FX1

Multimedia Playback Software

User Manual

Contents

1   Overview

1.1 Introduction

FX1 is a professional multimedia playback software. Together with the video or image processing device, it allows for professional management for LED screen playback. Featuring a simplified and friendly user interface, FX1 makes operations as simple as possible.

FX1 takes full advantage of the hardware decoding technology, realizing smooth playback of 4K videos of different formats. FX1 supports multi-layer and multi-program management, fade transition effect, quick picture rotation, and playback of PowerPoint files, thus undoubtedly becoming the ideal choice for a variety of fixed installation applications such as multimedia exhibition halls, conference rooms, data centers and more.

1.2 Features

- Simultaneous playback of 4x layers and 1x audio
- Visualized program arrangement and management
- Media library management, including videos, pictures, PowerPoint files, audios, website pages, streaming media and texts, etc
- Media file sorting
- Media file batch import
- NDI sources, website sources, streaming media sources supported
- Media collection configurations
- Custom OSD text
- Resolution adjustment of PowerPoint files
- Using a laser pointer for moving between slides in PowerPoint
- Auto presentation of PowerPoint file when the program starts to play
- Playback of subtitled videos
- Playback progress management
- Program auto jump
- Configurable layer size and priority
- Main KV jumping settings
- Main media based playback progress management
- Crossfade on program switching
- Layer mask and cropping adjustment
- Inheritance of audio properties supported

  The audio properties remain unchanged when you replace the layer audio media of the program
- Auto startup of built-in software on system power on
- Auto program playback on software startup
- Remote control via UDP or TCP/IP
- Controlled by a central control unit
- Auto saving of project file being edited
- Controlled in a visualized control App

2   Software Installation and Activation

2.1 Software Installation

Requirements of Software Operating Environment

- CPU: 9th Generation Intel® Core™ i5 or later
- RAM: 16GB or greater DDR4 2666
- Graphics card: T400 or later discrete graphics card recommended
- HD space: 250G or larger SSD
- OS: Windows 10 Pro (64-bit)

Installing Software

The installation procedure of FX1 is the same as that of other software applications.

Step 1   Double click the program file (*.exe) and follow the instructions to proceed. On the **Select Additional Tasks** screen, select **Create a desktop shortcut** and click **Next**.

Step 2   Proceed to **Ready to Install** window and click **Install** to start the installation. After the installation process ends, click **Finish**.

Two application programs are installed during the installation process:

- FX1: The video playback and control application program
- NDI Sender: The NDI sender end that provides NDI inputs for FX1

Notes:

- It is recommended you turn off the anti-virus software and firewall in advance.
- During installation, if the anti-virus software or firewall prevents the installation, choose to allow the installation.
- If the software prompts you to restart after the installation, it is recommended you restart the software for normal operation.

2.2 Software Licensing

FX1 supports two authorization modes: temporary authorization and permanent authorization.

- When FX1 is temporarily authorized, the remaining days of temporary authorization is displayed at the top right.
- When FX1 is permanently authorized, no authorization message is displayed at the top right.
- When FX1 is not authorized, **Trial** is displayed at the top right.

If you want to obtain authorization, please contact our sales engineer for purchasing the dongle or registration code.

In trial mode, the **UNAUTHORIZED** text is displayed on the output.

Dongle detection rules are as follows:

- When the inserted dongle is recognized, **Trial** will disappear automatically and the output will not display the **UNAUTHORIZED** text.
- Within 3 seconds after the dongle is removed, the software knows the dongle has been removed and prompts you that no dongles have been detected, and the software will again display the **UNAUTHORIZED** text on the output in 5 seconds.

Figure 2-1 Dongle removed

- When the dongle is inserted and recognized normally, the above window and the **UNAUTHORIZED** text on the output will disappear automatically.

3 User Interface Introduction

Note:

The software pictures given in this manual are for illustration purposes only. The actual user interface may vary due to product enhancement. The content of the pictures can be slightly different from reality such as the media files, form and position of software windows and more.

After the software is started, the main user interface is shown in Figure 3-1. The functions of each area are described in Table 3-1.
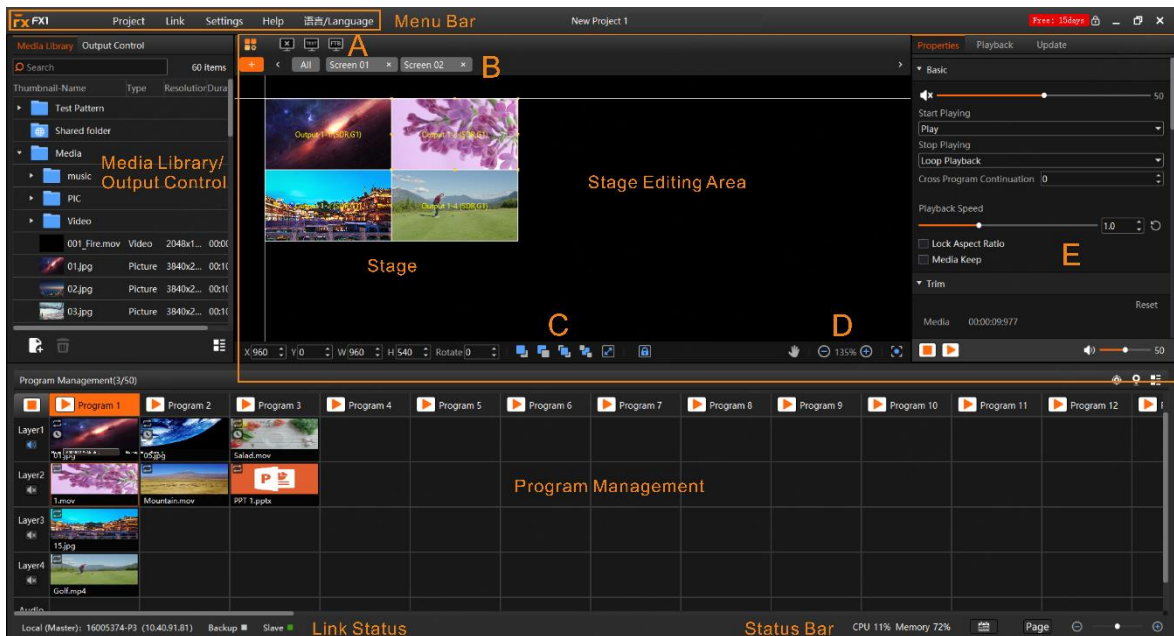
Figure 3-1 User interface
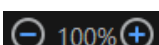
Table 3-1 User interface area descriptions

Area	Item	Description
Menu bar	Project	Project file operations include: - New: Create a new project. - Open: Open a saved project.

Area	Item	Description
		• Save: Save the current project.
		• Save As: Save the current project as a new project.
		• Package Project: Package the current project file and all media in it for easy use in the future.
	Link	• Link Settings: Set the master and slave devices.
		• Update to Slave: Manually update the data on the master device to the salve device.
		• Disconnect: Disconnect the slave device from the master device.
	Settings	Settings include system, output, audio, display mode and external control settings.
	Help	• Use the transcoding assistant.
		• View and export the playback logs.
		• Open the user manual.
		• View the software information.
	语言 /Language	Change the UI language. The options include English and Simplified Chinese.
Media library & Output control		• Media library: Add the desired media files, including videos, pictures, PowerPoint files, audios, website pages, streaming media, OSDs and digital clocks, etc. Go to **Settings** > **System Settings** to set the shared folder path, and then place the desired media files under this path. FX1 will automatically read the files and display them in the **Media Library** area. When you delete the media saved in the shared folder, this media will also be deleted in FX1.
		• Output control: Add the commands for controlling the splicers.
Stage editing area	Stage	• Preview the real-time playback content.
		• Edit the position and size of the added media.
	A	Output control buttons
		• : Pop up the output editing window.
		• : Enable the output screen and display the playback content on the screen. (Shortcut key: **Shift+H**)
		• : Disable the output screen. (Shortcut key: **Shift+H**)
		• : Close the test pattern and display the playback content.
		• : Open and display the test pattern.
		• : Disable the FTB function and display the playback content.
		• : Make the output fade to black.
	B	Individual screen management area
		• Click + to add a screen.
		• Click each screen to view and manage the programs by screens.
	C	Quickly adjust the layers.
		• X: Set the initial horizontal coordinate of the layer.
		• Y: Set the initial vertical coordinate of the layer.
		• W: Set the width of the layer.
		• H: Set the height of the layer.
		• Rotate: Set the angle by which the layer rotates clockwise.
		• : Bring the selected layer forward.

Area	Item	Description
		- ![icon]: Send the selected layer backward. - ![icon]: Bring the selected layer to front. - ![icon]: Send the selected layer to back. - ![icon]: Make the selected layer fill the output area. - ![icon]: Lock the stage editing area.
	D	Pan or zoom the output area. - ![icon]: Pan the stage editing area. - ![icon] 100%: Zoom in or out the stage editing area. - ![icon]: Make the stage start at the origin and all layers locate within the visible range in the stage editing area.

	E	- Properties: configure the media properties, including the layer basic info, trim, opacity, color, cropping, transition effect, graphics card mapping and more.
		- Playback: Control and view the playback progress.
		
		   − ![icon]: Count up timer
		
		   − ![icon]: Count down timer
		
		   − ![icon]: Start the playback.
		
		   − ![icon]: Pause the playback.
		
		   − ![icon]: Stop the playback.
		
		   − ![icon]: Adjust the volume.
		
		- Update: View the progress of updating the data to the slave device.

Program management area	n/50	Indicate the quantities of the edited programs and the total programs in the current group. - n: Indicates the quantity of the edited programs or the programs that have media files. - 50: Indicates the default quantity of the total programs. When a new program is added, the value increases accordingly.
	Program n	View the program name.

	Layer and layer status	- Layer n with/without audio: Displays the layer name and indicates whether the layer comes with audio or not.
		- ![icon]: Turn off the layer audio.
		- ![icon]: Play the layer audio.
		- Icons on the layer:
		
		   − ![icon]: This icon indicates the layer is the main media and the timer in the **Playback Progress** area is based on this layer.
		
		   − ![icon]: After the playback of the media in the current layer is completed, the layer stops the playback and displays the last frame of the playback image.
		
		   − ![icon]: Within the timing period for the main media, the current layer media is in loop playback mode.
		
		   − ![icon]: Within the timing period for the main media, the audio media playback will be stopped after it is finished.
		
		   − Lock: The layer is locked.

Area	Item	Description
Status bar		• ⊖——⊕: Increase or decrease the program column width. • **PPT**: Enable the PowerPoint file playback mode. You can use the laser pointer buttons or keyboard buttons to move between slides. • **PPT**: Disable the PowerPoint file playback mode. • 📅: The scheduled playback is enabled. • 📅: The schedules playback is disabled. • **Page**: The paging turning function is enabled, and the arrows keys on the keyboard can be used to turn pages. • **Page**: The paging turning function is disabled, and the arrows keys on the keyboard can be used to select between programs. • Display the CPU and memory usage.

Link status		• Name: The computer name by default
		• Backup/Slave: Show the statuses of the backup and slave devices. These items are shown on the primary/master end only.
		  – ▢: Not set
		  – ▮: Disconnected
		  – ▮: Normal communication

3.1 Change Layout

The main user interface can be customized according to user preferences. Once adjusted, the layout is automatically saved. Upon reopening next time, the interface retains the layout as adjusted last time.

To modify a particular area, hover the mouse cursor over the edge of the area until it changes into a double-headed arrow. Then, click and hold the left mouse button to drag horizontally to adjust the width, or vertically to adjust the height of the selected area.

Figure 3-2 Change user interface layout

3.2 Lock User Interface

Locking the user interface prevents unauthorized access to the editing environment, particularly when the operator is away.

Step 1　Click 🔒 at the top right of the main interface to open the UI locking window.

Figure 3-3 Lock user interface

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

Clicking ![icon] or ![icon] next to **Password** allows you to show or hide the password.

Step 3   Adjust the opacity of the lock screen.

An opacity setting of 100% means it is completely opaque, obscuring the editing interface and showing only the lock screen background.

Step 4   Define the duration of inactivity after which the system will automatically lock itself.

Options include **Never**, **3 minutes**, **5 minutes**, **10 minutes**, and **30 minutes**, with **Never** indicating no automatic screen locking.

Step 5   Decide whether to lock the user interface upon software launch.

- Select **Lock user interface on startup** to default to the lock screen when the software starts up.
- Deselect it to display the main software interface after startup.

Step 6   Confirm the settings by clicking **OK**.

By clicking **Lock**, the system enters to the lock screen mode, and the screen lock settings take effect.

Note:

- To unlock, enter the previously set password and click ![icon] to access the software editing interface.
- If the password is forgotten, please contact our technical support engineer for assistance.

4   Applications

Figure 4-1 FX1 applications
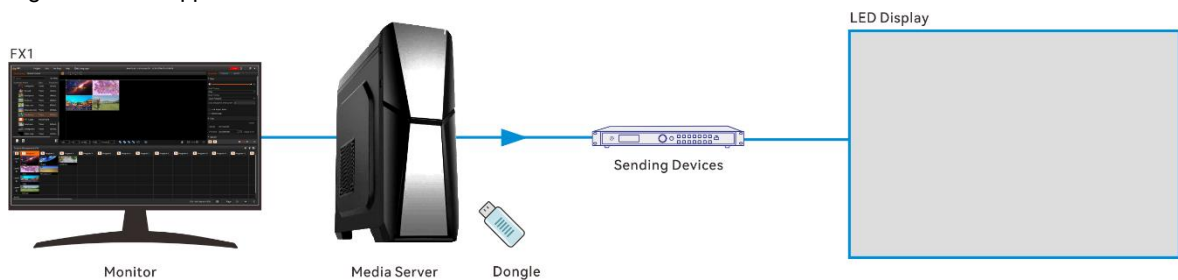
5   **Project**

FX1 allows you to add media files, edit the programs and set the program playback sequence and media properties. After all these are done, you can save the project as an independent project file to your local storage for future use.

5.1   Create New Projects

There are two methods to create a new project.

- Start FX1 and the software will create a new project automatically.
- Go to **Project** > **New** to create a new project.

5.2   Edit Outputs

5.2.1   Construct Irregular Screens

Click ⊞ to open the **Edit Output** window.

When you want to output an image of an irregular shape, you can partition the output and reorganize the sub-outputs to suit the loaded screen.

Output Partitioning

This function divides an output into several sub-outputs, breaks up and reorganizes the outputs, realizing easy reconstructing and management for irregular output images.

You can realize the output of an irregular image via the reorganizing of regular output connectors.

Figure 5-1 T-shape output image

Step 1   Select a partition layout in the output list area.

Figure 5-2 Output partitioning
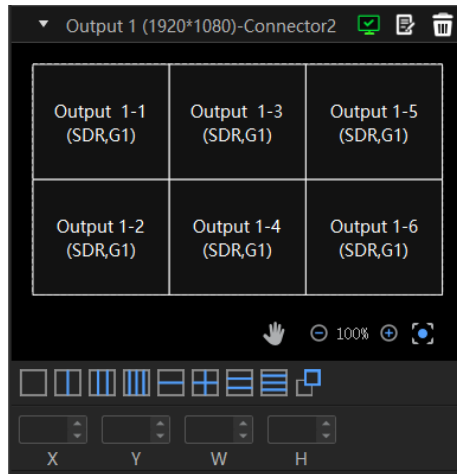
- ☐ : 1x sub-output

- ☐ : 2x sub-outputs in horizontal position

- ☐ : 3x sub-outputs in horizontal position

- ☐ : 4x sub-outputs in horizontal position

- ☐ : 2x sub-outputs in vertical position

- ☐ : 2x sub-outputs in both horizontal and vertical positions

- ☐ : 3x sub-outputs in vertical position

- ☐ : 4x sub-outputs in vertical position

- ☐ : Custom layout

- ☐ : Click once to add one sub-output of the same size as the first one.

- 🗑 : Delete the selected sub-output.

Step 2   Select a sub-output and set its position and size.

- Position:
  - X: Set the initial horizontal position of the sub-output area.
  - Y: Set the initial vertical position of the sub-output area.
- Size:
  - W: Set the width of the sub-output area.
  - H: Set the height of the sub-output area.

Sub-Outputs Reorganizing

Reorganizing sub-outputs refers to the re-layout of the output partitions of an output connector as required.

After startup, FX1 will automatically detect the graphics card connectors and display all the connectors in the output list on the left.

- ✅ : Enable the output.

- : Disable the output.

- : Delete the output.

Click to change the output name, connector binding relation and resolution.

Step 1   Click and drag the sub-outputs on the right to reorganize them.

Figure 5-3 Sub-outputs reorganizing

You can change the size and position of the sub-output at the bottom.

Figure 5-4 Output adjusting

- Name: Change the current output name.

- X: Set the initial horizontal position of the sub-output or output on the stage. The adjusting reference is the top left corner of the stage.

- Y: Set the initial vertical position of the sub-output or output on the stage. The adjusting reference is the top left corner of the stage.

- W: Set the width of the sub-output or output.

- H: Set the height of the sub-output or output.

- Rotate: Set the rotation angle (clockwise) of the sub-output or output.

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

After the reorganizing, you can add the layer image to the stage area. The mapping between the sub-output and image is shown as follows.

Figure 5-5 Sub-output and image mapping
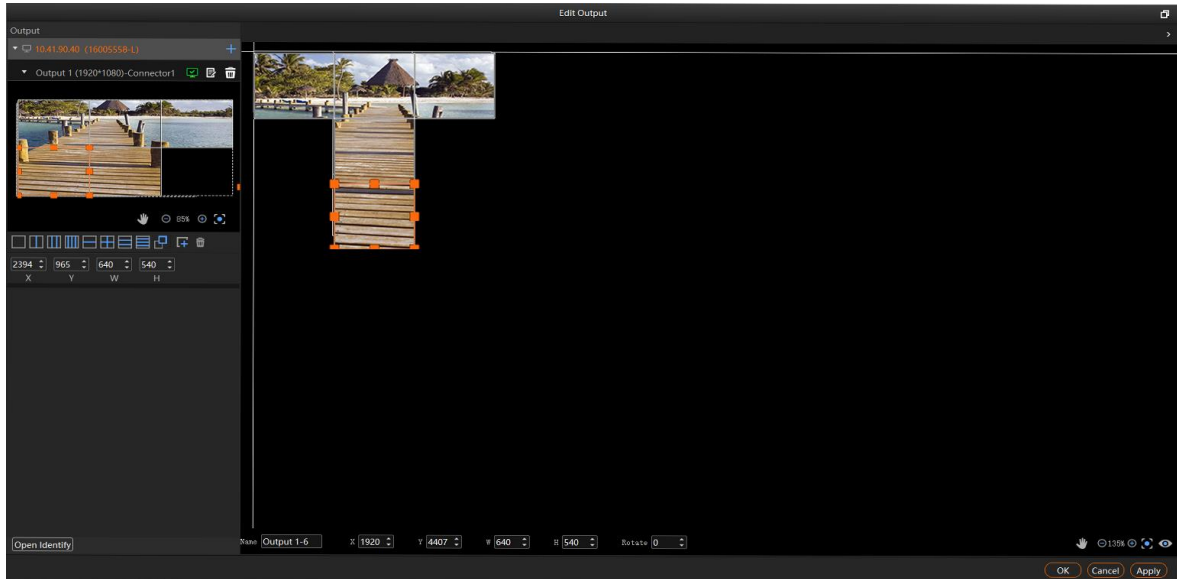
5.3 Manage Media

You can add the desired media files to the current media library. FX1 supports pictures, videos, PowerPoint files, audios, NDI, websites and streaming media.

The supported media formats are as follows:

- Video: mp4, avi, mkv, flv, mov, wmv, mpeg, m4v, m2ts
- Picture: jpg, jpeg, bmp, png, gif, ico
- Audio: mp3, aac, flac, amr, ape, wav, wma
- Office files: ppt (1080p), pptx, xls, xlsx, pdf, doc, docx
- Other formats: sensor

Note:

Up to 15 PowerPoint files can be added to the media library.

Recommended video coding formats:

- 4K < resolutions ≤ 8K, width ≤ 8192 pixels and height ≤ 4320 pixels: H.265 (HEVC) or VP9 recommended
- Resolutions ≤ 4K: H.264 (AVC) recommended

For a better image quality experience, the following video bitrates are recommended.

Recommended video bitrates for SDR uploads – single media server and single graphics card:

Type	Video Bitrate Standard Frame Rate (24 Hz, 25 Hz, 30 Hz)	Video Bitrate High Frame Rate (48 Hz, 50 Hz, 60 Hz)
2160 (4K)	35 to 45 Mbps	53 to 68 Mbps
1440 (2K)	16 Mbps	24 Mbps
1080p	8 Mbps	12 Mbps

5.3.1 Add Media Files

You can select to import a single media file or a folder including multiple media files.

5.3.1.1 Add Local Files

Step 1   Click 📄 at the bottom left corner of the **Media Library** area, or right click the area to select **Add Local File**.

Step 2   Select the target media files and click **Open**. FX1 will import the selected files to the media library automatically.

- Importing a single file: Select the desired file and click **Open** to complete the importing.

- Importing multiple files: Press the **Shift/Ctrl** key, select the desired files, and then click **Open** to complete the importing.

- Drag and drop to import: Select one or multiple media files and drag them to the blank area of the media library to complete importing.

Notes:

- When you add a media file whose size exceeds the processing capacity of the graphics card installed on the software server, the prompt **Optimizable** appears next to the added media file in the **Media Library** area. To render and play this media normally, go to **Help** > **Transcoding and Encryption Assistant** to optimize it.

- When the value of the width × height × frame rate of a video is greater than the recommended value, or the value of the width or height is greater than 8192 pixels, the prompt **Optimizable** appears.

- When the width or height of a picture is greater than 16384 pixels, the prompt **Optimizable** appears.

- When a media file in hap format exceeds the recommended maximum resolution, the prompt **Optimizable** does not appear.

- After the media file is added successfully, hover the mouse over the media and you can view its basic information.

5.3.1.2   Add Local Folders

Step 1   Click at the bottom left corner of the **Media Library** area, or right click the area to select **Add Local Folder**.

Step 2   Select the target folder and click **Select Folder**. FX1 will import the folder and the media files in it to the media library automatically.

You can also select one or multiple folders and drag them to the blank area of the media library to complete importing folders quickly.

5.3.1.3   Add OSDs

FX1 supports the OSD as a kind of media.

Step 1   Right click the **Media Library** area to show the context menu and then select **Add OSD**.

Figure 5-6 Add OSD
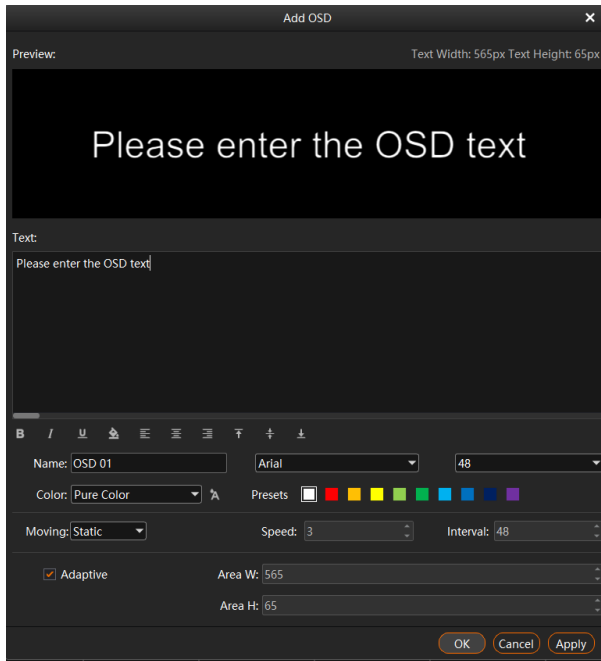
Step 2   Enter the desired content in the **Text** area.

Step 3   Adjust the font and style.

You can set the following attributes.

- **B** : Make the text bold or not.

- *I* : Italicize the text or not.

- U̲ : Underline the text or not.

- ☰ : Align the text to the left.

    When the display area width is larger than the text width and the moving is set to **Static**, align the text to the left of the display area.

- ☰ : Center the text horizontally.

    When the display area width is larger than the text width and the moving is set to **Static**, center the text horizontally to the display area.

- ☰ : Align the text to the right.

    When the display area width is larger than the text width and the moving is set to **Static**, align the text to the right of the display area.

- ↑ : Align the text to the top.

    When the display area height is larger than the text height and the moving is set to **Static**, align the text to the top of the display area.

- ⇅ : Center the text vertically.

    When the display area height is larger than the text height and the moving is set to **Static**, center the text vertically to the display area.

- ↓ : Align the text to the bottom.

    When the display area height is larger than the text height and the moving is set to **Static**, align the text to the bottom of the display area.

Step 4   Enter a name next to **Name**.

Step 5   Set the font and font size.

Select the desired font from the drop-down list and the default font is **Arial**.

Select the desired font size from the drop-down list and the default size is **48**. You can only select a number from the drop-down list and you cannot enter a number manually.

Step 6   Set the font color.

Gradient and **Pure Color** are supported.

- Pure Color: Select **Pure Color** from the drop-down list and select the desired color block next to **Presets**.

  When you are not interested in any of the preset colors, click A to open the **Select Color** window to customize your own color, and then click **OK** to complete the pure color settings.
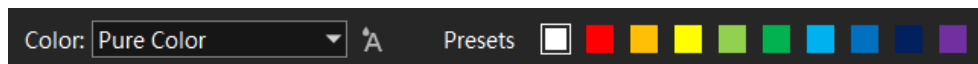
- Gradient: Select **Gradient** from the drop-down list and the default gradient color is displayed.

  Click two color blocks at the both ends of the gradient color to customize your own gradient colors. Set the gradient angle to complete the gradient color settings.

Step 7   Set the moving effect and speed.

- The moving effects include **Static**, **From Left**, **From Right**, **From Top** and **From Bottom**.

- Speed: Set the moving speed of the text. This parameter is available when the moving effect is set to **Static**.

- Interval: Set the interval from the end character of the previous scrolling to the start character of the next scrolling.

Step 8   Set the display mode in the display area.

If **Adaptive** is selected, the text fills the display area; if **Adaptive** is deselected, the text is shown in its set size.

Note:

If the area width or area height is smaller than the text width or height, the text will be cropped.

Step 9   Set the display area color.

1. Click ⬦ to open the **Select Color** window.

Figure 5-7 Select display area color
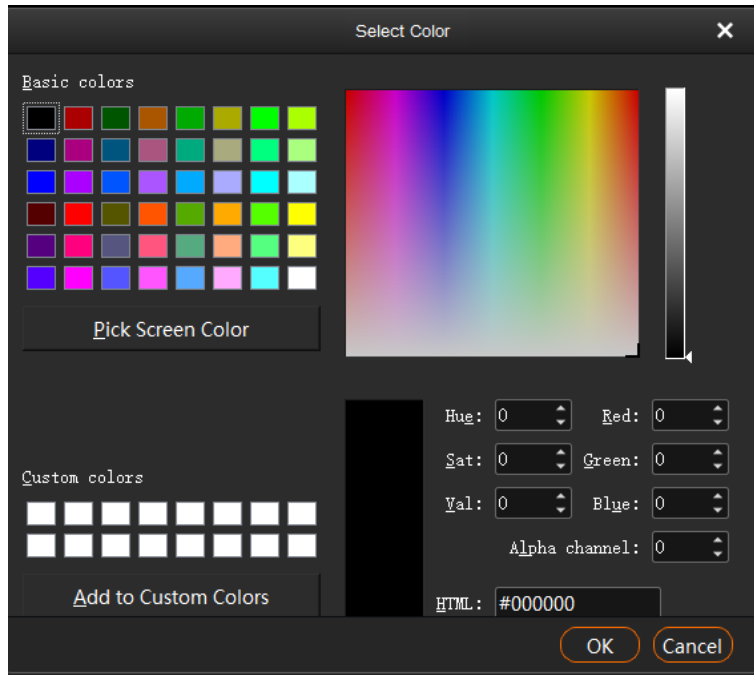
2. Set the value of the background transparency next to **Alpha channel**. The value ranges from 0 (totally transparent) to 255 (opaque).

3. Click **OK** to complete the display area color settings.

Step 10   Click **OK** to complete the OSD settings.

5.3.1.4   Add Digital Clocks

FX1 can set a digital clock as a media. You can view the details of the current date and time.

Step 1   Right click the blank area of **Media Library** and select **Add Digital Clock**.

Figure 5-8 Add digital clocks
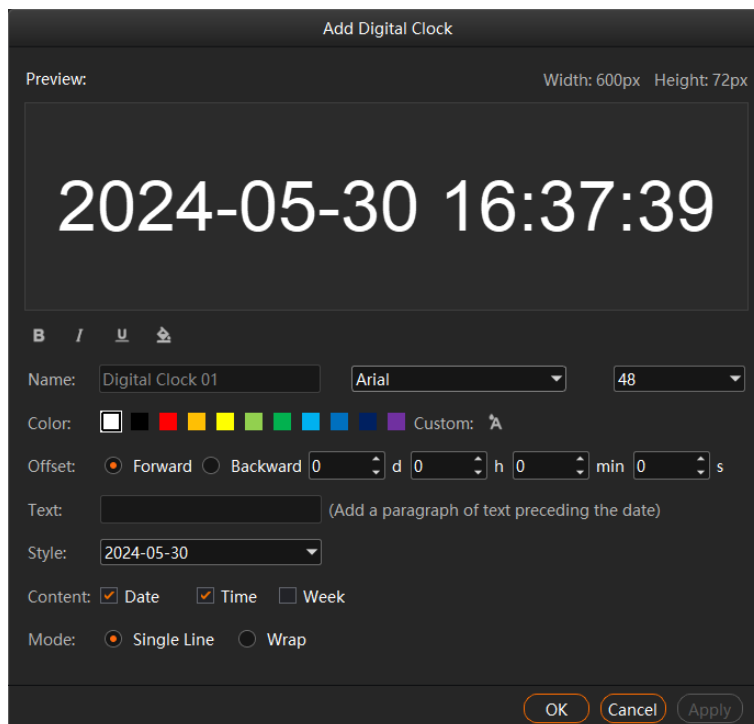
Step 2   Enter the clock name and select the desired text font and size from the drop-down list next to **Name**.

Step 3   Select the desired color block next to **Color** to set the clock text color.

Click 𝗔 next to **Custom** to open the **Select Color** window to customize your own color. Set the value of the background transparency next to **Alpha channel**. The value ranges from 0 (totally transparent) to 255 (opaque).

Step 4   Set the clock offset information, which includes the number of days, hours, minutes or seconds.

- Forward: Set the time to offset before the current time.
- Backward: Set the time to offset after the current time.

Step 5   Enter a paragraph of text which will be displayed preceding the date.

Step 6   Select the desired date format from the drop-down list next to **Style**. Three formats are provided.

Step 7   Select the clock content. The options are as follows.

- Date: After checked, the current date will be displayed.
- Time: After checked, the current time will be displayed.
- Week: After checked, the current week will be displayed.

Step 8   Set the desired clock display mode. The options include **Single Line** and **Wrap**.

Step 9   Set the style of the clock content below the **Preview** area.

You can set the following text attributes.

- **B** : Make the text bold or not.
- *I* : Italicize the text or not.
- U̲ : Underline the text or not.
- ♠ : Click this icon to open the **Select Color** window to change the background color of the clock text.

  Set the value of the color transparency next to **Alpha channel**. The value ranges from 0 (totally transparent) to 255 (opaque).

Step 10   Click **OK** to complete the digital clock adding.

After the clock is added successfully, right click the added clock and select **Edit** to open the clock editing window. After you complete the editing, click **Apply** to change the clock display information of all the programs.

5.3.1.5 Add Sensors

FX1 supports adding the data acquired by the sensor, and can display the sensor data on the screen.

Step 1   Right click the blank area of **Media Library** and select **Add Sensor**.

Figure 5-9 Add sensors
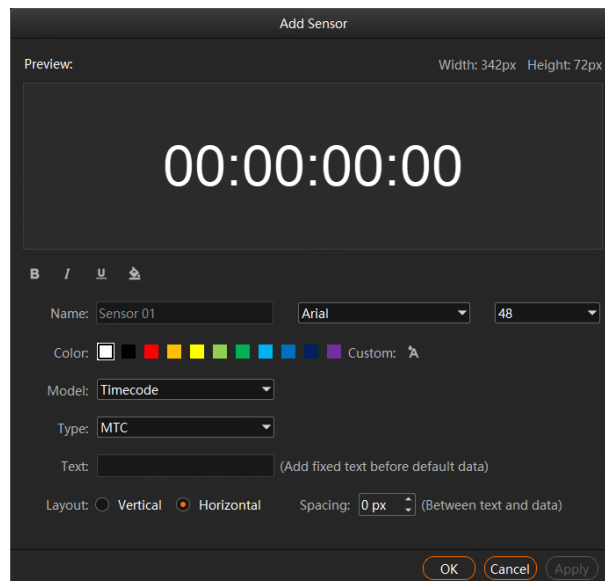
Step 2   Enter the sensor name and select the desired text font and size from the drop-down list next to **Name**.

Step 3   Select the desired color block next to **Color** to set the sensor text color.

Click ⒜ next to **Custom** to open the **Select Color** window to customize your own color. Set the value of the background transparency next to **Alpha channel**. The value ranges from 0 (totally transparent) to 255 (opaque).

Step 4   Select the model of the connected sensor next to **Model**.

The sensor models are classified based on the physical quantity and measurement principles of the sensors.

Step 5   Select the sensor type of the current sensor model next to **Type**.

The sensor types are differentiated based on specifications and performance parameters of the sensor models.

When playing the timecode data, the data type set in **Type** must be consistent with the data type generated by the timecode.

Step 6   Enter certain text that needs to be displayed preceding the default data.

Step 7   Select the layout mode for the fixed text and sensor data next to **Layout**.

- Vertical: The fixed text and sensor data are displayed in two lines, with the fixed text on the first line and the sensor data on the second line.

- Horizontal: The fixed text and sensor data are displayed in one line, with the fixed text on the left and the sensor data on the right.

Step 8   Set the distance between the input fixed text and the sensor data next to **Spacing**.

The value ranges from 0 px to 500 px.

Step 9   Set the style of the sensor text below the **Preview** area.

- **B** : Make the text bold or not.

- *I* : Italicize the text or not.

- U̲ : Underline the text or not.

- ⒜ : Click this icon to open the **Select Color** window to change the background color of the text.

  Set the value of the color transparency next to **Alpha channel**. The value ranges from 0 (totally transparent) to 255 (opaque).

Step 10   Click **OK** to complete the sensor adding.

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5.3.1.6 Create Media Copies

FX1 supports the creation of copies of the added texts, digital clocks, sensors, and media collections. After a copy is created, the copy can be edited to quickly complete the addition of a new media.

Step 1 Right click an added media and select **Create Copy**, and the system will automatically add a copy of the selected media.

The copied one is named with the original media name plus a number.

Step 2 Right click the copied media and select **Edit** to change the media properties.

Step 3 Refer to the corresponding media adding procedure to edit or modify the new media copy.

Step 4 Click **OK** to complete the editing of the media copy.

5.3.1.7 Add NDI Input Sources

Before adding an NDI input source, you must configure the NDI source image size and position in NDI Sender and enable NDI so that FX1 can search and find the NDI source and add it.

> **Note:**
>
> The computers running the NDI Sender and FX1 must be on the same network segment.

Configurations in NDI Sender

Step 1 Double click the NDI Sender shortcut on the desktop to open the NDI Sender software.

Figure 5-10 NDI Sender
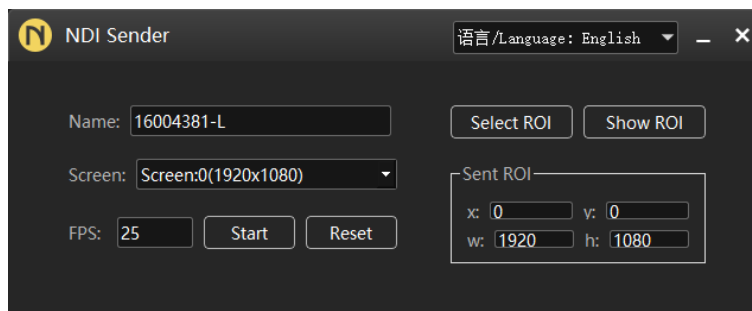
Step 2 Enter an NDI name.

Step 3 Click **Reset**.

After the name is changed, you must click **Reset** to make the setting take effect.

Step 4 If there are multiple screens in NDI Sender, select the screen you want to send.

If you want to send multiple screens, select the first screen you want to send.

Step 5 Click **Select ROI**, click and drag the mouse to select the display area you want to send.

In the **Sent ROI** area, you can see the position and size of the sent image. You can also change the **x**, **y**, **w** and **h** values to change the image position and size.

- X: The horizontal offset from the sent area to the selected screen's left edge
- Y: The horizontal offset from the sent area to the selected screen's top edge
- w: The horizontal width of the sent area
- h: The vertical height of the sent area

Step 6 Click **OK** to complete image settings in NDI Sender.

Step 7 Click **Start** to complete NDI Sender settings.

Note:

After the settings, you can click **Show ROI** to see the image position and image size you have set.

Add NDI Sources

Step 1   Right click the blank area of **Media Library** in FX1 and select **Add NDI Media**.

Step 2   The system will automatically search on the current network segment for all the devices with NDI enabled.

Figure 5-11 Add NDI media
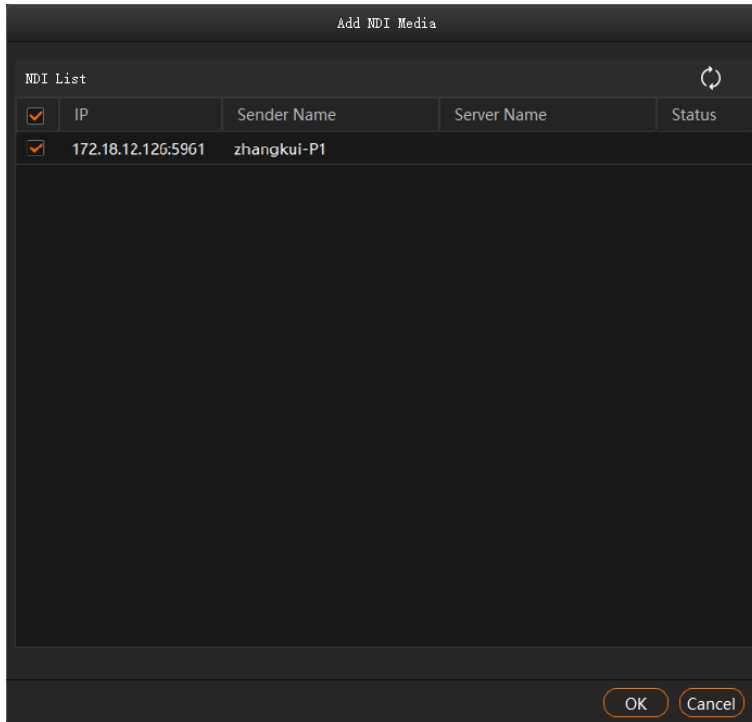
Step 3   Select the NDI sources from the NDI list.

Step 4   Click **OK** to complete NDI source adding.

Note:

After adding NDI sources, you can right click an NDI source and select **Edit** to change the NDI source name.

5.3.1.8 Add Website Sources

Prerequisites

The computer running FX1 is connected to the network.

Use Extended Browser

When using an extended browser, during the webpage playback, the stage editing area does not provide a preview. Instead, it is displayed directly on the output screen, and the output image can be controlled using the mouse.

Step 1   Right click the blank area of **Media Library** and select **Add Website**.

Figure 5-12 Add website-1

Step 2   Enter the desired website name in the **Resource Name** area.

Step 3   Select the browser mode from the drop-down list in the **Choose Browser** area**.**

Step 4   Select the display mode for the added website in the **Mode** area. The options include **Native** and **Screenshot**.

- Native: During playback, the stage editing area does not provide a preview. Instead, it is displayed directly on the extended screen, and the output image can be controlled using the mouse.

  It is NOT recommended to use this mode when the resolution of the added webpage exceeds the graphical card processing capabilities of the media server.

- Screenshot: During playback, the software captures the image from the webpage window and renders it onto the display screen connected to the connector, and allows for the image to be cropped if needed.

Step 5   Enter the tab name in the left text box in the **Website URL** area.

Step 6   Enter the complete website domain name in the right text box.

Step 7   Click **Add Tab** to add a new tab page.

Step 8   Enter the tab name and domain name of the new tab page.

Step 9   Click **OK** to enter the added website.

Figure 5-13 Website page (extended browser-screenshot mode)
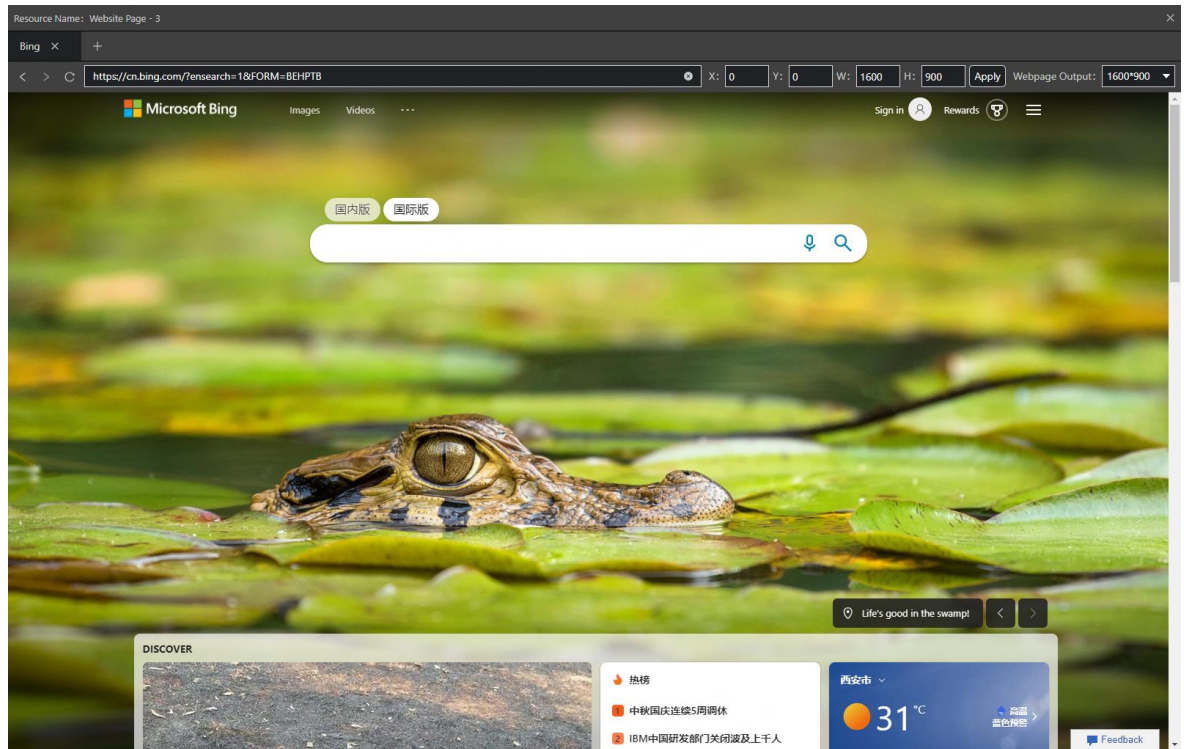
With a screenshot-mode extended browser, when a super-large browser image is added, which exceeds the processing capacity of a single graphics card on the media server, you can crop the bowser image to several parts and then mosaick them together in the program to finally display the whole webpage content.

You can complete the webpage cropping configuration using the following parameters:

- X: Sets the starting horizontal coordinate for the cropping, based on the top-left corner.
- Y: Sets the starting vertical coordinate for the cropping, based on the top-left corner.
- W: The horizontal width of the cropped image.
- H: The vertical height of the cropped image.
- Apply: Click **Apply** to make the parameters take effect.
- Webpage Output: Adjust the size of the output webpage by selecting an output resolution.

Step 10   Click ✕ at the top right corner of the website to close the website and complete adding the website.

Use Built-In Browser

When using the built-in browser, you can set the webpage resolution and webpage output mode during playback.

Step 1   Right click the blank area of **Media Library** and select **Add Website**.

Figure 5-14 Add website-2
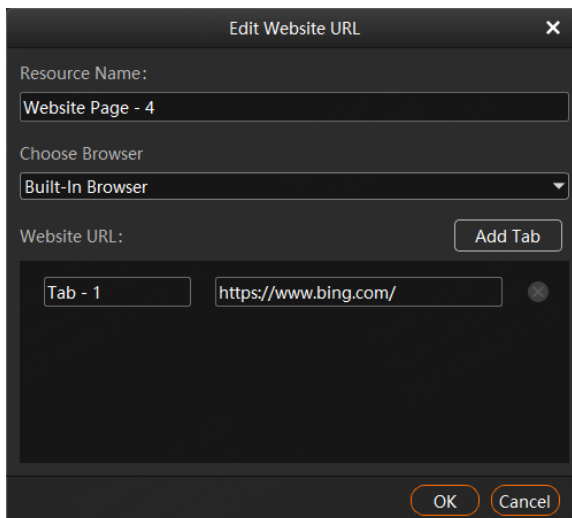
Step 2 Enter the desired website name in the **Resource Name** area.

Step 3 Select the browser mode from the drop-down list in the **Choose Browser** area**.**

Step 4 Enter the tab name in the left text box in the **Website URL** area.

Step 5 Enter the complete website domain name in the right text box.

Step 6 Click **Add Tab** to add a new tab page.

Step 7 Enter the tab name and domain name of the new tab page.

Step 8 Click **OK** to enter the added website.

Figure 5-15 Website page (built-in browser)
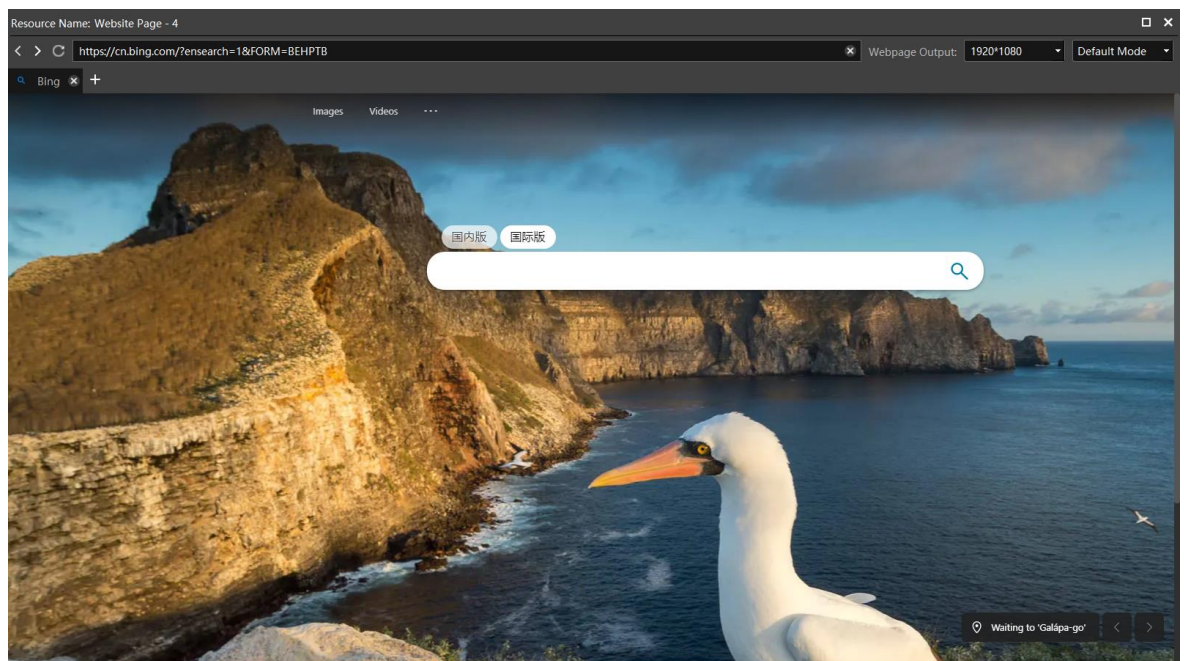
With a built-in browser, you can configure both the webpage output resolution and the webpage mode.

Click the first drop-down menu next to **Webpage Output** in the upper-right corner to change the webpage resolution.

Click the second drop-down menu next to **Webpage Output** to change the webpage output mode. The options include **Default Mode**, **Screenshot Mode**, and **Window Mode**.

- Default Mode: The default webpage output mode

- Screenshot Mode: This mode is recommended when there is video content on the webpage. This mode consumes more system resources.
- Window Mode: During playback, the stage editing area does not provide a preview. Instead, it is displayed directly on the screen, and the output image can be controlled using the mouse.

Step 9 Click **✕** at the top right corner of the website to close the website and complete adding the website.

Notes:

- When multiple tabs are opened, the tab where you stay on before closing the website will be used as the input source.
- If you opened other website pages and the new page is displayed on the new tab, the system automatically adds the new tab page.
- If you require long-time webpage playback, it is advisable to configure software to automatically restart at scheduled intervals via **Settings** > **System Settings**, in order to periodically clear the webpage cache.

5.3.1.9 Add Streaming Media

FX1 supports adding streaming media in rtsp, rtmp, http and https formats as input source.

Step 1 Right click the blank area of **Media Library** and select **Add Streaming Media** to open the window of adding a media network address.

Figure 5-16 Add streaming media
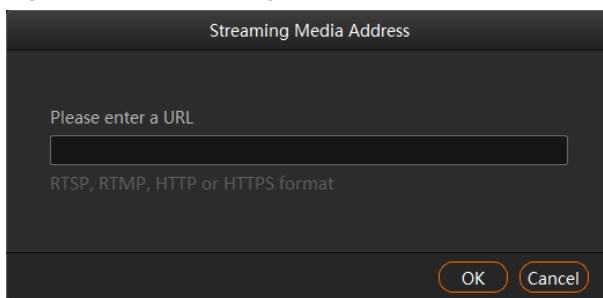
Step 2 Enter the media path in the URL field.

The path must begin with "rtsp://" , "rtmp://", "http://" or "https://".

Step 3 Click **OK**.

5.3.1.10 Add Media Collections

Multiple videos or videos and pictures can be combined with a specific order to form a new video source called media collection. The videos and pictures in the collection can be played automatically according to the set mode.

Note:

The PowerPoint files, NDI sources, websites and streaming media cannot be added to the media collection.

Step 1 Right click the blank area of **Media Library** and select **Add Media Collection**.

Figure 5-17 Add media collection
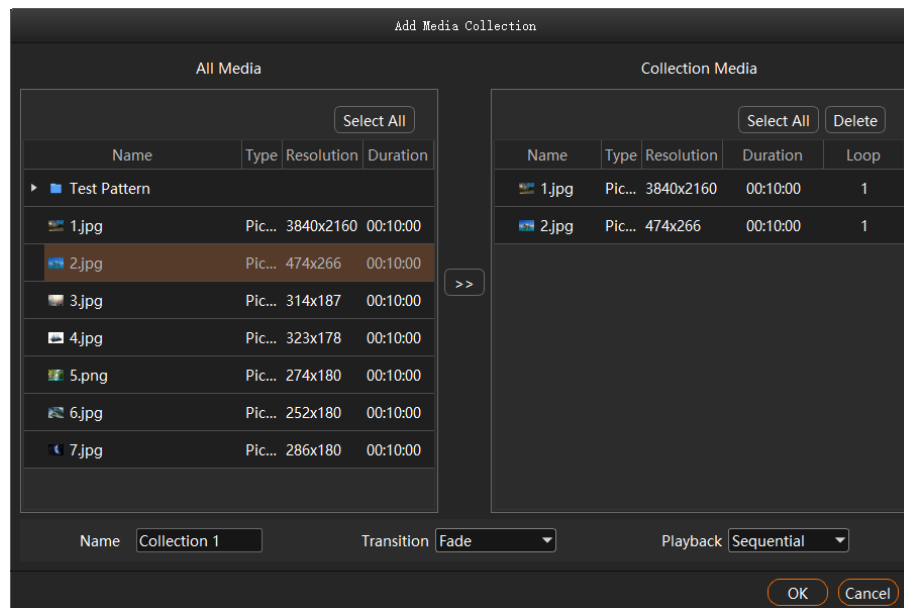
Step 2   In the **All Media** area, select the media files you want to add to the media collection

Step 3   Click [>>] in the middle to add the selected files to **Collection Media**.

Click and drag the media to change its order in the **Collection Media** area.

Step 4   For picture media, select a picture in **Collection Media** and click the value in the **Duration** column to change the playback duration of the picture.

For video media, select a video in **Collection Media** and click the value in the **Loop** column to change the number of times that the video can be played consecutively.

Notes:

- The duration of video media cannot be set.
- The number of playback times of picture media cannot be set.

Step 5   In the **Name** field, enter a name for the media collection.

Step 6   In the **Transition** filed, select a media switching effect. Supported effects include **Fade** and **Cut**.

Step 7   In the **Playback** field, select a playback order of media files in the media collection. Supported orders include **Sequential** and **Shuffle**.

Step 8   Click **OK**.

5.3.1.11 Add Control Commands

FX1 supports the control of the back-end splicers via the control commands. It is recommended the trained personnel use this function.

Step 1   Select the **Output Control** tab.

Figure 5-18 Output control

Figure 5-19 Add control commands
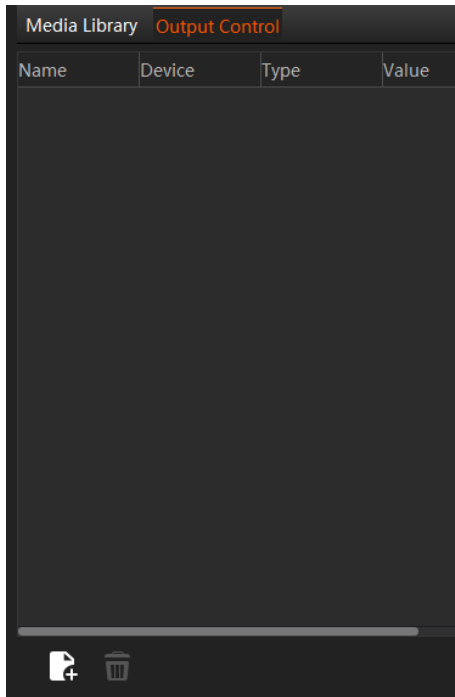
Step 2 Click ![icon] at the bottom-left corner or right click the blank area and select **Add** to open the **Edit Control Command** window.

Step 3 Enter the control command name next to **Name**.

Step 4 Enter the splicer information.

1. Select the connected splicer next to **Select Device**. The supported devices include the video wall splicer and intelligent controller.

1. Enter the splicer IP address next to **Device IP**.

2. Enter the port number for the external control next to **Port Number**.

Step 5 Configure the control command.

1. Select the control command type next to **Command Type**.

2. Enter the control command **value** next to Value. For the control command values, please refer the control protocol of the corresponding splicer.

Step 6 Click **OK** to complete the settings.

Notes:

- Each control command is a media file.
- The playback duration of the command media is fixed to 3s. If a program has the command media only, the output will be black for 3s.

5.3.2 Manage Media Files

5.3.2.1 Renaming

- Right click the media file or folder and select **Rename**. Enter a new name in the text box that appears.
- Click the media file or folder and press the **F2** key. Enter a new name in the text box that appears.

5.3.2.2 Deleting

There are three methods to delete a media file.

- Select the desired media file and click 🗑.
- Right click the media file and select **Delete**.
- Click the media file and press the **Delete** key.

5.3.2.3 Management

You can create folders to classify the added media files.

- Click ⬚ at the bottom left corner in the **Media Library** area, and then select **New Folder** and name the folder.
- Right click the **Media Library** area, and then select **New Folder** and name the folder.
- Select the desired media files and drag them to the new folder for better classification and management.
- Change the order of the files or folders by simply dragging and dropping them.

5.3.2.4 Switching View

Click the icon next to **Media Library** to switch the view mode.

- In list view mode, click ⊞ to switch to the thumbnail view mode. All media files will be displayed in thumbnails and folders will not be displayed.
- In thumbnail view mode, click ⊞ to switch to the list view mode. The media files will be displayed in folders.

5.4 Edit Programs

The playback unit of FX1 is a program. Each program supports at most four layers and one audio.

5.4.1 Edit Layers

Click and drag a media file to the layer in a program, and then adjust the layer in the stage editing area, such as the layer size and position.

Step 1 Select a media file in **Media Library** and drag it to the desired layer or output area.

Figure 5-20 Edit programs
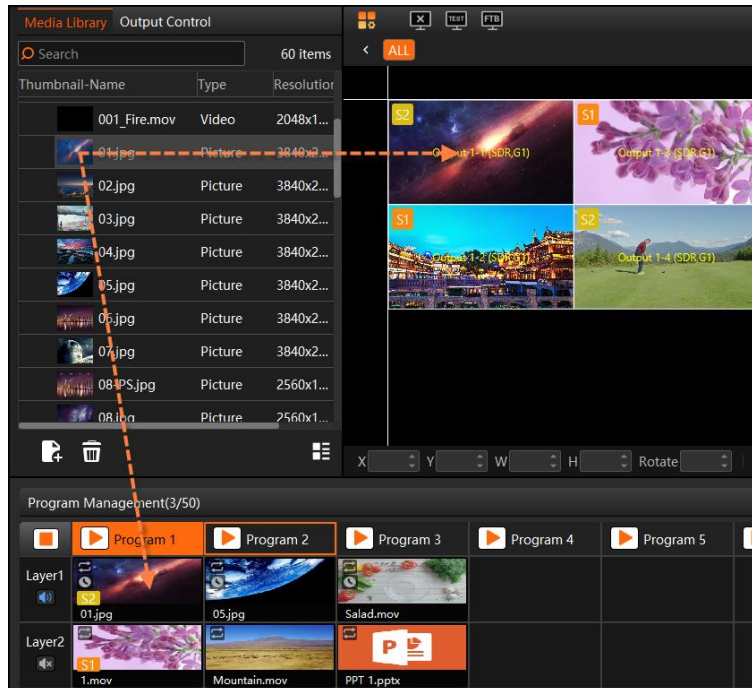
If the added media is an encrypted video converted using Transcoding and Encryption Assistant, when dragging the media to the target destination, you need to enter the password to decrypt the media in the pop-up dialog box. Alternatively, in the media library, right click the encrypted video, select **Decrypt**, and enter the password before you add the media.

Step 2   Adjust the layer size, position, rotation and priority.

Figure 5-21 Adjusting layers
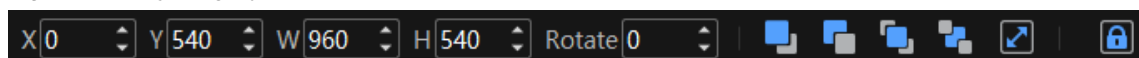
- Position adjustment: Drag and move the layer to adjust the layer position quickly, or fill in the values for the following parameters to precisely adjust the layer position.

  – X: Set the distance between the left edge of the layer and the left edge of the stage.

  – Y: Set the distance between the top edge of the layer and the top edge of the stage.

- Size adjustment: Drag the layer edge to adjust the layer size quickly, or fill in the values for the following parameters to precisely adjust the layer size.

  – Width: Set the layer width.

  – Height: Set the layer height.

- Rotate: Set the angle by which the layer rotates clockwise.

- Priority adjustment:

  – : Bring the selected layer forward.

  – : Send the selected layer backward.

  – : Bring the selected layer to front.

  – : Send the selected layer to back.

  – : Make the selected layer fill the output area.

Step 3   Set whether to play the layer audio.

Click the audio icon in the **Layer** column on the left of the program columns to set whether to play the layer audio.

- : Play the audio that comes with the layer.

- : Do not play the audio that comes with the layer.

Step 4   Group the media.

1. In the stage editing area, select the target media.

    Press the **CTRL** key and click the mouse to select multiple media.

2. Right click to open the context menu and select **Create Group**.

    −   For the media in the same group, the same icon appears on the top left of each layer as shown below.

    −   For the group media, you can perform the playback, fast forward, rewind, pause and stop operations on all the media in the group simultaneously.

Figure 5-22 Layer group
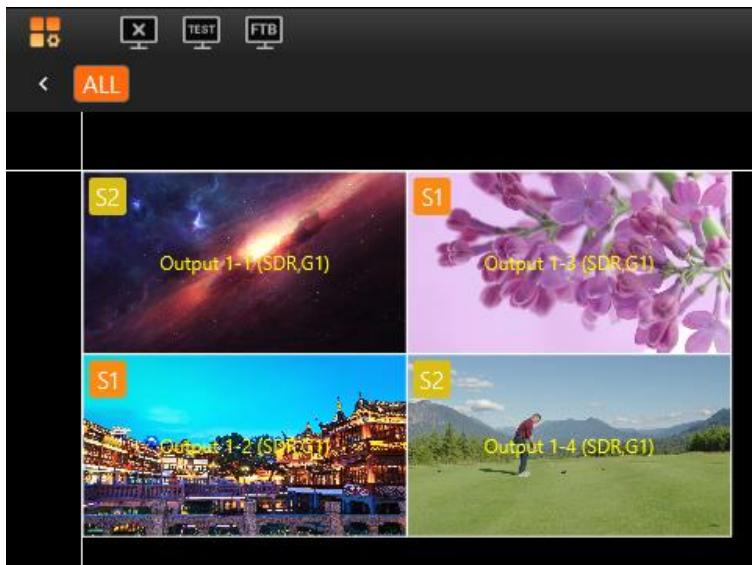
Step 5   Lock the layer media.

After a layer is edited, you can lock the layer to avoid unexpected changes to the layer caused by misoperation.

1. In the stage editing area, right click the target media to open the context menu.

Figure 5-23 Lock media
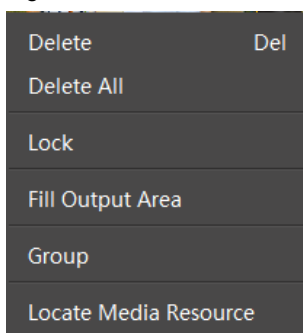
2. Select **Lock** to lock the selected media. After locked, the layer cannot be moved.

    −   After the layer is locked, **lock** appears at the top right corner of the layer in the **Program Management** area.

    −   After locked, the layer cannot be moved or re-sized, and the layer input source cannot be replaced.

    −   Right click the locked layer and select **Unlock** to unlock the layer.

Notes:

•   In the stage editing area, you can click and drag to select multiple layers.

- After you have completed all the editing in the stage editing area, click 🔒 to lock the stage to avoid the layout changes in the stage caused by misoperation.
- Select **Locate Media Resource** to quickly find out where the media file is in the media library.
- If the selected media is a webpage media that has multiple tab pages, you need to set the desired playback tab for each media respectively.
- Right click the layer and select **Rename** to give the layer a new name.
- Right click a layer and select **Bind Screen Group** to modify the binding relationship between the layer and the screen.
- In the program management area, right click a media and select **Locate Media Resource** to quickly locate the media in the media library.
- In the program management area, right click a media and select **Access File Location** to open the storage location of the current media on the media server.

5.4.2 Set Program Properties

Right click a program to pop up the context menu as shown in the following, and you can set the program properties as needed.

Figure 5-24 Set program properties
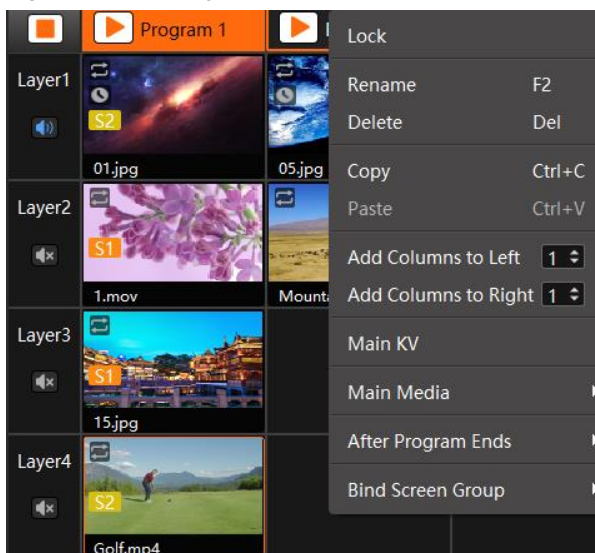
- Lock: Lock the selected program. Once locked, you can only play, pause, copy and insert the program.
- Rename: Give the program a new name for better management.
- Delete: Delete the current program. All the layers, layer settings and media properties will be deleted.
- Copy: Copy the layers, layer settings and media properties in the current program.
- Paste: Paste the copied program to a new program.
- Add Columns to Left: Insert a specified number of program columns to the left of the currently selected program column.
- Add Columns to Right: Insert a specified number of program columns to the right of the currently selected program column.

Notes:

- To add program columns to left or right, click ⬍ to set the number of columns to be added first and then click **Add Columns to Left** or **Add Columns to Right**.
- When you perform the copy and paste operations on a program, the pasted program becomes a newly-added program.

- Main KV: Set the current program as the main KV (key video).
  - After a KV program is set, if you add a layer in another no-layer program, the added-layer will automatically match the layer style and properties in the KV program, including the position, rotation, locking, sound channel mapping, graphics card mapping, start playing and stop playing settings, and layer grouping of each layer in main KV.

- If you set KV program after you add the layers to an empty program, the layers will not follow the layer style and properties in the KV program.

  For example, once the position, size, and rotation angle of Layer 1 are set in the main KV program, adding a layer to a blank program will ensure that its position, size, and rotation angle are identical to those of Layer 1 in the main KV program.

- Main Media: Set which layer is used as the main media. The playback timing and program switching are all based on the main media.

  When **Main Media** is set to **None**, no program jumping is performed. All media in the program will be played completely and with a set ending action after the program playback ends.

Notes:

- If **Main Media** is set to **None** and then the program is added to the schedule list, the playback of the program is not limited by the set loop times and the program jump settings do not take effect.

- If you have added the program to the schedule list, **Main Media** cannot be set to **None**.

- **Main Media** does not support the cross program continuation function.

- After Program Ends: Set the actions after the current program playback ends.

| ✓ Loop Playback |
| Jump to Next |
| Stop Playing |
| Jump to KV |
| Jump to ▶ |
| Apply to All |
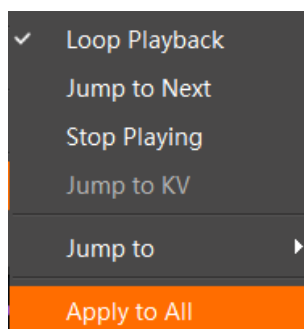
  - Loop Playback (default): The current program will be played circularly.

  - Jump to Next: The next program will be played automatically after the current program is stopped. If the program is the last program of a specific screen, this function is not available.

  - Stop Playing: The playback will be stopped after the current program is stopped.

  - Jump to KV: The main KV program will be played automatically after the current program is stopped.

  - Jump to: You can select the desired program and the specified program will be played automatically after the current program is stopped.

  - Apply to All: Apply your selected option for **After Program Ends** to all the programs.

- Bind Screen Group: Associate programs with screens and then group the programs by screens.

  Once a program is bound to a screen, by selecting different screens, you can view the programs bound to each screen, allowing for rapid switching between programs.

5.4.3 Play Programs

After completing the program editing, play the programs through either of the following two methods.

- Click ▶ next to the program name in the **Program Management** area.

- Click ▶ next to the program name in the **Playback** area.

- Click ▶ or ❚❚ next to each media to play or pause the playback of the selected media.

- For the media of the same group, drag the progress bar of a single media to control the synchronous playback of all the media in the group.

Note:

If there are no PowerPoint files in the playlist and the PowerPoint file playback mode is disabled, you can use the arrow keys, **Page Up** and **Page Down** keys on the keyboard to switch programs, and press the space key to start the playback.

5.4.4 Play Programs by Screens

You can add multiple screens and manage the programs and outputs by screens.

Add Screens

On the main user interface, click [+] to add a screen.

Figure 5-25 Add screens
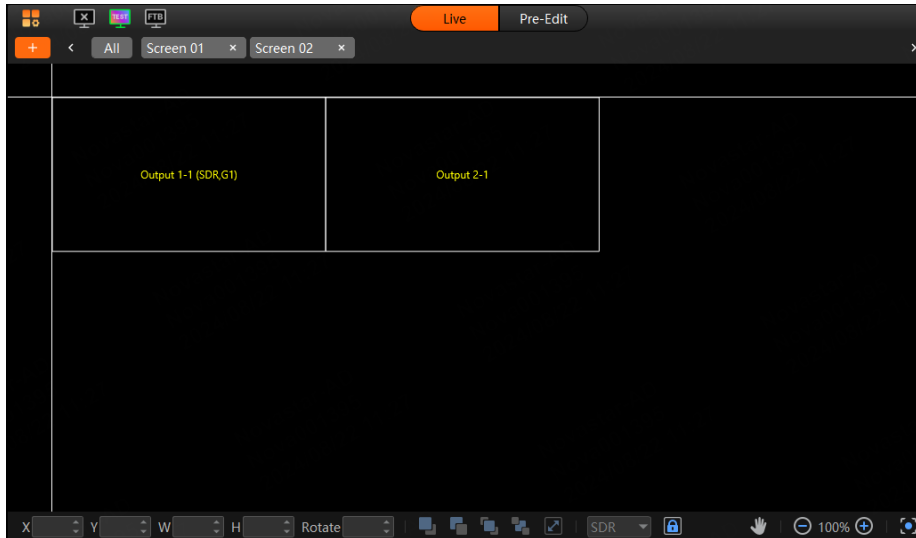
Click the screen name to manage the programs and layers by screen groups.

- All: Click **All** to display the programs not bound to any screen and all layers.

- Screen name: Click each screen name to display the programs and layers bound to that screen, as well as the layers not bound to any screen.

  When adding screens, the system binds 10 programs to each screen automatically. If the added screens exceed the default 50 programs, the system will automatically add 10 programs for each extra screen. When the automatically-added programs reach 100, the system will no longer add programs automatically. Subsequent screens will require manual program insertion and screen binding operations.

- Click the screen to select it. Click it again to deselect it, showing all programs and layers.

Note:

To let other programs to inherit the main KV layer properties, click **All** first, adjust the layer layout and properties on the stage, and set the current program as **Main KV**. For subsequent screen program edits, this will save time on adjusting the layer positions and sizes.

Play Programs by Screens

Each screen can only play one program at a time. Playback across screens does not interfere with each other. Use the following methods to perform playback.

Click the screen and it will automatically jump to the program list bound to the current screen. Click [▶] next to the program name to start playback.

Figure 5-26 Play programs by screens
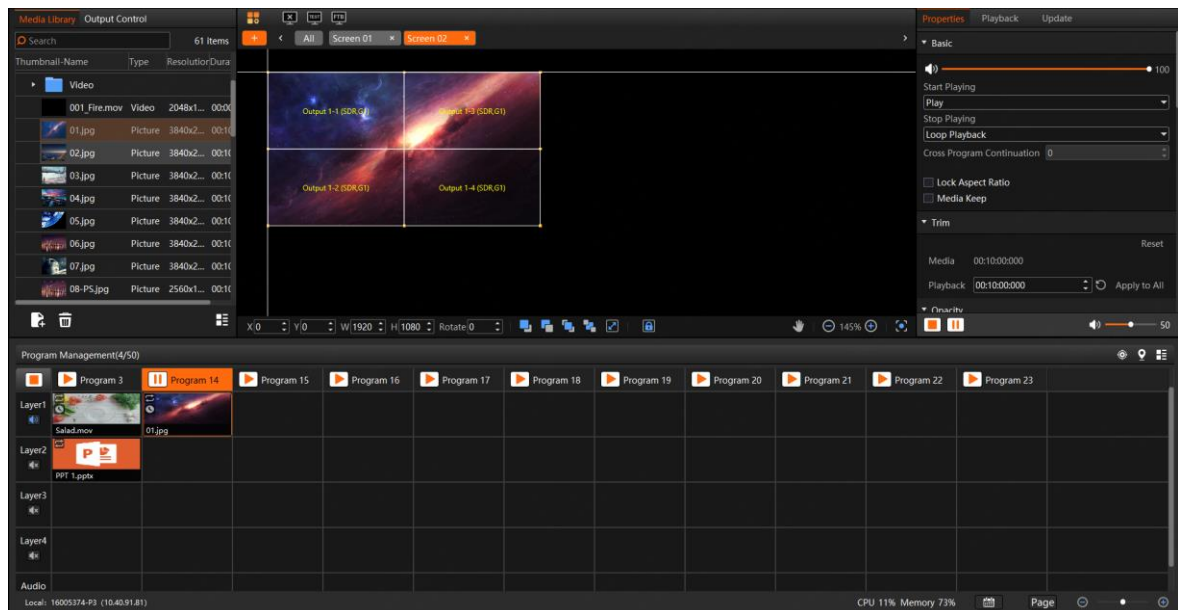
Playback Instructions:

- Each screen can only play one program in the program list at a time. Playback across screens does not interfere with each other.

- After selecting a screen, right click a program to insert a new program. The newly-inserted program will automatically bind to the selected screen.

- After selecting a screen, adding media to a layer will automatically bind that layer to the selected screen.

- Once a layer is bound to a screen, you can only add media to that layer within the bound screen, but cannot add media to that layer of other screens since that layer does not exist for other screens.

- Right click a layer and select **Bind Screen Group** to quickly modify the layer's screen binding.

- Removing all media from a layer already bound to a slit screen does not affect the layer's binding to that screen.

- Click ✕ next to the screen name to delete the screen. When a screen is deleted, the layers and programs bound to it will be automatically unbound, but the media in the added programs and layers will remain unchanged.

5.4.5 Set Media Playback Properties

You can set whether to mute the playing, and set display image when the playback stops.

Step 1   Click the playing media in the **Program Management** area or the **Output** area to select the media.

Step 2   In the **Media Properties** area within the **Output** area, click **Basic** to set the basic properties of the media.

Figure 5-27 Basic properties
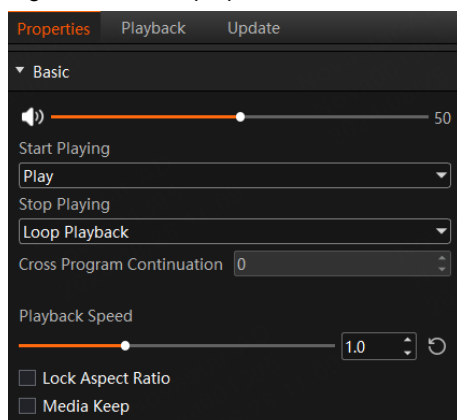
- Volume adjustment: Adjust the output volume of the program media. Click 🔊 or 🔇 to mute or unmute the output.
- Start Playing: Configure the state of the current media upon starting playback.
    - Play: The media enters directly into normal playback mode after the program begins.
    - Hold on First Frame: The media remains frozen at the first frame while the program starts playing, and can be resumed by clicking ▶ next to the media name in the **Playback** area in the top right corner.
- Stop Playing: Set the status or action when the playback of the current media ends.
    - Hold on Last Frame: After the playback of the current media ends, the output displays the last frame of the playback media.
    - Black Screen: After the playback of the current media ends, the output displays a black screen.
    - Loop Playback: The current media will be played circularly after the playback ends. When the media file type is picture, this option is unavailable.
    - Stop Playing: The playback will be stopped after the playback ends. When the media file type is audio, this option is available.
- Cross Program Continuation: Enable the feature of cross program continuation, so that selected media will continue playing seamlessly when switching between programs. Once cross program continuation is set, the media will play according to its normal progress without restarting from the beginning due to program switching.

    The main media does not support the configuration of cross program continuation.
- Playback Speed: Configure the playback speed of video or audio media. The value ranges from 0.5 to 2.0, and defaults to 1.0.
    - 1.0: The media plays at its original speed.
    - Smaller than 1.0: The media plays slowly. The smaller the value, the slower the playback speed.
    - Larger than 1.0: The media plays quickly. The larger the value, the faster the playback speed.
- Lock Aspect Ratio: Keep the aspect ratio of the media file unchanged during the adjustment.
- Media Keep: Check or uncheck the box to enable or disable the function.
    - When enabled, the media will continue playing from the last position in the previous playback after program switching.
    - When disabled, the media will start playing from the beginning after program switching.

Notes:

- When the media file type is a PowerPoint file, the basic property settings are unavailable.
- When the media file type is audio, **Hold on Last Frame** and **Black Screen** options are unavailable.

5.4.6 Trim

Within a program, by selecting a media and accessing its **Media Properties**, you can configure the desired media playback duration by setting the start time and end time.

Figure 5-28 Trim settings
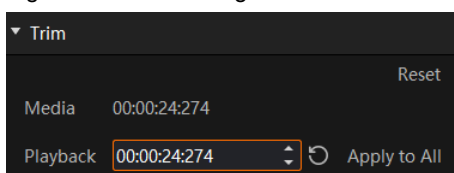
- Media: View the time length of the media.
- Playback: This is the time length the media is set to play, typically calculated by subtracting **Start Time** from **End Time**. When the playback duration is adjusted, the media will play for the newly set duration. The default playback duration for media other than video can be set in **Settings** > **Output Settings** > **Default Duration**.

- If the **Playback** duration exceeds the interval between **Start Time** and **End Time**, the media will repeatedly loop between these two time points.

- If the **Playback** duration is shorter than the interval between **Start Time** and **End Time**, the media will begin at the start time and stop playing once the set playback duration has elapsed.

- If the **Playback** duration equals the time interval between **Start Time** and **End Time**, the media will play from the start time and stop at the end time.

- By clicking **Apply to All**, the playback duration for all media of the same type within the layer can be synchronized to the current setting.

- Clicking ↺ to restore the playback duration to the default value.

- Clicking **Reset** in the upper right corner restores all settings to their default values.

Notes:

- You can change the values of **Playback**, **Start Time**, and **End Time** for video media.

- Other media types only support modification of **Playback**.

5.4.7 Flip Pages

For Excel Files

Select an Excel media, and click **Page** in the **Media Properties** area on the right side to expand the page flipping interface.

Figure 5-29 Excel page flipping
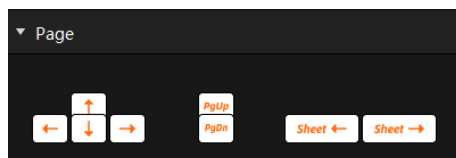
The functionality of the page flipping buttons differs depending on the playback mode set in **Settings** > **Output Settings**.

- When the Excel playback mode is set to **Native** or **Animation**, manual page flipping methods are as follows:

  - ←: Click it to move leftward, with each click moving one column.

  - →: Click it to move rightward, with each click moving one column.

  - ↑: Click it to move upward, with each click moving one row.

  - ↓: Click it to move downward, with each click moving one row.

  - PgUp: Click it to flip up, with each click flipping one page up.

  - PgDn: Click it to flip down, with each click flipping one page down.

  - Sheet ←: Click it to switch the Sheet page of the Excel table, with each click moving to one Sheet page to the left.

  - Sheet →: Click it to switch the Sheet page of the Excel table, with each click moving to one Sheet page to the right.

- When the Excel playback mode is set to **Picture**, manual page flipping methods are as follows:

  - ← / ↑ / PgUp: Each click flips one page up.

  - → / ↓ / PgDn: Each click flips one page down.

For Other Files

When the media type is Word, PDF, or PPT, the page flipping interface appears as follows:

Figure 5-30 Page flipping
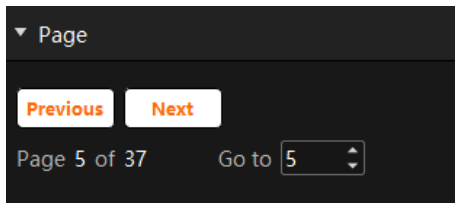
- Click **Previous** or **Next** to view the previous or next page.
- Enter a page number in the text box next to **Go to** to jump to the specified page.

5.4.8 Set Layer Opacity

You can set the overlapping effect of the output images by adjusting the layer opacity.

Step 1 Click the playing media in the **Program Management** area or the **Output** area to select the media.

Step 2 In the **Media Properties** area within the **Output** area, click **Opacity** to set the nontransparent degree of the layer.

Figure 5-31 Set layer opacity
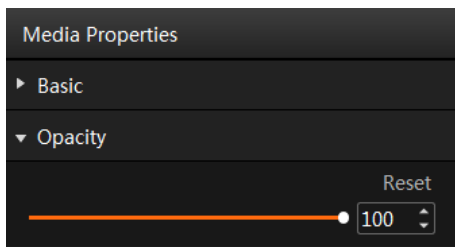
Step 3 Drag the slider to adjust the layer opacity degree, or enter a value in the text box below **Reset** to precisely adjust the layer opacity degree.

The value range is 0 to 100. 0 stands for totally transparent and 100 stands for nontransparent.

5.4.9 Set Layer Color

You can adjust the layer color parameters to adjust the output image effect. The related parameters are shown below.

Figure 5-32 Layer image quality
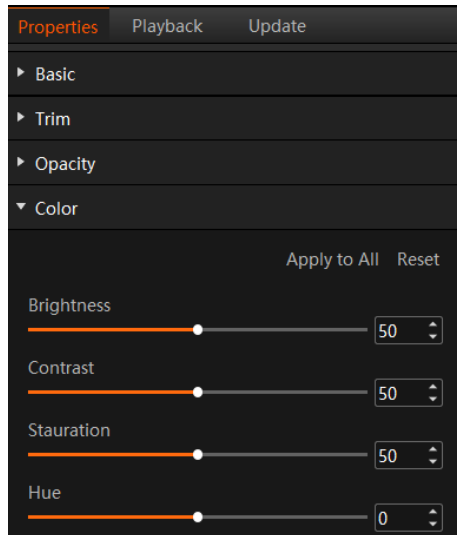
Table 5-1 Color parameters

Parameter	Description
Brightness	Adjust the brightness or darkness of the image. The value ranges from 0 to 100 and defaults to 50.
Contrast	Adjust the difference in brightness between light and dark areas of the image. The value ranges from 0 to 100 and defaults to 50.
Saturation	Adjust the strength or purity of the colors of an input source image. The larger the saturation, the more vivid the input source image; the smaller the saturation, the larger the image grayscale. The value ranges from 0 to 100 and defaults to 50.
Hue	Adjust the distinction between colors. The value ranges from –180 to +180 and defaults to 0.
Apply to All	Apply all the parameter settings to all the layers.
Reset	Reset all the color parameters to defaults.

5.4.10　Crop Layers

Crop a certain part of the layer image and display it in the output area.

The PowerPoint files do not support the cropping.

Step 1　Click the playing media in the **Program Management** area or the **Output** area to select the media.

Step 2　In the **Media Properties** area within the **Output** area, click **Crop** to set the cropping parameters.

Figure 5-33 Crop layers
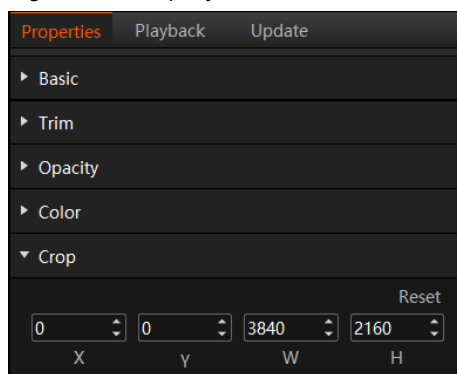
Step 3　Set the position and size of the cropped area.

- Position:
  - X: Set the distance between the left edge of the cropped area and the left edge of the input source image.
  - Y: Set the distance between the top edge of the cropped area and the top edge of the input source image.
- Size:
  - Width: Set the width of the cropped area.
  - Height: Set the height of the cropped area.

The cropping takes effect in real time and the cropping result is shown as follows.

Figure 5-34 Cropping

5.4.11 Set Layer Effects

Layer effect settings include blurring, keying, mask and inverting colors.

Step 1   Click the playing media in the **Program Management** area or the **Output** area to select the media.

Step 2   In the **Media Properties** area within the **Output** area, click **Effect** to set the related parameters.

Figure 5-35 Layer effect settings
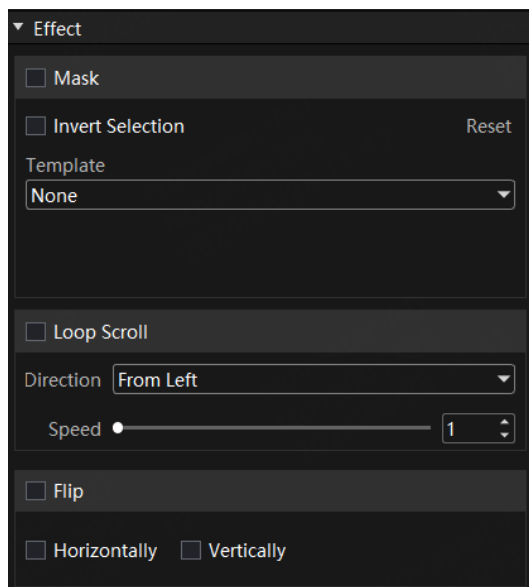
Mask

The mask function is used to remove the undesired part of the layer image.

Step 1   Select **Mask** to turn on the function.

Step 2   Select the layer mask template. The default option is **None**.

- None: Do not mask the layer image.

- Rectangle: Mask the layer image, and the cropped part is left as a rectangle.

Step 3　Set the height of the mask area (top and bottom) and the width of the mask area (left and right).

- Top: Set the height of the top mask area.
- Bottom: Set the height of the bottom mask area.
- Left: Set the width of the left mask area.
- Right: Set the width of the right mask area.

Note:

After the mask settings are completed, only the central area is kept. If **Invert Selection** is selected, the central area will be masked and the originally masked area will be displayed.

Loop Scroll

Enable media scrolling in a continuous loop. Media will scroll in the specified direction with adjustable speed.

Step 1　Select the media that you want to configure for scrolling.

Step 2　In the **Effect** section of the media properties, check the box next to **Loop Scroll** to activate scrolling playback for the media.

Step 3　Specify the scrolling direction for the media.

Choose from four scrolling modes: **From Left**, **From Right**, **From Top** and **From Bottom**.

Step 4　Adjust the scrolling speed.

The value ranges from 1 to 100, with a default setting of 5.

You can manually drag the adjustment bar or enter the desired numerical value in the adjacent text box to set the scrolling speed.

Flip

Configure the media to play with a flipped image.

- Horizontally: Flip the media image horizontally, meaning the output image will be displayed flipped from left to right.
- Vertically: Flip the media image to vertically, meaning the output image will be displayed flipped from top to bottom.

After selecting the desired flip option, check the checkbox next to **Flip** to enable the flip output.

5.4.12　Set Webpage Tabs

When you configure a webpage media for the layer of a program, this function is available.

When there are multiple tab pages, you can configure different tabs for the programs.

If you require long-time webpage playback, it is advisable to configure software to automatically restart at scheduled intervals via **Settings** > **System Settings**, in order to periodically clear the webpage cache.

Step 1　Select the desired webpage media in the stage or program area.

Step 2　Click **Webpage Tab** to show the tab setting options.

Step 3　Select the current webpage tab name next to **Main Tab**.

5.4.13　Set Sound Channel Mapping

You can configure the sound card for the layer media to output the media audio from different sound cards.

Step 1　Select the desired media from the program management area or the output editing area.

Step 2   Select **Sound Channel Mapping** in the **Media Properties** area on the right side.

Only the media with audio information supports this function.

Figure 5-36 Sound channel mapping

Step 3   Select the desired sound card from the drop-down list.

The default option is the sound card used by FX1. Please refer to 7.5   Audio Settings for specific sound channel mapping settings.

Step 4   Click the desired sound channel and sound track to configure the output channel for each track.

- At most 8 sound channels are supported. The specific sound track number depends on the actual media.
- If the media file does not contain any sound track information, the sound channel settings are not supported.

Note:

After you set the sound channel and re-install the sound card, the configured parameters of the sound card will be applied to a new card automatically.

5.4.14   Set Graphics Card Mapping

Set the rendering graphics card for the layer media.

Step 1   Click the playing media in the **Program Management** area or in the **Output** area to select the media.

Step 2   Select **Graphics Card Mapping** in the **Media Properties** area on the right side to set the related parameters.

Figure 5-37 Graphics card mapping
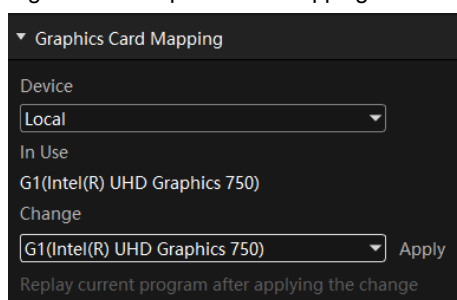
Step 3   Select the media output device from the drop-down list below **Device**. The options include the local and slave device.

Step 4   View the graphics card used by the current media below **In Use**.

Step 5   Select the rendering graphics card from the drop-down list below **Change**.

Step 6   Click **Apply** to complete the settings.

5.4.15   Set Layer Properties

Select a layer in the **Program Management** area, and then select the **Properties** tab on the right pane to show the layer property settings interface.

Figure 5-38 Layer properties
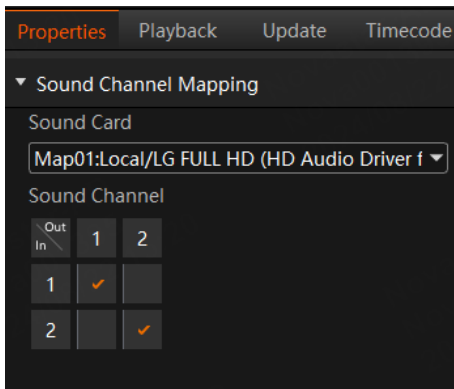
Layer properties involve configuring the audio channel mapping for the media within the layer. Before modifying the layer's channel mapping, you need to complete the sound card mapping configuration in 7.5 Audio Settings.

The relationship between layer channel mapping and media channel mapping is as follows:

- If you modify the layer channel mapping first and then add the media, and if you subsequently modify the media channel mapping, the output will follow the modified media channel mapping.

- If you add the media first and then modify the layer channel mapping, the existing media within the current layer will retain its original channel mapping. Media added thereafter will follow the layer's configured channel mapping for output.

5.4.16   Set Scheduled Programs

After the program editing, you can realize automatic playback of the programs according to the scheduled time and times.

Step 1   Click **[icon]** > **Edit Scheduled Playback** at the bottom right of the main user interface to open the **Scheduled Playback** window.

Figure 5-39 Scheduled programs
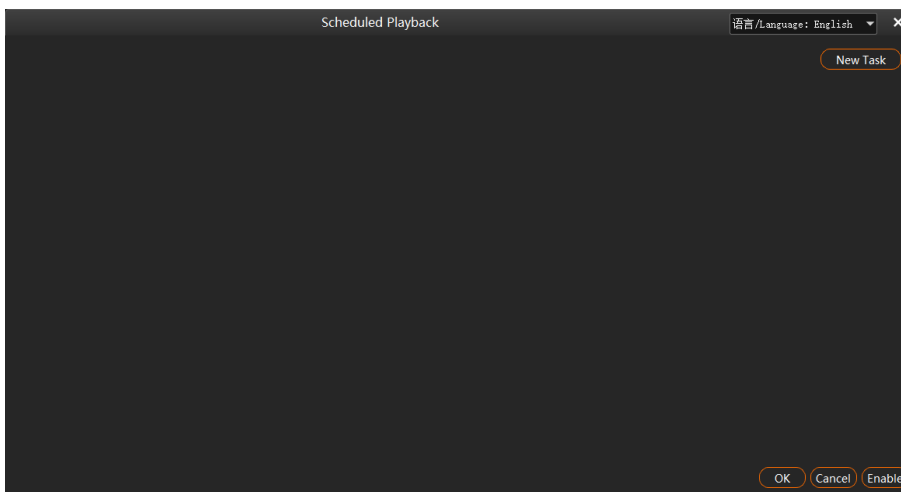
Step 2   Click **New Task** at the top right of the window to create a new playback task.

Figure 5-40 Playback tasks
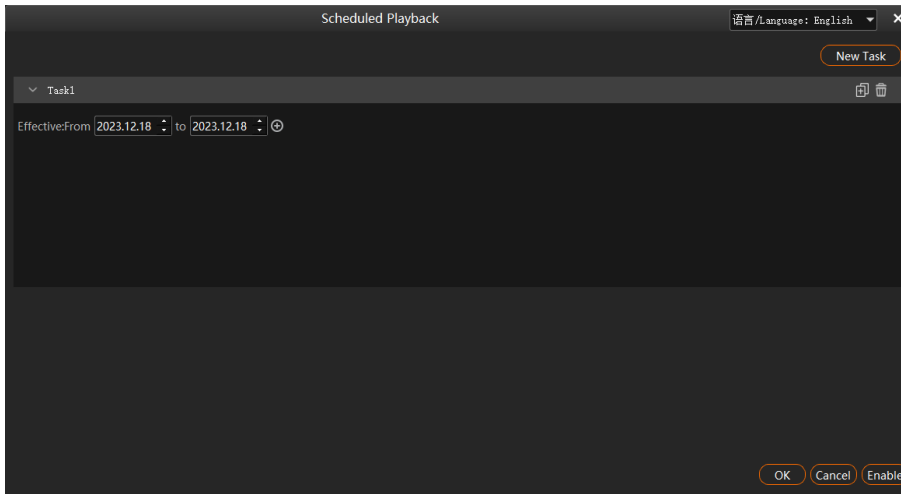
Step 3 Set the start date and end date of the task in the **Effective** area.

Step 4 Click ⊕ next to the effective time to add a new playback task.

Figure 5-41 Set scheduled programs
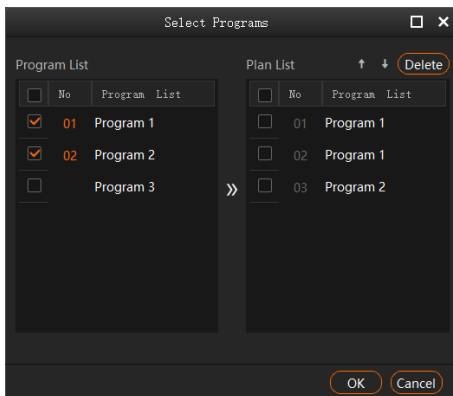
1. Select the desired programs in the **Program List** area on the left.

2. Click ≫ to add the selected programs to **Plan List.**

   The programs will be played according to the sequence (from top to bottom) in the **Plan List** area.

   If you want to adjust the playback sequence, check the box next to the desired program and click ↑ or ↓ to adjust the sequence of the selected program. Only one program sequence can be adjusted at a time.

3. Click **OK** to complete the settings.

Step 5 Click **OK** to show the tasks and plans.

Figure 5-42 Set playback tasks
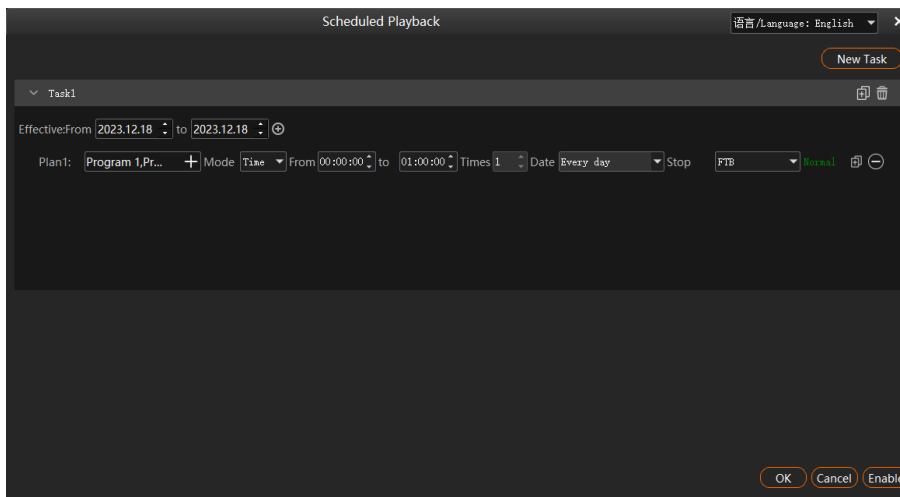
Step 6   Select the program playback mode next to **Mode**. The options include **Time** and **Times**.

- Time: The programs will be played by their durations circularly.

- Times: The programs will be played according to the set playback times.

Step 7   Set the start and end time within the schedule range.

1. Set the automatic start time of the program in the **From** area.

2. Set the automatic end time of the program in the **to** area.

   When the playback mode is set to **Times**, the end time of the program is **23:59:59** by default and cannot be changed.

Step 8   Set the program playback times.

Click the number next to **Times** to activate the times setting function. Enter the desired times and then the program will be played automatically according to the set times. When the playback mode is set to **Time**, the playback times of the program is **1** by default and cannot be changed.

Step 9   Set the program playback date. The options include **Every day**, **Monday**, **Tuesday**, **Wednesday**, **Thursday**, **Friday**, **Saturday** and **Sunday**.

- Every day: The plan will be played every day automatically according to the schedule within the effective time range.

- Monday: The plan will be played every Monday automatically according to the schedule within the effective time range.

- Tuesday: The plan will be played every Tuesday automatically according to the schedule within the effective time range.

- Wednesday: The plan will be played every Wednesday automatically according to the schedule within the effective time range.

- Thursday: The plan will be played every Thursday automatically according to the schedule within the effective time range.

- Friday: The plan will be played every Friday automatically according to the schedule within the effective time range.

- Saturday: The plan will be played every Saturday automatically according to the schedule within the effective time range.

- Sunday: The plan will be played every Sunday automatically according to the schedule within the effective time range.

Step 10   Set the action after the program stops. The options include **FTB** and **Current Frame**.

- FTB: After the program playback ends or the playback time reaches the end time, the output image fades to black.

- Current Frame: FTB: After the program playback ends or the playback time reaches the end time, the output image displays the frame when the program stops.

Step 11   Repeat Step 4 to Step 10 to add more plans under the current task.

Step 12   Repeat Step 2 to Step 10 to add more tasks and plans.

Step 13   Click **OK** to finalize the program scheduling.

Step 14   Go to [📅] > **Enable Scheduled Playback** in the bottom right corner of the main interface to enable scheduled playback.

Notes:

- Different plans cannot have overlapping time slots.
- Different tasks cannot have overlapping time slots.

Insert Program

Once the scheduled playback is activated, it supports the program insertion. This insertion can be executed either immediately or with a delay.

- Immediate Insert: Play the next selected program instantly.
- Delayed Insert: Wait for the current program to finish before playing the selected program.

Step 1   Navigate to [📅] > **Edit Scheduled Playback** from the bottom right of the main interface to open the scheduled playback window.

Figure 5-43 Edit scheduled playback
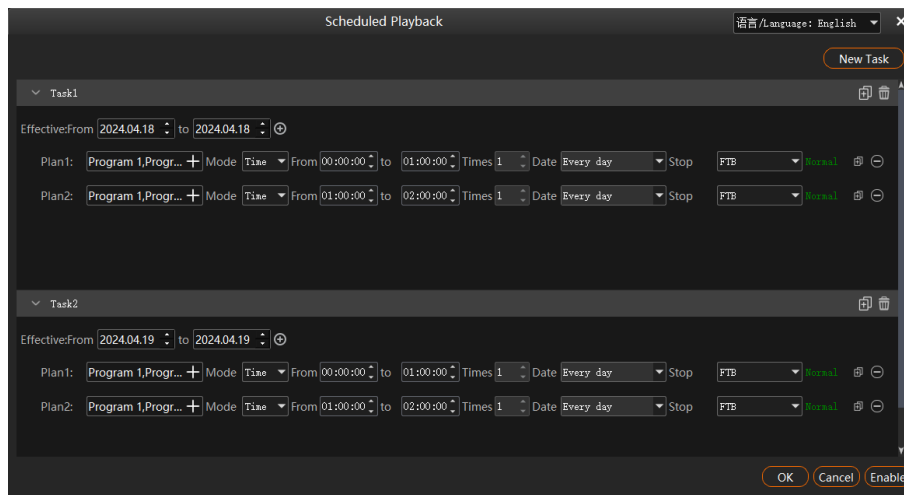
Step 2   Click the program name next to the plan that requires insertion to open the program selection window.

Figure 5-44 Select programs
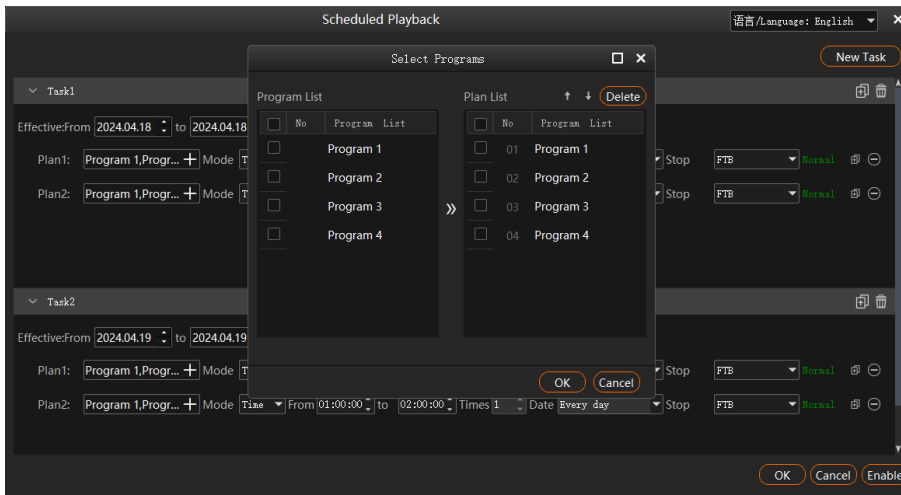
Step 3   Right click the desired program name in **Plan List** and select either **Immediate Insert** or **Delay Insert** to proceed with the program insertion.

Figure 5-45 Insert programs
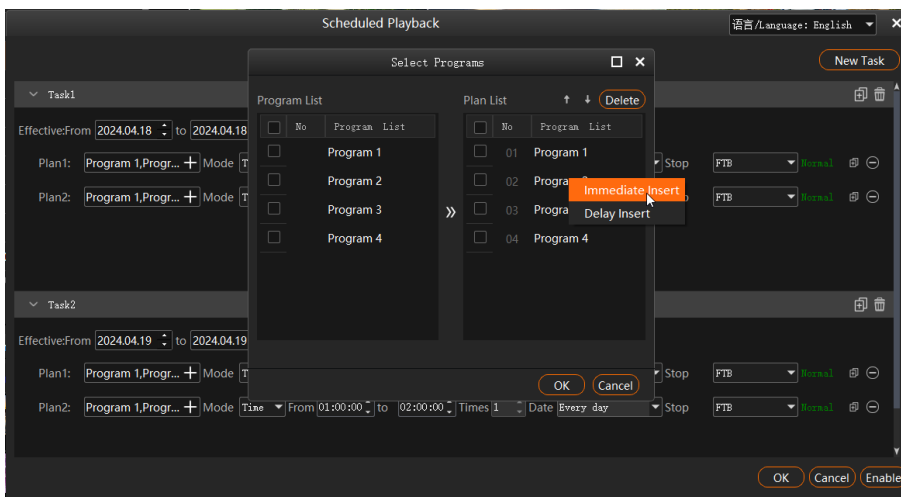
Rules for program insertion:

- Only programs that are currently being played or have not yet begun support program insertion. The programs that have already been played do not support insertion.

- For a schedule plan that is being played, the insertion can alter the order of the program sequence.

- If an insertion spans different plans, after the insertion, the playback will switch to the plan that contains the inserted program and continue until the end of the new plan.

- If an insertion spans different tasks, after the insertion, the inserted task will play first; once completed, the playback will revert back to the pre-insertion plan and continue.

Other Operations

- Delete plans

  In the **Scheduled Playback** window, click ⊖ next to the desired plan to delete the plan.

- Delete tasks

  In the **Scheduled Playback** window, click 🗑 next to the desired task to delete the task.

- Edit plans

  Click 🖥️ at the desktop taskbar to open the **Scheduled Playback** window and then add, edit or delete the desired plans or tasks.

- Create task copies

  Click ⊞ located on the right side of the task to quickly create a task copy. By expanding the copied task, you will be able to modify the related information.

- Create plan copies

  Click ⊞ located on the right side of the plan to quickly create a plan copy. By expanding the copied plan, you will be able to modify the related information.

- Disable scheduled playbacks

  Go to 📅 > **Disable Scheduled Playback** in the bottom right corner of the main interface to halt the scheduled playback.

5.5 Save Projects

You can save the project when you are satisfied with the project settings for easy use in future.

Go to **Project** > **Save** or **Save As** to save the current project file (*.fksp) to your local storage.

The project file includes the following information:

- Media files

- Output editing settings

- Programs and all layers in the programs

5.6 Package Projects

You can save the edited project and the imported media files as an independent project file for easy and convenient use on any computer in the future.

Step 1 Go to **Project** > **Package Project**.

Step 2 Enter the project file name, and select the save location and desired files in the displayed window.

Figure 5-46 Package projects
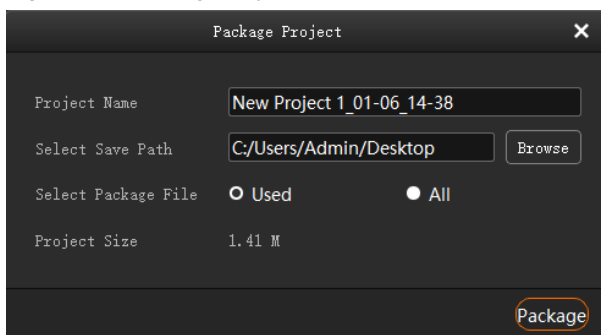
- Used: The media files that have been imported to the media library and added into the programs

- All: All the media files that have been imported to the media library

Step 3 Click **Package**.

6   **Link**

6.1 Link Settings

Application Scenarios

FX1 supports the master and slave outputs. If the master device cannot load the screen independently, one or multiple slave devices can help load the screen. You can configure the master and slave outputs on the master device to manage the playback images on the screen.

Figure 6-1 Applications
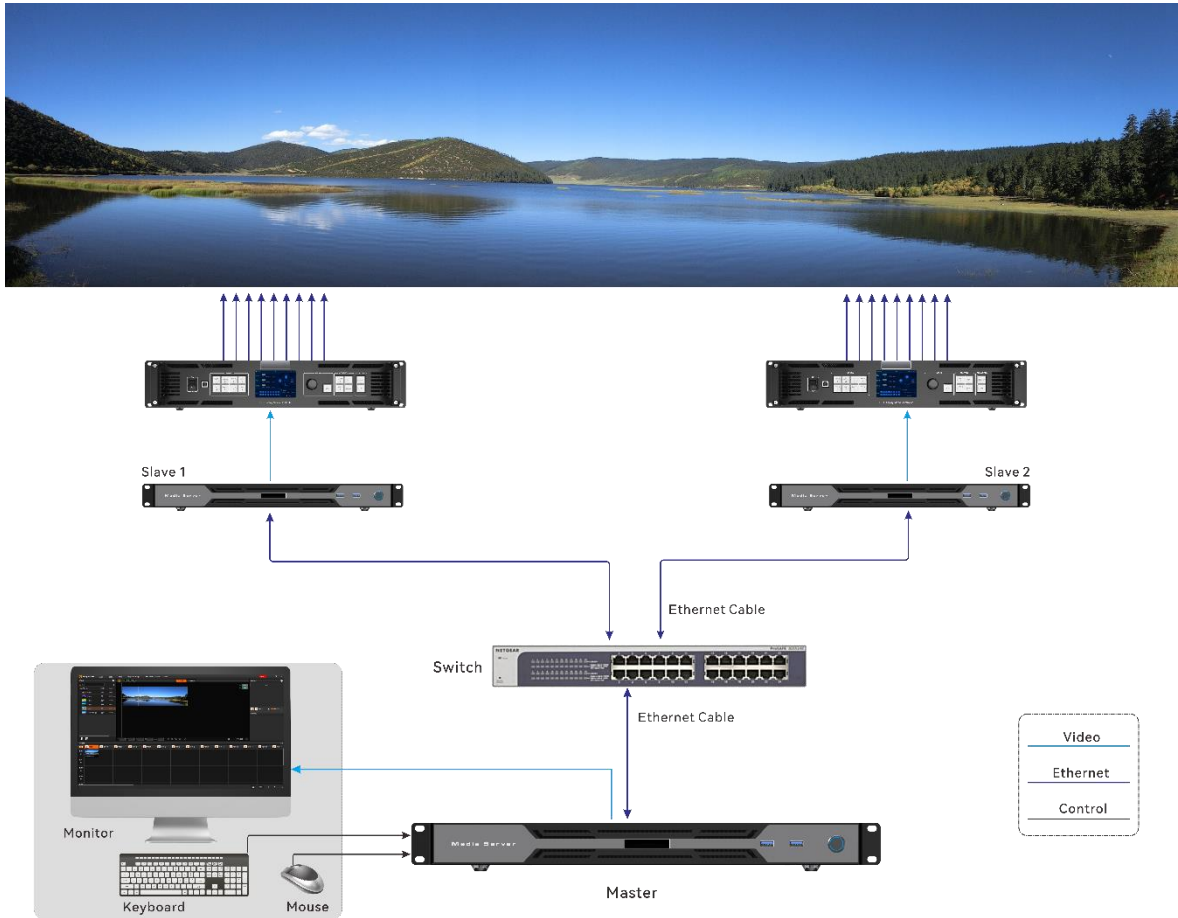
Prerequisites

The master and slave devices must be on the same network segment.

Notes

FX1 does not support frame sync playback.

Operating Procedure

Step 1   In the FX1 of the master device, go to **Link** > **Link Settings** to open the link settings window.

The system will automatically search for the IP addresses of the devices where FX1 is enabled on the current network segment, and then show the IP addresses in the **Device List** area.

Figure 6-2 Link settings
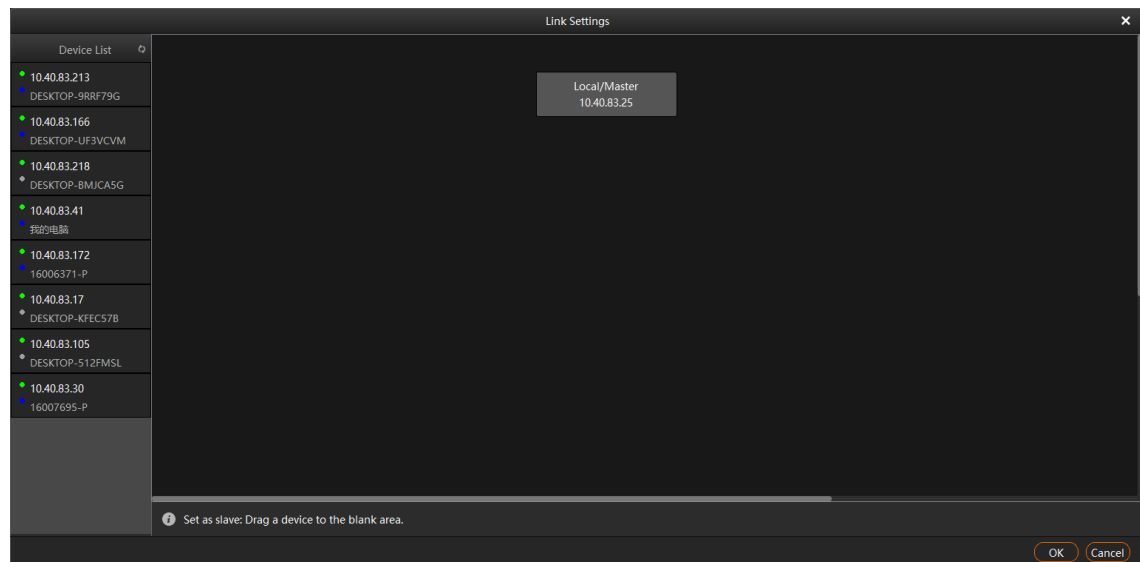
Step 2   Add a slave device.

1. In the **Device List** area, select the IP address of the device that you want to add as a slave device.

2. Click and drag the selected IP address to the blank area on the right side as shown in the following figure.

Figure 6-3 Add slave devices
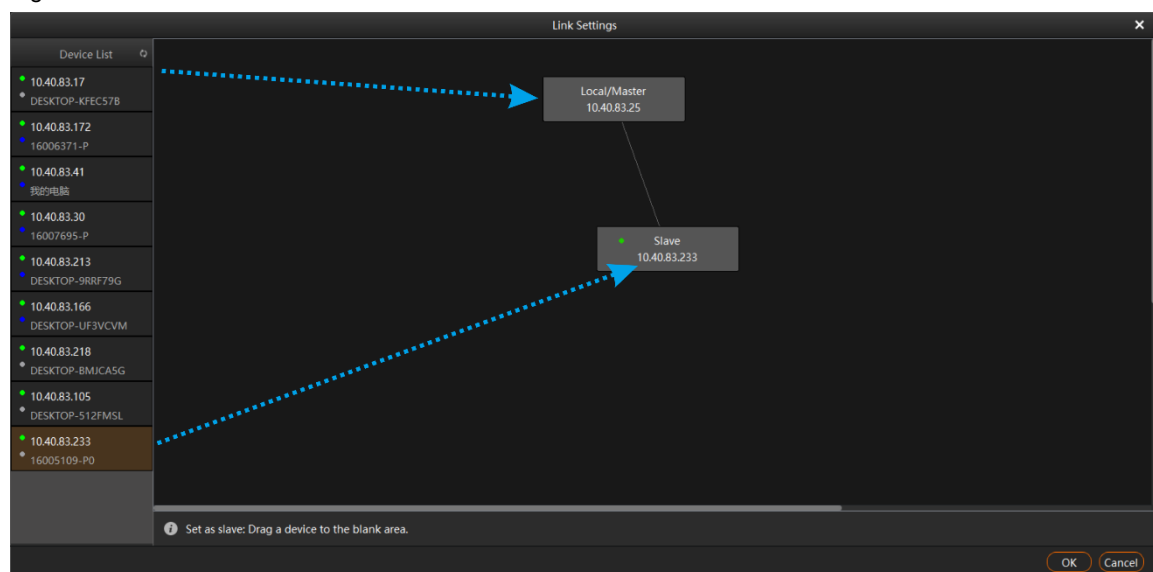
Step 3   Manage the slave devices.

1. In the topology, select the slave device.

2. Right click the device to open the context menu.

    –   Connect: If the master and slave connection fails, select this option to manually connect the devices.

    –   Delete: Break the master and slave connection.

    –   Power On: Power on the slave device remotely.

    –   Power Off: Power off the slave device remotely.

    –   Restart: Restart the FX1 software on the slave device.

Notes:

•   Right click **Local/Master** to show the context menu and select **Disconnect All Links** to disconnect all
     the linked devices.

• Right click **Local/Master** to show the context menu and select **Remote Power On/Off** to set the desired power on time and power off time of the linked device. Before you set the remote power on/off time, make sure you have enabled the auto power on/off function in the BIOS menu of the linked device.

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

6.2 Update to Slave

Manually update all the data on the master device to the slave device.

Step 1   In FX1 of the master device, go to **Link** > **Update to Slave**.

Step 2   Select the desired slave device from the window that appears.

Figure 6-4 Update to slave
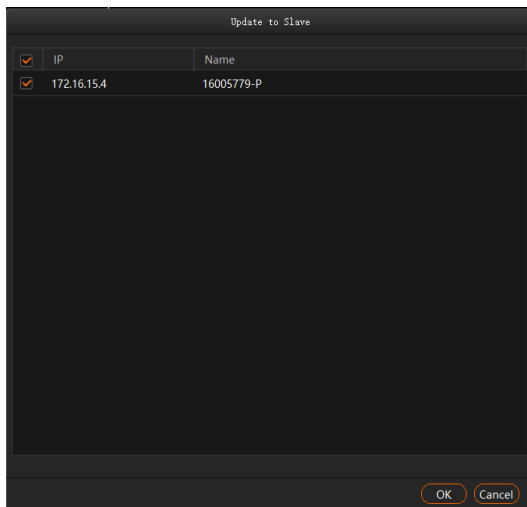
Step 3   Click **OK**.

On the main user interface, click **Update** on the top right to view the updating progress.

6.3 Disconnect

In the FX1 of the slave device, go to **Link** > **Disconnect** to break the connection between the connection between the master and slave devices.

● In the FX1 of the master device, this option is greyed out.

● In the FX1 of the master device, go to **Link** > **Link Settings** to break the binding relation between the master and slave devices in the topology.

7   **Settings**

7.1 System Settings

Set the startup-related settings. Go to **Settings** > **System Settings** to pop up the **System Settings** window.

Figure 7-1 System settings
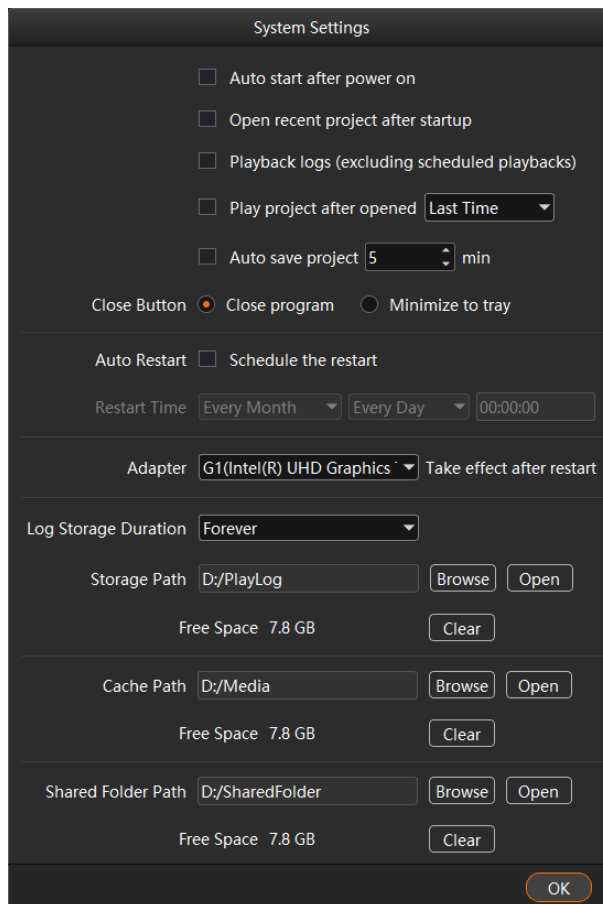
- Auto start after power on:

    – Selected: FX1 will be started automatically when OS starts.

    – Deselected: FX1 will not be started when OS starts.

- Open recent project after startup:

    – Selected: The recently-opened project will be when FX1 starts.

    – Deselected: A new project will be created when FX1 starts.

- Playback logs: Set whether to record the playback logs.

    – Selected: The playback logs will be recorded automatically.

    – Deselected: If the scheduled playback is disabled, the playback logs will not be recorded. If enabled, the playback logs will be recorded.

- Play project after opened:

    – Selected with specified program: The specified played project will be played automatically when FX1 starts.

      Last time: Play the program that was playing in FX1 before it was last closed.

      Program n: Play the specified program when FX1 starts.

    – Deselected: No project will be played when FX1 starts.

- Auto save project:

    – Selected: The project file will be automatically saved according to the set time interval. The time interval ranges from 1 to 30 minutes and defaults to **5 minutes**.

    – Deselected: The project file will not be saved automatically and you need to save it manually.

- Close Button: The status of FX1 when you click **Close** at the top right

    – Close Program: You will directly exit the program and no image will be output.

    – Minimize to tray: The program will be minimized to tray and the image will be output normally. Click the program icon in the tray and then the program will be displayed on your desktop.

- Auto Restart: Schedule the restart time for FX1.

  - Selected: FX1 will be restarted automatically according to the set time.

    A restart prompt appears 10 seconds before the restart time. You can restart the software or cancel the restart. If the software runs automatically for a long time, it is recommended to set the restart time to ensure that the software runs well.

  - Deselected: FX1 will not be restarted automatically.

- Adapter: Select the adapter for the video rendering in the stage editing area. After the selection, you must restart the server where FX1 is installed to apply this configuration.

- Log Storage Duration: Set the save duration for the playback logs. The supported options include **1Month**, **3 Months**, 6 Months, **12 Months** and **Forever**.

- Storage Path: Select the save location for the playback logs.

  - Click **Browse** to select the desired folder.

  - Click **Open** to open the folder where logs are saved.

  - Click **Clear** to clear the cache of the logs.

- Cache Path: Select the save location for the media files downloaded from the primary device.

  - Click **Browse** to select the desired folder.

  - Click **Open** to open the folder where the files are saved.

  - Click **Clear** to clear the cache of the files.

- Shared Folder Path: Set a shared folder locally and share the folder to other users on the same network segment. The user can add the media to the folder and the added media will be automatically displayed in the **Media Library** area. Add the desired media to the **Program Management** area and play it. A remote shared folder can also be added.

  - Click **Browse** to select the shared folder path.

  - Click **Open** to open the shared folder.

  - Click **Clear** to clear the files under the shared folder.

Note:

If the media under the shared folder is added to the program and media collections, after you delete the files under the shared folder path, the media saved in the program and media collections will also be deleted.

7.2 Output Settings

Set the program transition effect, transition duration, as well as the FTB status and duration.

Go to **Settings** > **Output Settings** to open the **Output Settings** window.

Figure 7-2 Output settings

- Mute FTB: Set whether to turn off the audio during the FTB process.
  - Selected: The audio will be turned off.
  - Deselected: The audio will be output as normal.
- MFPS/EFPS: The real-time frame rate
  - MFPS: After checked, the real-time frame rate will be displayed at the bottom left of the preview window in the editing area.
  - EFPS: After checked, the real-time frame rate will be displayed at the bottom left of the output image.
- FTB Duration: Set the time length the FTB process lasts. The value range is 0.00 to 10.00s and it defaults to **0.50s**.
- Program Transition: Set the program transition effect. The options include **Fade** and **Cut**.
- Transition Duration: Set the time length the fade effect lasts. When **Program Transition** is set to **Fade**, this option is available. The value range is 0.00 to 10.00s and it defaults to **0.50s**.
- After Program Ends: Set the default playback action after the newly-added program stops playing. The settings here do not affect the existing programs.
  - Loop Playback: The newly-added program will be played circularly.
  - Jump to Next: When the newly-added program stops playing, the first program on its right will be played.
  - Stop Playing: When the playback of the newly-added program ends, the playing will be stopped.
- Default Duration: Select the desired media type, and then set the default playback duration for the media of the selected type.
- After Media Starts: Set the state of the media at the commencement of playback.
  - Play: The media transitions to normal playback mode immediately upon the start of the program.
  - Hold on First Frame: The media freezes on the initial frame upon the start of the program.
- Office Type: Select the application program that will be used to open the PowerPoint or Excel files.
  - Default: The PowerPoint or Excel files will be opened in the default tool of your media server.
  - Microsoft Office: The PowerPoint or Excel files will be opened in Microsoft Office.
  - WPS Office: The PowerPoint or Excel files will be opened in WPS Office.
- Playback: Set the playback mode for the PowerPoint or Excel files.

- Animation:

  For the PowerPoint files, the animation effects will be shown during the slide switching.

  For the Excel files, one can navigate between columns and rows by means of page flipping.

  WPS Office does not support this mode.

  - Picture: The files are shown and switched as pictures.
  - Native: The default mode of Excel, exclusively supported by Excel, allows for switching between rows, columns, and sheet pages.

- PowerPoint Resolution: Select the desired output resolution of the PowerPoint file.

7.3 Multiple Displays

When two or mode displays are connected, you can duplicate the desktop or set it to show different content on each display, that is, extend mode. Go to **Settings** > **Multiple Displays** to select the desired mode.

- Duplicate: All the connected displays output the same content.

- Extend: The connected displays output the different contents. The extend mode is the default option.

7.4 External Control

FX1 supports remote control and control via a control device, allowing users to manage FX1 conveniently. For details on the commands and command writing rules of remote controlling and controlling via a control device, please see *Control Protocol of Playback and Control Software*.

Go to **Settings** > **External Control** to open the **External Control** window.

Figure 7-3 External control
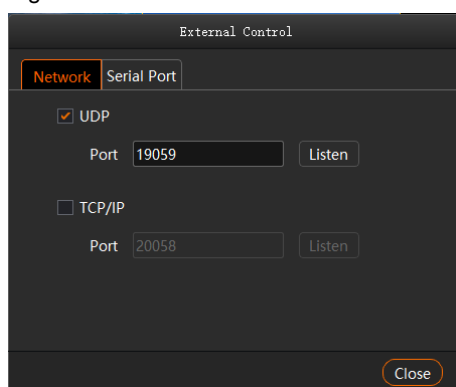
7.4.1 Control via Network

For control via a network, FX1 supports remote control via UDP and TCP/IP protocols.

Go to **Settings** > **External Control** to open the **External Control** window shown in Figure 7-3.

Control via UDP Protocol

Step 1 Select **UDP** to enable UDP control.

Step 2 In the text box next to **Port**, enter the UDP port number of FX1.

The UDP port number ranges from 1024 to 65535 and defaults to 19059.

Step 3 Click **Listen**. FX1 will automatically check whether the port number you entered in Step 2 is occupied.

- Occupied: Re-enter a port number and click **Listen** again to check.

- Not occupied: The UDP control settings are completed.

Control via TCP/IP Protocol

Step 1   Select **TCP/IP** to enable TCP/IP control.

Step 2   In the text box next to **Port**, enter the TCP/IP port number of FX1.

The TCP/IP port number ranges from 1024 to 65535 and defaults to 20058.

Step 3   Click **Listen**. FX1 will automatically check whether the port number you entered in Step 2 is occupied.

- Occupied: Re-enter a port number and click **Listen** again to check.
- Not occupied: The TCP/IP control settings are completed.

7.4.2   Control via Serial Port

To control FX1 via serial port, use a serial cable to connect the control device to the computer where FX1 is installed.

Step 1   Go to **Settings** > **External Control** > **Serial Port** to open the window shown in Figure 7-4.

Figure 7-4 Serial port control
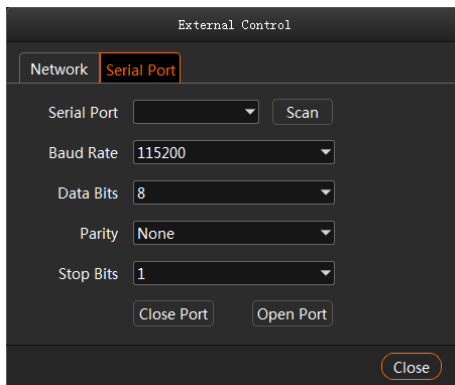
Step 2   Click **Scan**. The system will automatically scan the serial ports of the computer.

Step 3   Click the drop-down box next to **Serial Port** and select the serial port currently connected to the control device.

Step 4   Set **Baud Rate**, **Data Bits**, **Parity**, and **Stop Bits**.

> **Note:**
>
> The parameter values of baud rate, data bits, parity and stop bits of the serial port on the control device must be the same as the values of those parameters you set in FX1.

Step 5   Click **Open Port** to finish serial port settings.

Step 6   Click **Close** to close the **External Control** window.

7.4.3   Control via App

FX1 built in a media server can be controlled via a visual intelligent control platform app. The connections for App control are as follows.

Figure 7-5 Connections for App control

Figure 7-5 illustration: Video Controller, FX1 Media Server, Router, Pad

Connection Requirements

The media server, H series device and Pad device installed must be on the same network segment.

Media Server Configuration

- Obtain the IP address of the media server.
  1. On the media server, press **Win** and **R** keys simultaneously to open the **Run** command dialog window.

Figure 7-6 Run command window
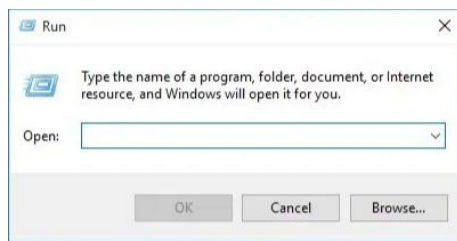
  2. Type "cmd" in the search box and then press **Enter** to open the command prompt.
  3. Type "ipconfig" and then press **Enter** to show the device IP address.

Figure 7-7 Obtain the IP address of the media server
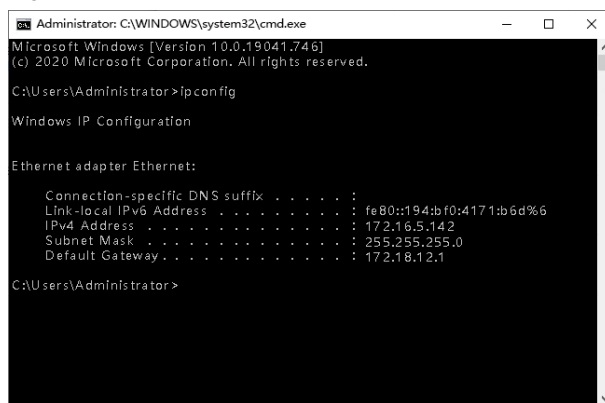
     IPv4 address indicates the IP address of the media server.

- Configure the listening port of the media server.
  1. Run FX1 and then go to **Settings** > **External Control** to open the external control settings window.
  2. Select the **Network** tab.
  3. Check the box in front of **TCP/IP** to enable the TCP/IP control.
  4. Enter the port number in the text box next to **Port**.

Figure 7-8 Port settings
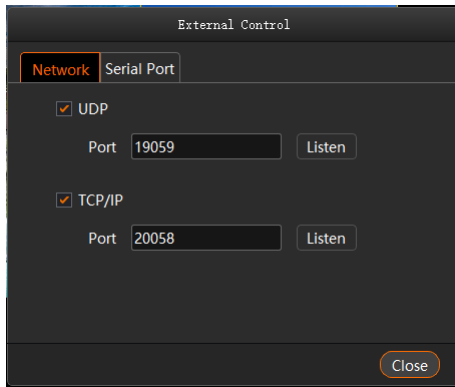
5. Click **Listen** to enable the listening for the external control.

    If the port is occupied, a prompt saying "**Listening failed: The port is being used.**" is shown. You must re-enter a port number and click **Listen** again.

    If a prompt saying "**Listening succeeded.**" is shown, the listening succeeds and the **Listen** button is highlighted. Click **OK** to complete the settings.

6. Click **Close** to complete the port settings.

Note:

When you use the App for device control, please refer to the App user manual for operation details.

7.5 Audio Settings

You can configure the correspondent relations between the sound cards and sound channel mappings. One sound card corresponds to one mapping only.

For example, if you select Map 01 for the layer media A, B and C at the same time, the audio information in these three media will be output via the sound card that Map 01 corresponds to. If you want to change the sound card for these three media, you only need to change the sound card that Map 01 corresponds to rather than set the sound card for each media respectively.

Figure 7-9 Audio settings
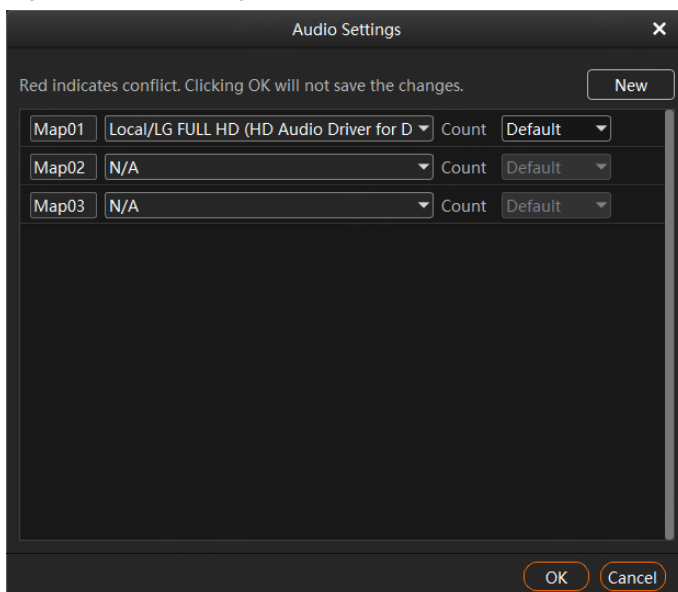
- One mapping is displayed by default.

    You can click **New** at the top right to add a new mapping, and click the channel mapping name on the left to modify it as required.

- The drop-down list shows all the sound card devices of the device.

FX1 supports hot plugging of sound card devices without the need to restart the software.

● Configure the sound channel count for the mapping. The supported options include **Default**, **2**, **4**, **6** and **8**.

Default indicates the sound channel count of the corresponding sound card.

8   **Help**

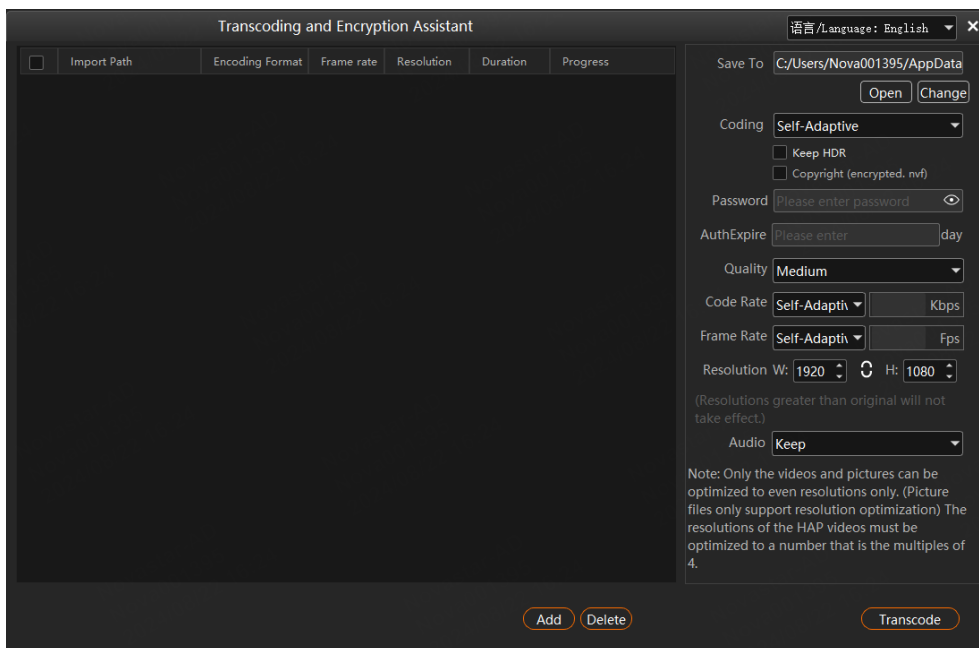## 8.1   Transcoding and Encryption Assistant

FX1 supports the conversion of the video coding format, code rate, resolution and frame rate, as well as the encryption of videos, to satisfy the requirements of different playback scenarios.

Step 1   Go to **Help** > **Transcoding and Encryption Assistant**.

Figure 8-1 Transcoding and encryption assistant

Step 2   Click **Add** at the bottom to open the local folder where you can select the desired video or image file.

You can also add multiple files by pressing the Ctrl key and selecting the files simultaneously.

Select the file and directly drag it to the file list area to swiftly add the video and image files.

Step 3   Click **Select File** to add them into the assistant.

Step 4   Select the target file for transcoding.

Step 5   Set the parameters of **Coding**, **Quality**, **Code Rate**, **Frame Rate**, **Resolution** and **Audio** and more as required.

● Coding: Set the coding format of the transcoded video. The supported options include **Adaptive**, **h264**, **h265**, **VP9** and **hap**.

When **Self-Adaptive** is selected, the video will be transcoded according to the original video coding.

● Keep HDR: Set whether to retain HDR in the converted video. When the **Self-Adaptive**, **H264**, and **H265** coding option is selected, this item is available.

   – Selected: The converted video retains the HDR of the original video.

   – Deselected: The original video's HDR is not retained, and the converted video will be in SDR format.

● Keep Alpha Channel: Set whether to train the original alpha channel for the HAP videos.

   – Selected: Retain the alpha channel information for the HAP video.

 – Deselected: Do not retain the alpha channel information and the system will automatically fill in the alpha channel.

 ● Copyright: Encrypt the selected video, making it playable only in FX1.

 – Select **Copyright (encrypted. nvf)**: Enable video encryption and convert the video file to the .nvf encrypted one.

 – Password: Set a password for the encrypted video.

 – Auth Expire: Set the authorization duration for the encrypted video. The value ranges from 1 to 999. Once the authorization duration is exceeded, the encrypted videos will show as **Expired** in the media library.

Table 8-1 Copyright description

Password	Auth Expire	Description
Empty	Empty	The video is .nvf encrypted, but can be played directly without password decryption.
Non-empty	Empty	The video is .nvf encrypted, and requires password decryption in the media library to play.
Empty	Non-empty	The video is .nvf encrypted within the authorization duration, but can be played directly without password decryption.
Non-empty	Non-empty	The video is .nvf encrypted within the authorization duration, and requires password decryption in the media library to play.

 ● Quality: Set the quality of the transcoded video. The supported options include **Low**, **Medium** and **High**.

 – High: Keep the quality of the transcoded video the same as the original video quality.

 – Low: The quality of the transcoded video is relatively blurred compared to the original video quality.

 – Medium: The quality of the transcoded video is between the high and low qualities.

 ● Code Rate: Set the code rate of the transcoded video. The supported options include **Self-Adaptive** and **Custom**.

 – Adaptive: The code rates before and after the transcoding are the same.

 – Custom: Set the desired code rate and the video will be transcoded according to the set value.

 ● Frame Rate: Set the frame rate of the transcoded video. The supported options include **Self-Adaptive**, **24**, **30**, **60** and **Custom**.

 – Adaptive: The frame rates before and after the transcoding are the same.

 – 24/30/60: The frame rate after the transcoding will be 24 Hz, 30 Hz, and 60 Hz, respectively.

 – Custom: Set the desired frame rate and the video will be transcoded according to the set value.

 ● Resolution: Set the resolution of the transcoded video.

 – W: Set the horizontal size of the transcoded video. The value defaults to 1920 and can reach a maximum value of 8192 (recommended).

 – H: Set the vertical size of the transcoded video. The value defaults to 1080 and can reach a maximum value of 8192 (recommended).

 ● Audio: Set how to deal with the audio that comes with the video. The supported options include **Keep** and **Remove**.

 – Keep: The transcoded video retains the audio in the video before transcoding.

 – Remove: The transcoded video displays pure images without any audio.

Step 6 Repeat Step 4 and Step 5 to set the transcoding parameters for other video files.

Step 7 Click **Transcode** and the system will automatically start the transcoding process.

When the progress reaches 100% in the **Progress** column, the transcoding completes. After the transcoding, the video will be saved in the path specified in **Save Path**.

Step 8 Click **Open** to open the local folder where you can view the transcoded files.

 ● Click **Change** to change the save path.

● Click **Delete** at the bottom to delete the selected video files.

Note:

The transcoding and encryption assistant and play log windows do not automatically close with the main user interface and require manual shutdown.

8.2 Play Log

FX1 supports the automatic statistics of the playback logs. When you select a certain date, time or media name, you can search for the desired logs. The log information includes the number, media name, start time, end time, total duration and playback times.

Step 1 Go to **Help** > **Play Log** to open the playback log window.

Figure 8-2 Play log
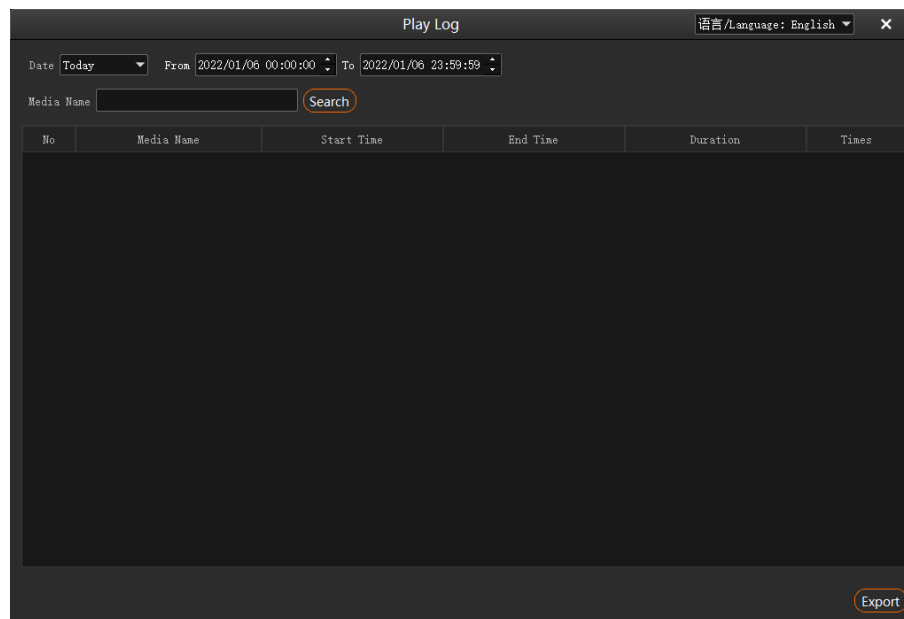
Step 2 Click **Date** and select the desired time. The supported options include **Today**, **Recent 7 Days**, **Recent 1 Month** and **Recent 3 Months**.

Note:

Before you use this function, please set the value range of **Log Storage** greater than the time range you set here.

Step 3 Set the start and end time.

Step 4 Enter the media file name in the text box next to **Media Name** to search for the payback logs of this single media, otherwise the playback logs of all media files will be searched and displayed.

Step 5 Click **Search** to start the searching.

Figure 8-3 Media playback logs

Step 6   Click **Export** to export the playback logs to your local computer.

8.3 User Manual

On the menu bar, go to **Help** > **User Manual**, or press the **F1** key on the keyboard to open the user manual.

8.4 Identification Code

On the menu bar, go to **Help** > **Identification Code** to view the product unique ID code.

8.5 About

On the menu bar, go to **Help** > **About** to view the software information.

9   Language

The currently-supported language options include English, Simplified Chinese and Traditional Chinese.

10   SCT Configuration Tool

SCT is the configuration tool for the media server, allowing users to configure output EDID and update the device firmware.

Once installed, the SCT configuration tool will automatically launch when the media server is powered on, with its icon hidden in the desktop taskbar.

Figure 10-1 SCT user interface
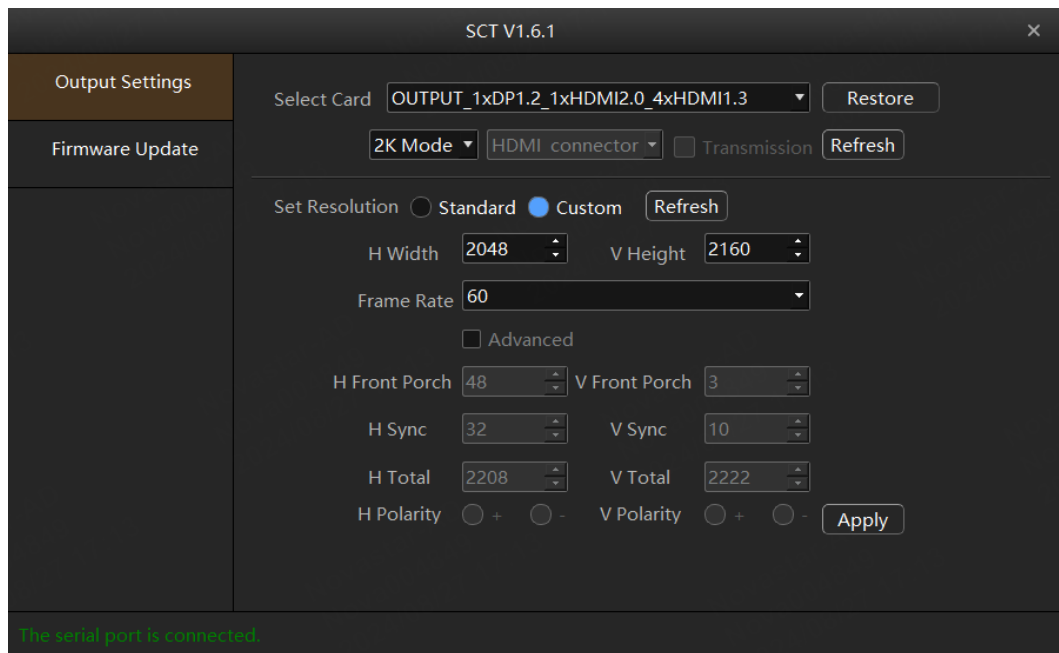
10.1 Output Settings

On the **Output Settings** interface, you can configure the output card's timing to meet different output specifications. The output card of the media server supports **2K Mode** and **4K Mode** outputs. The output card timing of the media server is locked by default.

- 2K Mode: In this mode, the output card (OUTPUT_1×DP1.2_1×HDMI2.0_4×HDMI1.3) does not support resolution pass-through but allows for timing adjustments through standard or custom settings, without advanced settings support.

- 4K Mode: In this mode, the output card (OUTPUT_1×DP1.2_1×HDMI2.0_4×HDMI1.3) supports resolution pass-through.

  - Resolution Pass-through

    If selected, the timing of the output card will not be locked, so changes in the input resolution of an external device directly affect the output timing of the media server, and the output timing adjustments are disabled.

    If deselected, the timing of the output card will be locked and will not be affected by the input resolution changes of the external device to prevent disruptions. You can also adjust the output timing to meet actual on-site resolution needs.

  - Resolution Settings

    The output card's timing can be adjusted through standard or custom settings.

Operating Procedure

Step 1   Double click [icon] on the desktop of the monitor connected to the media server.

Step 2   Click **Output Settings** to enter the output resolution configuration interface.

Step 3   Select the OUTPUT_1×DP1.2_1×HDMI2.0_4×HDMI1.3 card from the drop-down list.

Step 4   Select either **2K Mode** or **4K Mode** from the drop-down list based on your requirements.

Figure 10-2 Output mode
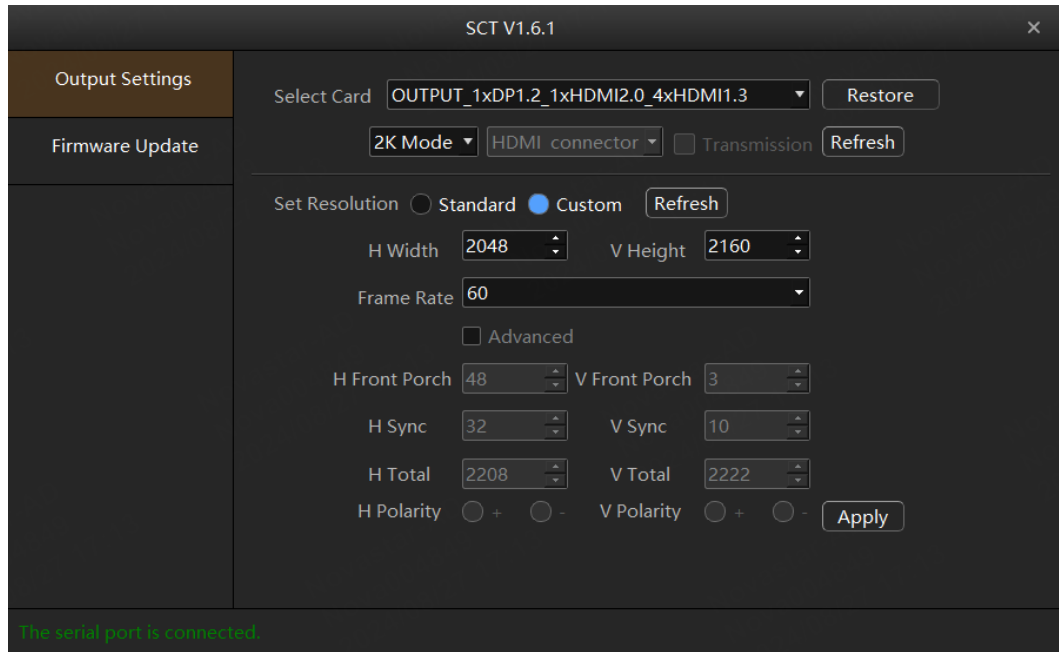
Choose from the following options to configure the output as needed:

- Transparent Transmission: Available for the 4K mode only. Select **Transmission** and choose the desired connector from the drop-down list. The connectors include HDMI and DP.

Note

Before switching between the HDMI and DP connectors, ensure the selected connector is properly connected. If the main output connector is not connected, there will be no data output from both the main and copy connectors.

- Resolution: Deselect **Transmission** and configure the output card resolution in the **Resolution** area.

  – The 2K mode supports the standard and custom resolution settings.

  – The 4K mode supports the standard, custom and advanced resolution settings.

    For the specific parameter descriptions, please refer to Table 10-1.
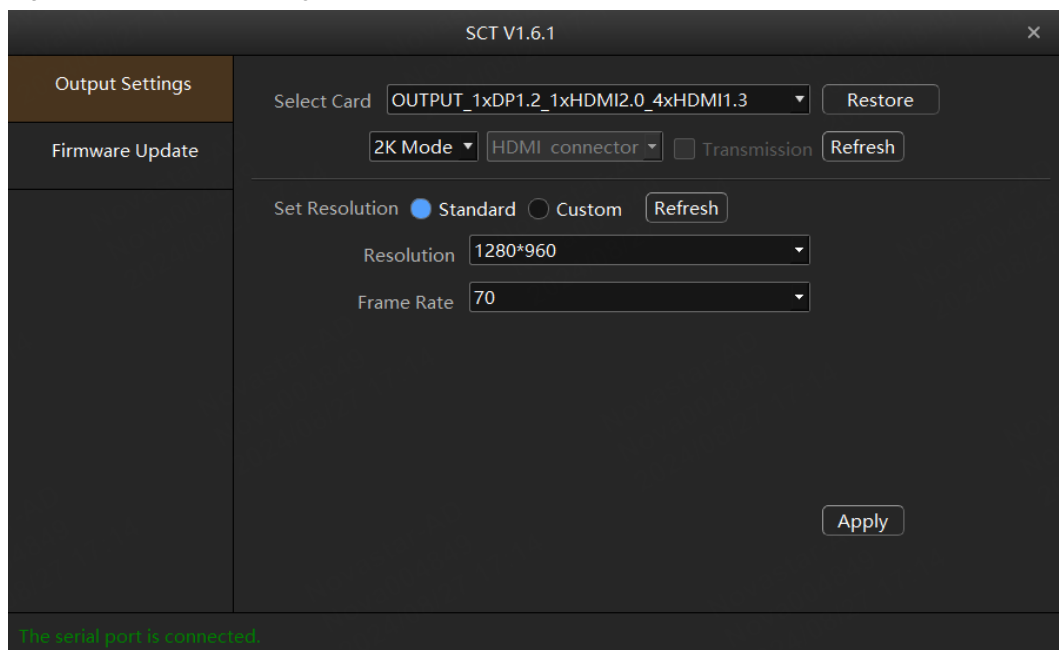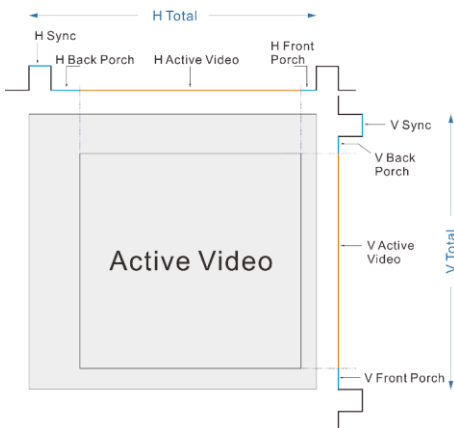
Figure 10-3 Resolution settings

Table 10-1 Resolution settings

Parameter	Description
Standard	Common resolutions and frame rates are listed for selection.

Custom	You can define the output width, height, and frame rate.
	• H Width: Set the output image width.
	   − 2K mode: Range 800 to 4096, step 4
	   − 4K mode: Range 800 to 8192, step 4
	     When the value exceeds 4095, the H Polarity and V Polarity settings will not take effect.
	• V Height: Set the output image height.
	   − 2K mode: The value ranges from 600 to 2560, step 2
	   − 4K mode: The value ranges from 600 to 4095, step 1
	• Frame Rate: Select the desired frame rate from the drop-down list.

Advanced	Select **Advanced** to enable the advanced resolution settings. • H Front Porch: Range 16 to 8192, step 4 • H Sync: Range 16 to 8192, step 4 • H Total: Range 848 to 8800, step 4 • V Front Porch: Range 600 to 7680, step 1 (4K mode) • V Sync: Range 4 to 7680, step 1 (4K mode) • V Total: Range 1 to 7680, step 1 (4K mode) **Note** • It is recommended the advanced settings are handled by professionally trained personnel. • EDID bandwidth limitation: max 600 Mbps, min 100 Mbps for 2K mode and 25 Mbps for 4K mode. Exceeding bandwidth will prompt "Bandwidth limit exceeded. Please retry."

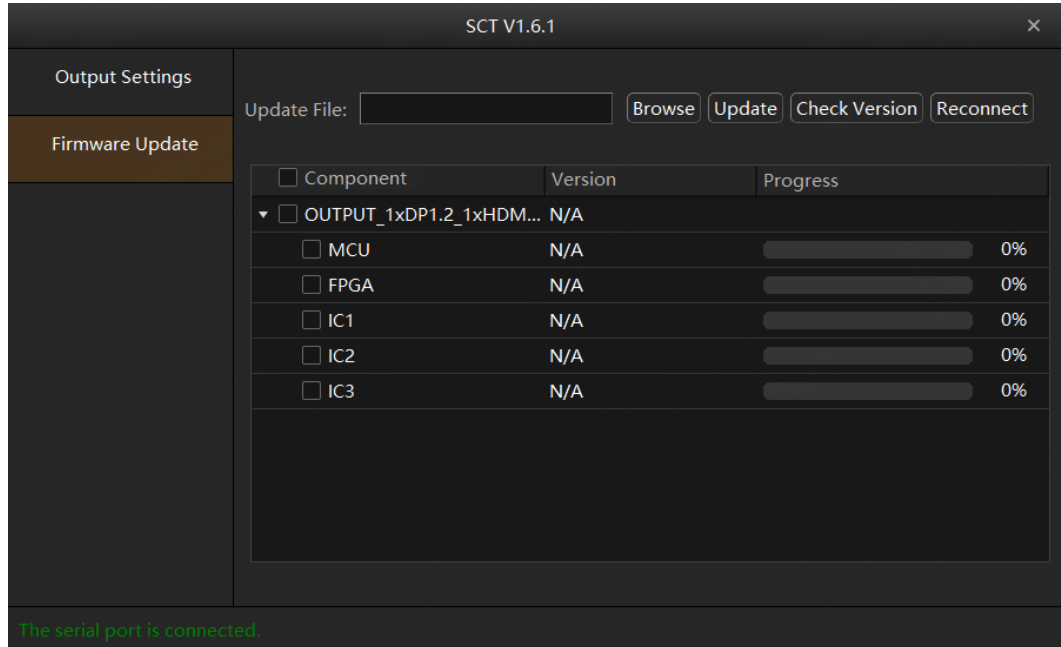Step 5 Click **Apply** after completing the configuration.

Note

Click **Restore** and confirm in the pop-up window whether to reset output to the 2K mode.

10.2 Firmware update

You can update the media server via the SCT configuration tool. Both single component and overall system update are supported.

Figure 10-4 Firmware update

Step 1 Obtain the necessary component software package from our official website or technical support, and save it to the target path.

Step 2 Click **Browse** and choose the storage location of the update file in the dialog box.

The system will automatically check the boxes in front of the installed components.

Step 3 (Optional) Deselect components if necessary.

Step 4 Click **Update** to automatically update the selected components.

After a successful update, the system will inform you that the card will restart for the changes to take effect.

After the update, click **Check Version** to view the updated version.