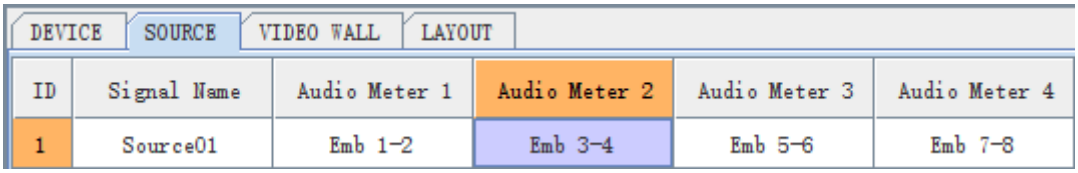


Figure 3.5-50 Audio Meter Setting

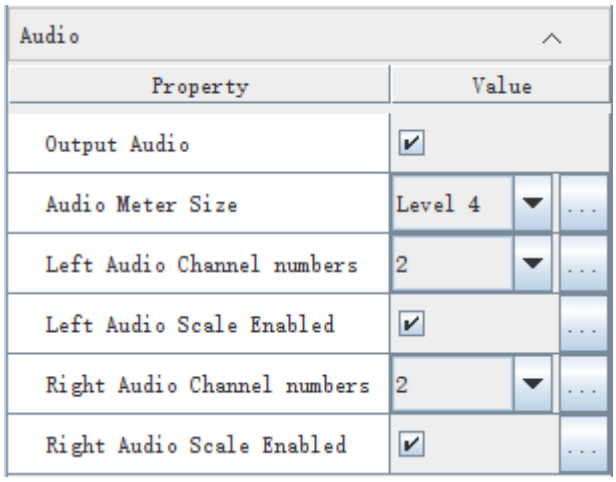


Figure 3.5-51 Audio Parameter Setting

Thus, the relationship of audio parameters setting and audio meter setting are as shown in ***Figure 3.5-52***:

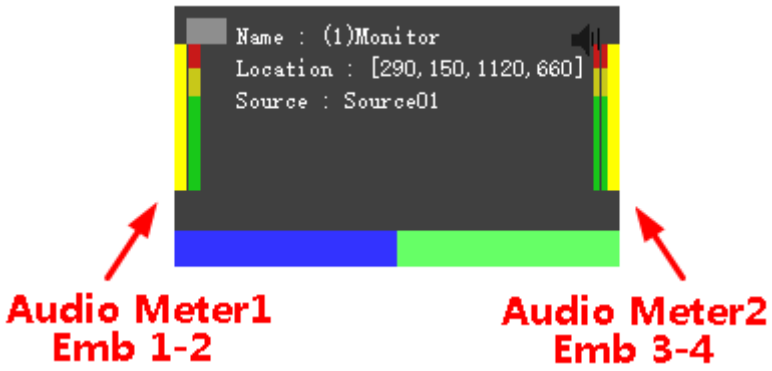


Figure 3.5-52 Relationship of Audio Parameters Setting and Audio Meter Setting

- UMD/Tally

The parameters about UMD are listed in UMD table, as shown in ***Figure 3.5-38***.

- UMD Setting: UMD is displayed at the bottom of a monitor window, as shown in ***Figure 3.5-53***, you can assign the height for UMD, or choose whether to display the left UMD or the right UMD separately.

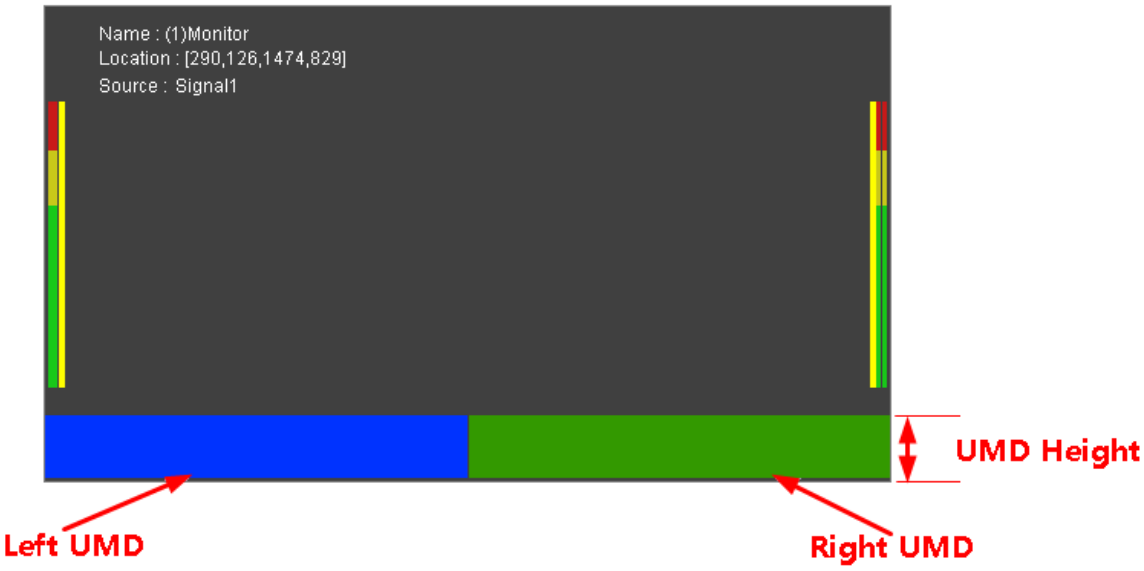


Figure 3.5-53 UMD

- Color Setting: The color for UMD text and background can both be customized. You can input the RGB value, or select one in its color picker dialog box.

Select a color: click the color setting button, it will pop up the color picker dialog box, as shown in ***Figure 3.5-54***:

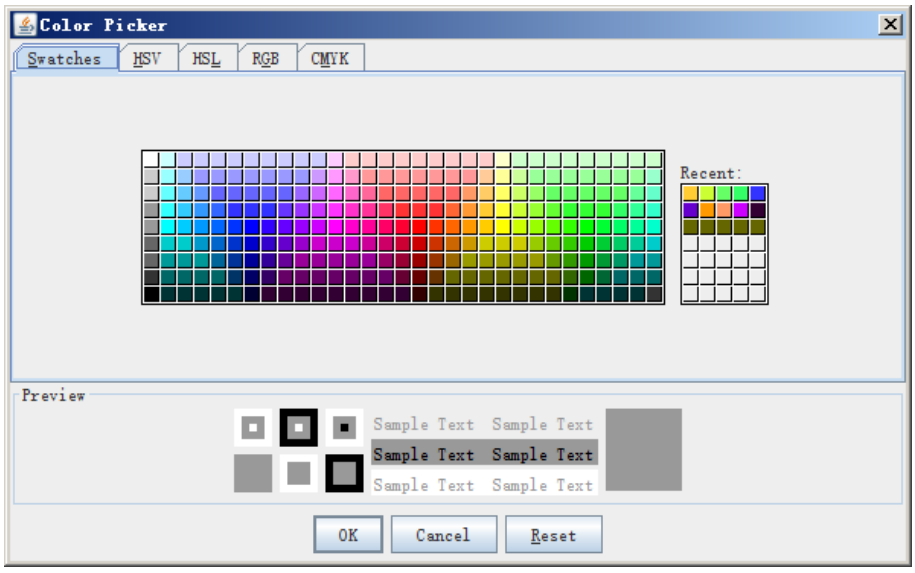


Figure 3.5-54 Color Picker

Click in the color bar to select a color, and the color will show its effect in the **Preview** area of this dialog box, click **OK** button to confirm the selection.

It provides five tabs for color picker: Swatches, HSV, HSL, RGB,

CMYK, click one tab to set a color.

- **UMD Source**: set Left UMD source and Right UMD source from **Monitor Name**, **Source Name**, **Format**, **Format & Scale**.

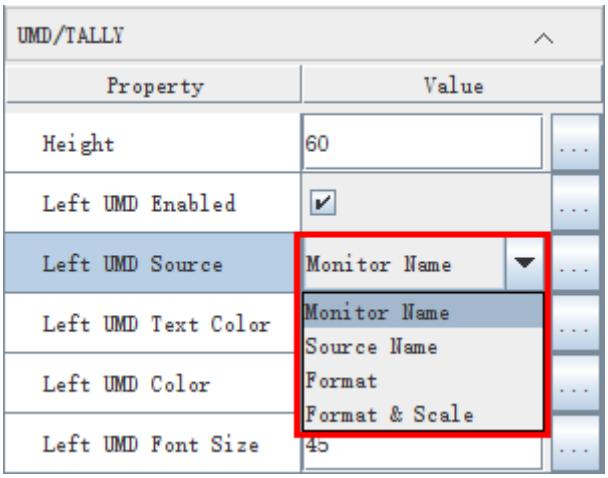


Figure 3.5-55 Set UMD Source

- **TALLY Setting**: set whether to display the left UMD and the right UMD, and set the color for its text and background. For example: choose the **Tally Display** item, and the tally indicators are as shown in ***Figure 3.5-56***:

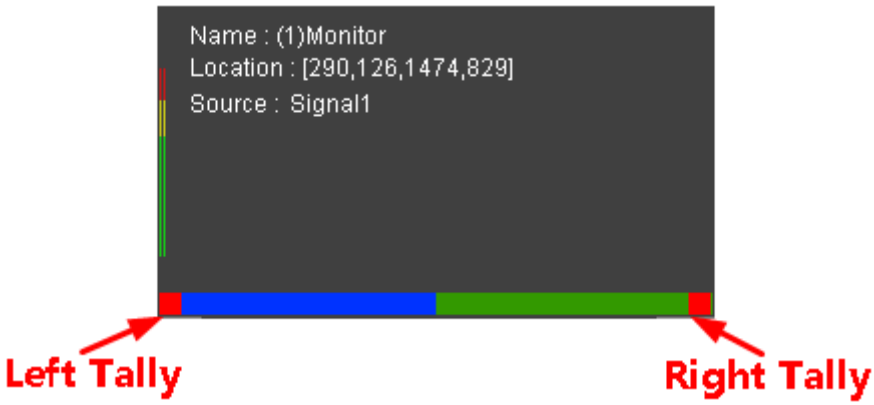


Figure 3.5-56 Tally

Tips

- The prerequisite for Tally display is choosing any one of the **Left UMD Display** or the Right UMD Display item, and then choose **Tally Display**, it will show the tally indicators in the monitor window.

- The display area of video window relates to the **UMD Mode** parameter. As shown in ***Figure 3.5-42***, if the **UMD Mode** parameter is set as Outside, you can see the video area is enlarged.

3. Monitor Display

The monitor window displayed on the working area of Layout tab is as shown in ***Figure 3.5-57***:

Figure 3.5-57 Position for a Monitor

The information listed in the monitor window from up to down contain: Name, Location and Signal, the details are as below:

- **Name**: it displays the monitor name and its type information. The default name is “Monitor” +”number”, each number will not be repetitive.

- **Location**: the position parameters such as Horizontal Start Position, Vertical Start Position, Width, Height, are showed in the monitor window followed the key word **Location** in working area. The position parameters will change with the position of the monitor window in working area.

- **Source**: the signal source is showed in the monitor window followed the key word **Source** in working area, as shown in ***Figure 3.5-58***:

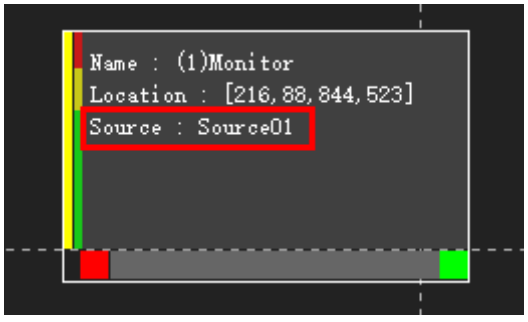


Figure 3.5-58 Signal Source for a Monitor

Tips

- The monitor window can be zoomed in a customized proportions, in 4:3 or 16:9, set in the **Aspect Ratio** parameter.

3.5.3.2 Clock/Date

The elements about date and time are contains the following types: **Analog Clock, Digital Clock** and **Digital Date**. The details are as below:

1. **Analog Clock**

The properties of analog clock are as shown in ***Figure 3.5-59***:

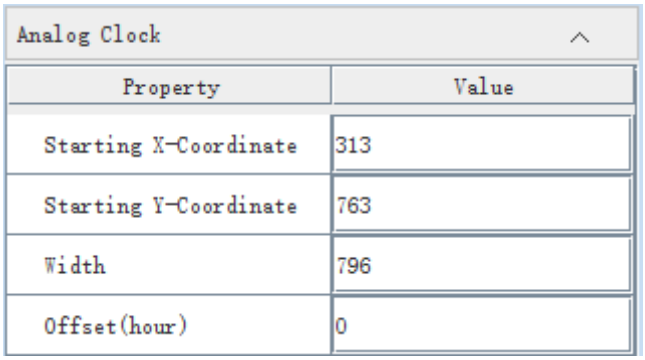


Figure 3.5-59 Analog Clock Properties

The property items for analog clock are listed in the following table:

Property name	Range	Default	Description
Starting X-Coordinate	-	0	Set the starting x coordinate for the clock/date, the unit is pixel.
Starting Y-Coordinate	-	0	Set the starting y coordinate for the clock/date, the unit is pixel.
Width	-	-	Set the size for analog clock
Offset(Hour)	0~24	0	Set the offset for analog clock or digital clock, the unit is hour.

The appearance of analog clock is as shown in ***Figure 3.5-60***:

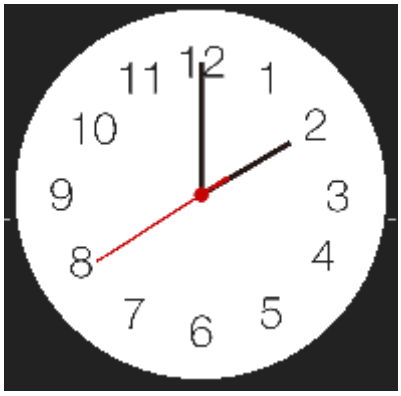


Figure 3.5-60 Analog Clock

Tips

- Particularly, when arranging the layout of analog clock, please abstain from crossing among screens. For example, as shown in ***Figure 3.5-61***, the analog clock should not be arranged between 1-1 screen(connected with Output1) and 1-2 screen(connected with Output2).

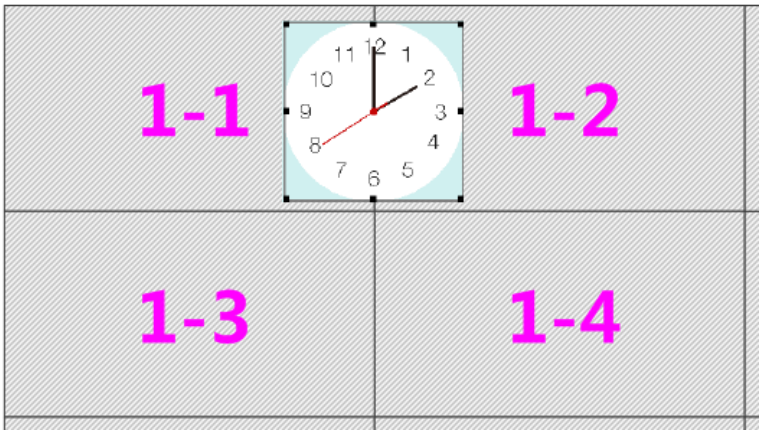


Figure 3.5-61 Analog Clock

2. Digital Clock

The properties of digital clock are as shown in ***Figure 3.5-62***:

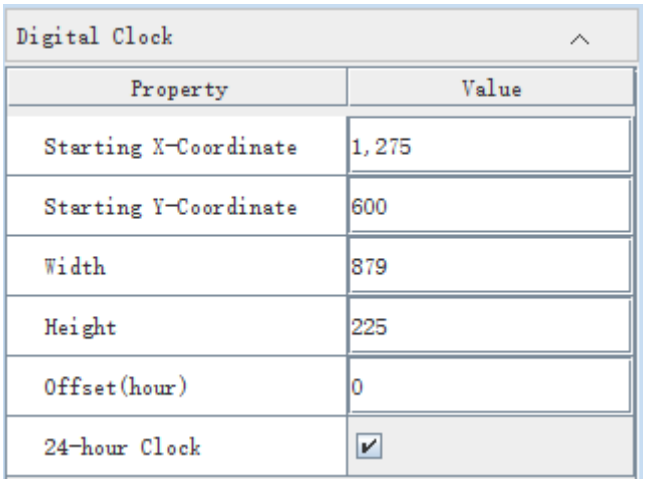


Figure 3.5-62 Digital Clock

The property items for digital clock are listed in the following table:

Property name	Range	Default	Description
Starting X-Coordinate	-	0	Set the starting x coordinate for the clock/date, the unit is pixel.
Starting Y-Coordinate	-	0	Set the starting y coordinate for the clock/date, the unit is pixel.
Width	-	-	Set the horizontal size for digital clock
Height	-	-	Set the vertical size for digital clock
Offset(Hour)	0~24	0	Set the offset for analog clock or digital clock, the unit is hour.
24-hour Clock	Yes/No	Yes	Set whether to display the digital clock in 24-hour standard.

The appearance of digital clock is as shown in ***Figure 3.5-63***:

Figure 3.5-63 Digital Clock

3. Digital Date

The properties of digital date are as shown in ***Figure 3.5-64***:

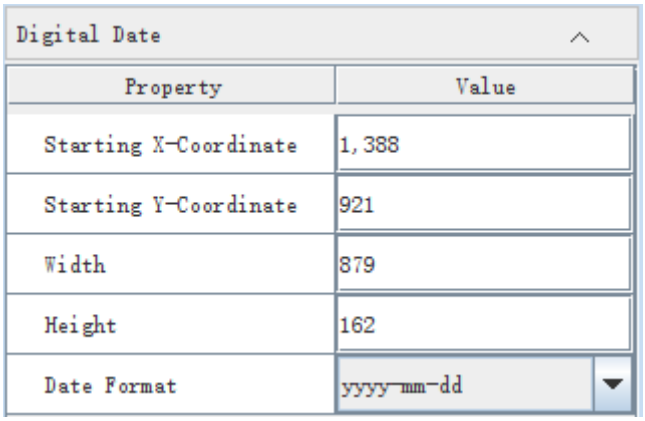


Figure 3.5-64 Digital Date

The property items for digital clock are listed in the following table:

Property name	Range	Default	Description
Starting X-Coordinate	-	0	Set the starting x coordinate for the clock/date, the unit is pixel.
Starting Y-Coordinate	-	0	Set the starting y coordinate for the clock/date, the unit is pixel.
Width	-	-	Set the horizontal size for digital clock
Height	-	-	Set the vertical size for digital clock
24-hour Clock	• yyyy-mm-dd • dd-mm-yyyy • mm-dd-yyyy	yyyy-mm-dd	Set the sequence for date display

The appearance of digital date is as shown in ***Figure 3.5-65***:

Figure 3.5-65 Date

As above, all kinds of elements have the following two properties:

- **Horizontal Start Position**: the starting x coordinate of the left corner of the element window;
- **Vertical Start Position**: the starting y coordinate of the left corner of the element window.

Take a monitor element for example, the coordinate of the left corner is as shown in ***Figure 3.5-66***:

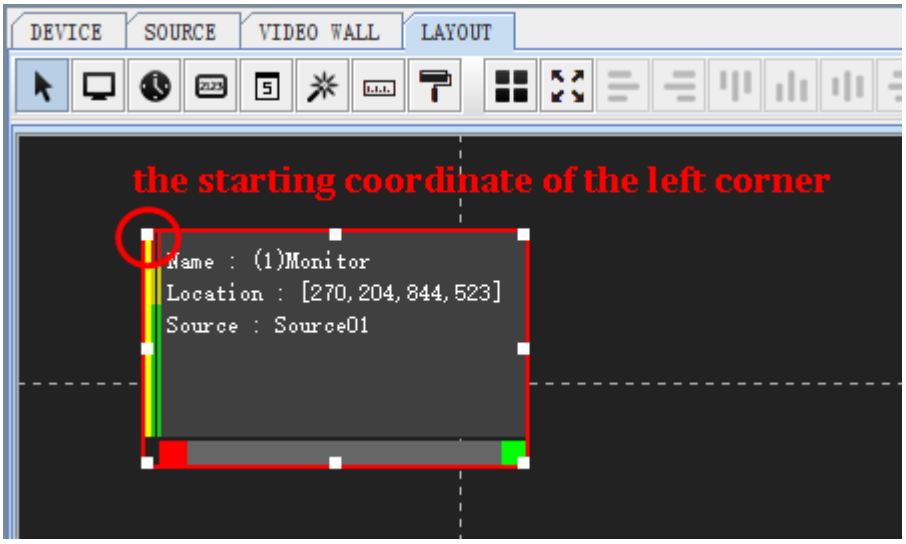


Figure 3.5-66 Left Corner for a Monitor Element

☐ **Property Modification**

The element will be changed right after you have modified its properties in working area, and the property value will be changed right after you have moved, stretched or zoomed the element, and the position and size of an element will change with the properties, too.

Tips

- The parameter value of the **Starting X-Coordinate** and the **Starting Y-Coordinate** will determine the starting coordinate of an element window.

3.5.3.3 Audio Output Settings

You can designate a virtual audio output card to output the audio signal of a designated signal source. The instructions are as below:

Step 1 Designate a Virtual Audio Output Card

In **VIDEO WALL** page→**Wall Properties**-**Audio Output Card**
As shown in ***Figure 3.5-67***, create a new wall in VIDEO WALL page, and designate an output card as the **Audio Output Card.**

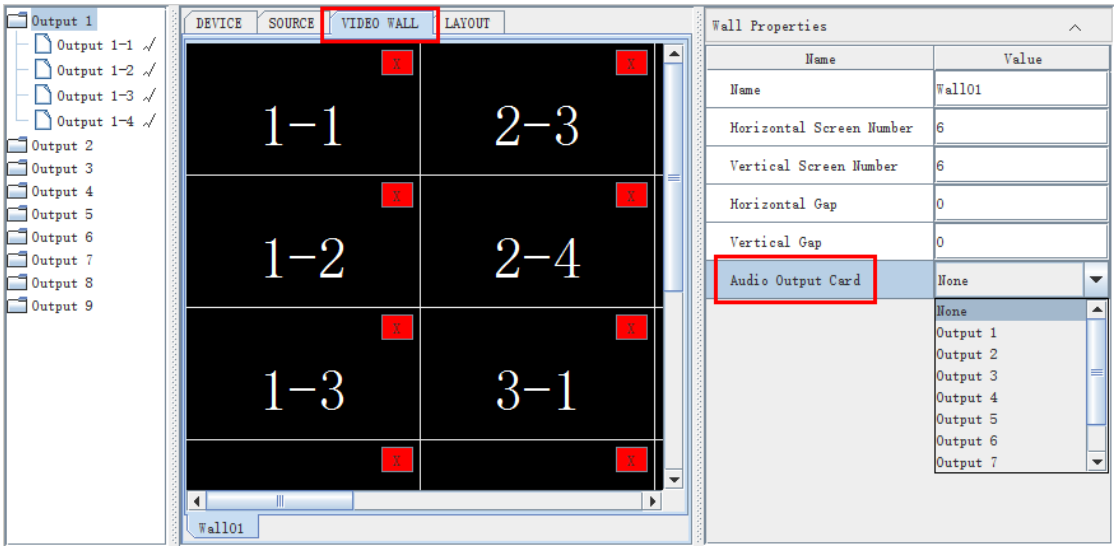


Figure 3.5-67 Designate Audio Output Card

Step 2 Set Output Audio Type

In **LAYOUT** page→**Model Prop**- **Output Audio Type**

As shown in ***Figure 3.5-68***, create a new layout in **LAYOUT** page, then, set it audio type in **Output Audio Type** item or **Analog Audio** item in Model properties pane.

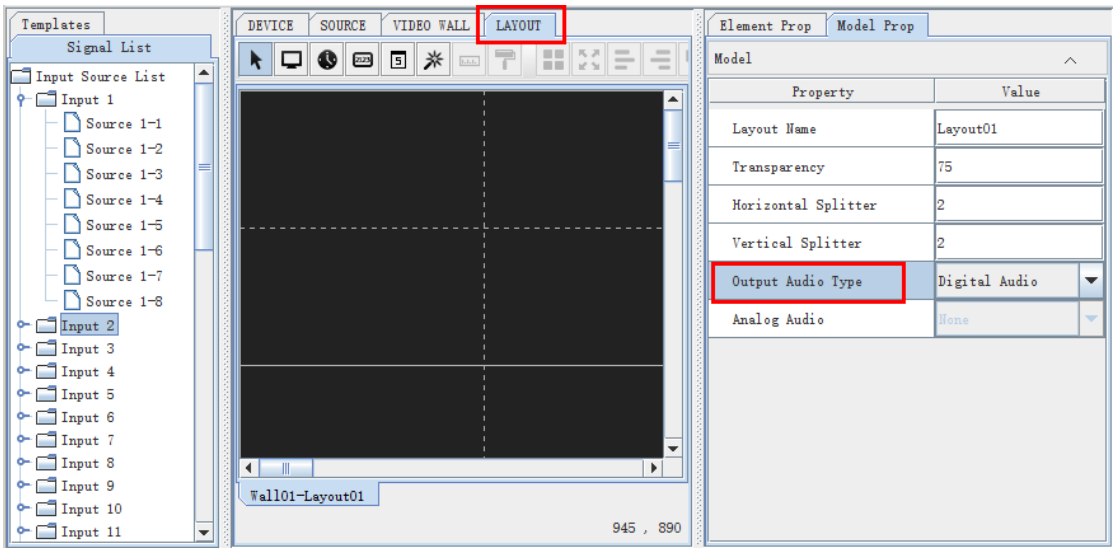


Figure 3.5-68 Set Output Audio Type

Step 3 Designate Output Audio Source

In **LAYOUT** page→**Element Prop**→ **Audio**→**Output Audio**

Add and arrange monitor elements in a layout as your requirements, and designate a signal source for each monitor element from the Input Source List pane.

For example, as shown in ***Figure 3.5-69***, select the target monitor element in the layout, and click its **Audio→Output Audio** property in its **Element Prop** pane, then, there will be an audio output icon labeled at the top right corner of the monitor element. Thus, the "Source1-1" will be output as the desired audio information.

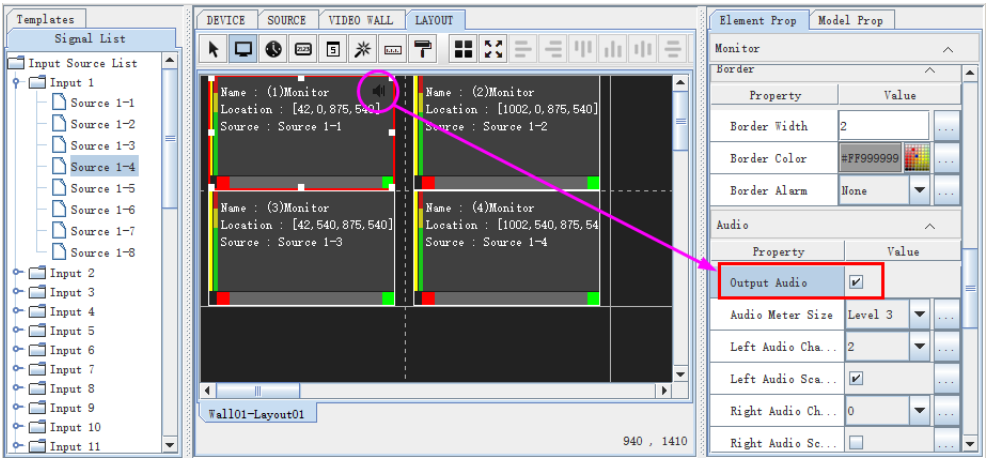


Figure 3.5-69 Designate Output Audio Source

3.5.4 Elements Layout

It will introduce the application of the tools in model configuration, and give some examples for impressive comprehension.

First, create a model, as shown in ***Figure 3.5-70***, then, we will add some elements to describe how to configure a layout for a model.

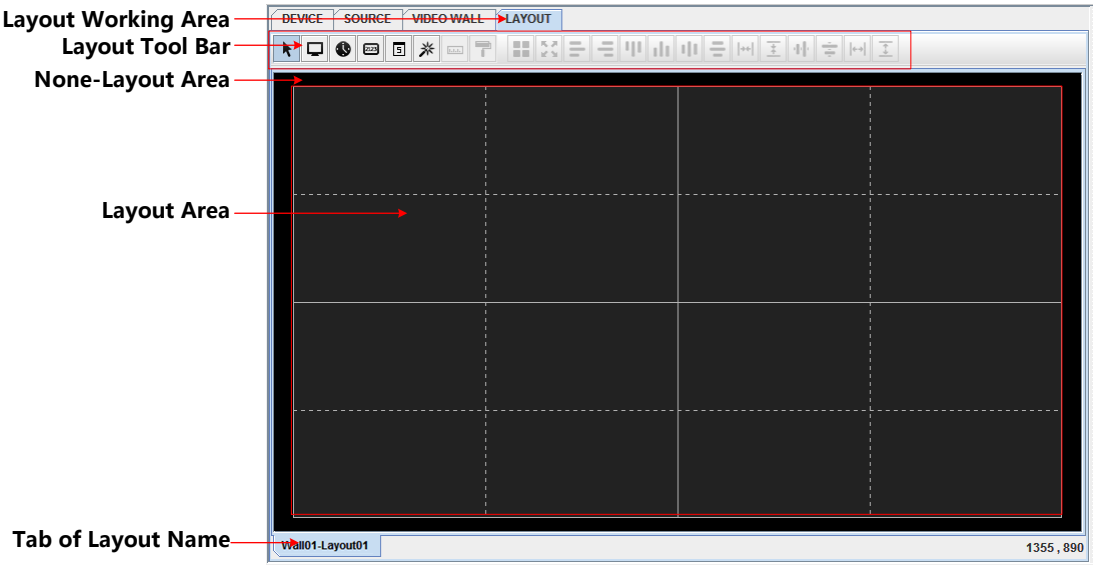


Figure 3.5-70 Working Area for Model Configuration

- **Layout Area**: all elements will be added and displayed in this area, and the physical video walls are corresponding to this area which is the light green area in working area for model configuration.
- **None-layout Area**: no element can be added or displayed in this area, and this area has no relationship with the physical video walls, it is the canvas for the layout area and surrounding it.

Tips

- The coordinates of the mouse cursor in layout area is displayed at the right bottom corner of the working area for model configuration, as shown in ***Figure 3.5-71***.

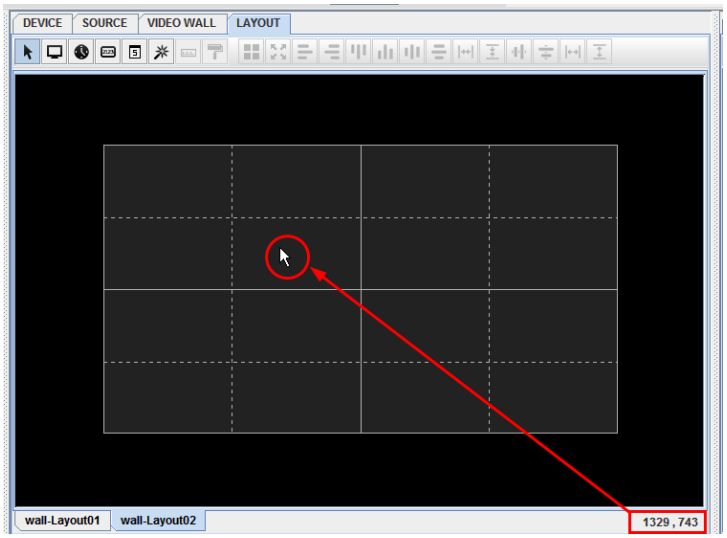


Figure 3.5-71 Coordinates for Mouse Cursor in Working Area for Model Configuration

When the mouse cursor is in layout area, and select some element windows, you can cooperate with tool buttons to activate the corresponding commands, the following will introduce these tools.

3.5.4.1 Add an Element Window

Take the monitor element for example, add a monitor element in the layout area, the others are the same.

■ **Use element tool to add an element window**

Operation: click the monitor tool button , the background of this tool button is changing to in blue , now you have chosen monitor tool.

- **Element with any size**: click the left mouse button to decide the starting coordinate of the top left corner, hold the button down and draw a rectangle, then release the left mouse button, it will add a monitor window, as shown in ***Figure 3.5-72***:

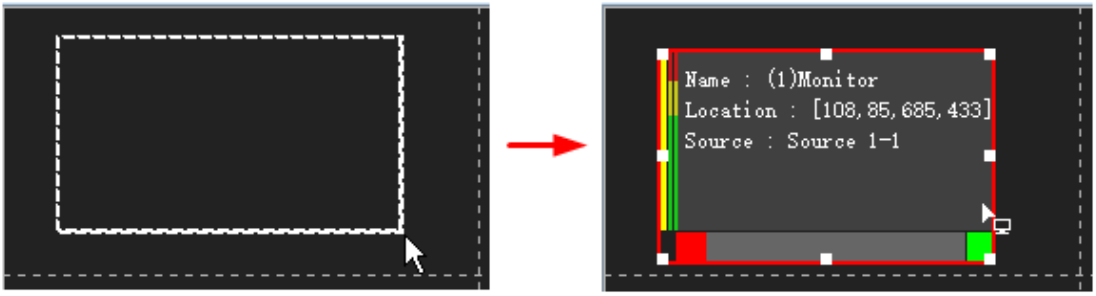


Figure 3.5-72 Add a Monitor Window

- **Element with accurate size**: first use the monitor tool  to add an element window, then click to select the element window in working area, it will display its properties about size and position in its **Element Prop** pane, modify these properties values to determine the accurate size and position for this window in video wall.

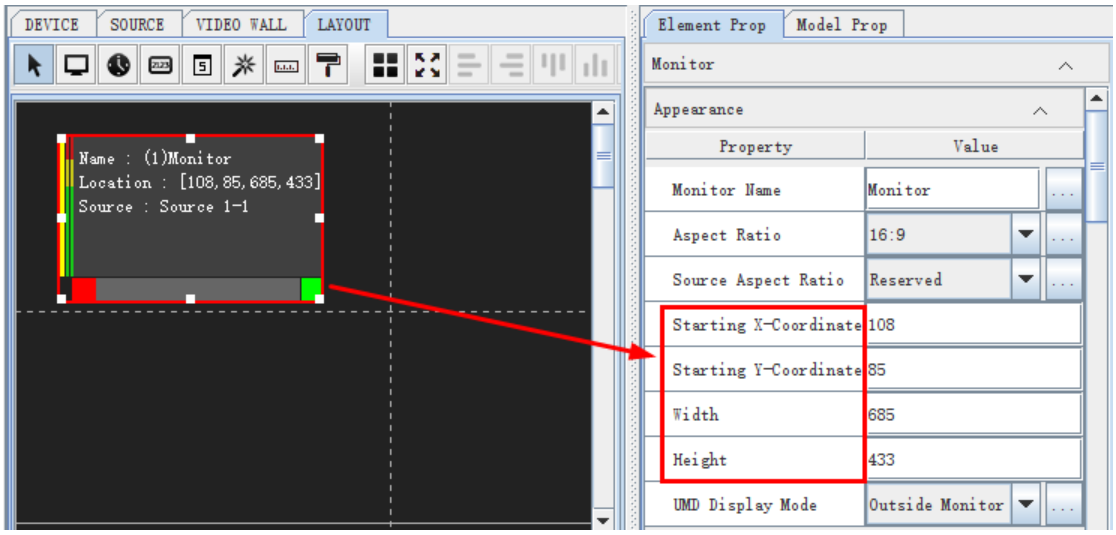


Figure 3.5-73 Position Properties for a Monitor Window

Tips

- After you have selected an element tool button, press and drag to add element windows consecutively, you will add the same kind of element until you select another element tool.

- Especially, the outline of an analog clock is a square, the ratio of the width and the height is 1.
- It is recommended not to overlap the element windows on a video wall, in case of the display effects, there will be an icon on each overlapped element window as prompt in layout area, and there will be a tip at the mouse cursor on the overlapped elements.

☐ Use split tool to add an element window

Especially, after add a monitor window, click split monitor tool button to divide the selected monitor into the desired numbers, refer to "3.5.4.3 Fill and Split" for details.

3.5.4.2 Select an Element Window

You can select only one element window, or multiple element windows, or all of the element windows in working area at a time.

Tips

- Select tool: click the select tool button in the edit tool bar, it will change its background color as when it is chosen.
- Mouse cursor: after select a tool button, click in the layout area, and it will focus the mouse cursor into the layout area, make sure you have move the mouse cursor into the layout area before you do the selection operation.

■ **Select a single element window**: click the Select tool in edit tool bar, and click on your desired element window, it will show a red rectangle surrounding the selected element window, and there are adjusting handles(white rectangle) on the element window, thus this element window is selected, as shown in ***Figure 3.5-74***

Figure 3.5-74 Single Selected Element Window

- **Select multiple element windows**: click **Select** tool in edit tool bar, click on a desired element window, then press Ctrl Key down, and click on the other desired element windows, thus to select multiple element windows. Or, after click the Select tool, press the left mouse button down, drag and draw a big rectangle to circle all the other desired element windows, release the left mouse button and these element windows are selected, as shown in ***Figure 3.5-75***:

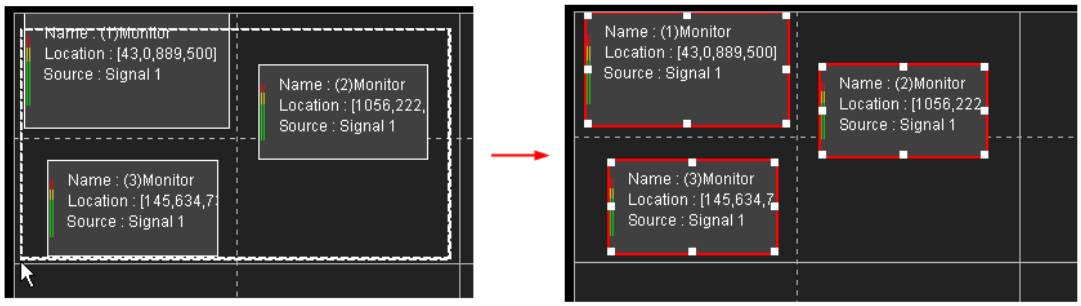


Figure 3.5-75 Multiple Selected Element Windows

- **Select all element windows**: click **Select** tool in edit tool bar, click in layout area to move the mouse cursor, press Ctrl+A key combination, or select **Edit→Select All** menu command, thus, all element windows in working area are selected.
- **Cancel Selection**: when there are selected element windows in working area, click in the blank position in layout area, or draw another element window, the selection will be canceled.

3.5.4.3 Fill and Split

- **Magic Wand**

It provides a magic wand tool to full fill the blank area between the existed element windows in layout area. Click **Magic wand** tool button, and click at a blank area, it will add a most large monitor window to full fill the blank.

It is used to full fill the blank area in video wall.

- **Split**

Use element tools to add multiple element windows, as shown in Part A in ***Figure 3.5-77***. Or, drawing a big enough element window, select it and click **Split** tool button, it will pop up a setting window, input the split parameters, as shown in ***Figure 3.5-76***, then it will be split into a few small windows with the same size, as shown in Part B in ***Figure 3.5-77***:

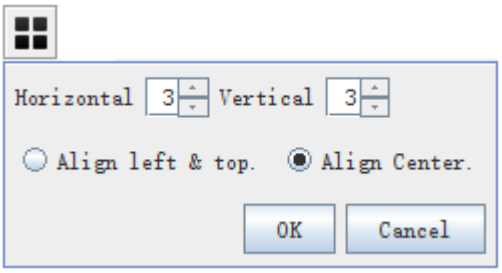


Figure 3.5-76 Split Setting

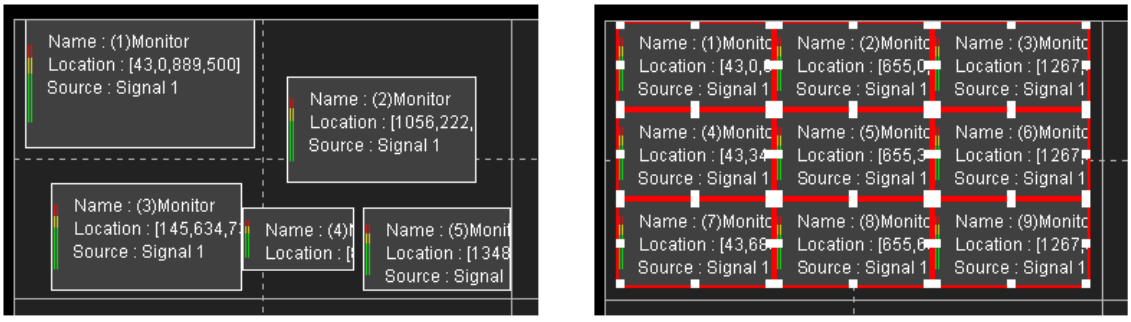


Figure 3.5-77 Split the Selected Element Window

- **Magic Wand+ Split**

In a model, you can use the magic wand tool to add a large enough monitor window which is not overlapped with the other monitors surrounding it, then use the split tool to divide the large monitor into a few desired small monitors with the same size, thus to make good use of the blank area.

For example: there is a Monitor 0 in a model, as shown in ,please use the magic wand and split tool to add a 2*4 equal small monitors beside it, the operations are as below:

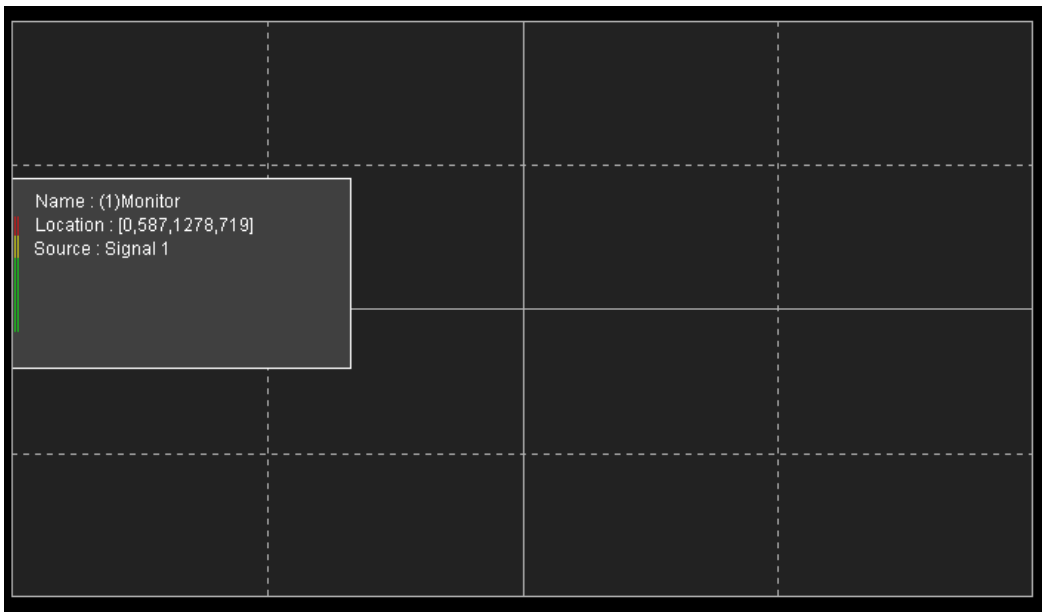


Figure 3.5-78 Add a Monitor Window

Step 1 Add a large enough monitor

Click the magic wand tool , move the mouse cursor into the layout area, and click at the right blank area besides Monitor 1, then it will a monitor in red rectangle, as shown in ***Figure 3.5-79***:

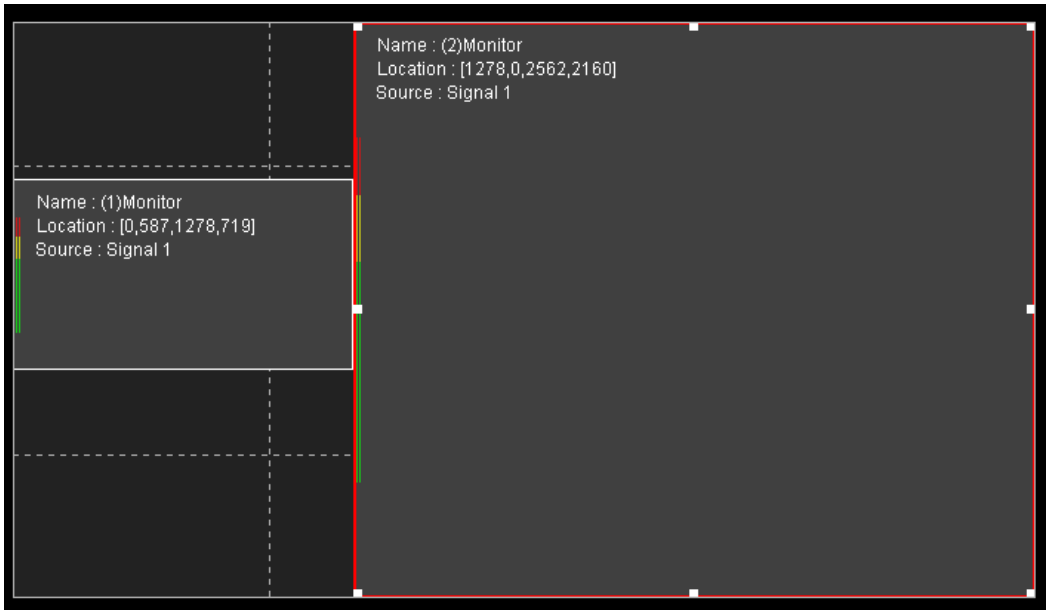


Figure 3.5-79 Fill the Blank Area

Step 2 Divide the monitor

Click the **Split** tool , and input the divided parameters as shown in ***Figure 3.5-80***:

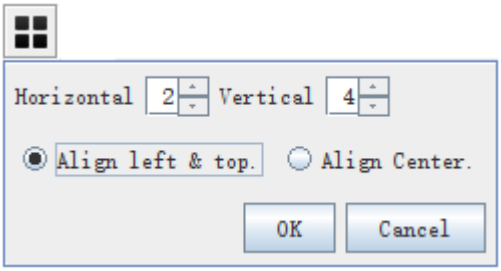


Figure 3.5-80 Split Setting

Click **OK** to confirm the split parameters, then the monitor is divided into eight small monitors with the same size, as shown in ***Figure 3.5-81***:

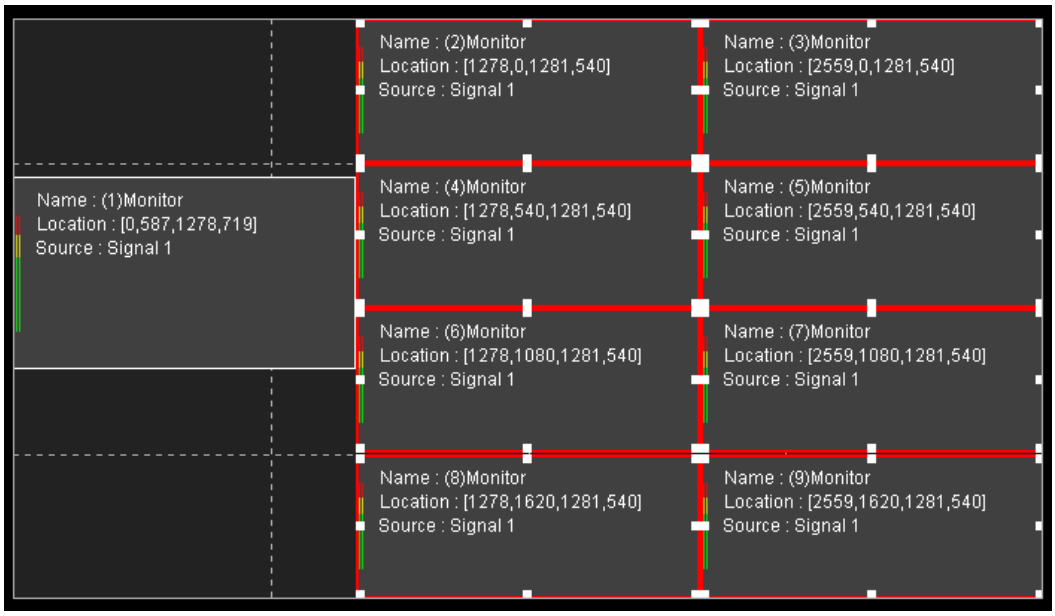


Figure 3.5-81 Split Windows

Tips

- Usually, when need to add equal sized monitors, or fill the blank area with monitor automatically, use the magic wand tool or split tool.

3.5.4.4 Adjust Window

1. Adjust the Window Size

The element added in layout area is display as a rectangle window, and the size of the window is decided by the height and width of the element.

- **Stretch an element**: select an element, and move the mouse cursor to the edge of the window, the cursor will change its shape into a double

-headed arrow like this: ↔, ↕, or ⤡, then press the left mouse button down, and drag it to be zoomed in or zoomed out, thus to change the size of the window, as shown in ***Figure 3.5-82***:

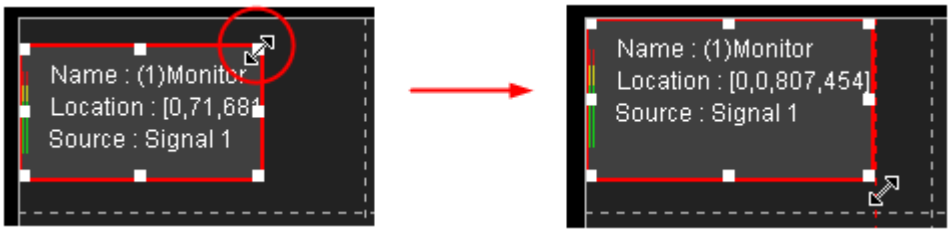


Figure 3.5-82 Stretch the Window

Stretch a window to change its height and width, or modify the values of the properties on height and width to change the size.

Tips

- The ratio of the element window can be set at any rate, 4:3, or 16:9, set the **Aspect Ratio** property.

For example: the function of the snap tool  using when changing the size of a monitor window.

First, click the Snap tool  , it will change its background color to label the snap as activated.

Then, when you move the mouse cursor to the left edge of a monitor window, the mouse cursor is changed into a double-headed arrow ↔, drag towards left to change the size of the window, and you can see there is a ruler with red dotted line to align with the grid lines, as shown in ***Figure 3.5-83***:

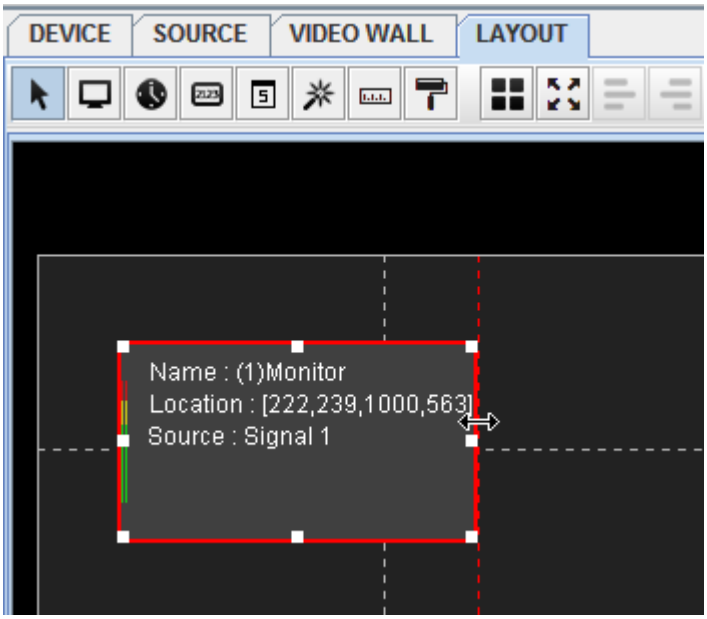


Figure 3.5-83 Snap Ruler

2. Adjust the Window Position

The element added in layout area is display as a rectangle window, and the position of the window is decided by the **Horizontal Start Position** and the **Vertical Start Position** of the element. Move the element window as the following methods:

- **Method 1**: select an element window, press the left mouse button down, and drag it to the desired position, and the coordinate of the window will be changed.
- **Method 2**: modify the values of the **Horizontal Start Position** property and the **Vertical Start Position** property of the element, then the position will be changed.

Tips

- The Snap tool is very helpful when moving the element window and aligning it to the grid lines on the video wall.

3.5.4.5 Common Edit Operation

1. Copy and Paste for Element

You could copy and paste an element in working area in Model configuration window. The operations are as below:

Click to select an element window as the original one, and click **Copy** tool

button  in tool bar, or select **Edit→Copy** menu command, then click **Paste** tool button  , or select **Edit→Paste** menu command, thus, the new element window will be pasted at the lower right direction whose coordinate of the top left corner offset (100,100) relative to the original element window, and complete the copy and paste.

For example: the top left corner of the original monitor window is (200,0), copy it, and paste it, the top left corner of the new monitor is (300,100), as shown in ***Figure 3.5-84***, the new one is at the lower right direction of the original one, and the distance is (100,100).

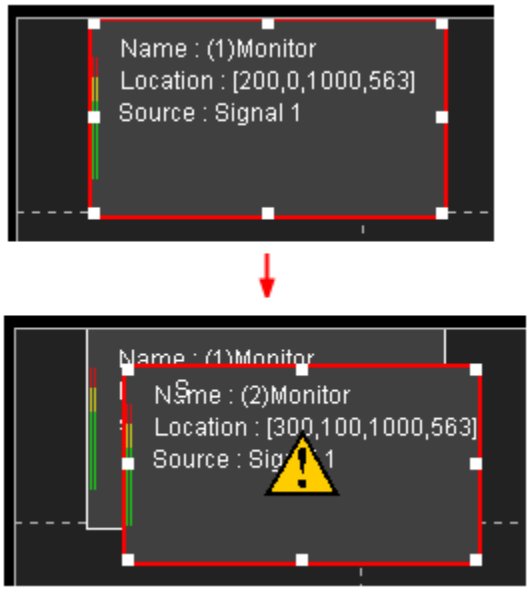


Figure 3.5-84 Copy and Paste

If you do the paste operation more than one times, you can see the new monitors are overlapping the last one, and move the lower right direction, each time (100,100) as a step, as shown in ***Figure 3.5-85***:

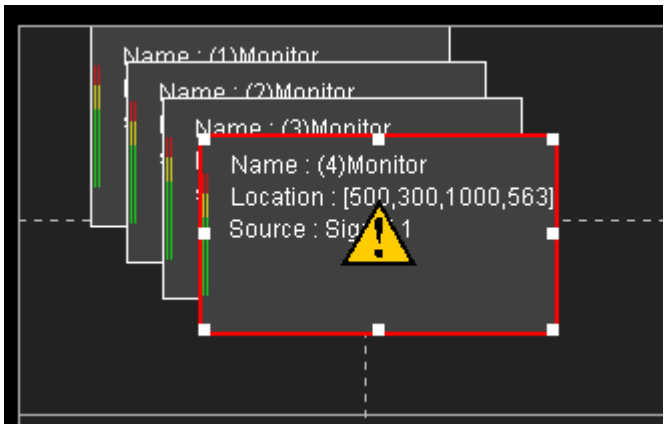


Figure 3.5-85 Multiple Paste Operations

2. Delete Element

You can delete element by the following methods:

- Method 1: Use the Delete command. Click **Delete** button in tool bar, or select **Edit→ Delete** menu command, it will delete the selected elements in working area.
- Method 2: Use the Clear command. Click **Clear** button in tool bar, or select **Edit→ Clear** menu command, it will delete all elements whether selected or not in working area.
- Method 3: Use the key. Click to select an element or more, then press **Delete** key to delete the selected element.

Tips

- Use Delete key to delete the selected elements.
- All of the above deletion can be canceled by Undo command.

3. Copy Size and Copy Properties

- **Copy Size**

Copy the size of an element window to another one.

Operation: the size of monitor A and monitor B are as shown in ***Figure 3.5-86***, select monitor A, and click the **Copy Size** tool, then click the target monitor B whose size will be as big as monitor A's, the new size of monitor B is as shown in ***Figure 3.5-87***:

Figure 3.5-86 Select Monitor A

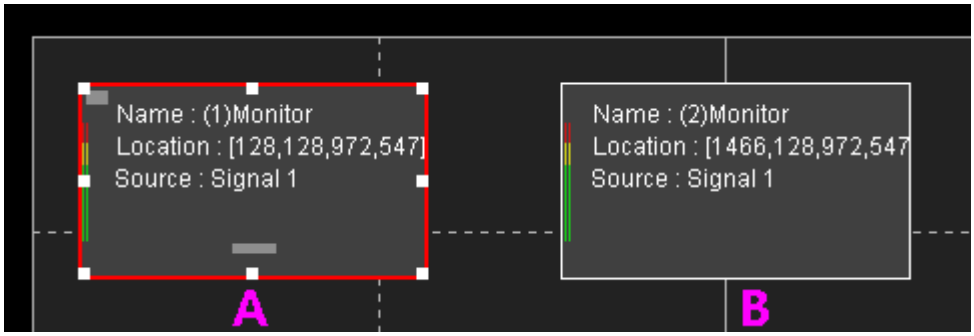


Figure 3.5-87 Monitor B with the New Size

The value of **Height** and **Width** of monitor A and monitor B are the same.

- **Copy Properties**

Copy the properties of an element window to another one.

Operation: the properties of monitor A and monitor B are as shown in ***Figure 3.5-88***:

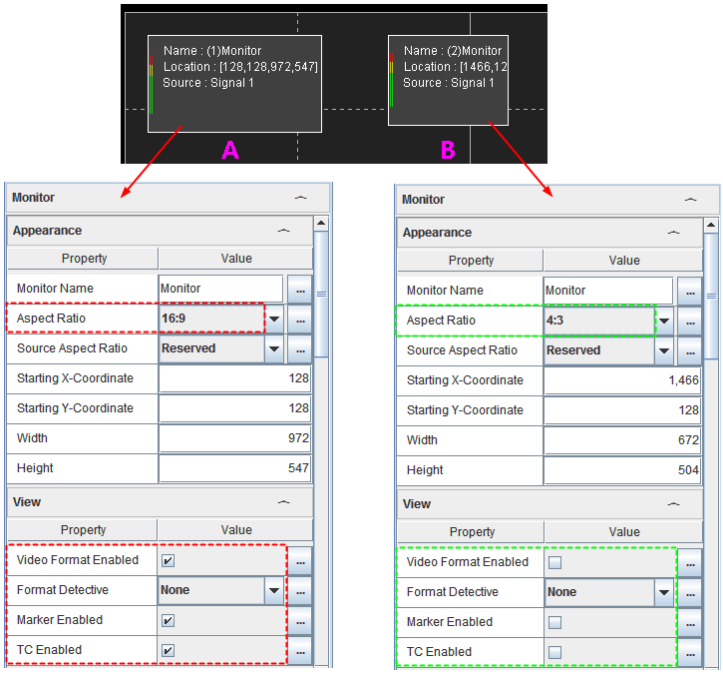


Figure 3.5-88 Properties of Monitor A and Monitor B-Before Copy Properties

Select monitor A, and click the **Copy Properties** tool  , then click the target monitor, the properties except **Horizontal Start Position**, **Vertical Start Position**, **Width** and **Height** will all be copied to monitor B, the new monitor B is as shown in ***Figure 3.5-89***:

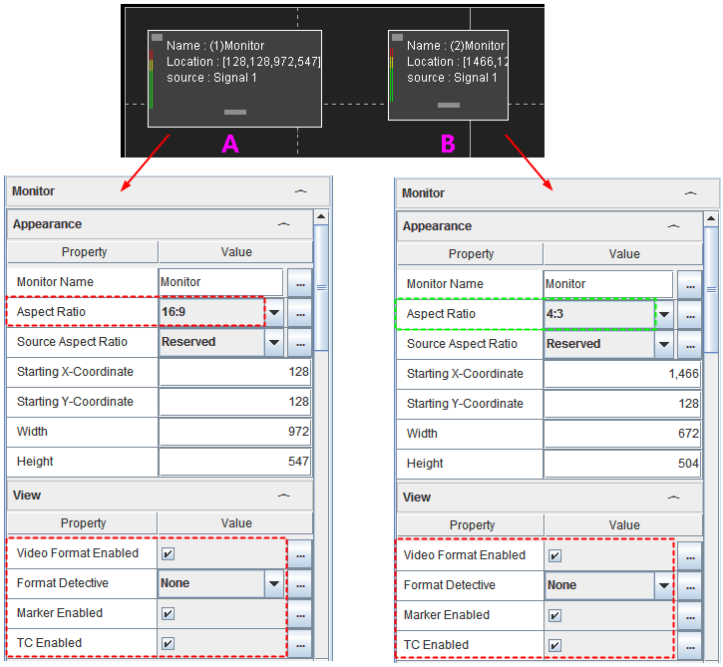


Figure 3.5-89 Properties of Monitor A and Monitor B-After Copy Properties

Tips

- Use **Delete** key to delete the selected elements.
- The properties for **Copy Size** command are the Width property and the Height property.
- The properties for **Copy Properties** command are the properties except **Horizontal Start Position, Vertical Start Position, Width** and **Height**.

3.5.4.6 Align Window

It provides some align commands for deal with the position relationship of element windows, such as **Align Left, Align Right, Align Top, Align Bottom, Align Vertical Center, Align Horizontal Center, Horizontal Docking, Vertical Docking, Horizontal Equal Spacing, Vertical Equal Spacing, Equal Width**, **Equal Height**.

It will give some examples for these commands as below:

1. **Align**

The common align commands: **Align Left, Align Right, Align Top,** and **Align Bottom** are all based on the edge of the element window. Take the

Align Left command for example to express how to align element windows.

For example: there are three monitor windows which are labeled as A, B and C in a model. Click **Select** tool , press the left button down and drag a rectangle to involve all of the three windows, as shown in ***Figure 3.5-90***.

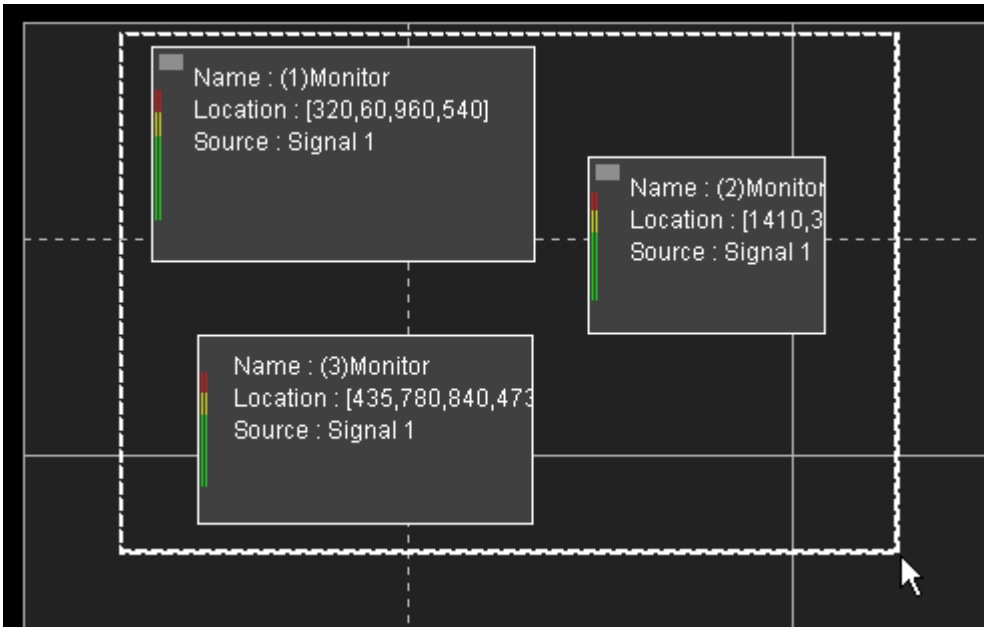


Figure 3.5-90 Select the Elements to Be Aligned

Then, click the **Align Left** tool , they will align to the most left edge of all these three monitors, as shown in ***Figure 3.5-91***:

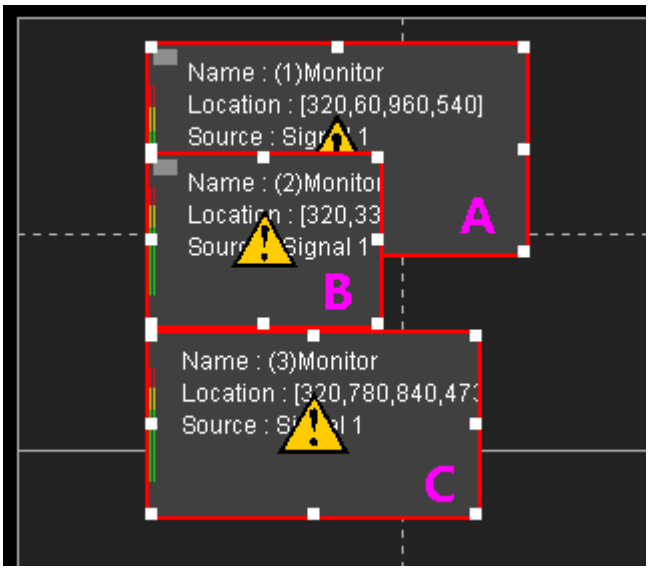


Figure 3.5-91 Align Left

2. Center

There are Align Vertical Center command and Align Horizontal Center command which will align based on the center of the element windows. Do Align Vertical Center command, and all of the selected element windows will align in a line vertically.

For example: these three monitors are aligned vertical center, as shown in ***Figure 3.5-92***:

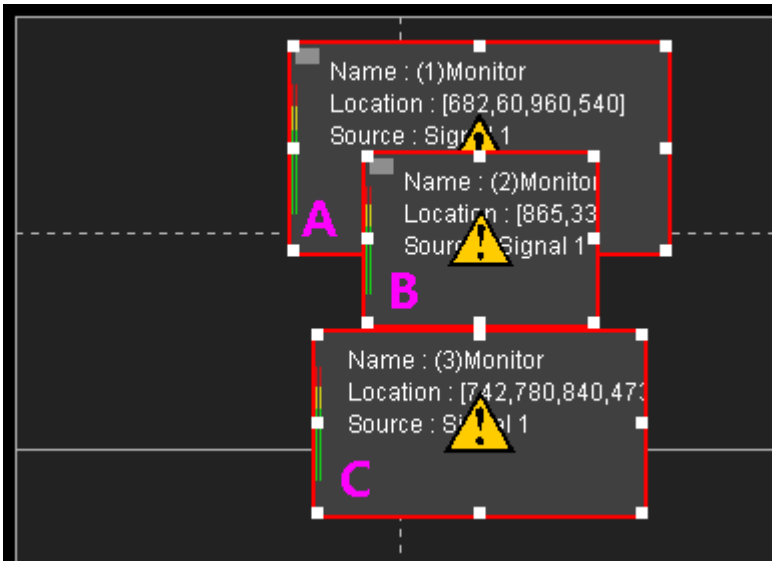


Figure 3.5-92 Align Vertical Center

For example: These three monitors are aligned Horizontal center, as shown in ***Figure 3.5-93***:

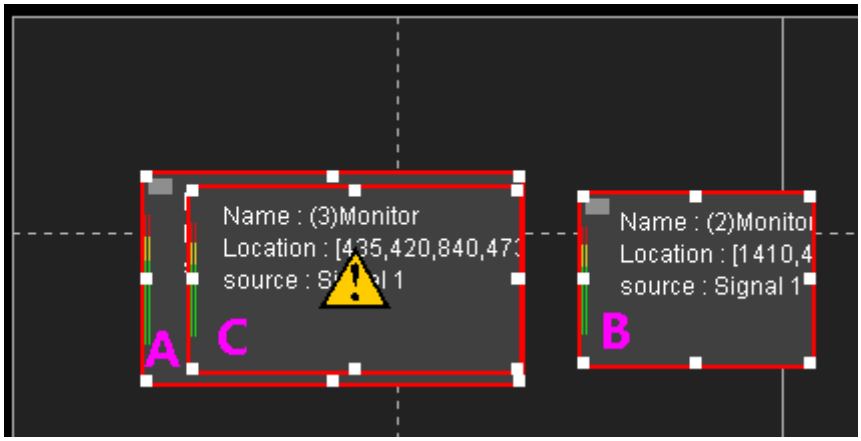


Figure 3.5-93 Align Horizontal Center

3. Remove gaps

There are **Horizontal Docking** command and **Vertical Docking** command which will remove the gap between every two adjacent element windows in horizontal direction and vertical direction separately.

For example: there are three monitor windows which are labeled as A, B and C in a model. Click the select tool, press the left button down and drag a rectangle to involve all of the three windows, as shown in ***Figure 3.5-94***:

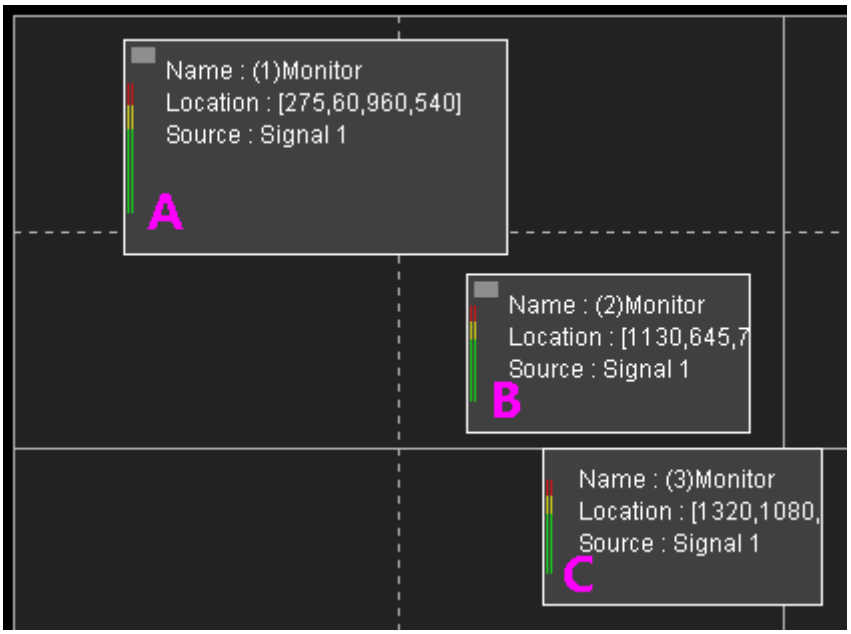


Figure 3.5-94 Select Elements

Click **Horizontal Docking** tool, it will remove the horizontal gaps between the three elements, and it will arrange the elements from left to right based on the most left edge of these elements, as shown in ***Figure 3.5-95***:

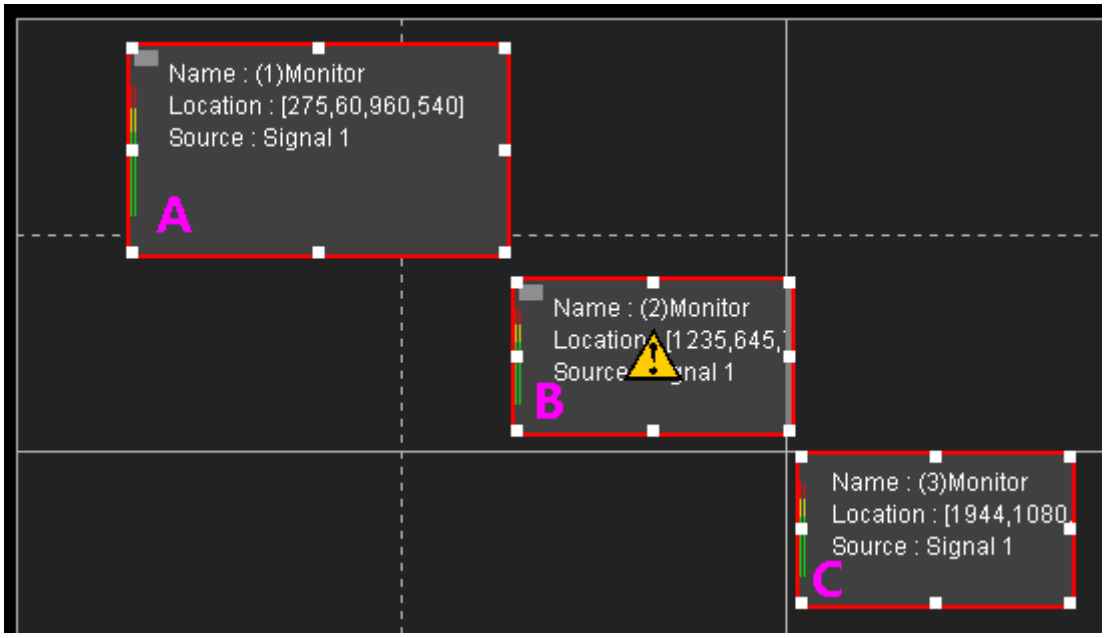


Figure 3.5-95 Horizontal Docking Elements

Click **Vertical Docking** tool , it will remove the vertical gaps between the three elements, and it will arrange the elements from top to bottom based on the most top edge of these elements, as shown in ***Figure 3.5-96***:

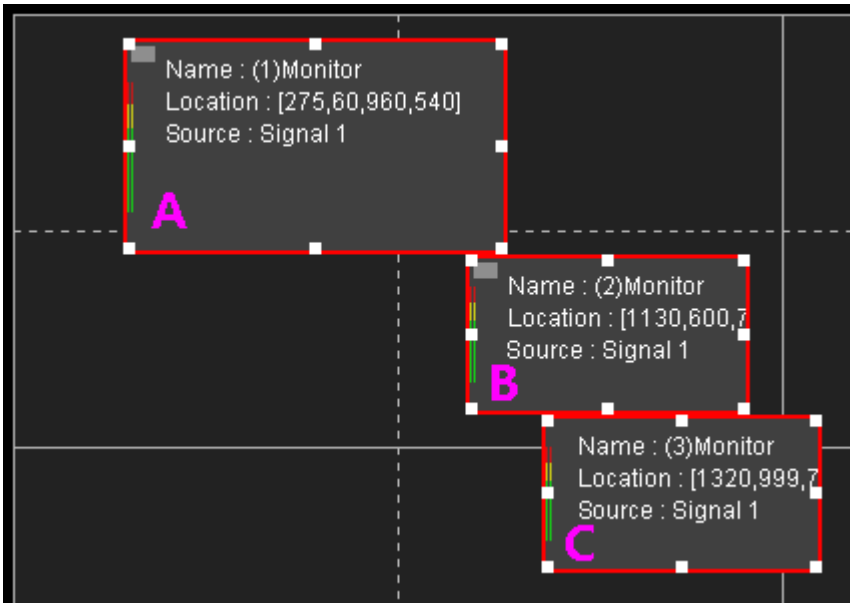


Figure 3.5-96 Vertical Docking Elements

Tips

- It does not support to overlap elements in a video wall, so use these align tool to arrange their positions.

4. Equal Distance

There are **Horizontal Equal Spacing** command and **Vertical Equal Spacing** command which will equal the center point distance between every two adjacent element windows in horizontal direction and vertical direction separately.

- **Horizontal Equal Spacing**: reallocate the new horizontal center for the element windows which is between the most left element window and the most right element window of the entire selected element windows. Thus, the average distance between every two center points of the adjacent selected elements is the same.
- **Vertical Equal Spacing**: reallocate the new vertical center for the element windows which is between the most top element window and the most bottom element window of the entire selected element windows. Thus, the average distance between every two center points of the adjacent selected elements is the same.

For Example: there are four monitor windows, as shown in ***Figure 3.5-97***:

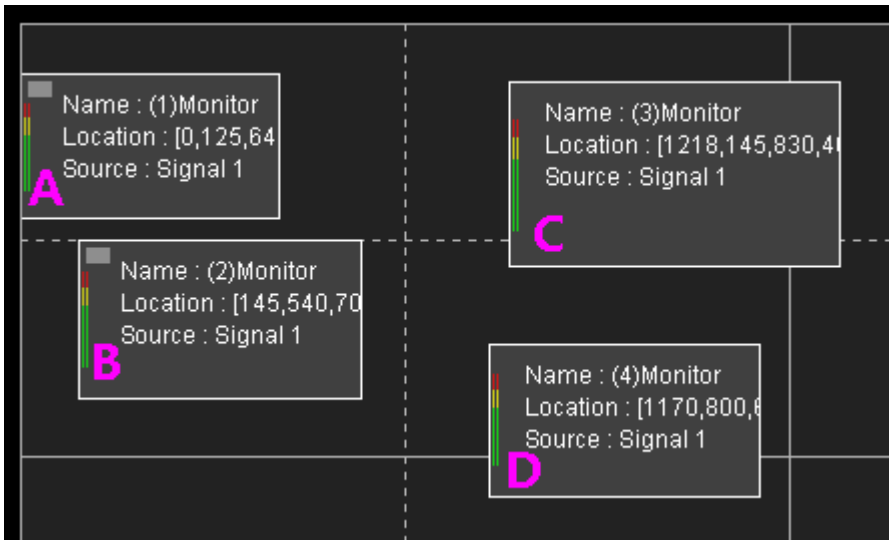


Figure 3.5-97 Select Elements

Select them, and click **Horizontal Equal Spacing** button, the new position for them are as shown in ***Figure 3.5-98***, the horizontal distance between every two center points of the adjacent selected elements is the same.

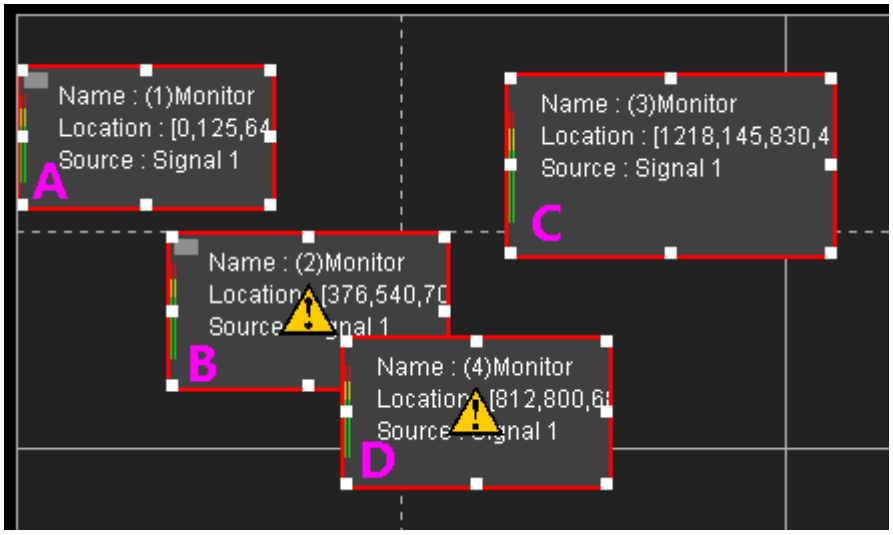


Figure 3.5-98 Horizontal Equal Spacing Elements

Or, click **Vertical Equal Spacing** button, the new position for them are as shown in ***Figure 3.5-99***, the vertical distance between every two center points of the adjacent selected elements is the same.

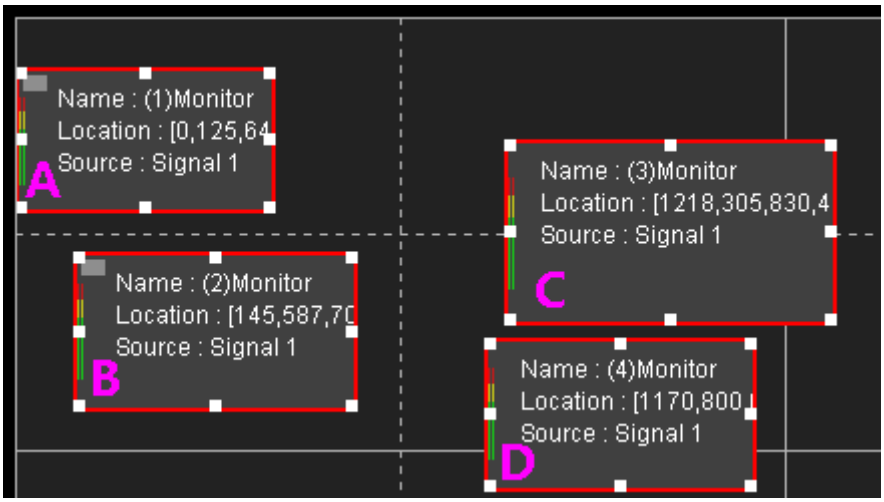


Figure 3.5-99 Vertical Equal Spacing Elements

5. Equal Width/Height

There are **Equal Width** command and **Equal Height** command to reassign the Width and the Height between element windows separately.

- **Equal Width**: assign the average width to each selected element window. The average width is equal to the result that is the total width from the left edge to the right edge of the entire selected elements divided by the number of the selected elements.
- **Equal Height**: assign the average height to each selected element window. The average height is equal to the result that is the total height from the top edge to the bottom edge of the entire selected elements divided by the number of the selected elements.

Example1: there are three monitor windows, the total width of these selected elements is labeled by the double-headed arrow, as shown in ***Figure 3.5-100***:

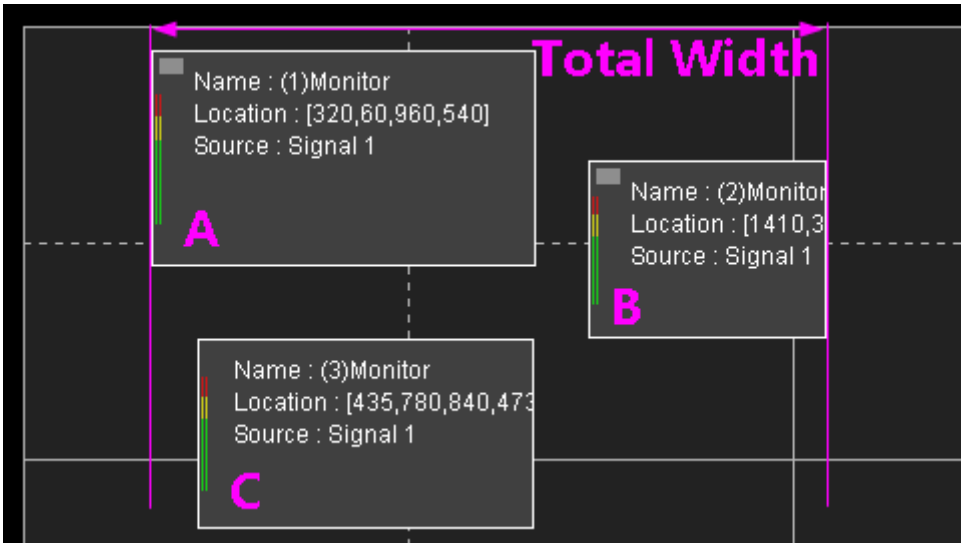


Figure 3.5-100 Total Width of the Selected Elements

Click the **Equal Width** tool , the width for each element is as shown in ***Figure 3.5-101***, and the starting y coordinate for A, B, C is 60, 335, 780 separately, the same as their originals.

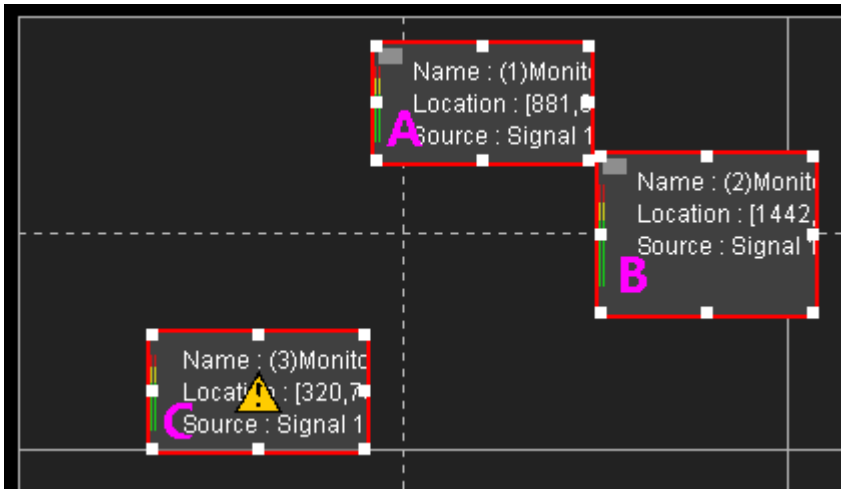


Figure 3.5-101 Equal Width

Example2: there are three monitor windows, the total height of these selected elements is labeled by the double-headed arrow, as shown in ***Figure 3.5-102***:

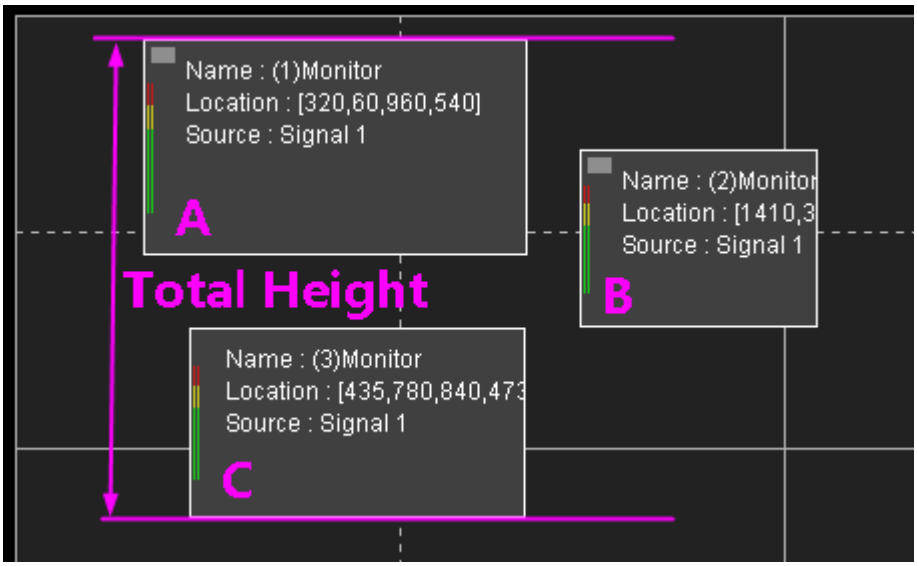


Figure 3.5-102 Total Height of the Selected Elements

Click the **Equal Width** tool , the width for each element is as shown in ***Figure 3.5-101***, and the starting y coordinate for A, B, C is 320, 1410, 435 separately, the same as their originals.

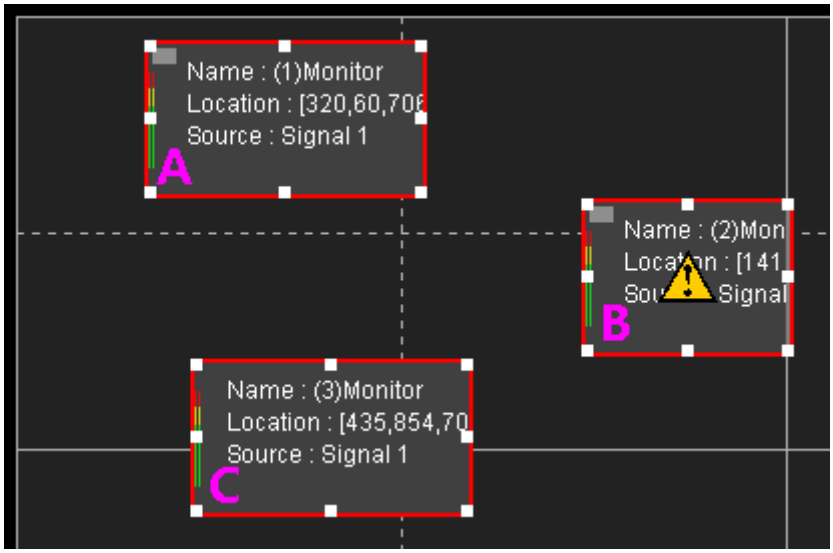


Figure 3.5-103 Equal Height

Tips

- The aspect ratio of the element windows which are before and after equal width or equal height operation are the same.

6. Overlap

When the monitor windows overlap, there will be an overlap icon ⚠ on each overlapped monitor window, and move the mouse cursor on the overlapped monitor window, there will a tip to prompt which monitor is overlapped with the cursor location one.

For example: as shown in ***Figure 3.5-104***, monitor A is overlapped with monitor B, and monitor C is not overlapped, so there is overlap icon on monitor A and monitor B.

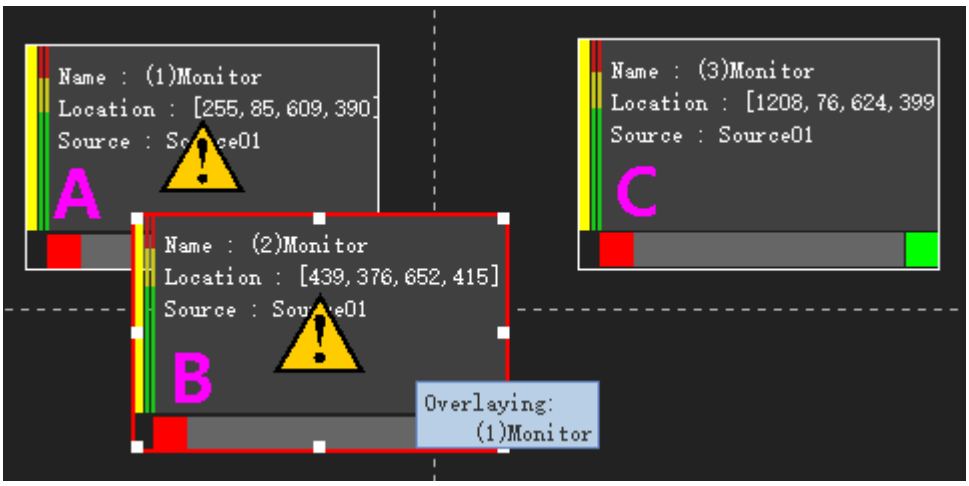


Figure 3.5-104 Monitor Overlap

3.6 Other Functions

It will introduce some assistant function in AURORA, such as **Import** and **Export, Restore Factory Default, Device Information, Change Authorization Code** and **Language Selection**.

3.6.1 Import and Export

Select **File→Import/Export** menu command to copy or backup the data on video wall, model and screens.

3.6.1.1 Export

You can select **Export** command to export all of the project data, or only the Layout data, the instructions are as below.

Select **File→Export** menu command, it will pop up the export dialog box, select the export type, as shown in ***Figure 3.6-1***:

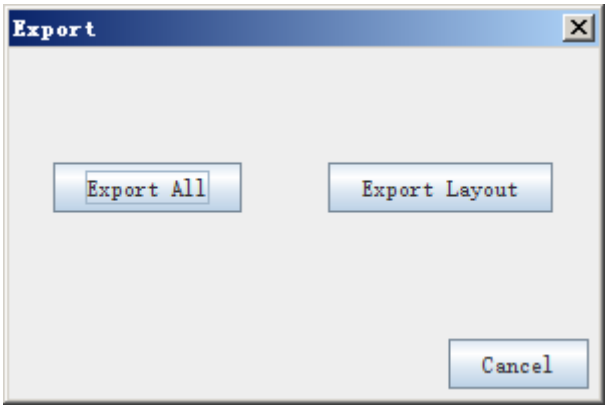


Figure 3.6-1 Select Export Type

1. **Export All**

Click **Export All** button to export all of the project data, it will prompt the export directory dialog box, as shown in ***Figure 3.6-2***:

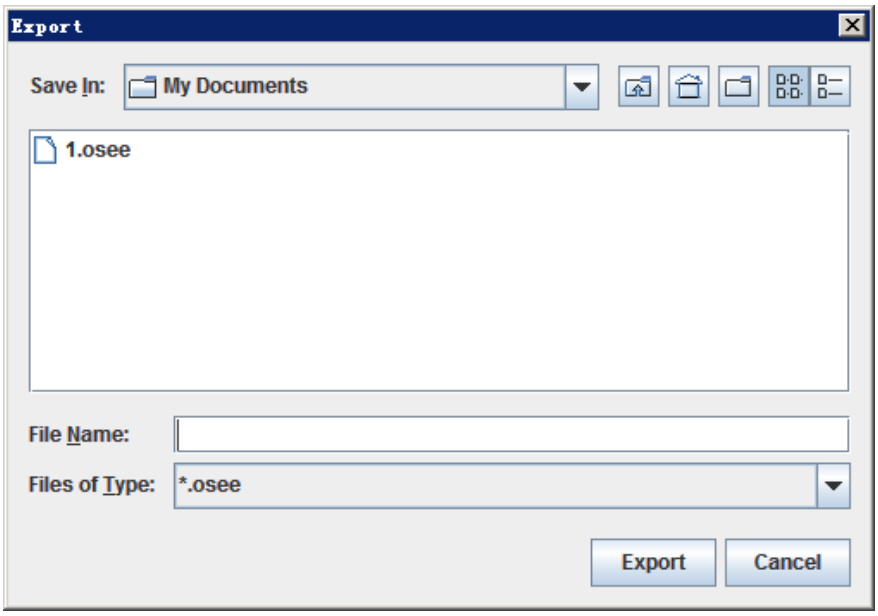


Figure 3.6-2 Export Dialog Box

Select an export file, and click **Export** button, it will execute the export operation. If the name of the export file is already existed, it will pop up the prompt, as shown in ***Figure 3.6-3***:

Figure 3.6-3 Prompt for Reduplicated File

If the export operation is successful, it will pop up a successful prompt, such as shown in ***Figure 3.6-4***, click **OK** to confirm it.

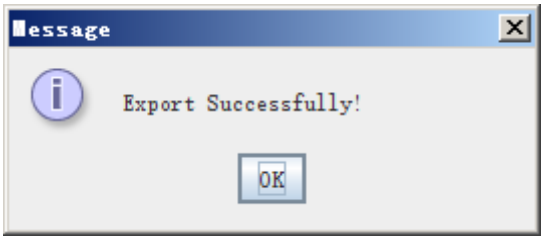


Figure 3.6-4 Prompt for Successful Export

2. Export Layout

Click **Export Layout** button to export the layout data, it will prompt the export directory dialog box, as shown in ***Figure 3.6-5***:

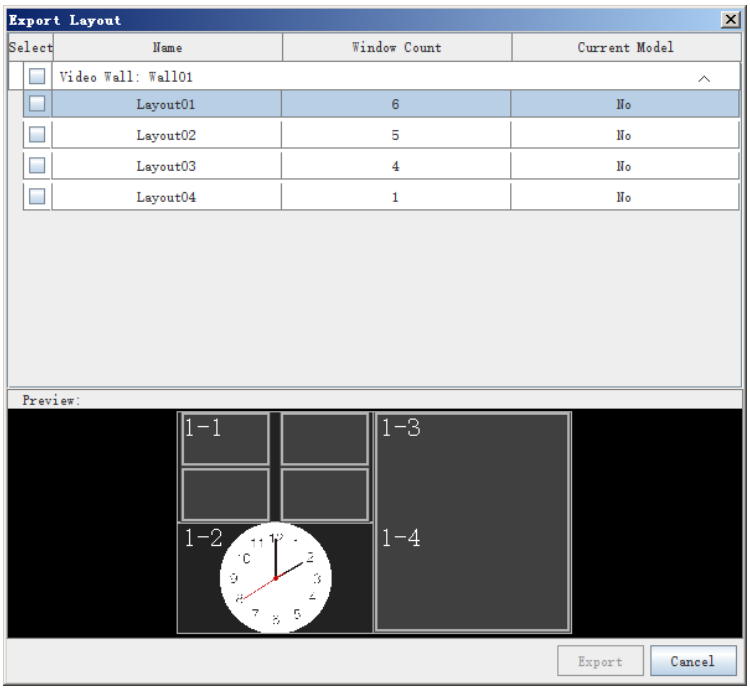


Figure 3.6-5 Export Layout Dialog Box

Click the selection box in the **Select** column to choose the export layout, and check it in the **Preview** window, you can select one or more layouts to export.

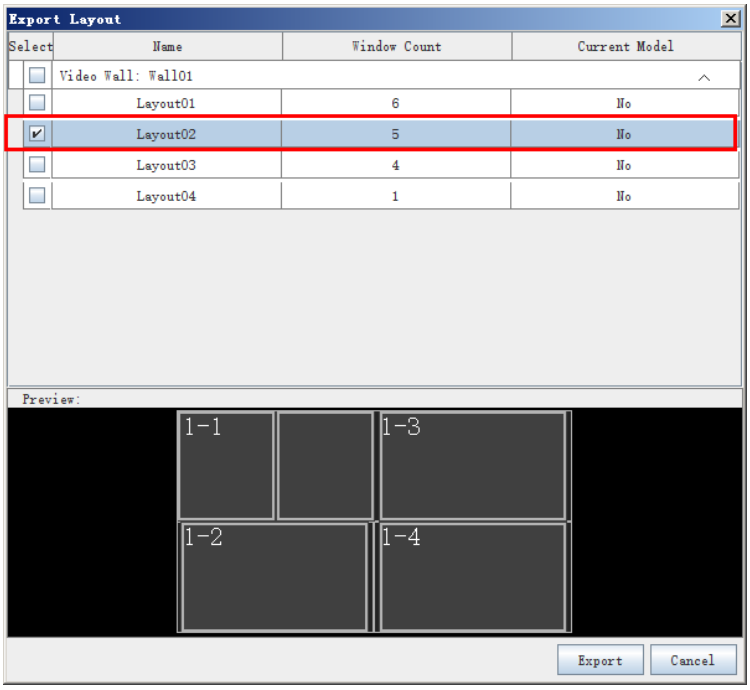


Figure 3.6-6 Select a Layout Dialog Box

Click **Export** button to confirm the selection, set the export directory, and

click **Export** button, it will execute the export operation.

3.6.1.2 Import

Select **File→Import** menu command, it will pop up the Import dialog box, as shown in ***Figure 3.6-7***:

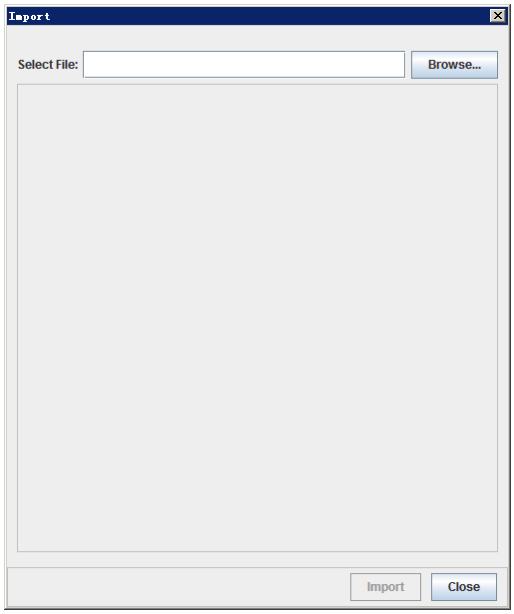


Figure 3.6-7 Import Dialog Box

Click **Browse** button to select a file to import, it will pop up the import dialog box, as shown in ***Figure 3.6-8***, click **Open** button to confirm the selection.

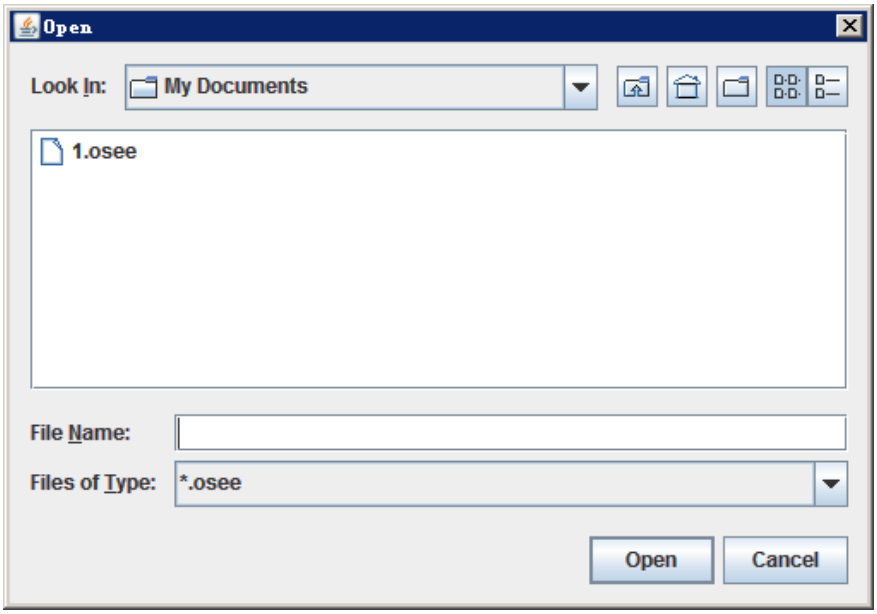


Figure 3.6-8 Import Dialog Box

If the file contains the project data, it will import all project data, and if the file only contains the layout data, it will prompt for a dialog for layout selection.

1. Import All

It will show a caution for importing operation, as shown in ***Figure 3.6-9***. Click **Import** button to start the import operation, and the import information will list at the center of the import dialog box.

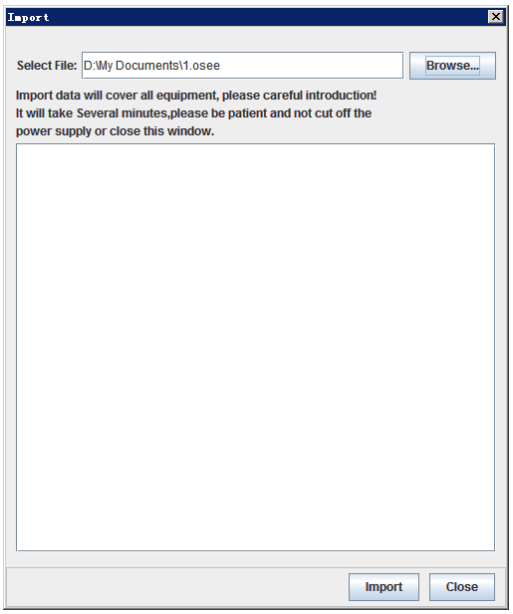


Figure 3.6-9 Prompt for Overwrite

It will pop up a successful prompt after completing import. Otherwise, click **Close** button to cancel the import operation.

2. Import Layout

It will show a caution for importing operation, as shown in ***Figure 3.6-10***. Choose layout at the left list, and check it in the **Preview** window below, select the target wall at the right list, then click **Import** button to start the import operation.

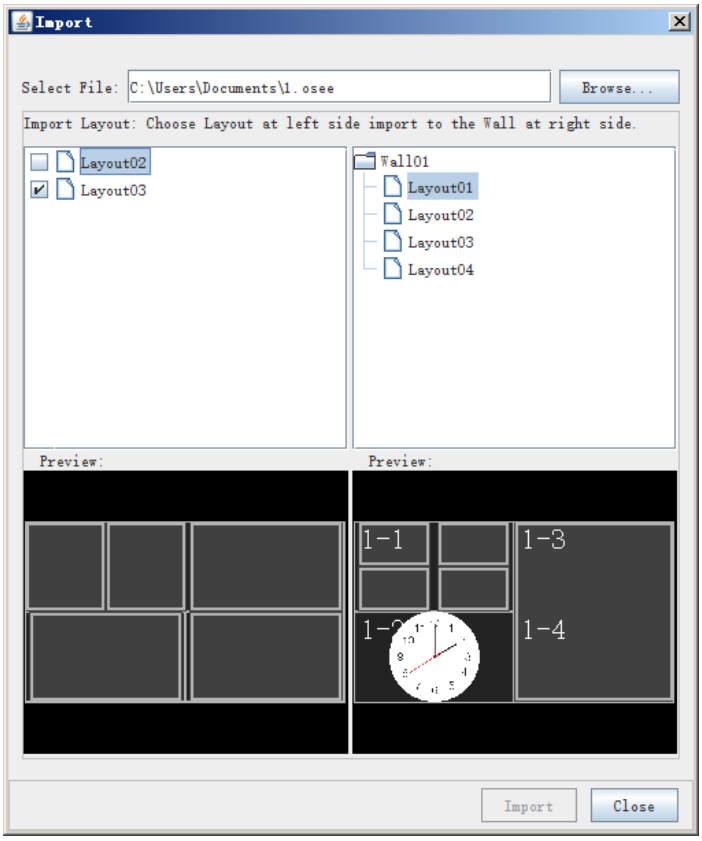


Figure 3.6-10 Import Layout Dialog Box

Tips

- If the name of the selected layout is as the same as the existed one in the target project, there will be a suffix “-Impt” added at the end of the imported new one, the old one will not be covered.

3.6.2 Restore Factory Default

Use the Restore Factory Default command to restore the factory defaults.

Click **Help→ Restore Factory Default** menu command, it will pop up the prompt for confirming whether to restore the factory defaults, as shown in ***Figure 3.6-11***.

Click **Yes** to restore the factory defaults, then restart the multi-image processor after one minutes at least. Click **No** to cancel the restore operation.

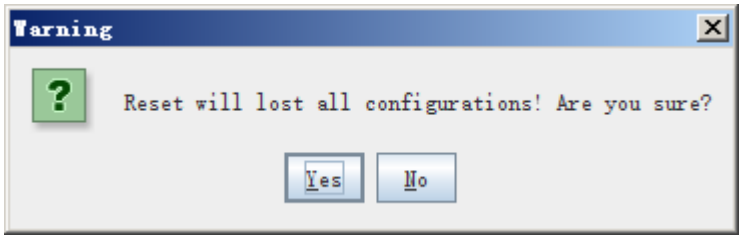


Figure 3.6-11 Prompt for Restore Factory Default

Tips

- The **Help→ Restore Factory Default** operation will not restore the default IP address, but you could restore the default IP address by short-circuit an electronic element in the control module of the multi-image processor. Refer to the manual for the corresponding multi-image processor.

3.6.3 Device Information

Use the device information command to check the devices in the project.

Click **Help→ Device Information** menu command, it will pop up the device information list, as shown in ***Figure 3.6-12***, including device information, device name, version and so on.

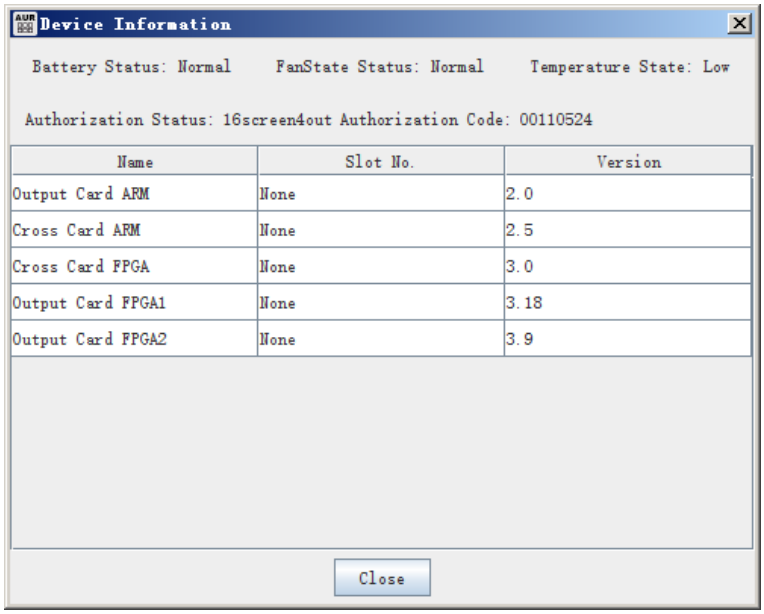


Figure 3.6-12 Device Information List

3.6.4 Language

Use Language command to switch language between English and Chinese in the software.

Click **Help→ Language** menu command, it will show the drop down list for language selection: **Chinese**, **English**, choose one, and the software language will be changed to the corresponding language item.

3.6.5 Change Authorization Code

Use the **Change Authorization Code** command to change the authorization code of the multi-image processor, thus to satisfy different requirement for device display capacity.

Click **Help→ Change Authorization Code** menu command, it will pop up Change Authorization Code dialog box, as shown in ***Figure 3.6-13***, input a code in the Enter Authorization Code field, and click **OK** to confirm the modification.

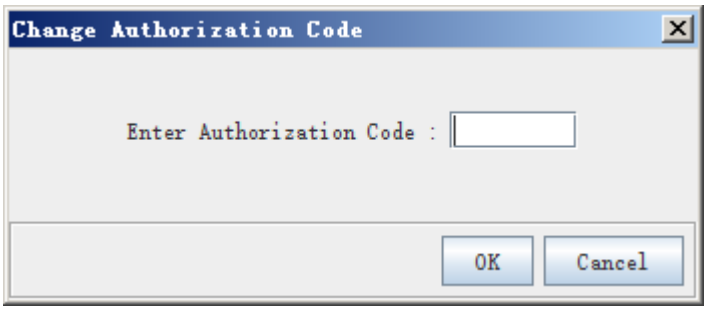


Figure 3.6-13 Change Authorization Code Dialog Box

Then, it will pop up a warning for authorization code changing, as shown in ***Figure 3.6-14***, click **Yes**, and you should keep the multi-image processor being powered up at least two minutes during the authorization code changing, thus to complete saving the changes.

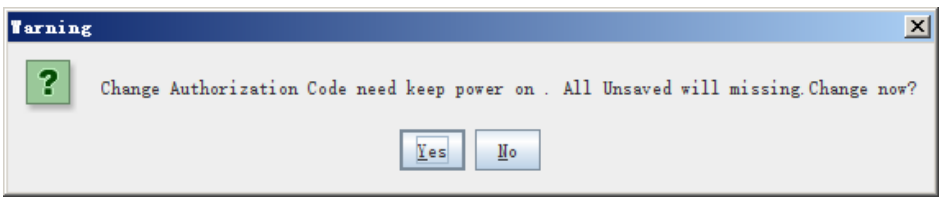


Figure 3.6-14 Prompt for Change Authorization Code

Warning

- Make sure you have entered a valid authorization code to the device,

otherwise the device may not work normally.

3.6.6 Hardware Update

The **Hardware Update** command contains two items: Zip File and Update, as shown in ***Figure 3.6-15***:

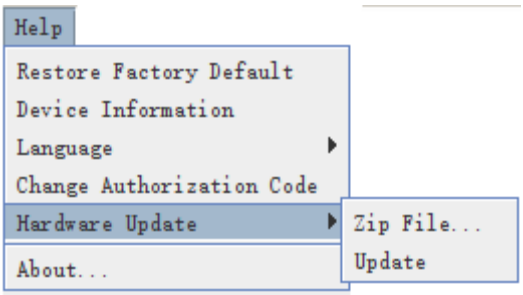


Figure 3.6-15 Hardware Update

Aurora software supports update operation only with the file of oseeupdate type. For we offer the update file with the bin type, so you should use the **Zip File** command to convert the update file from bin type to oseeupdate type.

1. **Zip File**

Use **Zip File** command to convert the update file from bin type to oseeupdate type. The relationships between the element type and the file type are as shown in the following table, the instructions are as below:

Element Type	File Type
CrossCard ARM	Aurora_CrossCard_ARM*
Output ARM	Aurora_OutputCard_ARM*
Output FPGA	Aurora_OutputCard_FPGA*
CrossCard FPGA	Aurora_InputCard_FPGA*

Step 1 Zip File

Click **Help→ Hardware Update→ Zip File** menu command, it will pop up Zip File dialog box, as shown in ***Figure 3.6-16***, click the corresponding button to select the zip file type. For example, zip the Output ARM file. Click **Output ARM** button, it will pop up the Select dialog box, as shown in ***Figure 3.6-17***:

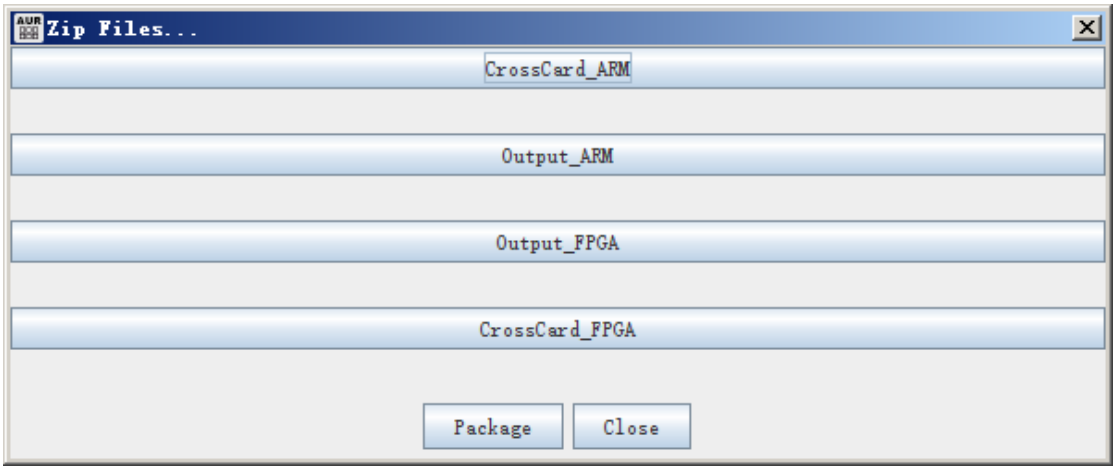


Figure 3.6-16 Zip File Dialog Box

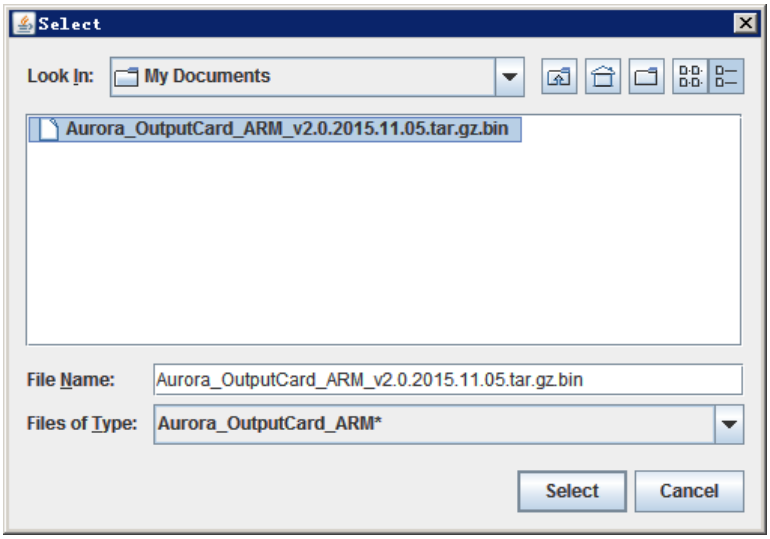


Figure 3.6-17 Select a Zip File Dialog Box

Step 2 Zip and Save

Select the target file and click **Select** button to confirm the selection, the file is loaded to the Zip file dialog box, as shown in ***Figure 3.6-18***. Click **Package** button to confirm the package operation, it will prompt the Save dialog box, as shown in ***Figure 3.6-19***:

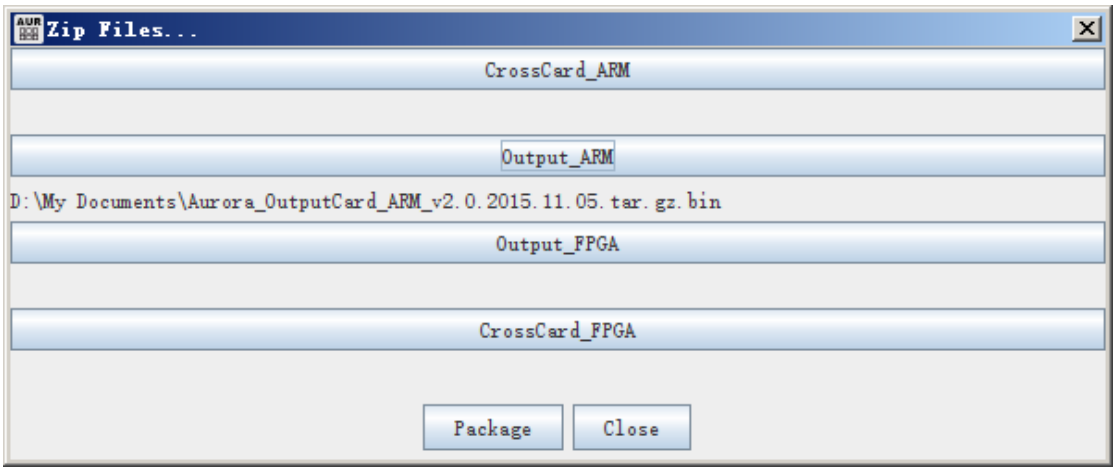


Figure 3.6-18 Load the Zip File

Input the file name, and appoint the save directory, you can use the default one. The file type is oseeupdate, that is the file suffix is ".oseeupdate", click **Save** button to confirm the save operation, it will pop up a prompt for saving successfully, as shown in ***Figure 3.6-20***.

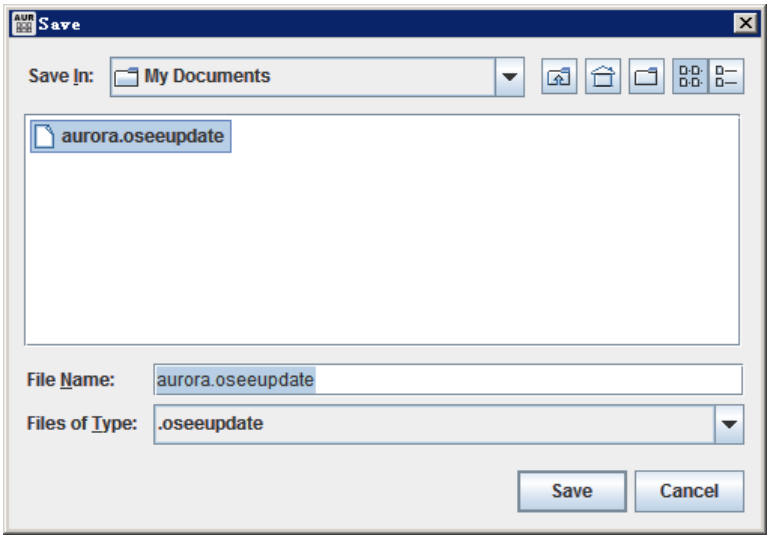


Figure 3.6-19 Save the Zip File

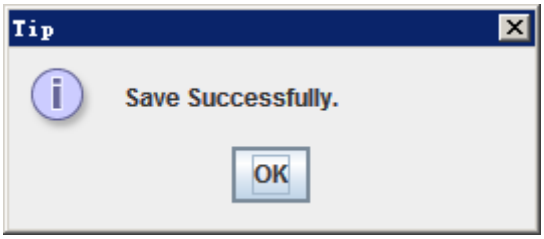


Figure 3.6-20 Prompt for Save Successfully

2. Update

Aurora software supports update operation only with the file of oseeupdate type. The update file has been converted to be oseeupdate type refer to the above Zip File operation. The update operations are as following instructions:

Step 1 Select the update file

Click **Help→ Hardware Update→ Update** menu command, it will pop up upgrade dialog box, as shown in ***Figure 3.6-21***, click the **Select upgrade package** button to select an update file, it will pop up the Open dialog box, as shown in ***Figure 3.6-22***, click **Open** button to load this file.

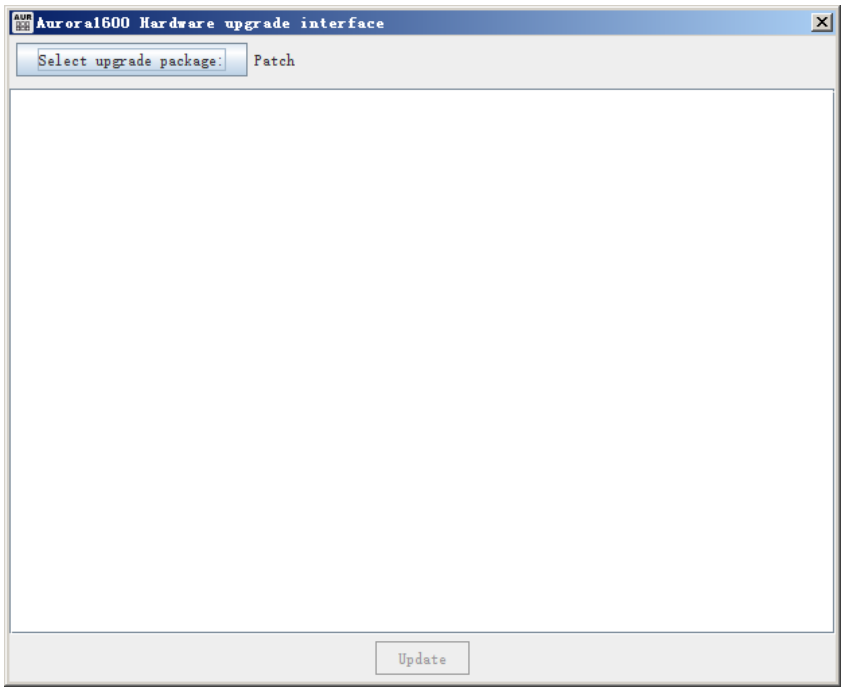


Figure 3.6-21 Update Dialog Box

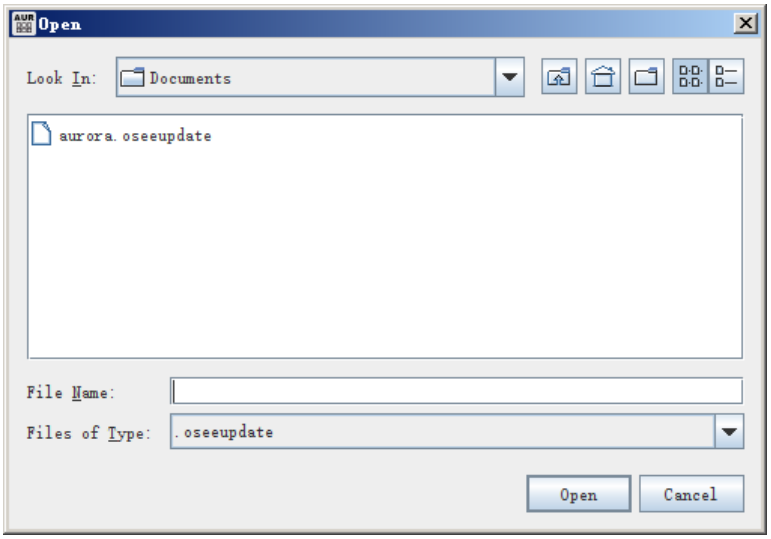


Figure 3.6-22 Save Dialog Box

Step 2 Update and Restart

It will display the name of the update file at the right side of the **Select upgrade package** button, as shown in ***Figure 3.6-23***, then click **Update** button to confirm the upgrade operation, it will display the process of the update, as shown in ***Figure 3.6-24***:

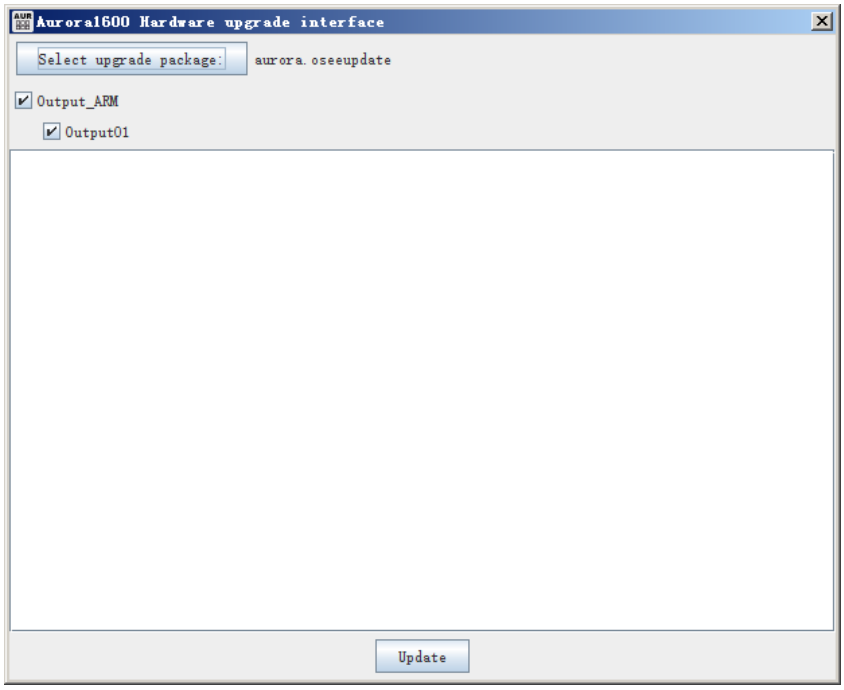


Figure 3.6-23 Update Dialog Box

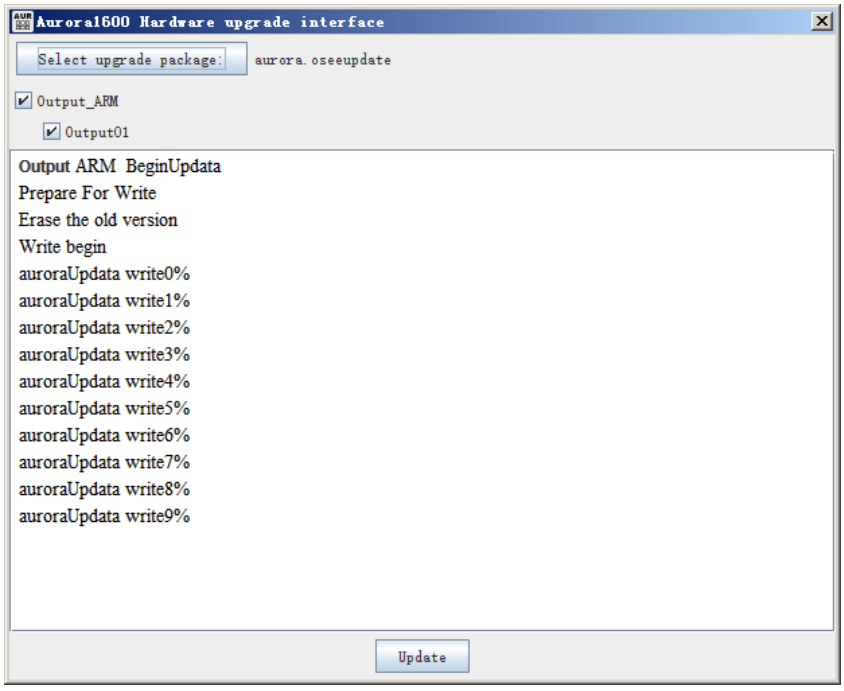


Figure 3.6-24 Update Process

After update operation has completed, it will pop up a restart prompt as shown in ***Figure 3.6-25***, click **OK** button, and please restart your device manually to effect the update operation.

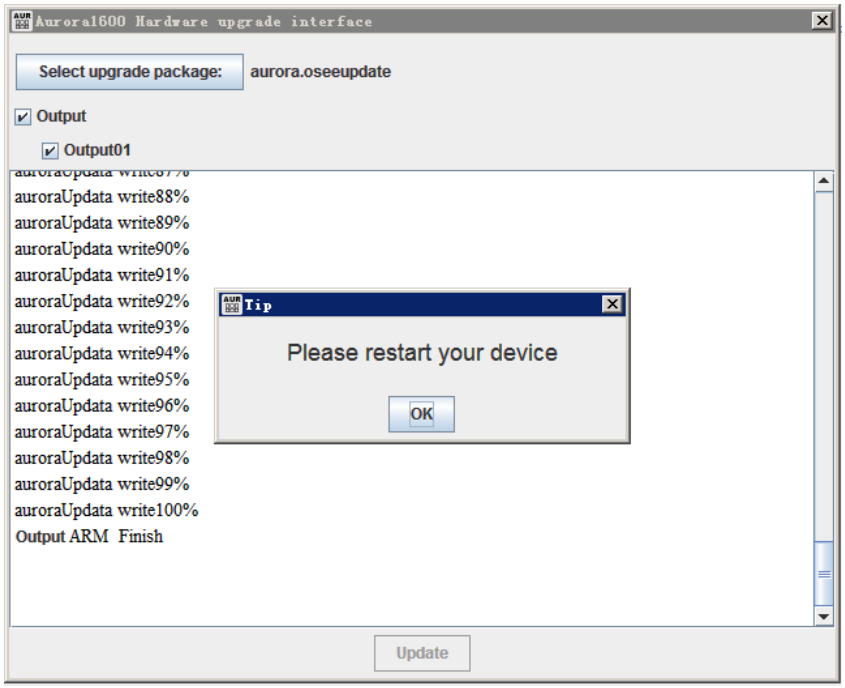


Figure 3.6-25 Restart Prompt

Tips

- It is recommended that the connection between the control computer and the target multi-image processor should be straight through connected.
- When update the multi-image processor, please follow these steps: First, power off the device and restart it. Second, execute the **Zip File** command and the **Update** command in sequence. At last, after the prompt of updating completed, power off the device and restart it again to affect the update.

3.6.7 About

Use the **About** command to display the basic and version information about this software.

Click **Help→ About** menu command, it will pop up the version information

dialog box, as shown in ***Figure 3.6-26***, click **Close** button to close this dialog box.

Figure 3.6-26 Update Dialog Box

3.7 Online Control

Click **Control** button  in the right bottom of the status bar to enter the online control editor, it will display the online controller interface, as shown in Figure 3.7-1:

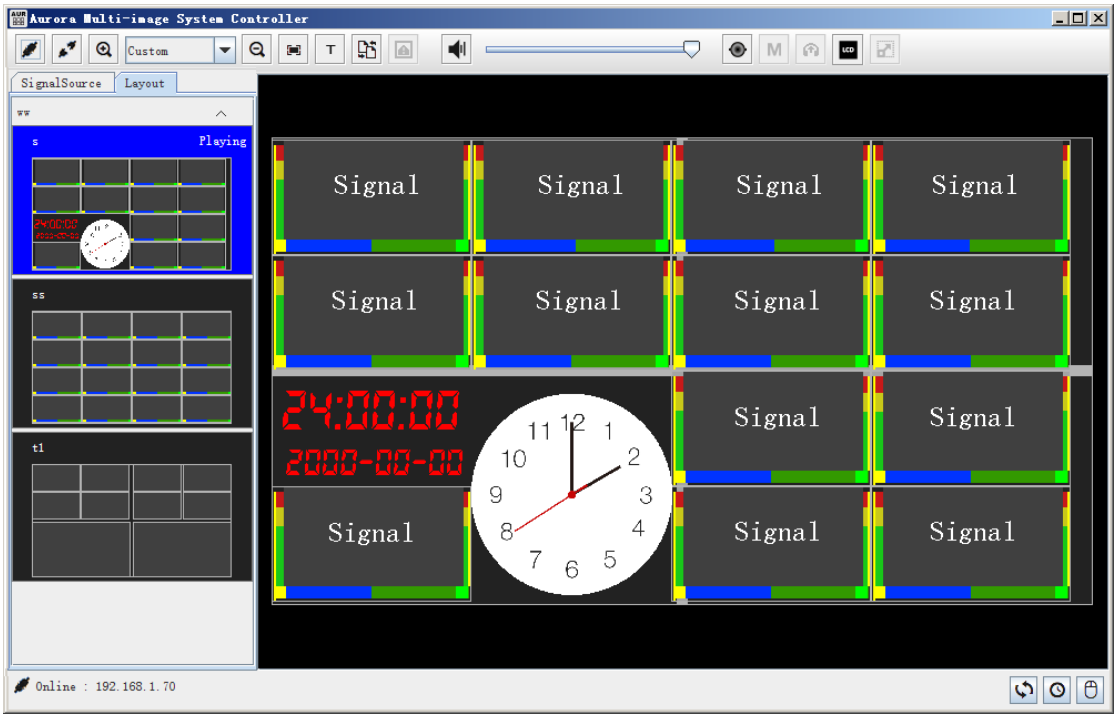


Figure 3.7-1 Online Controller

3.7.1 Device Connect

In online controller interface, press **Connect** button in the **toolbar** to set up the connection between the control computer and the target multi-image controller, and use the **Disconnect** button to cut down the connection.

1. Connect

Click **CONNECT** button in tool bar, it will pop up the **Device Connect** dialog box. Set the network card, selecting a target connecting destination, and set up the connection, it will display the keyword **Online** and the IP address of the multi-image controller in the status bar.

2. Disconnect

Click **DISCONNECT** button in tool bar, it will cut off the connection with the current multi-image controller, and it will display the keyword **Offline** in the status bar.

The operations are almost the same as in the configuration editor, please refer to “2.2.2 **Device Connection**” for the details.

3.7.2 Template Switch

In online controller interface, press the **Layout** tab, it will list the thumbnails of all templates in the layout pane, as shown in Figure 3.7-2:

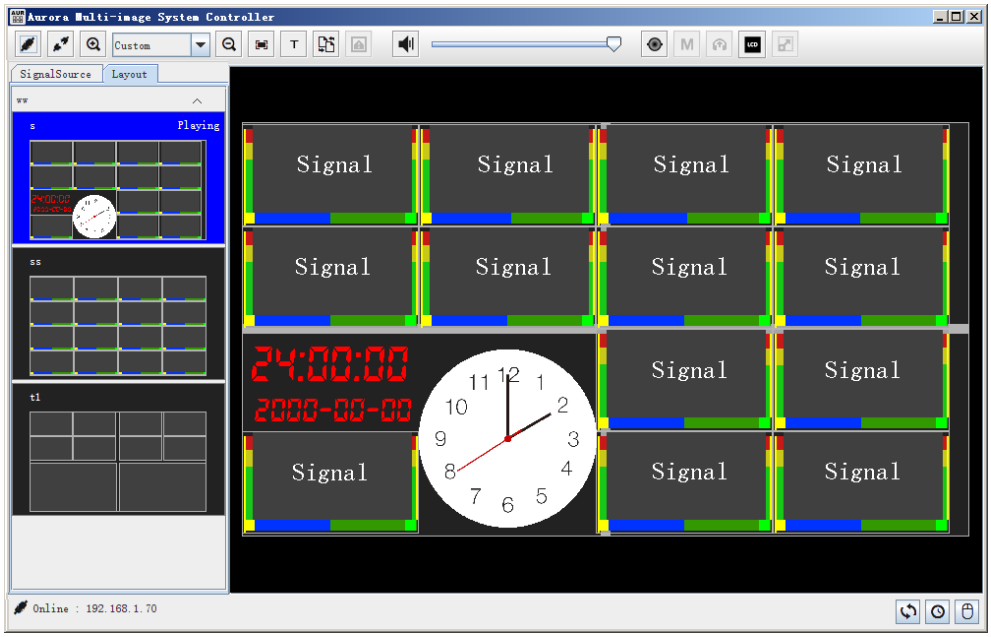


Figure 3.7-2 Online Controller

Click the any one of the template in the **Layout** pane, it will display in the right preview area of the Online controller, thus to preview the display effect of the current selected template.

The current used template on the display screen is highlighted in the **Layout** pane, and there is a keyword **Playing** at the top right corner of the template thumbnail in the **Layout** pane, as shown in Figure 3.7-3:

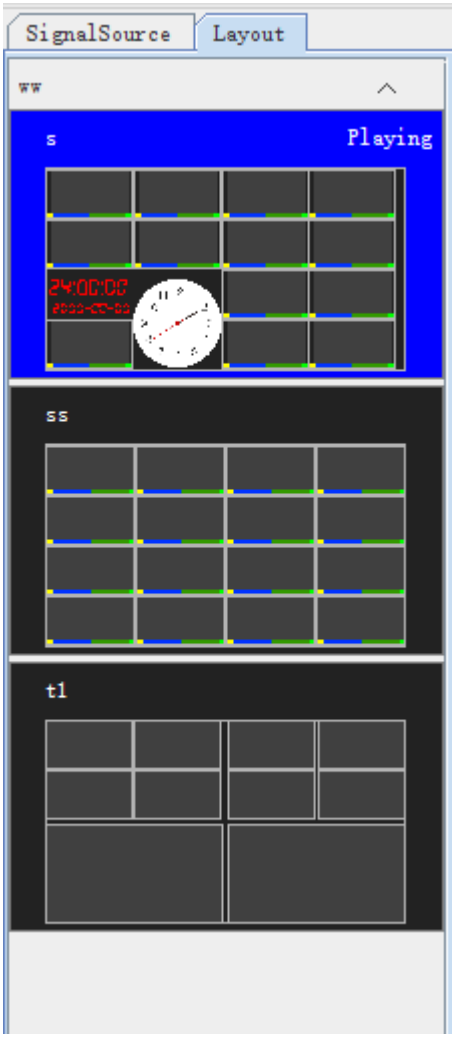


Figure 3.7-3 Template on Playing

- Switch Template Operation

Select the target template in the **Layout** pane, then double-click it or click the **Display Current Layout** button in the toolbar, it will be applied to the display screen, and pop up the prompt as shown in Figure 3.7-4, click **OK** button to confirm the completion.

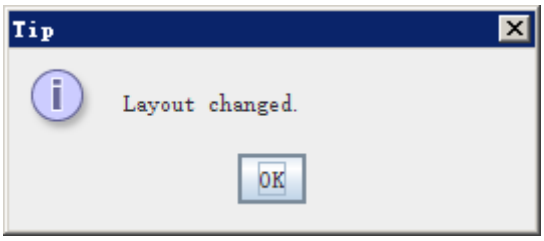


Figure 3.7-4 Switch a Template

3.7.3 Signal Source Switch

In online controller interface, press the **Signal Source** tab, it will display the signal sources list in this pane, as shown in Figure 3.7-5:

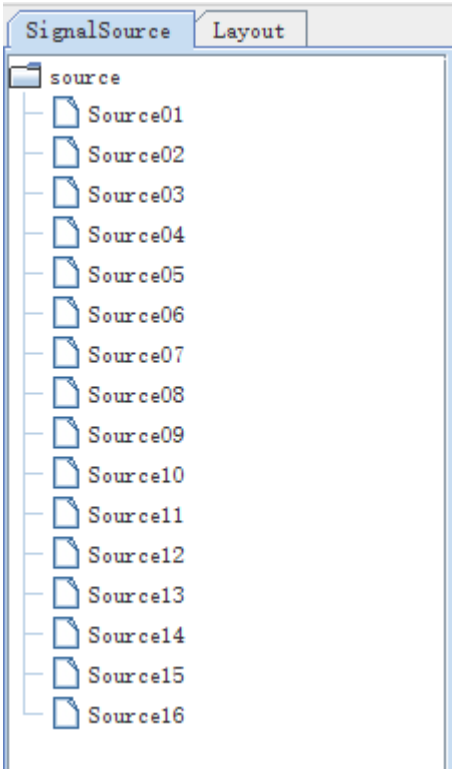


Figure 3.7-5 SignalSource List

Click the target monitor window in the display area at the right part of the online controller interface, and drag a signal source from the signal source tree to this monitor and hold on, release the left mouse button, then the signal source of this monitor will be replaced by the new one.

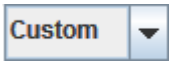
3.7.4 Image Zoom In/Out

In online controller interface, you can zoom in or zoom out the image displayed at the right part of the online controller interface, do as follows to

realize this function.

- **Zoom In/Out by Shortcut Button**

Click the image size control buttons in the toolbar at the top line of the online controller, the functionality of each button is listed in the following table:

Command	Shortcut Button	Description
Zoom In		It is used to zoom in the display area of the monitor in working area.
Zoom Out		It is used to zoom out the display area of the monitor in working area.
Fitting With Screen		It is used to zoom the display area of the monitor to fitting with screen.
Ratio		It is used to control the display ration of the monitor, providing these ratios: 50%, 75%, 100%, 125%, 150%, 250%, 300%.

- **Zoom In/Out by mouse wheel**

Scroll the mouse wheel up or down when the mouse cursor in the online display area of online controller. Scroll up to increase the image size, and scroll down to decrease the image size, 10% adjustment at a pace.

3.7.5 Alarm Switch

Press the **Alarm Switcher** button  in the toolbar at the top line of the online controller, to enable or disable the alarm function.

3.7.6 Matrix Switch

Press the Matrix Switcher button  in the toolbar at the top line of the online controller, to switch the matrix source from the Matrix window, as shown in Figure 3.7-6:

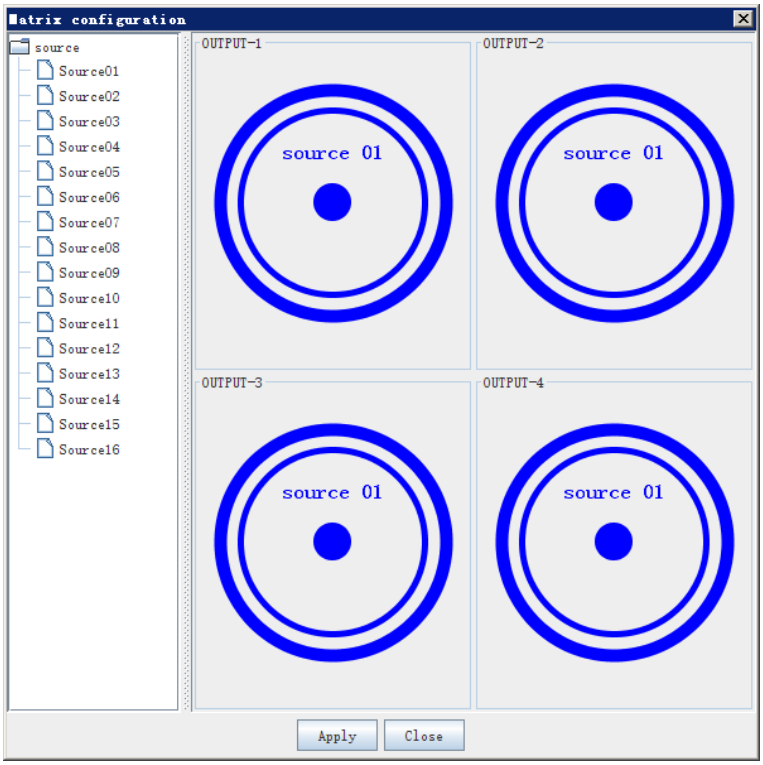


Figure 3.7-6 Matrix

3.7.7 Monitor Window

1. Show output information

You can display the output information on the screens which is used to observe the relationship between output module and screen.

Click **Show output information** button T in tool bar, it is used to enable/disable to highlight the output interface information and the brim of the display screens on the display screens, as shown in Figure 3.7-7:

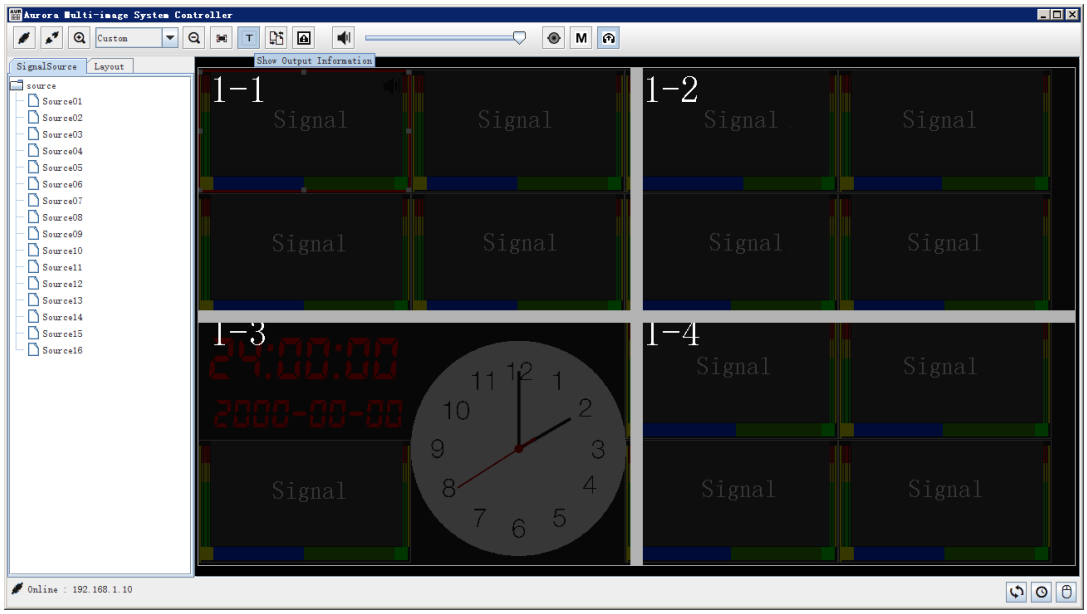


Figure 3.7-7 Show output information

Then press the **Show output information** button again to cancel the display status, the information of the input interfaces will be hiden.

2. **Monitor window**

- **Marker**

Click a monitor window in the display area in online controller, press **Marker Visible Switcher** button M to display or hide the marker on the selected monitor window.

- **Audio Source**

Click a monitor window in the display area in online controller, press **Choose Audio** button , thus the audio source of this monitor will be broadcasted, and there will be a speaker icon at the top right corner of the monitor window, as shown in Figure 3.7-8.

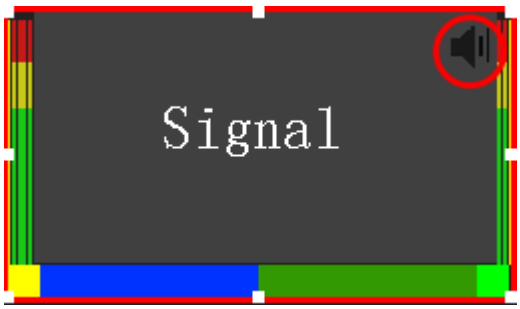
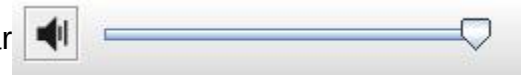


Figure 3.7-8 Set Audio Source

■ **Volume Control**

Use the volume bar  in the toolbar at the top line of the online controller to adjust the sound level. Drag the slider to the left for volume down, and to the right for volume up. Press the volume button  to mute the volume, and the icon will changed as  .

Tips

- The shortcut buttons of **Alarm Switcher**  , **Marker Visible Switcher** button  and **Choose Audio**  could be available only for the current template labeled in playing status.

3.7.8 Main Window

1. Set as Main Window

In Editor interface, select the target monitor window in a layout, and set its **View→ Main Window** item to be selected in its Element Prop pane, as shown in Figure 3.7-9, thus this monitor window will be selected as the Main window.

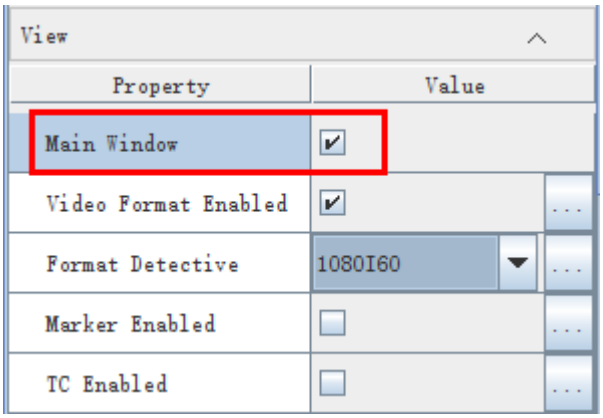


Figure 3.7-9 Set as Main Window in Element Prop Pane

There will be an **M** icon at the top right corner of the monitor window, as shown in Figure 3.7-10:

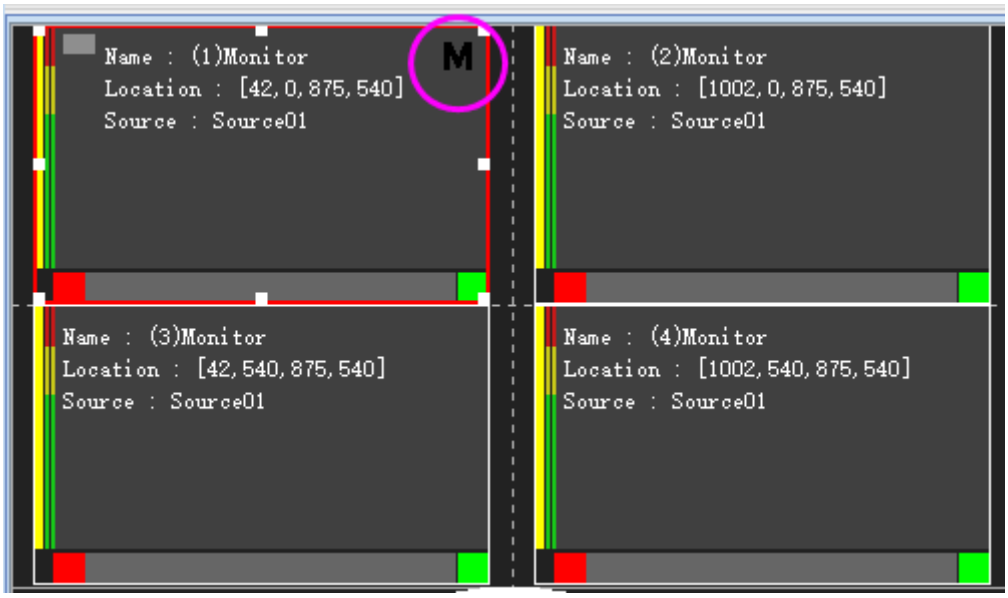


Figure 3.7-10 The Main Window Icon on the Monitor Window

2. Select Signal Source for the Main Window

After switching to the control interface, designate the signal source to the main window by the following two methods:

- ☐ Double click any monitor window on the layout, the signal source of this monitor will be displayed in the main window.
- ☐ Drag a signal source from the **Input Source List** to the main window on the layout interface, it will be displayed in the main window.

3.7.9 Full Screen

There could be a full screen layout in a wall, which you can arrange some important signal sources in it.

Create the full screen layout by clicking **Full Screen** button in Layout page, then you can switch to the full screen layout by the **Full Screen** button on **Control** interface.

Tips

- There could be only one full screen layout in an aurora project.

1. Configure a Full Screen Layout

Follow the instructions below to configure a full screen layout:

Step 1 Switch to Full Screen layout

First, click **Full Screen**  button in Layout page, it will open the blank full screen layout , as shown in Figure 3.7-11:

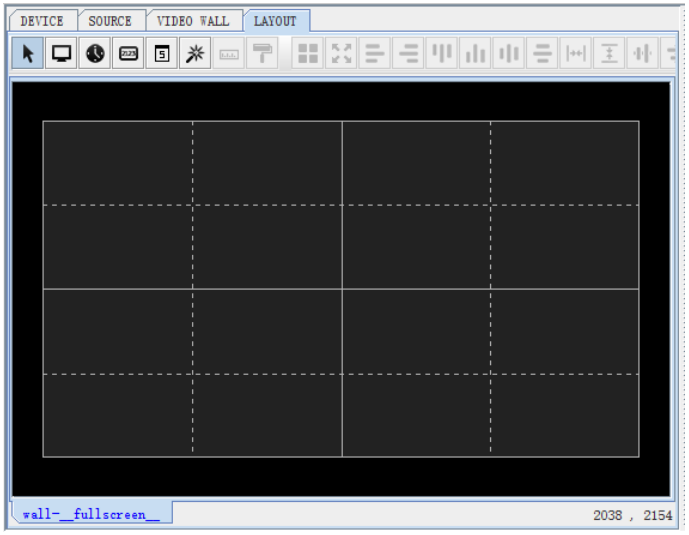


Figure 3.7-11 Open the Full Screen Layout

The full screen layout name is " wall name+_fullscreen_" by default, and its tag is in highlight blue.

Step 2 Set full screen monitor window

Add and arrange monitor elements on the full screen layout, there will be selection box at the bottom right corner of each monitor window, as shown in Figure 3.7-12:

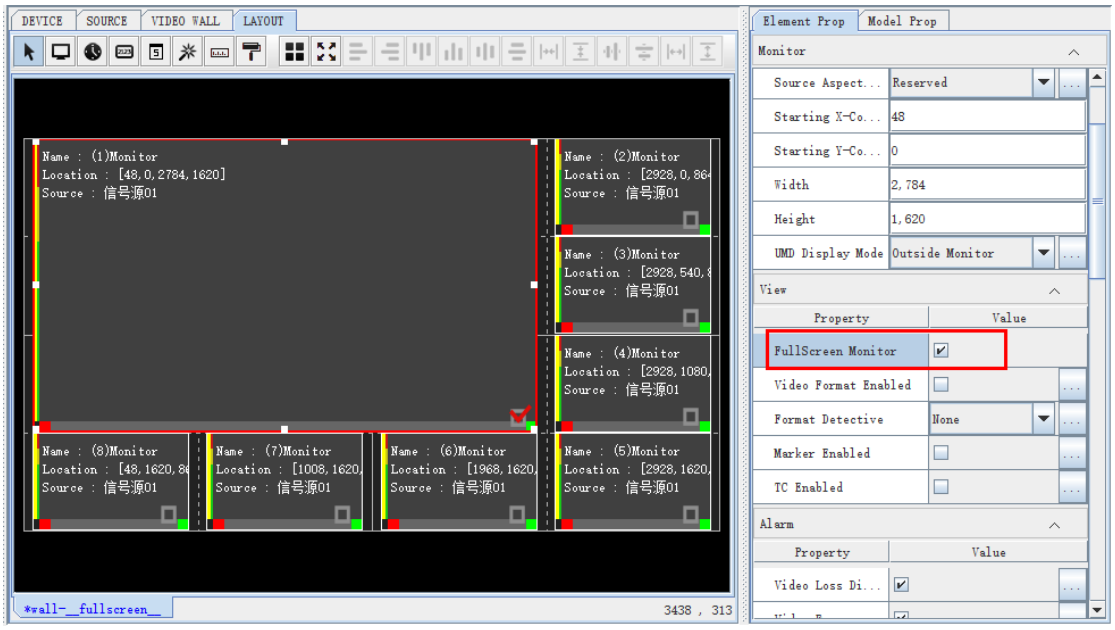


Figure 3.7-12 Select the Full Screen Monitor Property

Set one of the monitors as the full screen monitor:

- Method No.1: Set the full screen monitor window icon. Choose one of the monitor window on the full screen layout, and tick off its selection box at the bottom right corner of the window as the full screen monitor window icon. Thus, the chosen one is the full screen monitor.
- Method No.2: Set the FullScreen Monitor property. Choose one of the monitor window on the full screen layout, and set its **View→ FullScreen Monitor** item to be selected in its **Element Prop** pane. Thus, the chosen one is the full screen monitor.

There will be red tick added to the full screen monitor.

Step 3 Save the Full Screen layout

Click save button to save the modification on the full screen layout.

Step 4 Switch to normal layout

Click Exit Full Screen button, click the other layout tag or open another layout, it will exit the full screen layout editing page. The modification of the full screen layout will not affect the other normal layouts.

2. Display the full screen layout

After finishing the configuration of the full screen layout, click the control button in the status bar, it will switch to the control interface, as shown in Figure 3.7-13:

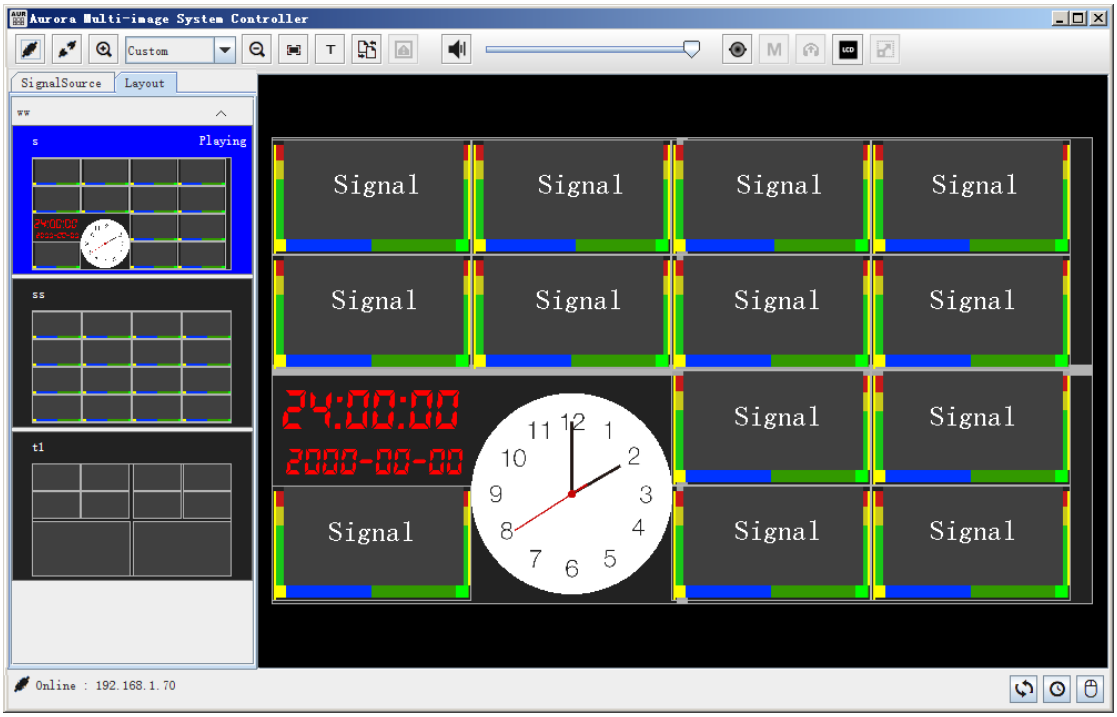


Figure 3.7-13 Control Interface

First, click the layout of **Playing** status in the left Layout pane, then this layout will be displayed in the working area of control interface.

Second, select one of the monitor windows in current displayed layout, and click **Full Screen** button on the tool bar, it will switch to the full screen layout and play it on the video wall, the signal source of the selected monitor window will also be displayed in the FullScreen monitor window of the full screen layout.

At last, click full screen button again, it will pop up a closing prompt,as shown in Figure 3.7-14:

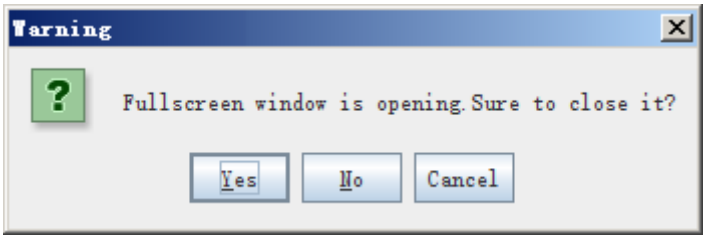


Figure 3.7-14 Exit Full Screen

Click **Yes** to confirm the exit, and it will display the last layout before switching to the full screen layout.

3.8 Linkage With the Supervisory Monitor

Aurora system could set up a linkage with LMW-550-SE supervisory monitor through SDI interface, the connection is as shown in Figure 3.8-1:

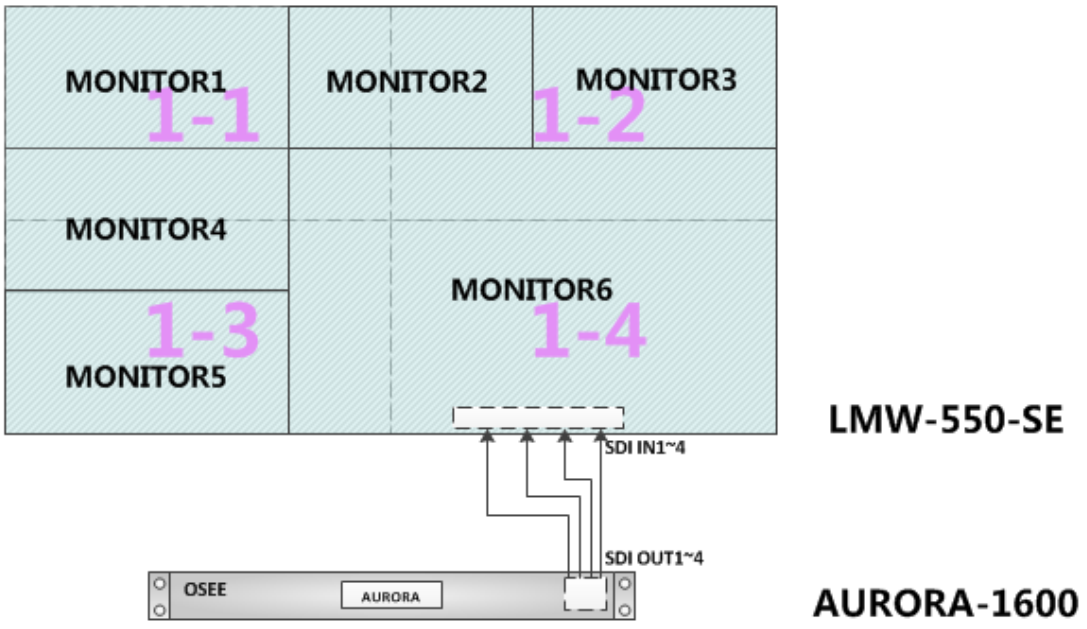


Figure 3.8-1 Linkage Between Aurora and Supervisory Monitor

Set up the control relationship by the following methods:

1. Virtual Control Panel

Click LCD button on the control interface, it will prompt a virtual LCD button panel, as shown in Figure 3.8-2:

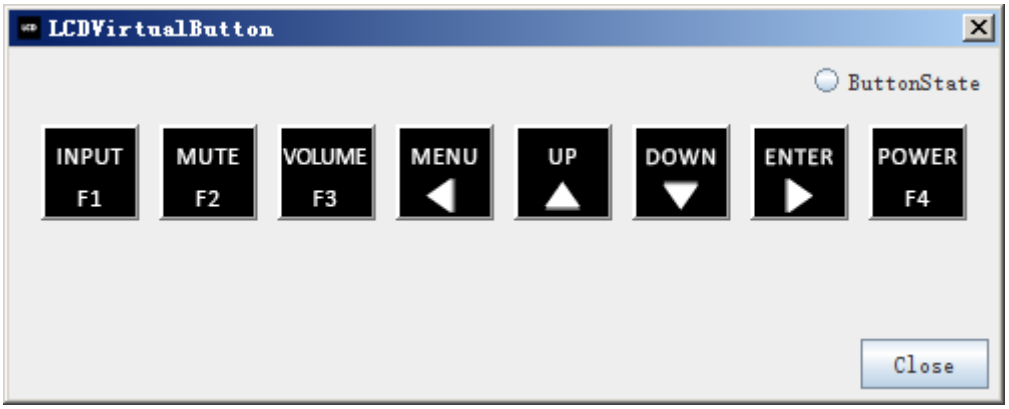


Figure 3.8-2 Virtual Control Panel

The higher characters on these buttons on the virtual control panel are corresponding to the remote controller and the control buttons of LMW-550-SE, and the lower characters on these buttons on the virtual control panel are corresponding to the keyboard, as shown in Figure 3.8-3:

Figure 3.8-3 Buttons Mapping Relationship

The mapping relationship of the all these buttons are as shown in the following table:

Button Icons	Keyboard Buttons	Button Function
INPUT	F1	Signal selection button
MUTE	F2	Mute button
VOLUME	F3	Volume adjust button
MENU	◀	Monitor main menu button
▲	▲	Up button
▼	▼	Down button

Button Icons	Keyboard Buttons	Button Function
ENTER	▶	Confirm button
POWER	F4	Power button

2. **Keyboard**
3. **AURORA-RCP**

----------No Text Below----------

FOR MORE INFORMATION PLEASE VISIT: http://www.osee-dig.com/
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