

Pilot MS3

Professional Multimedia Playback Software




User Manual

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1 General

Overview

- About This Manual
- Symbols and Pictures

1.1 About This Manual





This user manual guides you how to use our software. This manual is designed to be a reference for your daily use of our product.

Note

Always check for the latest version of all documents at www.pixelhue.com.

1.2 Symbols and Pictures

Symbol Overview

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

Picture Overview

Images and pictures given in this manual are used for illustration purposes only. The actual product may vary due to product enhancement. The content of the images can be slightly different from reality, such as device types, installed modules, form and position of software windows on the screen.

2 Software Installation

About This Chapter

This chapter is designed to guide you to the installation of the software.

Overview

- Software Installation
- Software Licensing

2.1 Software Installation

Requirements of Software Operating Environment

To better use Pilot MS3, the computer where Pilot MS3 is installed needs to meet the minimum configurations for the operating environment as follows:

- CPU: 9th Generation Intel® Core™ i7 or later
- RAM: 16GB or greater DDR4 2666
- Graphics card: NVIDIA P2200 (or later) or AMD W5100 (or later) discrete graphics card recommended
- HD space: 512G or larger SSD
- OS: Windows 10 Pro (64-bit)

Installation Procedure

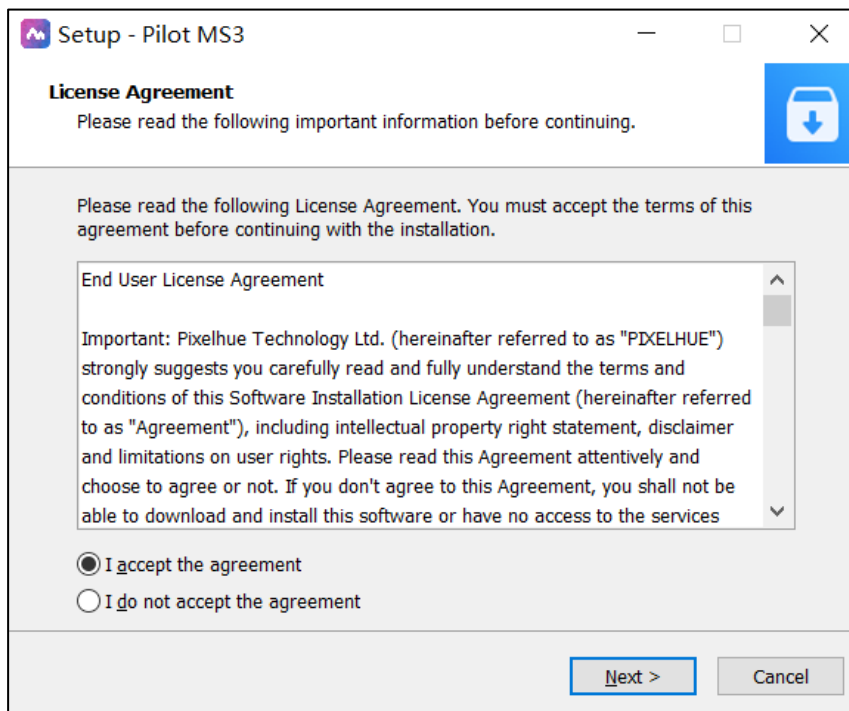


The following installation pictures are for illustration purposes only. The actual pictures may vary.

Step 1 Double click the program file (Pilot MS3.exe) to start the installation wizard.

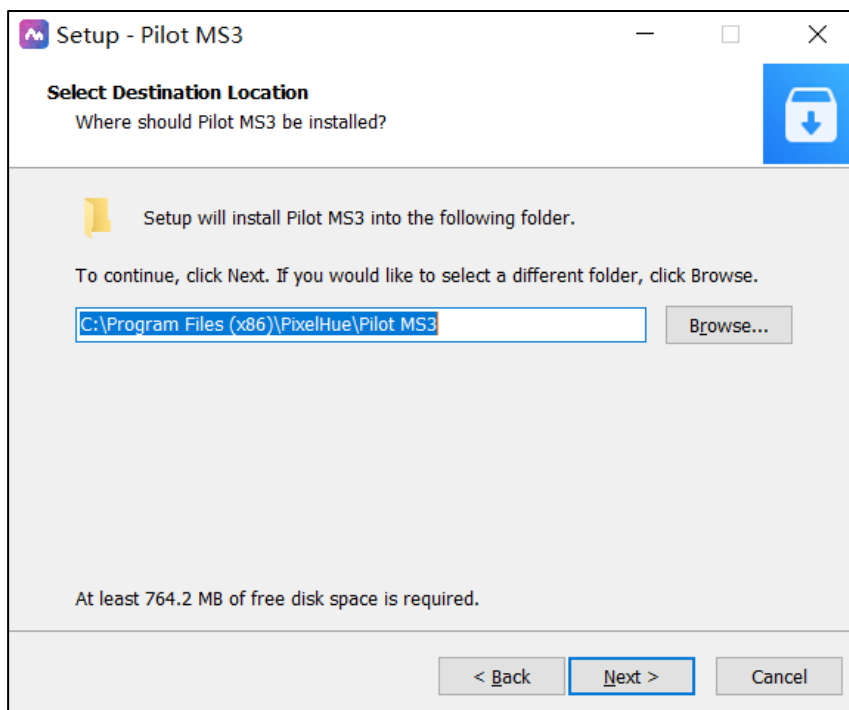
Step 2 Select I accept the agreement.

Figure 2-1 License agreement



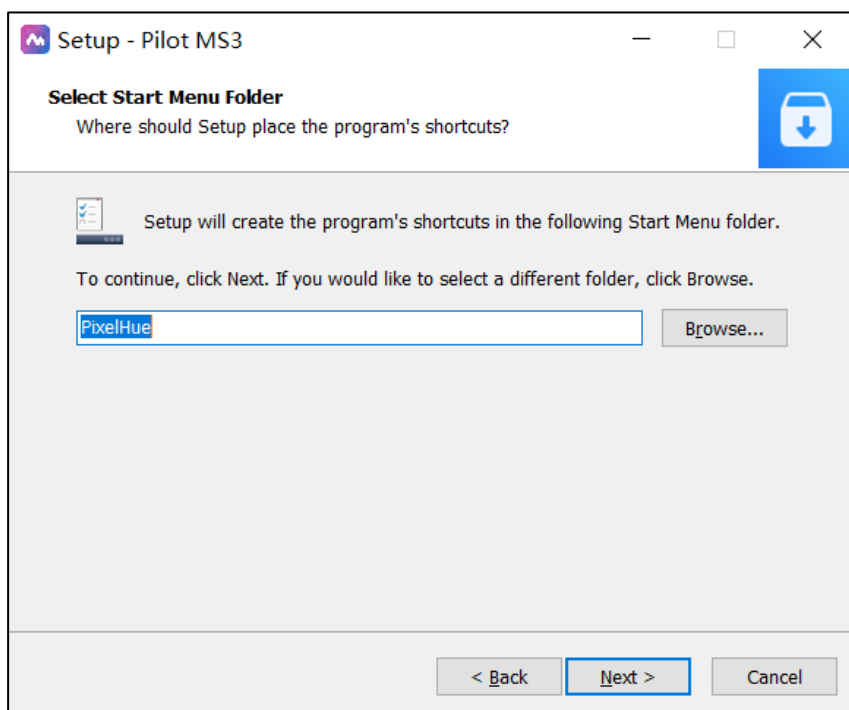
Step 3 Click **Browse** to select the folder where the software will be installed.

Figure 2-2 Select installation path



Step 4 Click Next to enter the Select Start Menu Folder page.

Figure 2-3 Select start menu folder

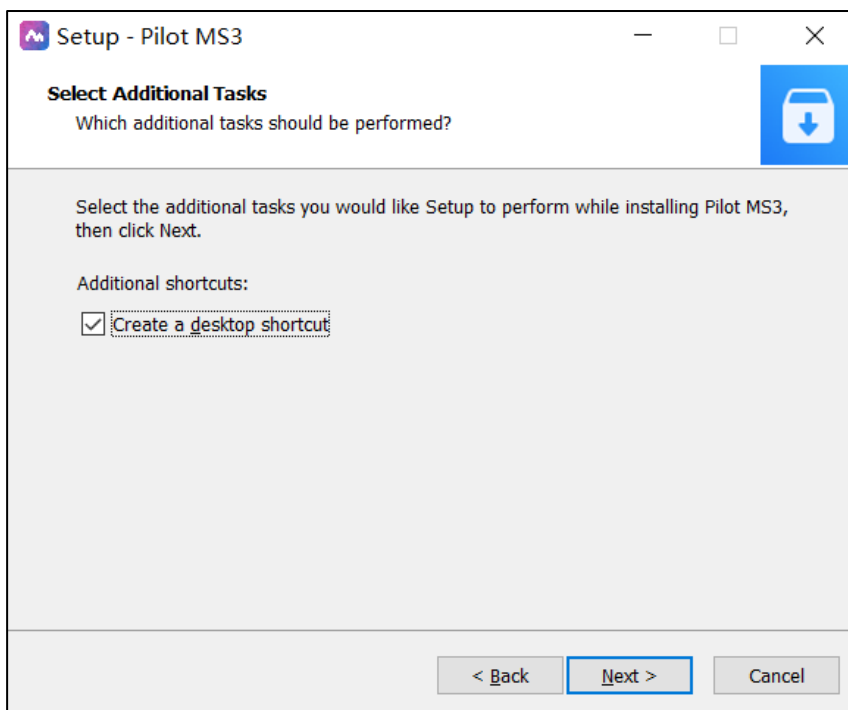


Step 5 Click **Browse** or enter the folder name directly to select a folder for the start menu.

Step 6 Click Next to enter the Select Additional Tasks page.

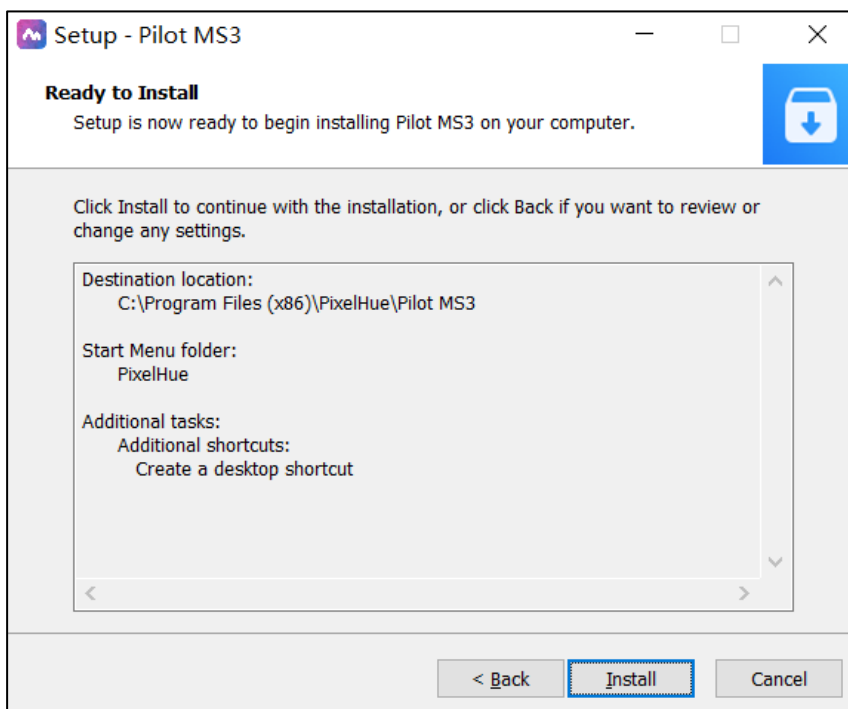
Check the box next to **Create a desktop shortcut** to add the Pilot MS3 shortcut icon on the desktop.

Figure 2-4 Additional tasks



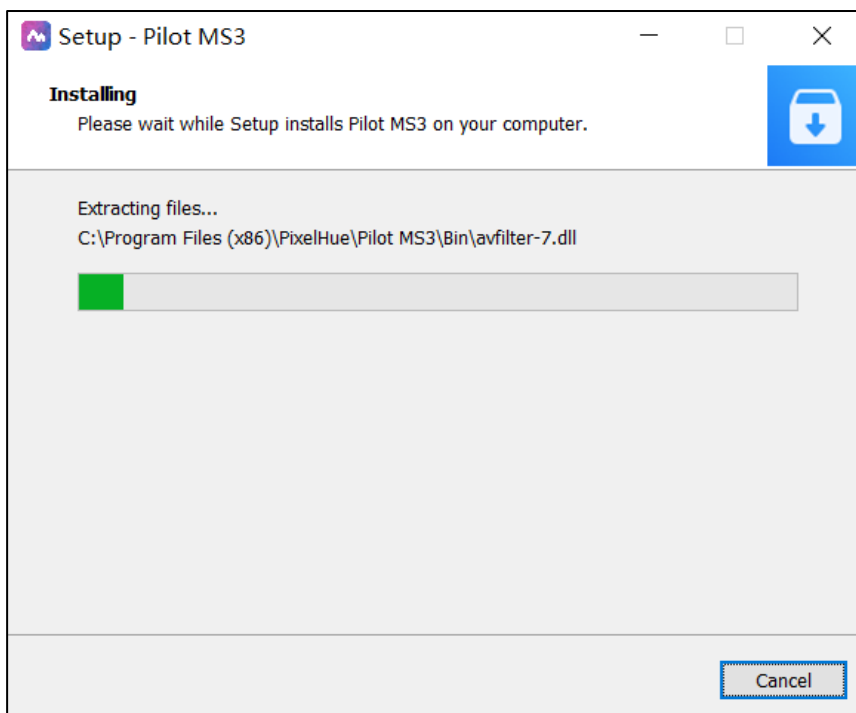
Step 7 Click **Next** to enter the **Ready to Install** page.

Figure 2-5 Installation confirmation



Step 8 Click **Install** to enter the automatic installation page.

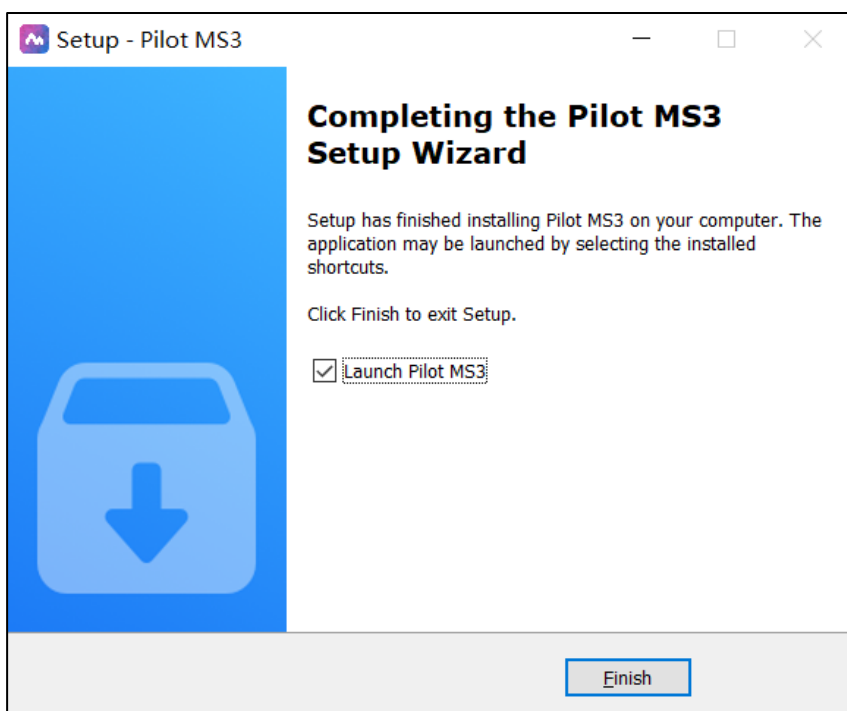
Figure 2-6 Automatic installation



Step 9 After the software installation is finished, click **Finish**.

The system will exit the software setup page and start the Pilot MS3 software automatically.

Figure 2-7 Installation completed



After the program is successfully installed, two programs (Pilot MS3 and NDI Sender) appear on your desktop.

- Pilot MS3: Video playback program

- NDI Sender: Provides NDI inputs for Pilot MS3

Notes

- It is recommended you turn off the anti-virus software and firewall in advance.
- If any security alert from anti- or firewall appears during installation, choose to allow the installation.
- If the software prompts you to restart after the installation, it is recommended you restart the software in time.

2.2 Software Licensing


After Pilot MS3 is started, the software automatically detects the presence of an authorization dongle. If a dongle is detected, the Pilot MS3 user interface will be displayed normally; if not, the following window will be displayed and guide you through obtaining the authorization dongle.

Figure 2-8 Dongle detection



You can license your software via the following two methods.

- Purchase an authorization dongle from your sales.
1. Insert the authorization dongle into the USB connector of the computer, and start the Pilot MS3 software.
 2. Copy the authorization ID file in the USB drive that comes with the authorization dongle to your computer.
 3. On the authorization user interface, click **Import** at the upper right corner and select the authorization ID file.

4. Click **Open** to complete the importing.
 - Take a clear picture of the QR code and send it to your sales to obtain the registration code. Enter the obtained registration code in the text box below the QR code, and click  to complete the authorization.

3 User Interface Introduction

About This Chapter

This chapter introduces you to the user interface of the software.

Overview

- Introduction
- Change UI Layout
- Load Layout
- Lock User Interface

3.1 Introduction

After the software is started successfully, 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

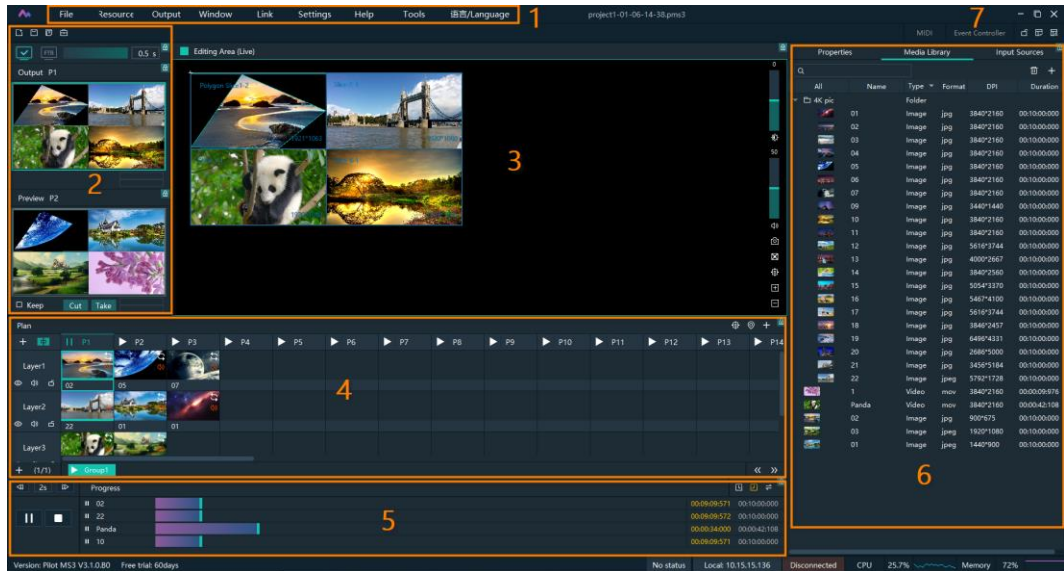




















Table 3-1 User interface descriptions

Area	Item	Description
Menu bar	File	Project file operations include: <ul style="list-style-type: none"> • New: Create a new project. • Open: Open a saved project. • Save: Save the current project. • Save As: Save the current project as a new project. • Package Project: Package the current project and the media files in it as an independent project file for easy use in future.
	Resource	Manage the media files and input sources. <ul style="list-style-type: none"> • Add Local Media: Add the local media files. • Add Input Source: Add the network media, NDI screens and websites as input sources. • Delete All Media: Delete all the imported media files. • Delete All Inputs: Delete all the added input sources.
	Output	Configure and manage the linked devices, screens and slices.

Area	Item	Description
	Window	Show or hide the desired areas of the Pilot MS3 user interface.
	Link	<ul style="list-style-type: none"> • Link Settings: Enter the link settings page and configure the backup device. • Update to Backup: Manually synchronize the data on the primary and backup devices.
	Settings	Perform the system, authorization, hotkey and MIDI binding settings.
	Help	<ul style="list-style-type: none"> • View the user manual. • View the product-related information. • Check for the software updates.
	Tools	<ul style="list-style-type: none"> • Open the Transcoding Assistant tool and perform the needed transcoding actions.
	语言 /Language	Switch the UI language.
Preview area	<ul style="list-style-type: none"> • Output: View the content of the current output program. • Preview: Preview the content of the next program. <ul style="list-style-type: none"> – Cut: Send the currently previewed program to the screen without transition effect. – Take: Send the currently previewed program to the screen with the fade transition effect. – If Keep is selected and the program is sent to the screen via Take or Cut, the program will be played from the current playback progress in the preview area. – If Keep is not selected and the program is sent to the screen via Take or Cut, the program will be played from the beginning. 	

Area	Item	Description
Editing area		<ul style="list-style-type: none"> • Use layers to configure the output according to the on-site screen pattern. • Preview the output image. • : Adjust the output image brightness. The value ranges from -50 to + 50 and defaults to 0. • : Adjust the output volume. The value ranges from 0 to 100 and defaults to 50. Click  to turn off the output audio. • : After selecting a layer or slice in the editing area, click this icon to capture the current frame of the selected layer or slice and add the captured image to the media library. • : Make the selected layer fill the screen area loaded by the output connectors where the layer is located and crosses. • : When the output image is moved out of the visible area, click this icon to restore the screen to the origin. • : Zoom in the editing area. • : Zoom out the editing area.
Layer and program editing area		<ul style="list-style-type: none"> • Add, control and mosaic the layers. • Edit, group and play the layers.
Playback control area		Control the playback of the programs or layers in the program.
Media library and properties area	Media Library	Manage the media files. <ul style="list-style-type: none"> • Add the local media files. • Create folders to manage the media files efficiently. • Delete, replace or rename the media file.
	Input Sources	Manage the input sources. <ul style="list-style-type: none"> • Add the network media, NDI screens and websites as input sources. • Delete the input sources. • Preview the input sources. • Enable or disable the preview of acquisition card sources.
	Properties	Edit the layer or program properties.
Others	Event Controller	Enable or disable the event controller control.
	MIDI	Open the MIDI Connection Settings window and connect the MIDI devices.
		The output connection has been established. Click the button to disconnect the output.


Area	Item	Description
		The output has been disconnected. Click the button to regain the connection.
	 / 	<ul style="list-style-type: none">  : Output normally.  : Fade to black. <p>Click , the icon turns to  and the output fades to black.</p> <p>Click , the icon turns to  and the output displays image as usual.</p> <p>When the slider block is at the leftmost, the output is black; when the slider block is at the rightmost, the output is normal.</p> <p>The default FTB duration is 0.5s and the value ranges from 0 to 5s.</p>

 **Note**



Pressing the **Ctrl + ← / →** key combination allows you to switch the display screen of the software main user interface.

3.2 Change UI Layout

Pilot MS3 allows you to adjust the user interface layout according to your using habits. You can save and load the adjusted layout.

Step 1 Click  at the top right corner of the target area to unlock this area.

The icon descriptions are as follows:

-  (highlighted): The area is locked and you cannot adjust its size and position.
-  (grayed out): The area is unlocked. Move the cursor to the edge of the area and then click and drag the edge to adjust its size.

Step 2 Move the cursor to any edge of an area. When the cursor turns into a double-sided arrow, click and drag the mouse to change the area size.

Step 3 Move the cursor to the title bar of an area, and click and drag the mouse to change the area position.


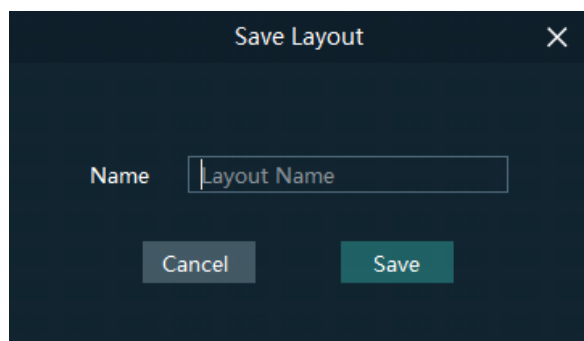
Step 4 Click  at the top right of the user interface to save the adjusted layout.

Figure 3-2 Save layout



Step 5 Enter a layout name.

The layout name is unique and it is recommended you set a name that is easy to recognize.

Step 6 Click **Save** to save the layout.

3.3 Load Layout

When the interface layout has been adjusted by others, you can load your preferred layout simply by using this function, instead of adjusting it area by area.


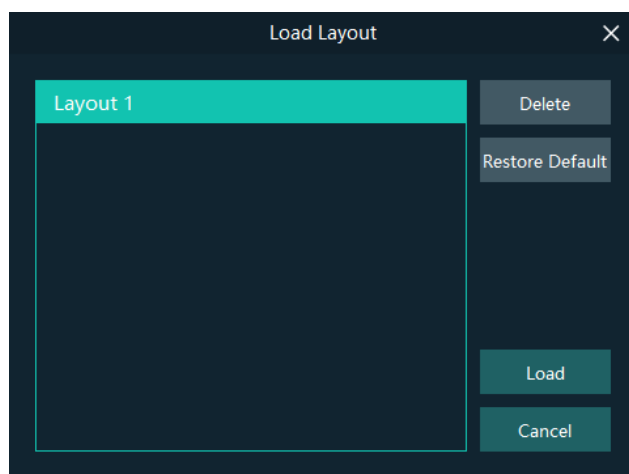
Step 1 Click  at the top right of the user interface to open the layout loading window.

Figure 3-3 Load layout



Step 2 Select the desired layout from the list on the left.

Step 3 Click **Load** to load the layout.

You can also perform the following operations:

- Delete: Delete the selected layout from the layout list.
- Restore Default: Restore the current interface layout to the default style.
- Cancel: Cancel the layout loading and exit the layout loading interface.

3.4 Lock User Interface

If you do not want others to operate the software when you are away, just simply use this function to lock the software interface.


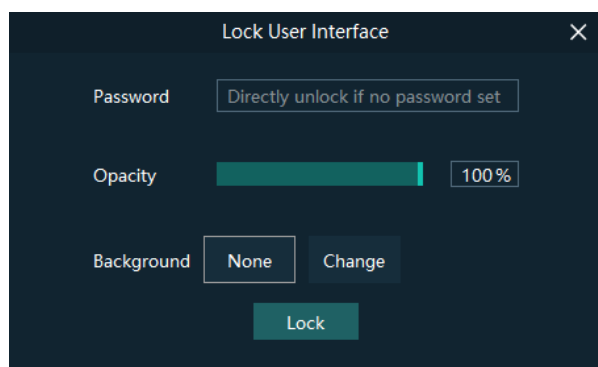
Step 1 Click  at the top right of the user interface to open the UI locking window.

Figure 3-4 Lock user interface



Step 2 Enter a password.


Step 3 Set the opacity for the locking interface.

100% is completely opaque. At this time, the editing interface is completely invisible and only the lock screen background can be seen.

Step 4 [Optional] Click **Change** next to **Background** to select a picture to be displayed on the locking interface.

Step 5 Click **Lock** to complete the locking settings and lock the interface.

Notes

- The locking password and background are for one-time use only. When you want to lock the interface for a second time, please set the password and background again.
- To unlock the user interface, just enter your password click  to show the Pilot MS3 interface.

4 Project

About This Chapter


This chapter guides you on how to add media files, edit programs, set program playback sequence and media properties, save configuration data as an independent project file for future use and more.

Overview

- Create New Projects
- Manage Media
- Manage Layers
- Build Application Environment
- Produce Programs
- Playback Control
- Save Projects

4.1 Create New Projects

There are three methods provided for you to create a new project.

- After Pilot MS3 is started successfully, click **New** on the startup interface and select the save path for the new project, and finally click **Save**. The system will automatically create a project file.
- Go to **File > New**, select the save path for the new project and click **Save** to create a new project.
- Click  below the menu bar to create a new project.

4.2 Manage Media

Pilot MS3 supports pictures, videos, audio media files and website inputs.

The supported media formats are as follows:

- Video: avi, asf, wmv, flv, mkv, mov, 3g, mp4, mpg, mpeg, ts, m4v
- Picture: jpg, bmp, gif, mif, miff, png, wmf, jpeg, ico, pic
- Audio: wav, mp3, wma, ape, aac, flac, ogg, dts, amr, alac
- Office files: ppt, pptx

Notes

Recommended video coding formats:

- 4K < resolutions ≤ 8K: 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:

Type	Video Bitrate Standard Frame Rate (24 fps, 25 fps, 30 fps)	Video Bitrate High Frame Rate (48 fps, 50 fps, 60 fps)
4320 (8K)	75 to 90 Mbps	110 to 135 Mbps
2160p (4K)	35 to 45 Mbps	53 to 68 Mbps
1440p (2K)	16 Mbps	24 Mbps
1080p	8 Mbps	12 Mbps

4.2.1 Add Media

Pilot MS3 supports both single media file importing and batch importing.

4.2.1.1 Import Files

- Step 1 Click the **Media Library** tab on the right pane of the user interface.
- Step 2 Right click the blank area in the **Media Library** area and select **Add Local Media** to open a local folder.
- Step 3 Select the target media files and click **Open**. Pilot MS3 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 click **Open** to complete the importing.

4.2.1.2 Import Folders

There are three methods provided for you to import a folder.

- Import folder
- Step 1 Right click the blank area in the **Media Library** area and select **Add Local Folder** to open a local folder.
 - Step 2 Select the desired folder where the media files are stored, and click **Open**.

The system will automatically import the media files in the target folder with their original names to the media library.

 - Replace folder
 - Step 1 Right click the blank area in the **Media Library** area and select **Add Folder**. The system will automatically create a new folder.
 - Step 2 Right click the folder and select **Replace** in the context menu.
 - Step 3 Select the desired folder from the displayed dialog box.
 - Step 4 Click **Select Folder** and the system will automatically import the media files in the target folder with their original names to the media library.

4.2.2 Edit Media

4.2.2.1 Media Optimization

When the imported media or video resolutions are inconsistent, or the imported media resolution exceeds the processing capability of Pilot MS3, to facilitate future use, you can change the file resolution in advance by using this function.

 **Note**

Only the videos and .jpg pictures can be optimized to even resolutions only.

-
- Step 1 Select the picture or video that needs to be optimized from **Media Library**.
 - Step 2 Right click the file and select **Media Optimization** in the context menu.
 - Step 3 Set the desired parameters for the optimization.

Figure 4-1 Media optimization



If **Lock Aspect Ratio** is selected, you only need to set either width or height, and the other parameter value will be calculated automatically according to the current aspect ratio of the media.

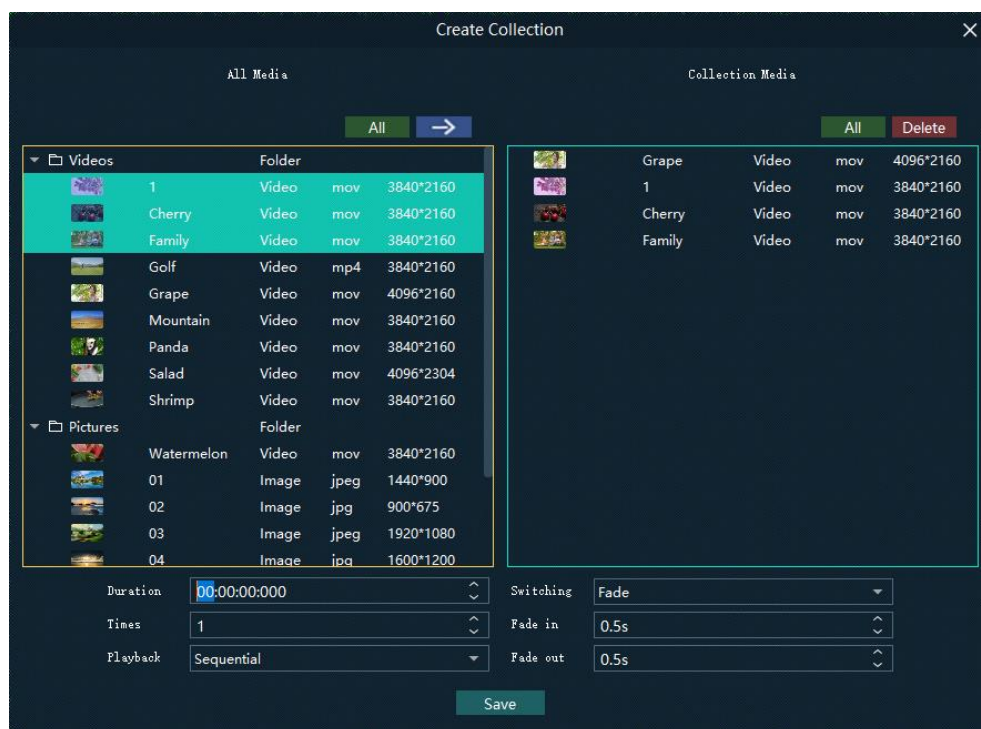
Step 4 Click **Optimize** and the system will automatically optimize the selected media file.

4.2.2.2 Create Playback Collection

The playback collection allows you to sort and combine multiple videos or pictures into a new collection source. All the videos and pictures in the collection will be played automatically according to the set mode.

Step 1 Right click the blank area in the **Media Library** area and select **Create Collection** to open the **Create Collection** window.

Figure 4-2 Playback collection



Step 2 Select the desired media files in the **All Media** area on the left side.


- Step 3 Click  at the top right in the **All Media** area to add the selected files to the **Collection Media** area on the right side.
- Step 4 Select the newly-added media in the **Collection Media** area.
- Step 5 Change the media properties at the bottom.

Table 4-1 Collection media properties

Property	Description
Duration	Set how long the selected media will be played. After the playback ends, the next media will be played automatically. If the duration is not set, the video file will be played according to its original playback duration, and the picture file will be played for 10 minutes by default.
Times	Set how many times the selected media will be played.
Playback	Set the media playing order in the collection media. <ul style="list-style-type: none"> • Sequential: The media in the collection will be played in sequence. • Shuffle: The media in the collection will be played randomly.
Switching	Set the transition effect when the current media starts to play or stops the playing. Currently, only Cut and Fade effects are supported.
Fade in	Set the time length from when the current media starts to play to when the media is fully displayed.
Fade out	Set the time length from when the current media starts to stop to when the media is stopped.

- Step 6 Repeat Step 2 to Step 5 to complete the settings of other media in the collection.
- Step 7 Click **OK** to complete the collection settings.
- Step 8 Double click the collection name, and the name becomes editable. Rename the collection and press **Enter** to confirm the change.

 **Note**

After a collection is created, the default name is Playback Collection. It is recommended you give it a new name that is easier for you to distinguish.

4.2.2.3 Media File Group Management

You can create folders to classify the added media files.

- Step 1 Right click the blank area in the **Media Library** area and select **Add Folder**. The system will automatically create a new folder.
- Step 2 (Optional) Double click the folder to rename it.
- Step 3 Select the desired media files and drag them to the new folder.

 **Notes**

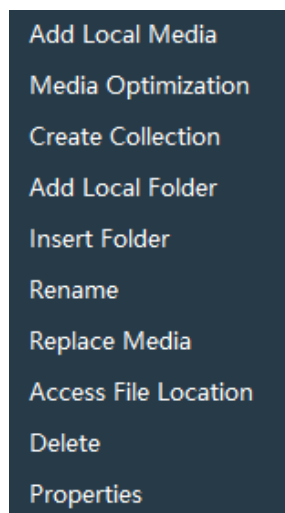
- Hold down the **Shift** or **Ctrl** key, and select the target file or multiple files in **Media Library**.

- After selecting a media file, right click it and select **Insert Folder** in the context menu to move the selected file to the newly-inserted folder.

4.2.2.4 Media File Context Menu

Right click a media to show the media file context menu.

Figure 4-3 Media file context menu



- Add Local Media: Add new media files into the media library.
- Media Optimization: Change the coding, quality, code rate, frame rate, audio and resolution settings of the videos or pictures.
Only the videos and .jpg pictures can be optimized to even resolutions only.
- Create Collection: Create a collection media.
- Change Playback Collection: Change the settings of the collection media.
- Add Local Folder: Import a folder containing media files into the media library.
- Insert Folder: Create a new folder and move the selected media files into the folder.
- Rename: Rename the selected media or collection.
- Replace Media: Replace the currently-selected media. When the media is replaced, the media in the program will also be replaced synchronously.
- Access File Location: Open the storage location of the current media.
- Delete: Delete the current media.
- Properties: View the media properties, such as the name, size, format and more.

4.2.3 Add Input Sources

You can add the network media, website input sources, NDI input sources and input sources from acquisition devices. The system automatically identifies and adds the input sources from acquisition devices. You can also enable or disable the acquisition device.

 **Note**

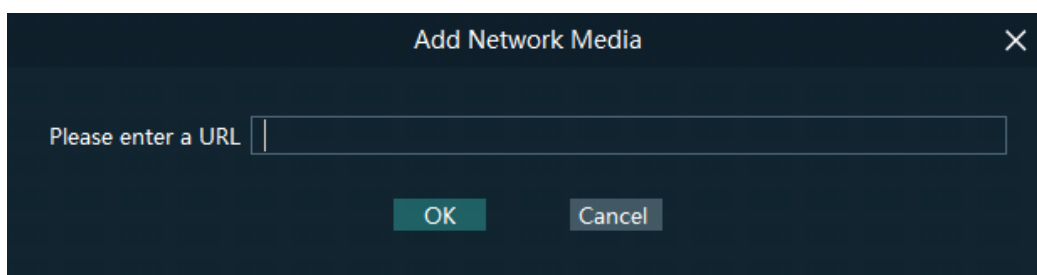
When the acquisition card and its driver have been installed into the device successfully, Pilot MS3 will automatically identify and add the acquisition card input source.

4.2.3.1 Add Network Media

Pilot MS3 supports adding the streaming media whose format is rtsp and rtmp as input sources.

- Step 1 Click the **Input Sources** tab on the right pane of the user interface.
- Step 2 Right click the blank area and go to **Add Input Source > Add Network Media**. The system will automatically open the network media adding window.

Figure 4-4 Add network media

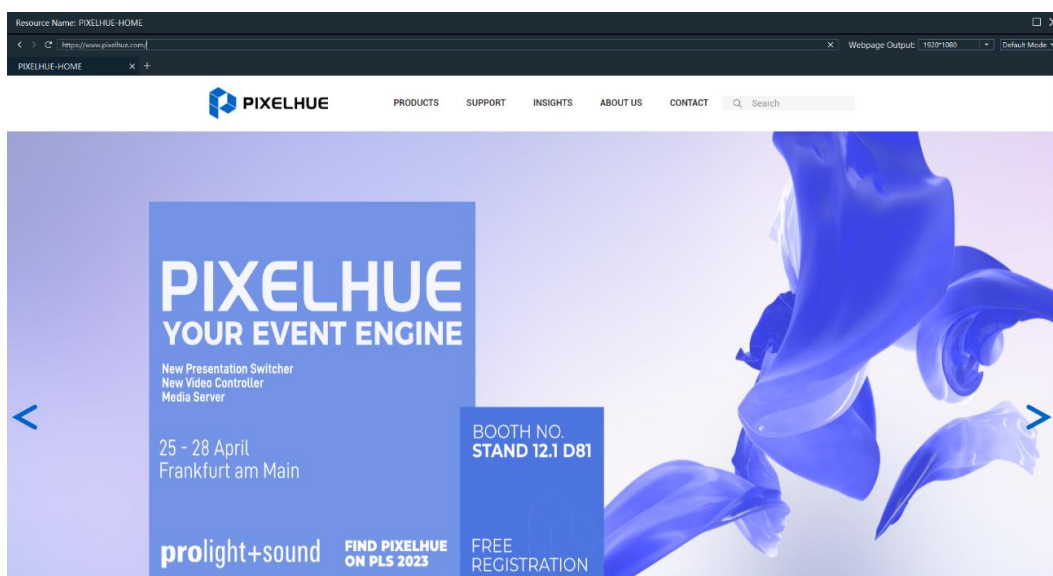


- Step 3 Enter the media path in the URL text box.
Make sure the media path begins with rtsp:// or rtmp://.
- Step 4 Click **OK** to complete the adding.

4.2.3.2 Add Website Input Sources

- Step 1 Click the **Input Sources** tab on the right pane of the user interface.
- Step 2 Right click the blank area and go to **Add Input Source > Add Webpage**. The website page will appear as shown below.

Figure 4-5 Add website input sources-1



- Step 3 Enter an URL in the address bar.

Step 4 Press **Enter** to enter the website and select the content to be played.

Step 5 Set the output resolution and mode of the webpage.

Change the webpage output resolution from the first drop-down list next to **Webpage Output** at the top right.

Change the webpage output mode from the second drop-down list next to **Webpage Output** at the top right. The supported options include **Default Mode** and **Screenshot Mode**.

- Default Mode: The default webpage output mode
- Screenshot Mode: When the webpage displays the video monitoring images, this mode is recommended.





Step 6 Click **×** at the top right to close the window and finish adding the website.

Note

When multiple tabs are opened, the input source displays the tab you stay on before closing.

Figure 4-6 Add website input sources-2



- 1: Preview window where you can preview the input source image, input source name, type and resolution
- 2: List all the input sources with their names.
 - : The added network media
 - : The added NDI input source
 - : The input sources from the acquisition device
 - : The added webpage input source

4.2.3.3 Add NDI Input Sources

After Pilot MS3 is successfully installed, the NDI configuration tool NDI Sender that comes with Pilot MS3 will be installed. After NDI Sender is enabled, Pilot MS3 will automatically search for all the computers whose NDI sending functions have been enabled in the current network segment.

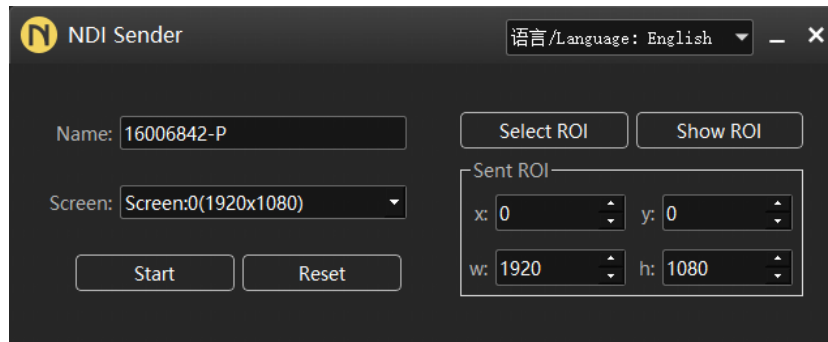
Prerequisites

- The computer running the NDI Sender and Pilot MS3 must be on the same network segment.
- Make sure the computer running the NDI Sender and Pilot MS3 can communicate normally.

NDI Settings

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

Figure 4-7 NDI Sender



- Step 2 Set the image position and size for NDI on the computer screen.

There are two methods to set the NDI image position and size.

- Click **Select ROI** and then click and drag the mouse to select the display area you want to send.
- In the **Sent ROI** area, you can precisely set the position and size of the sent area.
 - x: The horizontal offset from the top left corner of the sent area to the screen's left edge
 - y: The horizontal offset from the top left corner of the sent area to the screen's top edge
 - w: The horizontal width of the sent area
 - h: The vertical height of the sent area

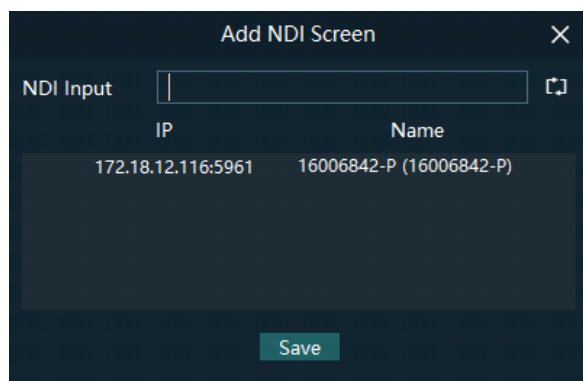
After the settings, you can click **Show ROI** to see the image position and image size you have set.

- Step 3 Enter an NDI name.
- Step 4 Select the screen you want to send if there are multiple computer screens.
- Step 5 Enter the frame rate of the NDI image. The default value is 25.
- Step 6 Click **Start** to complete the NDI Sender settings.

Add NDI Input Sources

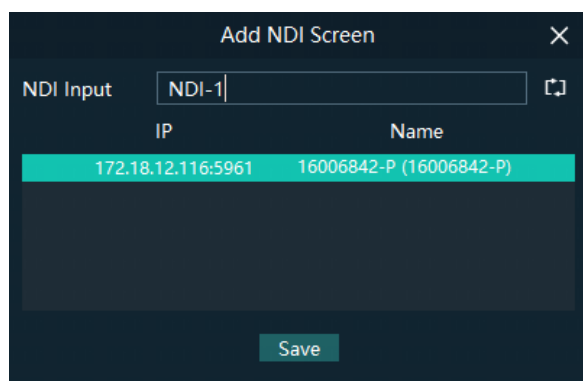
- Step 1 Click the **Input Sources** tab on the right pane of the user interface.
- Step 2 Right click the blank area and go to **Add Input Source > Add NDI Screen**. The system will automatically search the current network segment for all the NDI-enabled devices and then show you the NDI list.

Figure 4-8 NDI list



Step 3 Select the NDI sources from the NDI list.

Figure 4-9 Select NDI sources



Step 4 Enter an NDI name.

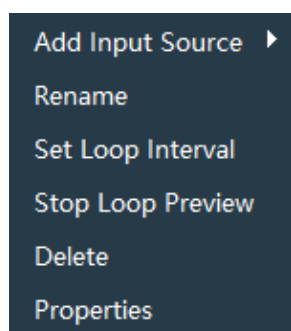
After the name is changed here, the new name will be displayed under the **Input Sources** tab.

Step 5 Click **OK** to complete adding an NDI source.


Website Input Source Menu

Right click an input source under the **Input Sources** tab to show the website input source menu.

Figure 4-10 Website input source menu



- Add Input Source: Add the network media, NDI screen or webpage.
- Rename: Change the input source name.
- Set Loop Interval: Set how long the input source is previewed in the preview area.

- Stop Loop Preview: Stop loop preview of the current input source in the preview area.
- Restore Loop Preview: Perform loop preview of all the input sources in the preview area.
- Delete: Delete the current input source.
- Properties: View the relevant information of the input source, including the name, type, network address, resolution and frame rate.
- Click  at the bottom right of the acquisition card to select whether to add the sources from the acquisition device.

4.3 Manage Layers

4.3.1 Add Layers

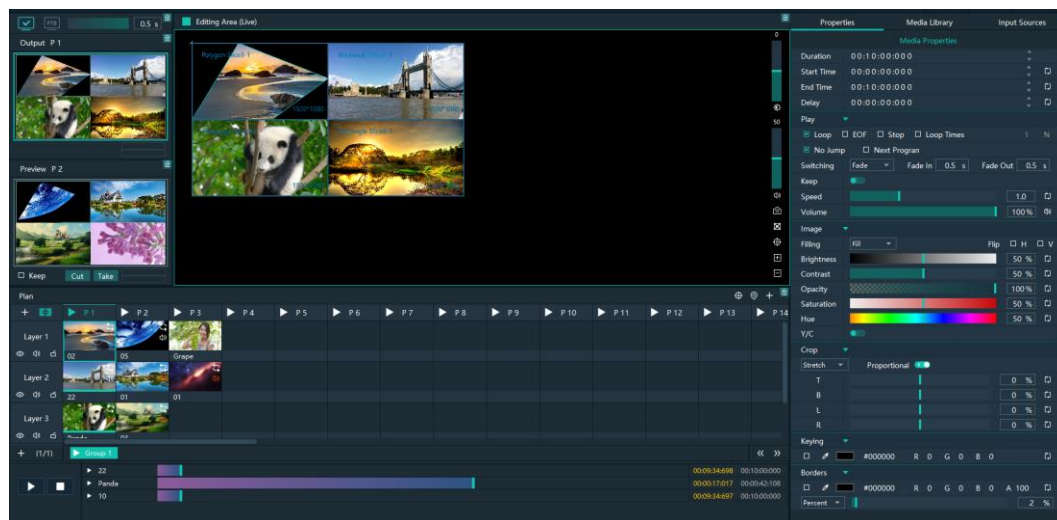
The layer is a container where you store the media file of a program. Before you edit the program, please add the layers and add the media files into the layers first.

Step 1 Click **+** at the top left in the **Plan** area to add a layer.

The new layer will be added to each program.

Step 2 Change the layer position in the **Editing Area** to arrange the output slices and avoid overlapping perfectly.

Figure 4-11 Slice position



Step 3 Select a layer and click the **Properties** tab on the right pane to show the layer properties.

Step 4 Configure the layer-related properties by referring to [Table 4-2](#).

Notes

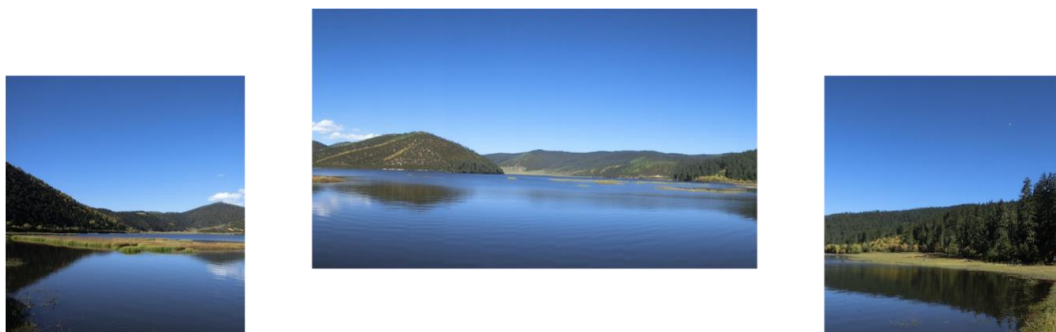
- When you click and drag the layer, the purple auxiliary lines appear to help you better align the layers.
- When there are too many media items, you can search for the media item in the search box above.

4.3.2 Layer Mosaic

Applications

When an image needs to be output by multiple connectors and pixel-to-pixel display is required, you can use this function to satisfy your needs.

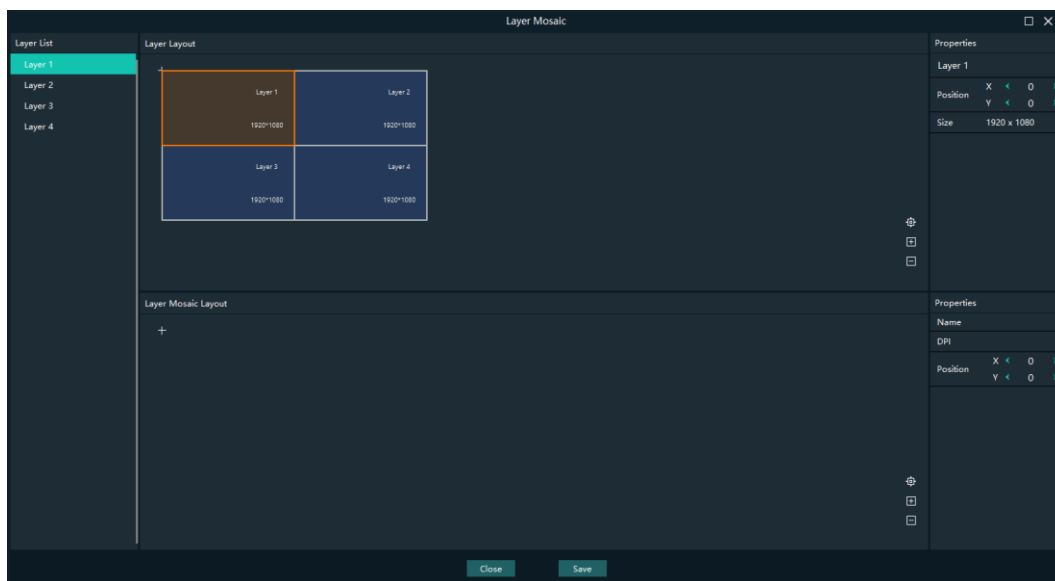
Figure 4-12 Layer mosaic effect



Operating Procedure

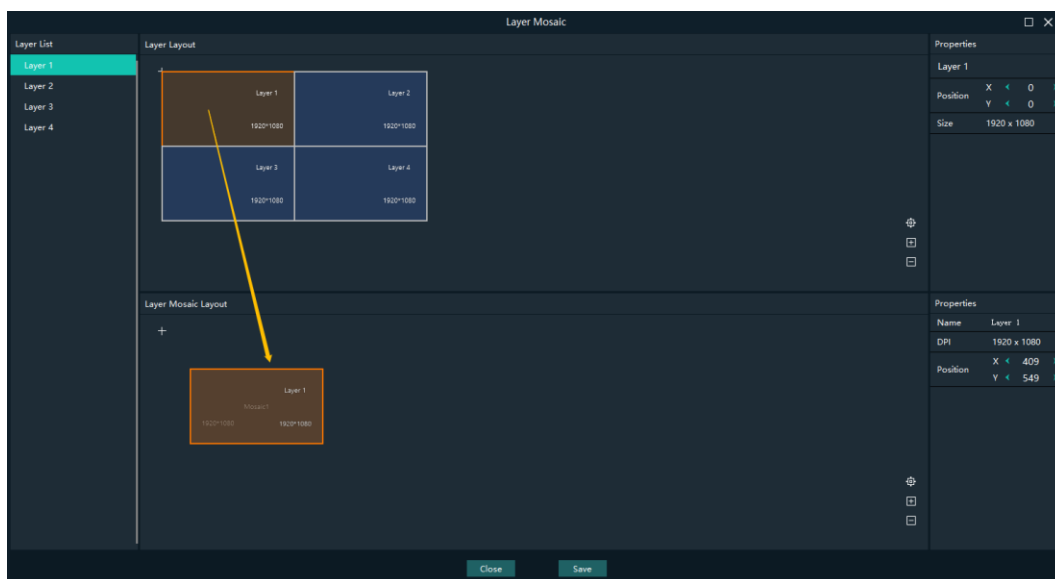
Step 1 Click  at the top left in the **Plan** area to open the layer mosaic window.

Figure 4-13 Layer mosaic-1



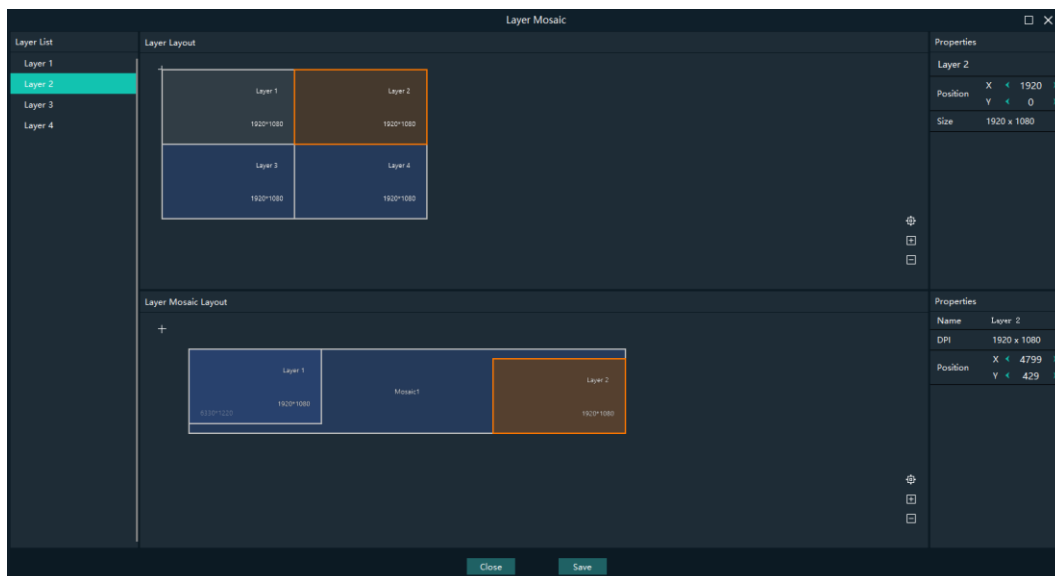
Step 2 Select and drag the layers in the **Layer Layout** area to the **Layer Mosaic Layout** area.

Figure 4-14 Layer mosaic-2



Step 3 Arrange the layers in the way you prefer in the **Layer Mosaic Layout** area.

Figure 4-15 Layer mosaic layout



Step 4 (Optional) Change the mosaic layer name in the **Properties** area on the right.

Step 5 Click **Save** to complete the layer mosaic.

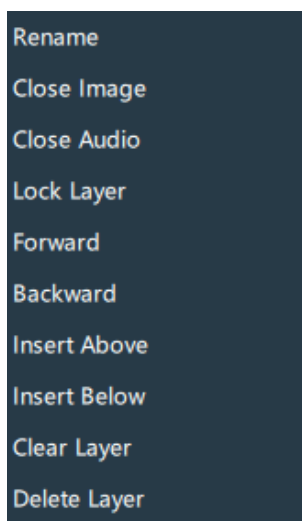
After the mosaic is completed, a new mosaic layer will be displayed in the **Plan** area.

4.3.3 Set Layer Properties

Layer Menu

Right click a layer in the **Plan** area to show the layer menu as shown below.

Figure 4-16 Layer menu



- Rename: Change the layer name.
- Close Image: Do not display the image of the current layer in all the programs.
- Close Audio: Do not play the audio of the current layer in all the programs.
- Lock layer: Lock the current layer in all the programs. After the layer is locked, the layer property changes will not take effect.
- Forward/Backward: Adjust the order of the layer.
- Insert Above: Insert a layer above the current layer row.
- Insert Below: Insert a layer below the current layer row.
- Clear Layer: Clear the data in the current layer.
- Delete Layer: Clear the layer data and delete the layer.

Layer Properties

Step 1 Select a layer in the **Plan** area or **Editing Area**.

Step 2 Select the **Properties** tab on the right pane of the user interface.

Figure 4-17 Layer properties

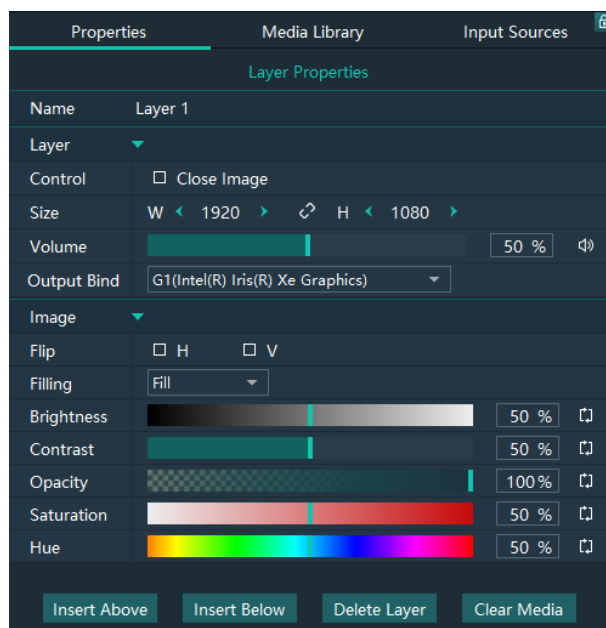


Table 4-2 Function descriptions

Function	Description
Name	View and change the layer name.
Control	Close Image: Do not display the image of the current layer, and only the audio is played.
Size	Change the layer size. <ul style="list-style-type: none"> • W: Set the layer size in the horizontal direction. • H: Set the layer size in the vertical direction.
Volume	Adjust the output volume of the current layer. The default value is 100%. <ul style="list-style-type: none"> • Click to turn off the audio. • Click to reset the volume to default.
Output Bind	Select the rendering graphics card for the layer image.
Flip	Set the flipping mode of the output image. If H and V are not selected, the output image is displayed normally, without any flipping effect. <ul style="list-style-type: none"> • H: Flip the image horizontally. • V: Flip the image vertically.
Filling	Set how the image is displayed in the selected layer. <ul style="list-style-type: none"> • Fill: The image fills the whole layer. • Proportional: The image is scaled and displayed in the layer according to its original aspect ratio.
Brightness	Set the overall brightness of the layer image. The value range is 0%–100%, and it defaults to 50%.

Contrast	Set the overall contrast of the layer image. The value range is 0%–100%, and it defaults to 50%.
Opacity	Adjust the transparency of the output image. The value range is 0% (totally transparent)–100% (opaque), and it defaults to 100%.
Saturation	Adjust the colorfulness of the output image. The value range is 0%–100%, and it defaults to 50%.
Hue	Set the relative degree of how bright or dark the output image is. The value range is 0%–100%, and it defaults to 50%.
Insert Above	Insert a layer below the current layer row.
Insert Below	Insert a layer below the current layer row.
Delete Layer	Clear the layer data and delete the layer.
Clear Layer	Clear the data in the current layer.

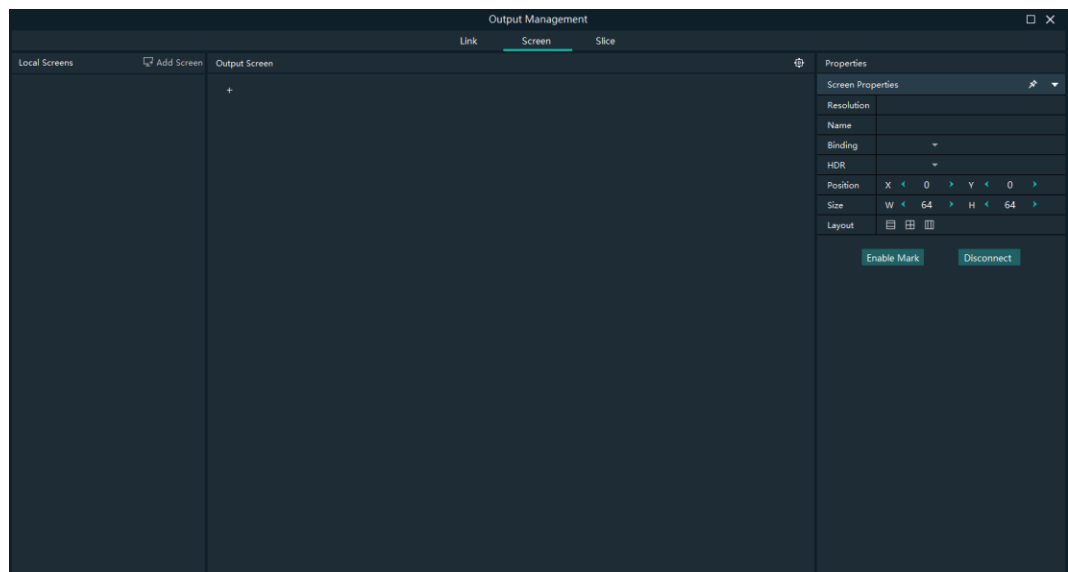
4.4 Build Application Environment

In Pilot MS3, you can use the screens and slices to build an application environment according to your actual on-site needs.

- Screen: Configure the output image displayed on the screen.
- Slice: Configure the image output by the corresponding output connector.

Click **Output** in the menu bar to open the **Output Management** window where you can relate the screens with the output connectors and change the screen position and sequence.

Figure 4-18 Output management



4.4.1 Add Screens

Each output connector on the discrete graphics card of the computer or server where Pilot MS3 is installed corresponds to a screen.

To synchronize output images, please refer to [8 Graphic Card Mosaic](#) to complete relevant configurations.

Add and Bind Screens Automatically

Pilot MS3 will automatically detect the graphics card connectors and then complete the adding and binding of those detected connectors. All the connectors are displayed in the output list on the left.

Add and Bind Screens Manually

When you add the graphics card to the control PC or change the saved project file, you can add the screens manually.

- Step 1 Click **Add Screen** at the top left to add an output.
- Step 2 Set the screen position and size according to the screen layout in the **Screen Properties** area on the right.

Figure 4-19 Screen management

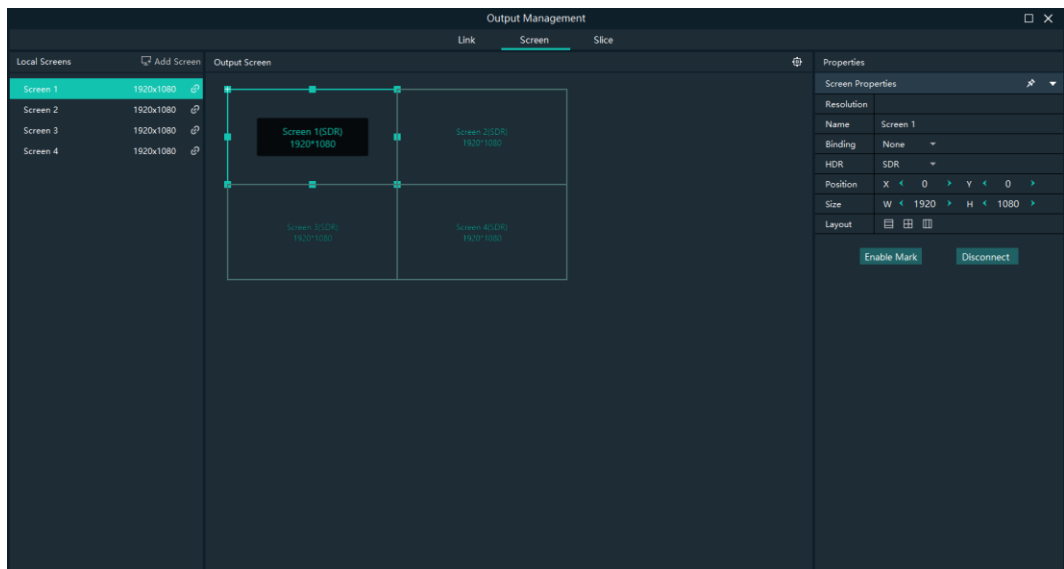





Table 4-3 Screen properties

Menu	Description
Resolution	The resolution of the screen loaded by the connectors
Name	Change the screen name.
Binding	Set the relationship between the output connector and screen.
HDR	Set the output dynamic range. The options include SDR and HDR . <ul style="list-style-type: none"> • SDR: The output is in SDR format. • HDR: The output is in HDR10 format.
Position	<ul style="list-style-type: none"> • X: Set the horizontal distance between the top left corner of the screen and the top left corner of the screen editing area. • Y: Set the vertical distance between the top left corner of the screen and the top left corner of the screen editing area.

Size	Set the screen size. <ul style="list-style-type: none"> • W: Set the screen size in the horizontal direction. • H: Set the screen size in the vertical direction.
Layout	When there are multiple screens, use this function to arrange the screens quickly. <ul style="list-style-type: none"> • : All the screens are arranged in a 1x4 pattern. • : The screens are arranged in a 2x2 pattern. • : All the screens are arranged in a 4x1 pattern.
Enable Mark	Display a sequence number on the output connector and screen, which helps you easily identify and adjust the output pattern.
Disable Mark	Do not display the sequence number.
Disconnect	Do not show the output image of the current screen.
Connect	Show the output image of the current screen.

Step 3 Configure the necessary parameters in the above table to complete the screen configuration.

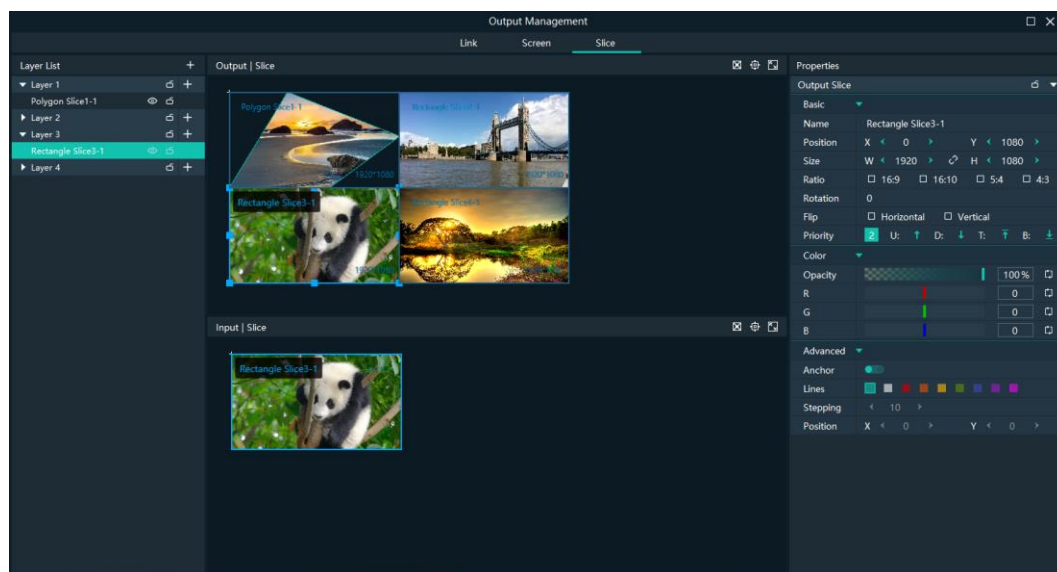
4.4.2 Add Slices

Pilot MS3 uses the slices to output the image to the LED screen. Select the desired image area of the layer using the slice, and then map the image to the output connector to complete the image construction.






Step 1 Click **Output** in the menu bar to open the **Output Management** window.

Step 2 Select the **Slice** tab.

Figure 4-20 Screen slice and area descriptions



- Layer List: Add and delete the rectangle or polygon slices.
- Output | Slice: Adjust the output slice positions on the screen to construct the desired output image.

- Input | Slice: Adjust the sizes and positions of the input slices, and flexibly crop the input image.
- Properties: Set the properties of the output slices and input slices.
- : Slice filling configurations
 - In the input slice area, click  to make the selected slice fill the layer.
 - In the output slice area, click  to make the selected slice fill the screen.
- : Restore the canvas to the origin.
- : Maximize the output slice or input slice area.

Add Rectangle Slices

Step 1 In the **Layer List** area, select the desired layer to add the slices.

Step 2 Click **+** next to the layer name, and then select **Rectangle Slice** to add a rectangle slice.

- In the output slice area, change the position and size of the output slice, as well as view the output image.
- In the input slice area, change the position and size of the input slice to crop the input image.

Add Polygon Slices

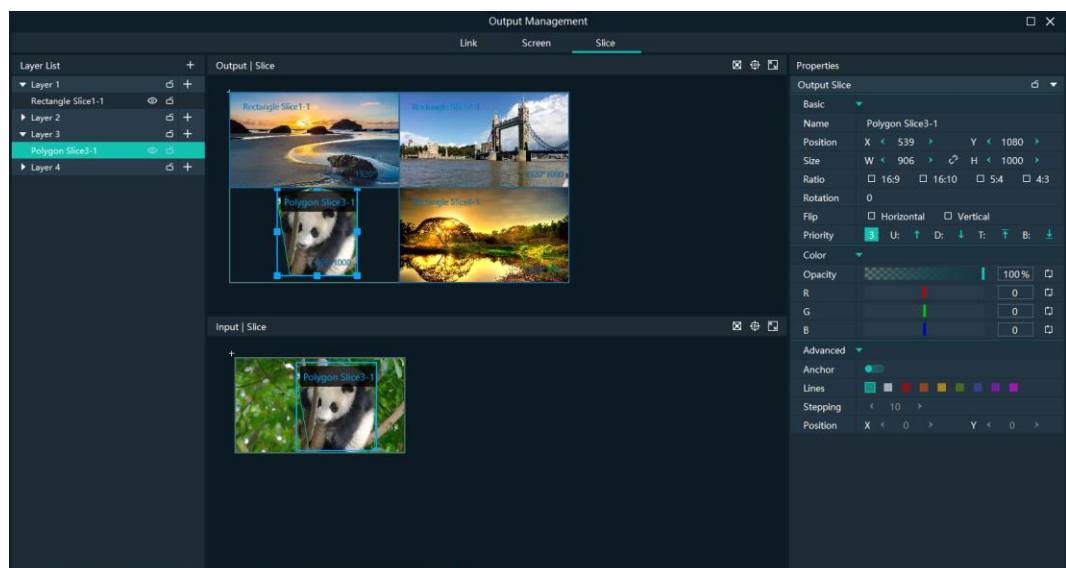
Step 1 In the **Layer List** area, select the desired layer to add the slices.

Step 2 Click **+** next to the layer name, and then select **Polygon Slice** to add a polygon slice.

To add a polygon slice, you need to draw the polygon manually. During the drawing, please note that the sides of the polygon cannot intersect.

Step 3 Move the cursor to the input slice area, and the cursor turns to a pen head. Click the polygon vertices in sequence according to the polygon style you want to draw to complete the polygon drawing.

Figure 4-21 Add polygon slices



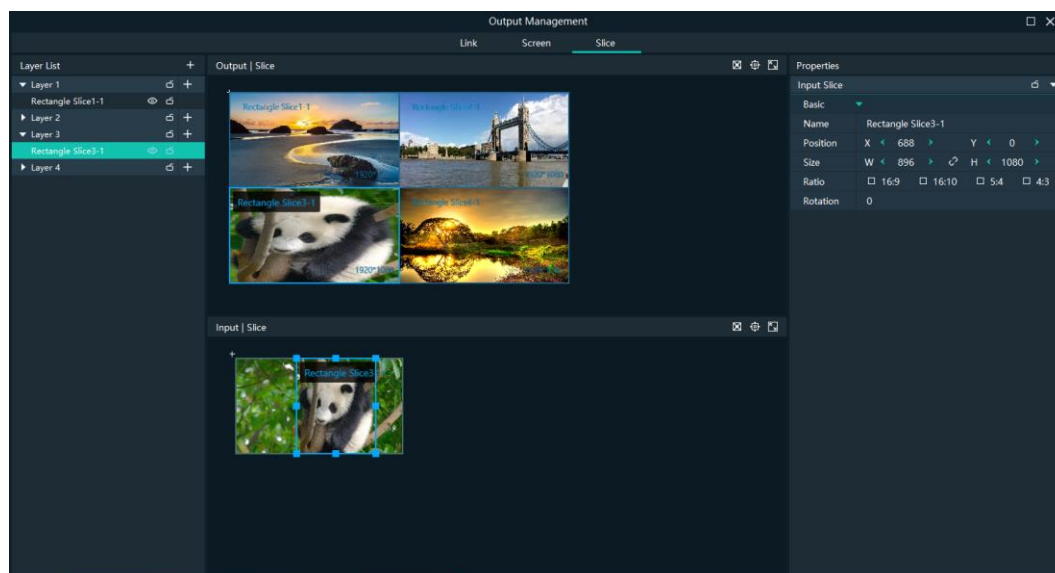
Step 4 Configure the properties of the polygon slice as required.

1. Select the polygon slice.
2. In the **Advanced** area on the right pane, enable the anchor editing function.
3. Click the desired anchor and edit the anchor in the following two ways.
 - Click and drag the anchor to change the anchor position.
 - Click the anchor, and then press the arrow keys of the keyboard to change the anchor position. The moving stepping can be adjusted by setting the **Stepping** value in the **Advanced** area.

Application Example

If you want to output only the panda in Layer 3, do the followings.

Figure 4-22 Slice application example



Step 1 Under the **Slice** tab, select **Rectangle Slice 3-1** on the left side.

Step 2 In the input slice area, move the input slice to cover the panda and adjust the slice size as needed.

Step 3 In the output slice area, adjust the output slice size as needed and move the slice to the desired screen.

4.4.3 Set Slice Properties


Output Slice





The output slices are used for the construction of the output image. The output slice outputs the image of the corresponding input slice, and then scales the input slice image according to the output slice size you set. Select the desired output slice in the output slice area, and then set the slice properties on the right.

Figure 4-23 Output slice properties



Table 4-4 Function descriptions

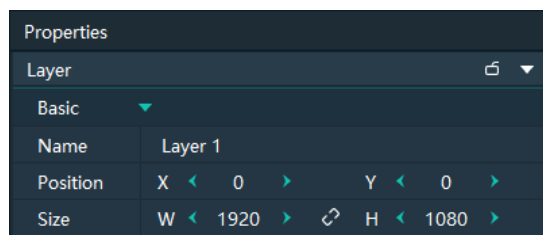
Area	Parameter	Description
Basic properties	Name	Display or change the name of the output slice.
	Position	View or set the output slice position in the Output Slice area. The origin of the Output Slice area is the adjustment reference point and the adjustment unit is the pixel. <ul style="list-style-type: none"> • X: View or set the horizontal coordinate of the top left corner of the output slice in the Output Slice area. • Y: View or set the vertical coordinate of the top left corner of the output slice in the Output Slice area.
	Size	View or set the output slice size. <ul style="list-style-type: none"> • W: View or set the output slice size in the horizontal direction. • H: View or set the output slice size in the vertical direction. • Click  between W and H to lock the slice aspect ratio.
	Ratio	Set the aspect ratio of the output slice.
	Rotation	Rotate the output image clockwise based on the center of the output slice.

Area	Parameter	Description
	Flip	Set the flipping mode of the output image. <ul style="list-style-type: none"> • Horizontal: Flip the output image in the horizontal direction. • Vertical: Flip the output image in the vertical direction.
	Priority	View or set the displaying priority of the output slice. <ul style="list-style-type: none"> • Display: Indicate the priority of the output slice by a number. The larger the number, the higher the priority, i.e., the more front the output slice is displayed. • Adjustment: Select the desired output slice, and then click , ,  or  to adjust its priority.
Color properties	Opacity	Adjust the transparent degree of the output slice. The value ranges from 0% (totally transparent) to 100% (nontransparent).
	R/G/B	Adjust the RGB values of the output slice.
Advanced	Anchor	Enable or disable the anchor editing function.
	Lines	After the editing function is enabled, set the color of the anchor lines.
	Stepping	After the editing function is enabled and you use the keyboard arrow keys to move the anchor, this parameter is used to set the anchor moving distance each time you press the arrow key.
	Position	After the editing function is enabled, enter the specific values of X and Y to precisely position the anchor.


Layers

Select the desired layer in the input slice area, and then set the layer properties on the right.

Figure 4-24 Layer properties



- Name: Display or change the name of the layer.
- Position: View or set the layer position in the input slice area. The origin of the input slice area is the adjustment reference point and the adjustment unit is the pixel.

- X: View or set the horizontal coordinate of the top left corner of the layer in the input slice area.
- Y: View or set the vertical coordinate of the top left corner of the layer in the input slice area.
- Size: View or set the layer size.
 - W: View or set the layer size in the horizontal direction.
 - H: View or set the layer size in the vertical direction.
 - Click  between **W** and **H** to lock the slice aspect ratio. If one of the two values is changed, the other value will change automatically according to the aspect ratio.

Input Slices

Select the desired input slice (highlighted when selected) in the input slice area, and then set the input slice properties on the right.

The input slice is used to select a specific image area of the input source image.

Figure 4-25 Input slice properties

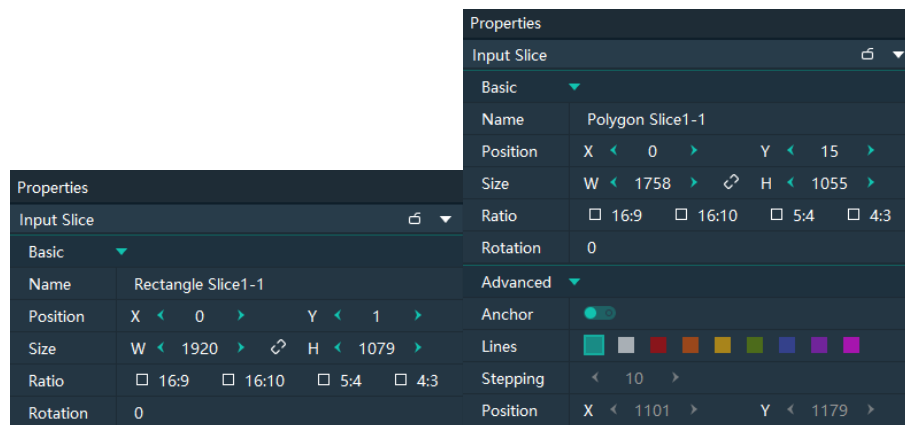


Table 4-5 Function descriptions

Parameter	Description
Basic properties	
Name	Display or change the name of the input slice.
Position	View or set the input slice position upon the layer. The top left corner of the layer is the adjustment reference point and the adjustment unit is the pixel. <ul style="list-style-type: none"> • X: View or set the horizontal coordinate of the top left corner of the layer slice upon the layer. • Y: View or set the vertical coordinate of the top left corner of the layer slice upon the layer.
Size	View or set the input slice size. <ul style="list-style-type: none"> • W: View or set the input slice size in the horizontal direction. • H: View or set the input slice size in the vertical direction.

Parameter	Description
Ratio	Set the aspect ratio of the input slice.
Rotation	Set the rotate degree of the input slice. The reference point is the center of the output slice.
Advanced properties	
Anchor	Enable or disable the anchor editing function when the input slice is a polygon slice.
Lines	After the editing function is enabled, set the color of the anchor lines.
Stepping	After the editing function is enabled and you use the keyboard arrow keys to move the anchor, this parameter is used to set the anchor moving distance each time you press the arrow key.
Position	After the editing function is enabled, enter the specific values of X and Y to precisely position the anchor.

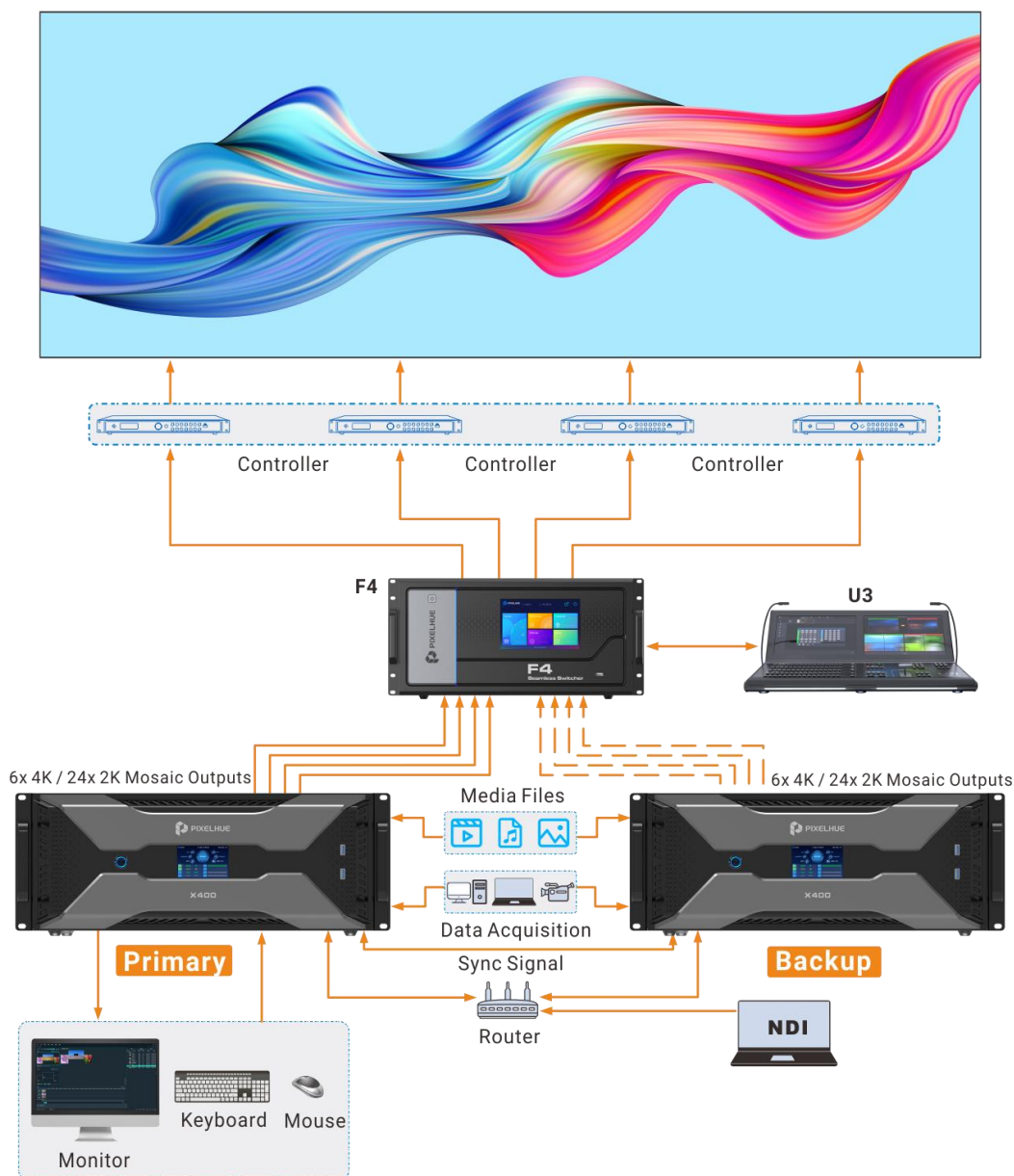
**Note**

The rectangle slices in the input slice area do not support advanced property settings

4.4.4 Configure Link Backup

Pilot MS3 supports the device backup to set the backup relationship between two devices. You can set one of the devices as the primary device or the backup device. When the primary device has got a problem or the primary device's cable fails, the backup device will take over the responsibilities of the primary device seamlessly, and continue to work well to ensure the LED screen will not go black.

Figure 4-26 Application



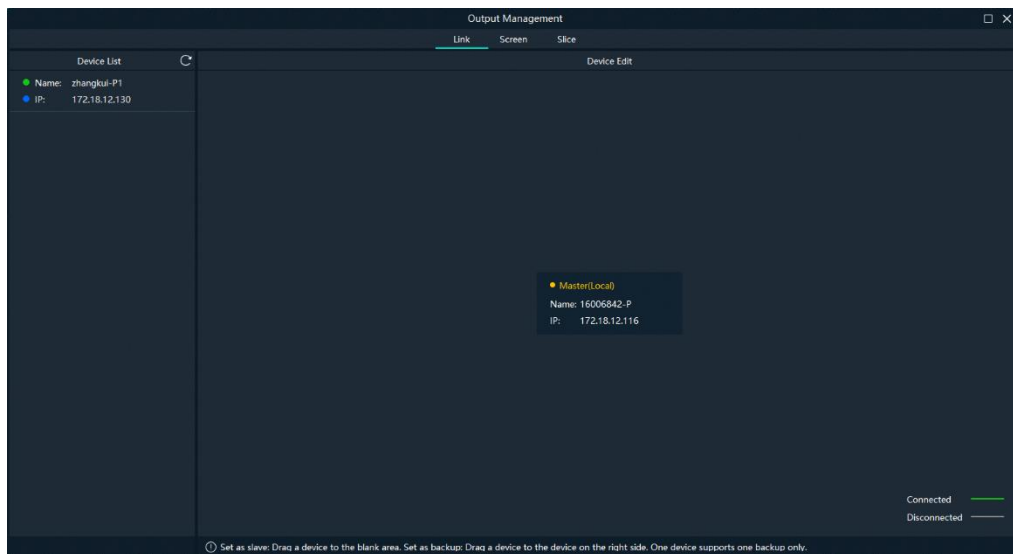
Prerequisites

- The primary and backup devices must be on the same network segment.
- The primary and backup devices must be connected to the same downstream device, such as an F4 shown above.

Operating Procedure

Step 1 On the primary device, go to **Link > Link Settings** or click **Output > Link**.

Figure 4-27 Link settings



In the device list, the system will automatically search for all the online devices on the current network segment.

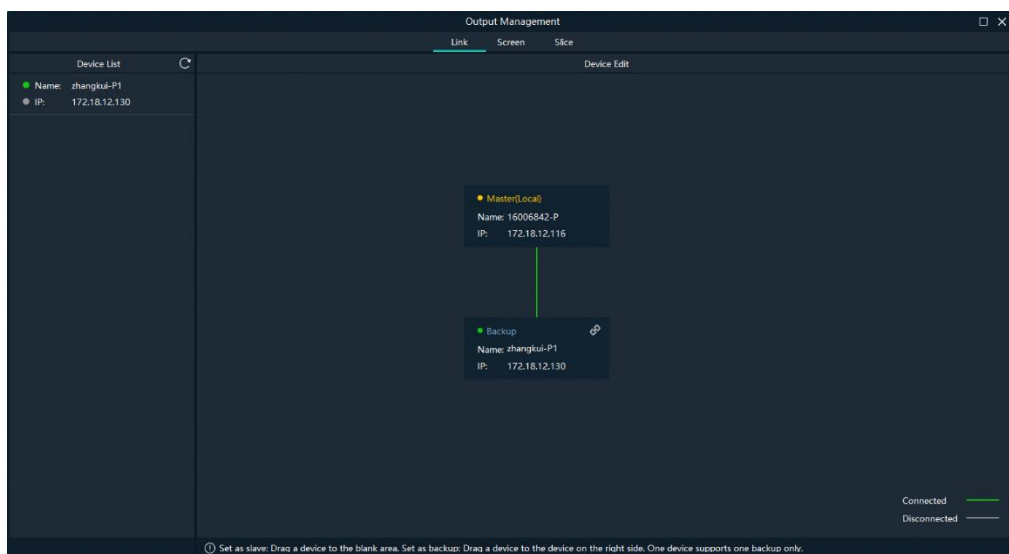
Device status descriptions:

- Name:
 - The media server name
 - ●: The device is online.
 - ●: The device is offline.
- IP:
 - The device IP address
 - ●: The device is not used as a backup one.
 - ●: The device is used as a backup one.

Step 2 In the device list, select the device used as a backup one.

Step 3 Select the desired device and drag it to the target primary device to complete the backup settings.

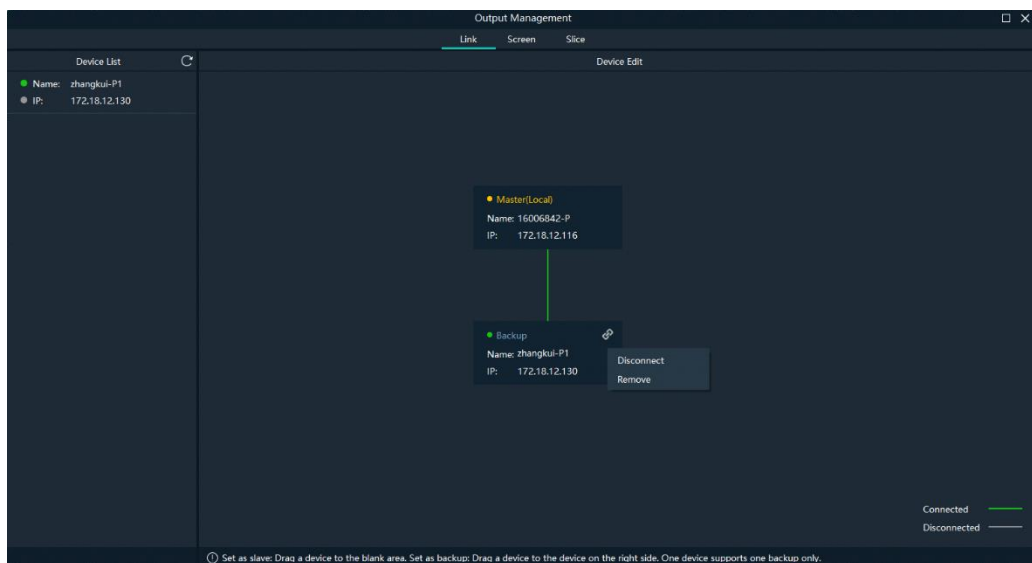
Figure 4-28 Backup settings



Other Operations

On the output management page, right click the backup device to show the context menu.

Figure 4-29 Context menu for backup device



- Click **Disconnect** to disconnect the backup device from the primary device. Right click again and select Connect to reconnect them.
- Click **Remove** to delete the backup device and remove the backup relation between the primary and backup devices.

4.5 Produce Programs

The playback unit of Pilot MS3 is the program.

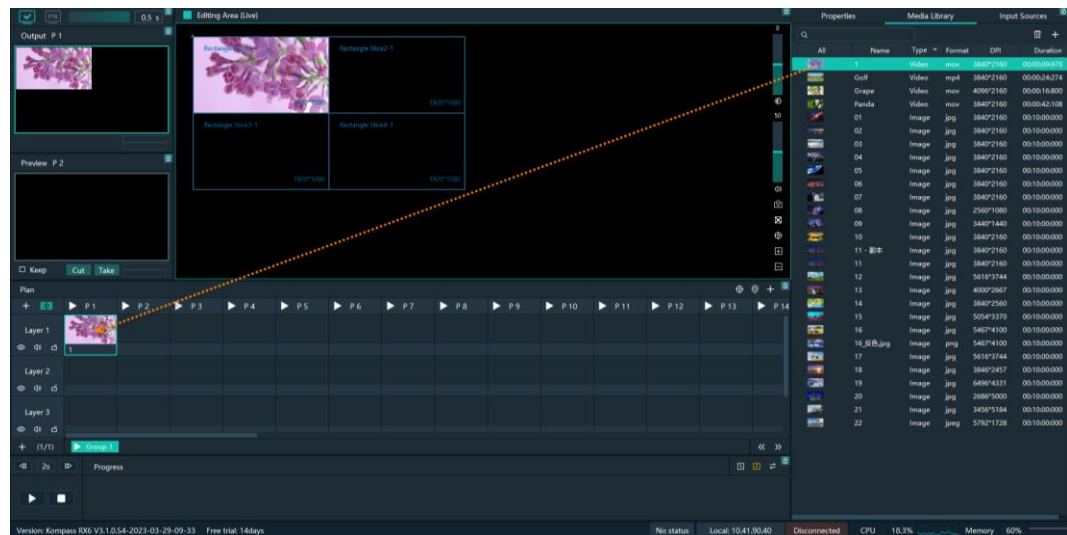
After you have completed the construction of the outputs and added images to the layers, the system will output the image according to your construction (slices).

4.5.1 Edit Programs

The system provides 50 programs by default. Before the playback of a program, you must add the media files or input sources to the layers of the programs.

Select the desired media file or input source in **Media Library** and drag it to the target program layer in the **Plan** area.

Figure 4-30 Edit programs



The functions of the icons in the **Plan** area are described as follows.

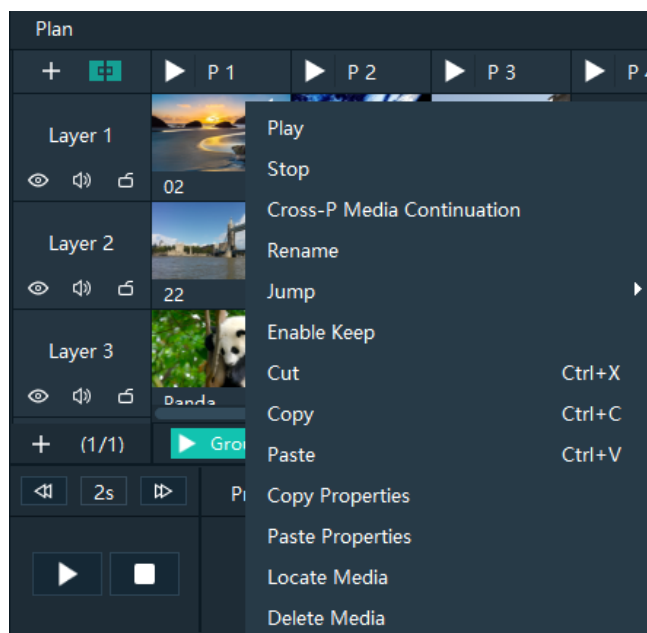
- : Return to the first program column.
- : Locate the program that is being played or edited.
- : Add a new program.
- : Turn off the image display of the selected layer.
- : Turn on the image display of the selected layer.
- : Turn off the audio of the selected layer.
- : Turn on the audio of the selected layer.

4.5.2 Set Media Continuation

When you want to play media content in the same layer of multiple continuous programs, you may need to add the same media file to each program. The added media will be played from the beginning when a new program starts, which may not be what you want to see. The cross-program media continuation function can perfectly solve this problem. After you have enabled this function for a specified media, the program will be played continuously but not played from the beginning when a new program is started.

- Step 1 Right click the desired media in the **Plan** area and select **Cross-P Media Continuation** from the context menu.

Figure 4-31 Set media continuation



Step 2 Click and drag the media to the target program.

Note

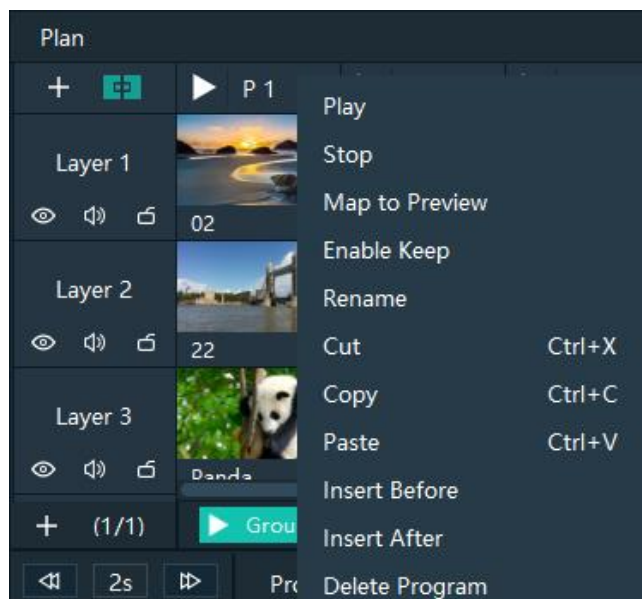
Right click the target program media after the cross-program continuation, and then select **Cancel Continuation** to delete the continuation settings.

4.5.3 Set Program Properties

Program Menu

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

Figure 4-32 Set program properties



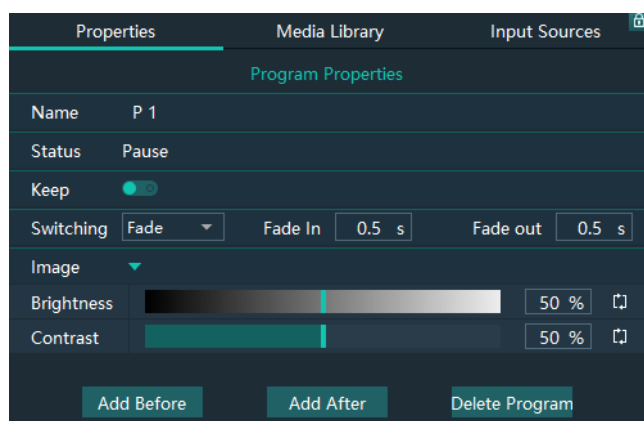
- Play: Play the current program.
- Pause: Pause the program playback. The program will be played from where it is paused next time when it is played.
- Stop: Stop the program playback. The program will be played from the beginning next time when it is played.
- Map to Preview: Show the program content in the preview area.
- Enable Keep: When the playback switches to the program, it starts to play from the last position.
- Disable Keep: When the playback switches to the program, it starts to play from the beginning.
- Rename: Change the program name.
- Cut: Cut the current program.
- Copy: Copy the current program and its properties.
- Paste: Paste the copied program and its properties to the specified program.
- Insert Before: Add a new program before the current program column.
- Insert After: Add a new program after the current program column.
- Delete Program: Clear all the layer data in the program and delete the program.

Program Properties

Step 1 Select a layer in the **Plan** area or **Editing Area**.

Step 2 Select the **Properties** tab on the right pane of the user interface to show the program property settings.

Figure 4-33 Program properties



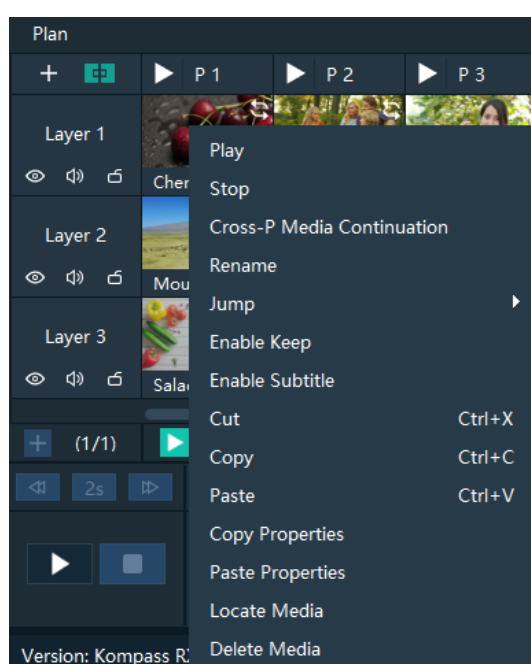
- Name: View or change the program name.
- Status: Display the playback status of the current program.
- Keep: After this is enabled, when the playback switches to the program, it starts to play from the last position. After this is disabled, when the playback switches to the program, it starts to play from the beginning.
- Switching: Set the transition effect for program switching. The options include **Fade** and **Cut**.
- Fade In: When **Fade** is selected, set the duration for the current media to appear.

- Fade Out: When **Fade** is selected, set the duration for the current media to disappear.
- Brightness: Set the brightness of the images in the program.
- Contrast: Set the contrast of the images in the program.
- Add Before: Add a new program before the current program.
- Add After: Add a new program after the current program.
- Delete Program: Clear all the layer data in the program and delete the program.




Media Context Menu in Program

Right click a media in a program in the **Plan** area to show the context menu.

Figure 4-34 Media context menu



- Play: Play the current media.
- Pause: Pause the media playback. The media will be played from where it is paused next time when it is played.
- Stop: Stop the media playback. The media will be played from the beginning next time when it is played.
- Cross-P Media Continuation: When you want to play a media in the same layer of multiple continuous programs, you may need to add the same media file to each program. The added media will be played from the beginning when a new program starts, which may not be what you want to see. The cross-program media continuation function can perfectly solve this problem. After you have enabled this function for a specified media, the program will be played continuously but not played from the beginning when a new program is started.
- Cancel Continuation: After the cross-program media continuation function is enabled, this item is available and you can cancel the cross-program continuation settings.
- Rename: Change the name of the media in the program. The media name in the media library is changed at the same time.

- Jump: Set the jump playback mode of the current media after the media playback ends.
 - Loop: Loop the playback of the selected media in the program, and then  will be displayed at the top right of the layer in the **Plan** area.
 - EOF: The current media will stop the playing and display the last frame after being played once, and  will be displayed at the top right of the layer in the **Plan** area.
 - Stop: The playback will stop after being played once, and  will be displayed at the top right of the layer in the **Plan** area.
 - Next Program: Jump to the next program after the current media playback ends.
 - Jump to Specified Program: Specify the desired program and the specified program will be played automatically after the current program is completed.
- Enable Keep: When the playback switches to the media, it starts to play from the last position.
- Disable Keep: When the playback switches to the media, it starts to play from the beginning.
- Enable/Disable Subtitle: Turn on or turn off the subtitle display for the selected media.
- Cut: Cut the media in the layer of the current program.
- Copy: Copy the media in the layer of the current program.
- Paste: Paste the copied or cut media.
- Copy Properties: Copy the properties of the selected media.
- Paste Properties: Paste the copied media properties to another media.
- Locate Media: Locate the current media file in the media library.
- Delete Media: Delete the selected media.

Program Media Properties

Step 1 Select the desired media in a program.

Step 2 Select the **Properties** tab on the right pane of the user interface to show the media property settings.

Figure 4-35 Media properties

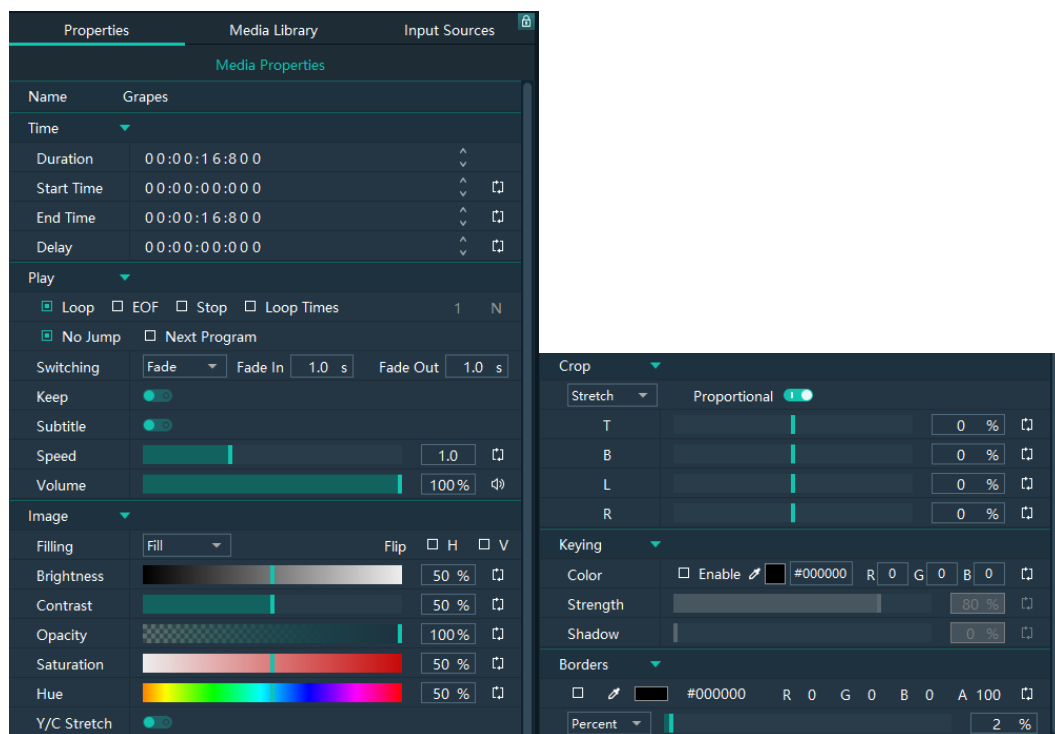


Table 4-6 Media property descriptions

Area	Function	Description
Name		View or change the media name.
Time	Duration	View the length of the media playing time.
	Start Time	Set the start time of the media playback. The start time value cannot be later than the media duration.
	End Time	Set the end time of the media playback. The end time value is later than the start time, and cannot be later than the media duration.
	Delay	Set the delay time of the media playback, that is, the duration the program is played before the media starts playing.










Play	Play	<p>Set the playback mode of the current media during the playing time of the program.</p> <ul style="list-style-type: none"> • Loop: Loop the playback of the selected media in the program, and then  will be displayed at the top right of the layer in the Plan area. • EOF: The current media will stop the playing and display the last frame after being played once, and  will be displayed at the top right of the layer in the Plan area. • Stop: The playback will stop after being played once, and  will be displayed at the top right of the layer in the Plan area. • Loop Times: Set the loop playback times of the current media, and  is displayed at the top right of the layer in the Plan area. ("N" stands for the number of loop times).
	Jump	<p>Set the jump playback mode of the current media after the media playback ends.</p> <ul style="list-style-type: none"> • No Jump: No operation will be performed after the current media playback ends. • Next Program: Jump to the next program after the current media playback ends, and  will be displayed at the top right of the layer in the Plan area. • If you have enabled the program jump, the group name and program name of the next program are displayed and  will be displayed at the top right of the layer in the Plan area.
	Switching	<p>Set the transition effect for switching the current media in the program layer. The options include Fade and Cut.</p>
	Fade In	<p>When Fade is selected, set the duration for the current media to appear.</p>
	Fade Out	<p>When Fade is selected, set the duration for the current media to disappear.</p>
	Keep	<p>After this is enabled, when the playback switches to the program, it starts to play from the last position. After this is disabled, when the playback switches to the program, it starts to play from the beginning.</p>
	Subtitle	<p>Turn on or turn off the subtitle display.</p>
	Speed	<p>Set fast playback speed for the media.</p>
	Volume	<p>Adjust the output volume of the media.</p> <p>Click  on the right of the volume to turn off the output volume of the layer.</p>

Image	Filling	<p>Set how the image is displayed in the selected layer.</p> <ul style="list-style-type: none"> • Fill: The image fills the layer. • Proportional: The image is scaled and displayed in the layer according to its original aspect ratio.
	Flip	<p>Set the display mode of the output image. If H and V are not selected, the output image is displayed normally, without any flipping effect.</p> <ul style="list-style-type: none"> • H: Flip the image horizontally. • V: Flip the image vertically.
	Brightness	<p>Set the overall brightness of the layer image. The value range is 0%–100%, and it defaults to 50%.</p>
	Contrast	<p>Set the overall contrast of the layer image. The value range is 0%–100%, and it defaults to 50%.</p>
	Opacity	<p>Set the transparency of the output image. The value range is 0% (totally transparent)–100% (opaque), and it defaults to 100%.</p>
	Saturation	<p>Adjust the colorfulness of the output image. The value range is 0%–100%, and it defaults to 50%.</p>
	Hue	<p>Set the relative degree of how bright or dark the output image is. The value range is 0%–100%, and it defaults to 50%.</p>
	Y/C Stretch	<p>After enabled, the output image is brighter in the bright areas and darker in the dark areas. This function is disabled by default.</p>
Crop	Crop	<ul style="list-style-type: none"> • Cropping method: <ul style="list-style-type: none"> – Stretch: Stretch or shrink the output image. – Crop: Crop the output image. – Proportional: Scale down the output image. • Proportional: <ul style="list-style-type: none"> – Enabled: The unit for the cropping is the percentage. – Disabled: The unit for the cropping is the pixel.
		T: Set the size of the shrunk/cropped/scaled down area at the top part of the media.
		B: Set the size of the shrunk/cropped/scaled down area at the bottom part of the media.
		L: Set the size of the shrunk/cropped/scaled down area at the left part of the media.
		R: Set the size of the shrunk/cropped/scaled down area at the right part of the media.

<p>Keying</p>	<p>Remove a specific color from the selected media.</p> <p>Check the box next to Enable to enable the function.</p> <ul style="list-style-type: none"> • Select the desired keying method to set the color to be keyed. <p>Four keying methods are supported:</p> <ul style="list-style-type: none"> – Click the eyedropper  and select the color to be removed on the screen. – Click the color block and select the color in the displayed Select Color window. – Next to #, enter the value of the color to be removed. – Double click the values next to RGB and enter their values, respectively, to precisely set the color. <ul style="list-style-type: none"> • Strength: The higher the value, the wider the keying color range and the stronger the color correction. <p>When precise keying is required for a specific image, it is recommended to set the value smaller than 10%; for other cases, it is recommended to set it greater than 50%.</p> <ul style="list-style-type: none"> • Shadow: The higher the value, the cleaner the noise area that contains shadows in the foreground.
<p>Borders</p>	<p>Configure the size and color of the image borders.</p> <p>Check the box next to Borders to enable the function.</p> <ul style="list-style-type: none"> • Set the border color. Four methods are available: <ul style="list-style-type: none"> – Click the eyedropper  and select the desired color on the screen. – Click the color block and select the color in the displayed Select Color page. – Next to #, enter the value of the desired color. – Double click the values next to RGB and enter their values, respectively, to precisely set the color. – Click the A value and enter a value to set the border opacity. The value range is 0% (totally transparent)–100% (opaque). • Set the border size. Two methods are available. <ul style="list-style-type: none"> – Percent: Set the percentage of the border size to the media. – Pixels: Set how many pixels the border occupies.

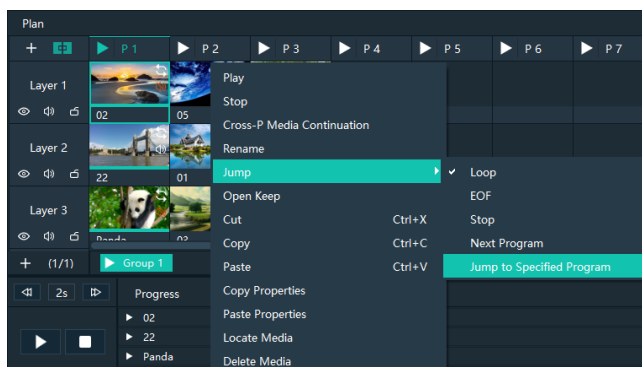
4.5.4 Set Program Jump

After the program editing is completed, set the program jump to realize the automatic continuous playback of the programs.

Before the program jump settings, you need to specify a media in each program as the timing base. After the playback of the selected media ends, the specified program will start to play.

- Step 1 Select the desired media in a program in the **Plan** area and right click the media to open the context menu.
- Step 2 Go to **Jump > Jump to Specified Program** and all the programs become selectable.


Figure 4-36 Program jump



- Step 3 Select the desired program to complete the jump settings.

If you want to jump to a program in another group, click the name of the group where the program belongs, and then click the program name to complete the program jump between program groups.

- Step 4 Repeat Step 1 to Step 3 to complete the jump settings for more programs.

After the program jump settings,  is displayed at the top right of the layer in the **Plan** area.

Note

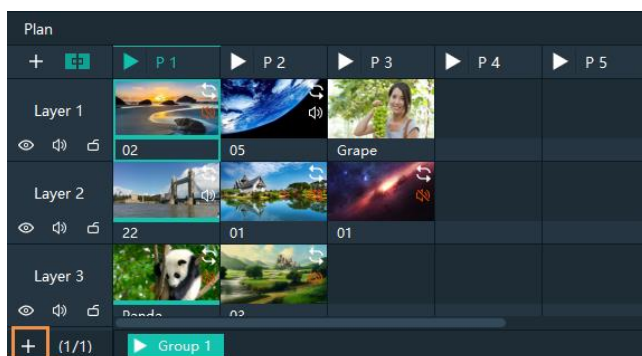
When two programs become jump partners for each other, they will be played circularly.

4.5.5 Manage Program Groups

When you need a large number of programs, you can create groups to manage those programs. Each group supports 20 programs by default.

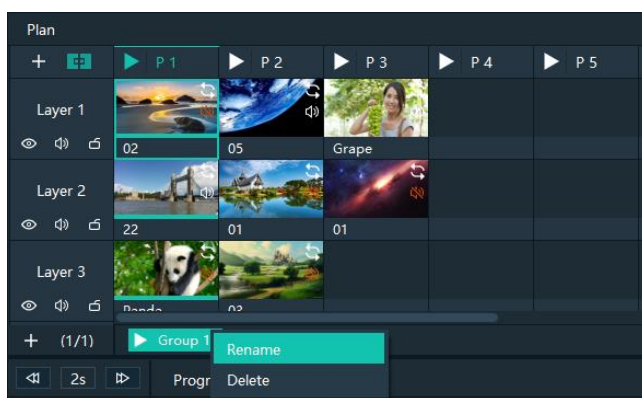
- Step 1 Click **+** at the bottom left in the **Plan** area to add a program group.

Figure 4-37 Add program groups



Step 2 Right click the group name and select **Rename** to give the group a new name.








Figure 4-38 Rename groups



Step 3 Click **+** at the top right to add new programs to the newly-added group.

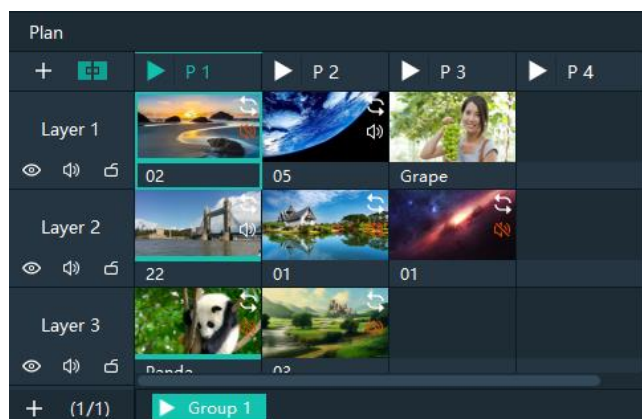
4.6 Playback Control

After the program editing, you can play the programs.

- Control the program playback.
 - Click  next to a program name in the **Plan** area to play the program.
 - Click  to pause the program playback.
(The  icon turns to  during the program playback. The  icon turns to  after the program is paused.)
 - Click  to continue the program playback.
- Switch the playback content.

During the playback of a program, switch the playback content of a layer. For example, in the below figure, when **Program 1** is being played, double click the media in **Layer 2** of **P 2** to switch the playback of the media.

Figure 4-39 Playback control-1



- Control the media playback.

In the playback control area, control the playback of a single media or all the media.

Figure 4-40 Playback control-2














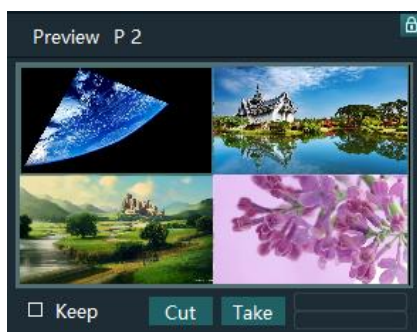

- Click  or  on the left side to play or pause the playback of all media in a program; click  on the left side to stop the playback of all media in a program.
- Click  or  next to a media name to play or pause the playback of the selected media.
- Click  at the top right, and the program media adopts the count up timer.
- Click  at the top right, and the program media adopts the countdown timer.
- Click  at the top right, click the name of the program to be played synchronously and drag the media playback progress bar to play two media synchronously.
- Click  at the top left to set the fast-forward and rewind speed. The options include **2s**, **4s**, **8s** and **16s**. (The number refers to the playback speed and the unit is second.)
- Click  to set the fast-forward speed.
- Click  to set the rewind speed.
- In the **Preview** area, click **Cut** or **Take** to send the preview program to the screen.





Figure 4-41 Preview playback



- Cut: Send the currently previewed program to the screen without transition effect.
 - Take: Send the currently previewed program to the screen with the fade transition effect.
 - If **Keep** is selected and the program is sent to the screen via Take or Cut, the program will be played from the current playback progress in the preview area. If **Keep** is not selected and the program is sent to the screen via Take or Cut, the program will be played from the beginning.
 - FTB:
 - Click  at the upper left of the main interface and the output image will fade to black within the time you set.
- The time ranges from 0 to 5s and it defaults to 1s.

4.7 Save Projects

You can save the editing and settings as an independent project file for easy use in the future.

- Go to **File > Save** or **Save As** to save the current project file (*.pms3) to your local storage.
- Click  at the top left of the main interface to create a new project.
- Click  at the top left of the main interface to save the current project.
- Click  at the top left of the main interface to save the current project as a new project file.
- Click  at the top left of the main interface to package the current project, such as all the used media or all the media files and project files, which is convenient for future use.

5 Settings

About This Chapter

This chapter introduces you to various settings of the software.

Overview

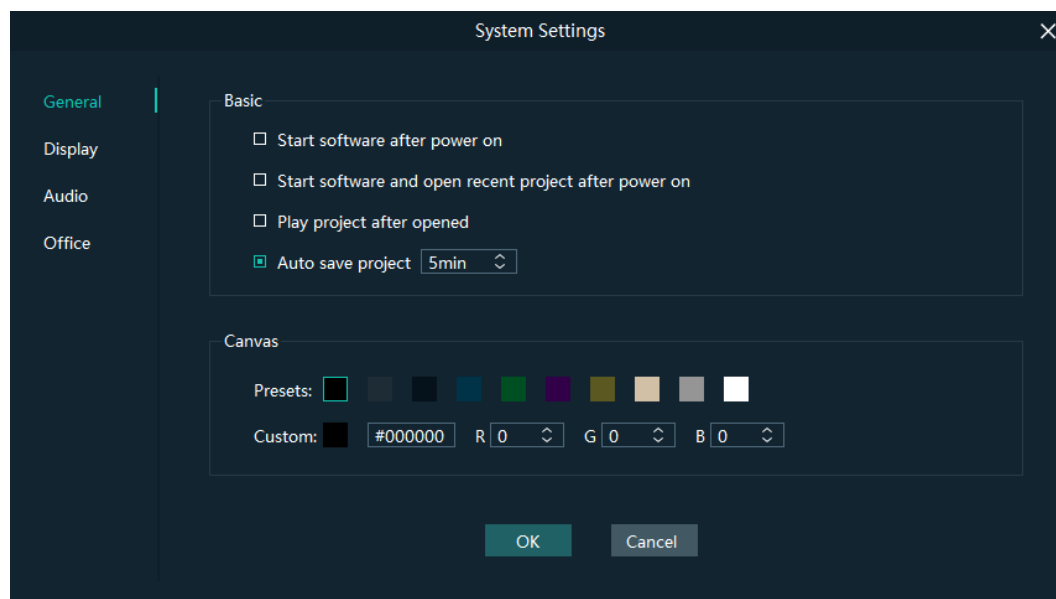
- System Settings
- Authorization
- Hotkey Binding
- MIDI Binding

5.1 System Settings

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

5.1.1 General

Figure 5-1 System settings



Basic

- Start software after power on
 - Selected: Automatically launch Pilot MS3 when the system is started.
 - Deselected: Do not automatically launch Pilot MS3 when the system is started.
- Start software and open recent project after power on
 - Selected: Automatically open the last edited project when Pilot MS3 is launched.
 - Deselected: Display the default interface when Pilot MS3 is launched.
- Play project after opened
 - Selected: When you open a project, the project will be played from where it stopped playing last time.
 - Deselected: When you open a project, no media will be played and the project interface will be displayed.
- Auto save project

Set an interval that the system will automatically save the project. The value ranges from 1 to 30 min and it defaults to 5 min.

Canvas

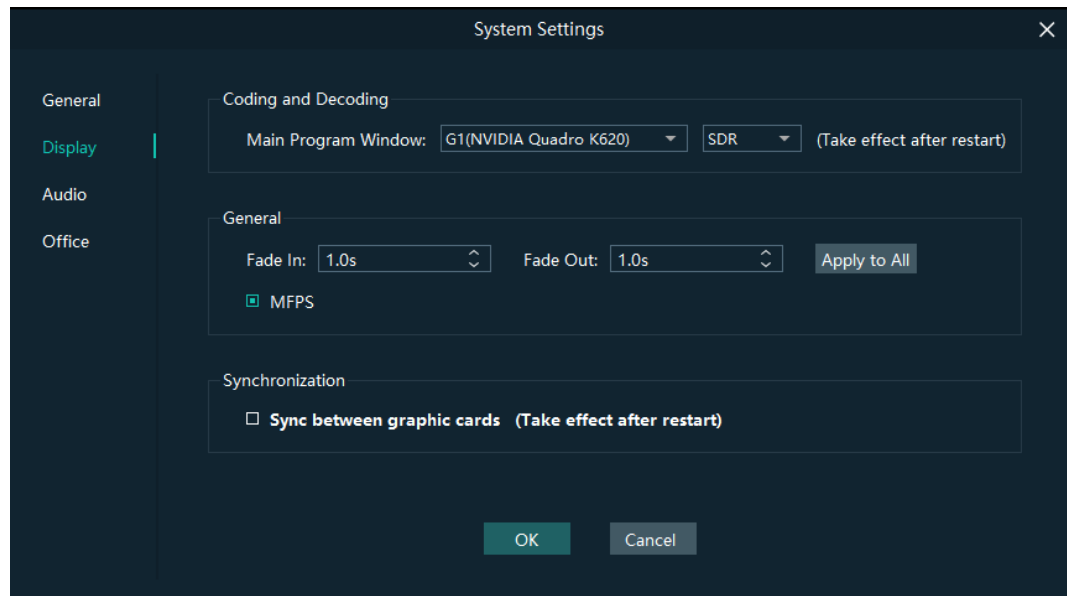
Set the background color of the editing area.

In the canvas settings area, change the background color of the editing area by selecting a preset color or customizing a color.

After the basic and canvas settings are done, click **OK** to apply the settings.

5.1.2 Display

Figure 5-2 Display settings



Coding and Decoding

- Main Program Window: Select the graphics card for the rendering of the program main user interface. After the configuration, you need to restart the software.
- HDR: Enable the HDR rendering output.
- SDR: Enable the SDR rendering output.

General

- Fade In: Set the time length from when the current media starts to play to when the media is fully displayed. The value ranges from 0 to 10 s. When the value is set to 0 s, there is no transition effect.
- Fade Out: Set the time length from when the current media starts to stop to when the media is stopped. The value ranges from 0 to 10 s. When the value is set to 0 s, there is no transition effect.
- Apply to All: Apply the duration of **Fade In** and **Fade Out** to all the programs. After the time length is set, if you do not click **Apply to All**, the transition will only be effective on the programs without the added media.
- MFPS: Real-time frame rate
 - Selected: Display the real-time frame rate at the bottom right on the media preview window.
 - Deselected: Do not display the real-time frame rate on the media preview window.

After the coding and decoding and general settings are done, click **OK** to apply the settings.

Synchronization

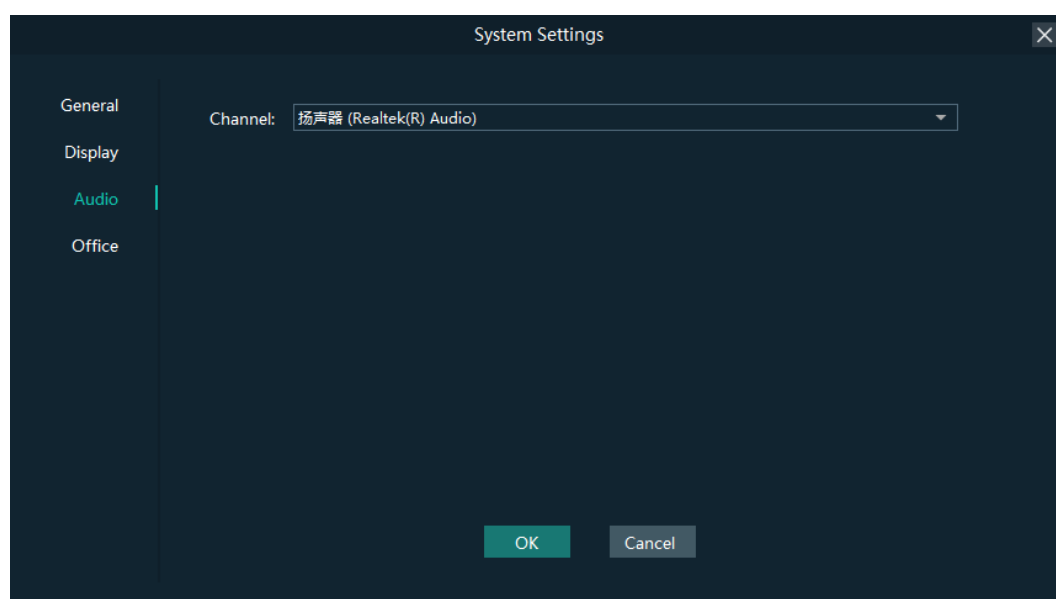
Configure the synchronization mode for graphics cards. When multiple graphics cards are deployed in a mosaic setup, enabling the synchronization between the graphics cards is necessary to ensure the consistent display across the graphics card connectors. Check the **Sync between graphic cards** box to activate synchronization function.

After completing the configuration, please restart the software for the system settings to take effect.

5.1.3 Audio

On the system settings window, click **Audio** to enter the audio settings tab page.

Figure 5-3 Audio settings



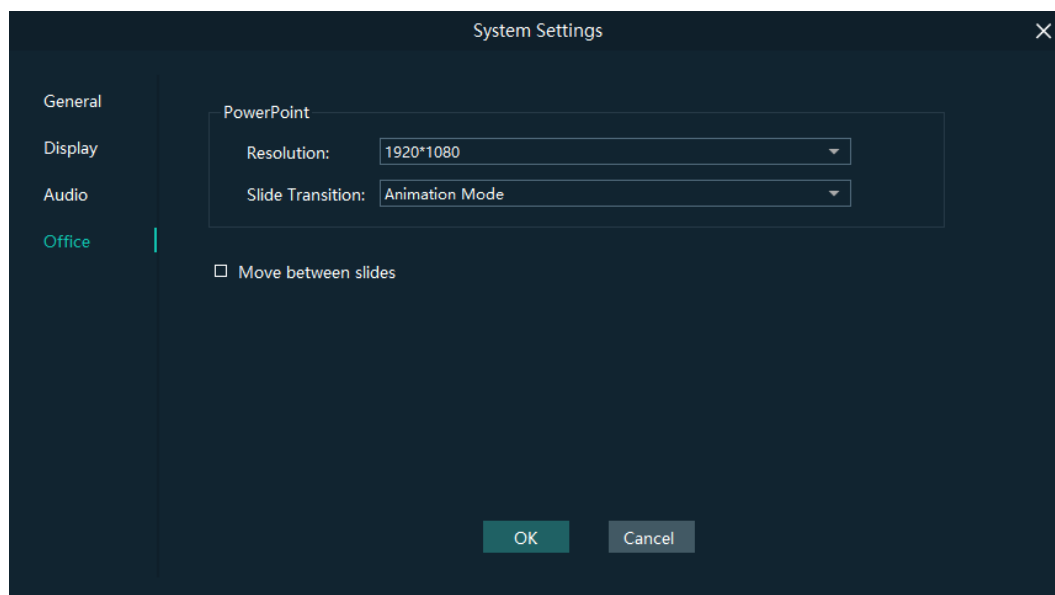
Select an audio output channel from the drop-down list next to **Channel**. Click **OK** to complete the audio settings.

5.1.4 Office

Pilot MS3 supports playback of PowerPoint files. Before playback, configure the basic information of PowerPoint files.

On the system settings window, Click **Office** to enter the office settings tab page.

Figure 5-4 Office settings



- Resolution: Set the resolution according to the resolution of the PowerPoint file.
- Slide Transition: Set the transition of each slide of the PowerPoint document during playback.
 - Animation Mode: Show the animations of slides during playback.
 - Picture Mode: Do not show the animations of slides.
- Use arrow keys to switch between slides
 - Selected: Allow arrow keys to be used to switch between slides.
 - Deselected: Arrow keys cannot be used to switch between slides.

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

5.2 Authorization

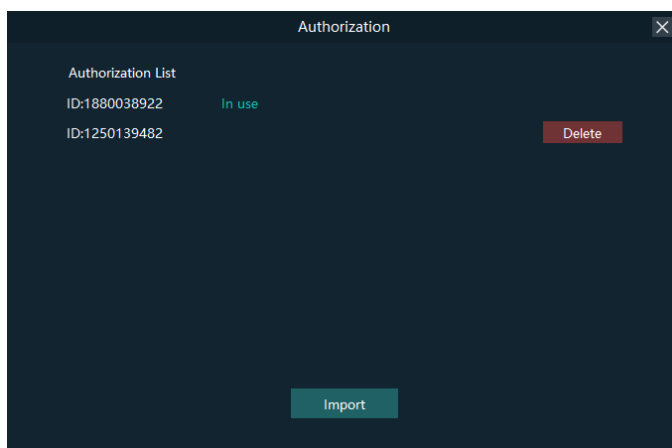
One authorization dongle corresponds to only one authorization file. When the dongle matches the authorization file, Pilot MS3 can be used normally.

Pilot MS3 supports the centralized management of multiple authorization files. When an authorization dongle is inserted, the system can automatically identify the corresponding authorization file to ensure the normal operation of Pilot MS3.

Step 1 Import the authorization file.

1. Go to **Settings > Authorization** to open the authorization settings window.
2. Click **Import** at the bottom to open the authorization file importing window.
3. Select the desired authorization file and click **Open**. The system will automatically import the file to Pilot MS3.

Figure 5-5 Authorization file



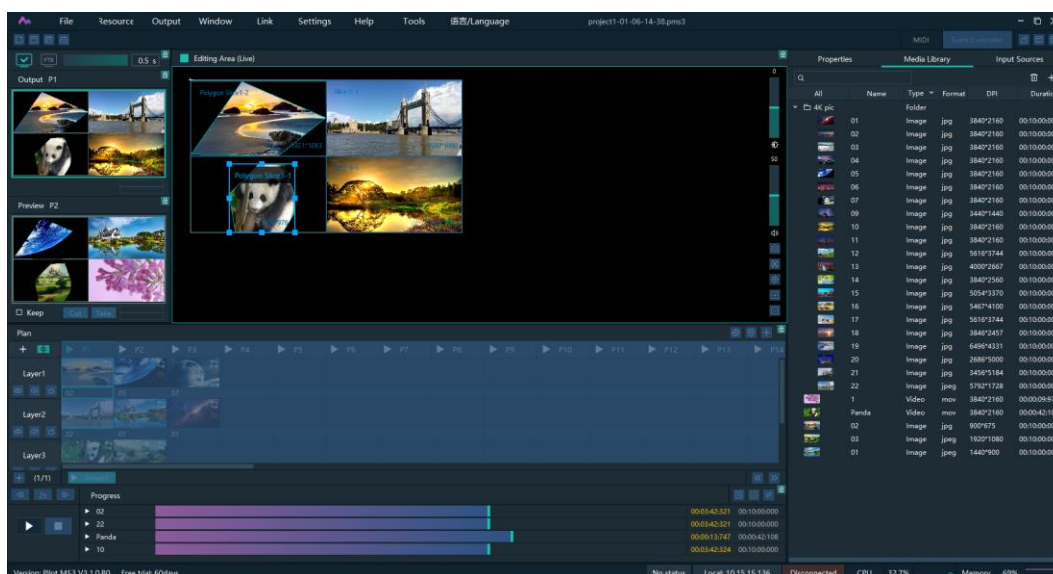
Step 2 Check the authorization.

1. Insert the authorization dongle into the system.
2. The system will automatically identify the authorization file according to inserted the authorization dongle, and then display **In Use** after successful identification.

5.3 Hotkey Binding

Pilot MS3 supports custom hotkeys, and users can use those keys to operate Pilot MS3 simply and conveniently. Go to **Settings > Hotkey Binding** to show the hotkey settings interface, and the areas where you can carry out the hotkey binding are highlighted.

Figure 5-6 Hotkey binding



Click the target area, and then press the letter or number keys on the keyboard as needed to complete adding the hotkey.

After the settings, go to **Settings > Complete Binding** to make the hotkeys take effect and exit the hotkey binding interface.

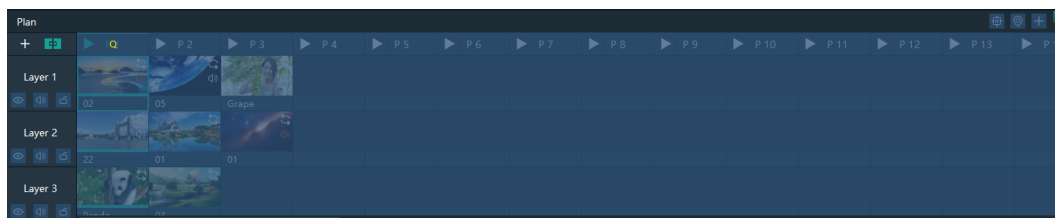
 **Note**

The **Ctrl+H** key combination is a built-in global hotkey which can quickly locate the mouse to the center of the main interface. When you set the hotkeys, this combination cannot be used.

For example:

Set the hotkey for Program 1 to **Q**.

- a. On the hotkey settings interface, click **Program 1**.
- b. Press the letter **Q** on the keyboard, and then a letter **Q** will be displayed on Program 1.



5.4 MIDI Binding

Bind the Pilot MS3 functions with the MIDI (Musical Instrument Digital Interface) keyboard. After a successful binding, you can control Pilot MS3 by using a MIDI keyboard.

5.4.1 Connect MIDI Keyboard

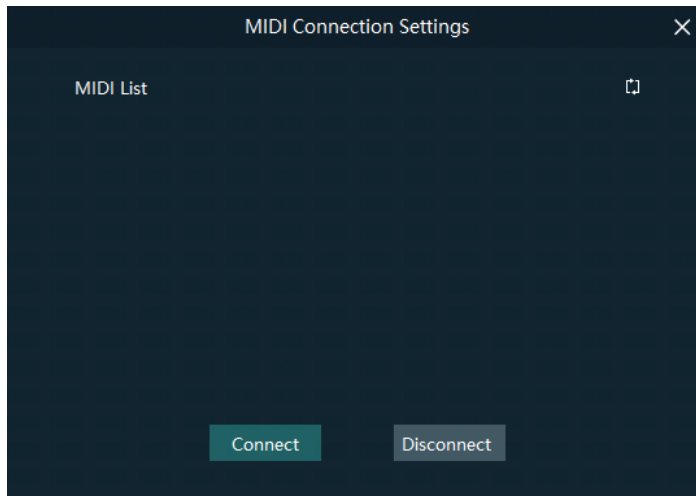
Prerequisites

- You have connected a MIDI keyboard to the computer where Pilot MS3 is installed.
- Make sure the computer where Pilot MS3 is installed have successfully recognized the connected MIDI keyboard.

Procedure

- Step 1 Click **MIDI** at the top right of the user interface to open the MIDI connection settings window.

Figure 5-7 MIDI connection

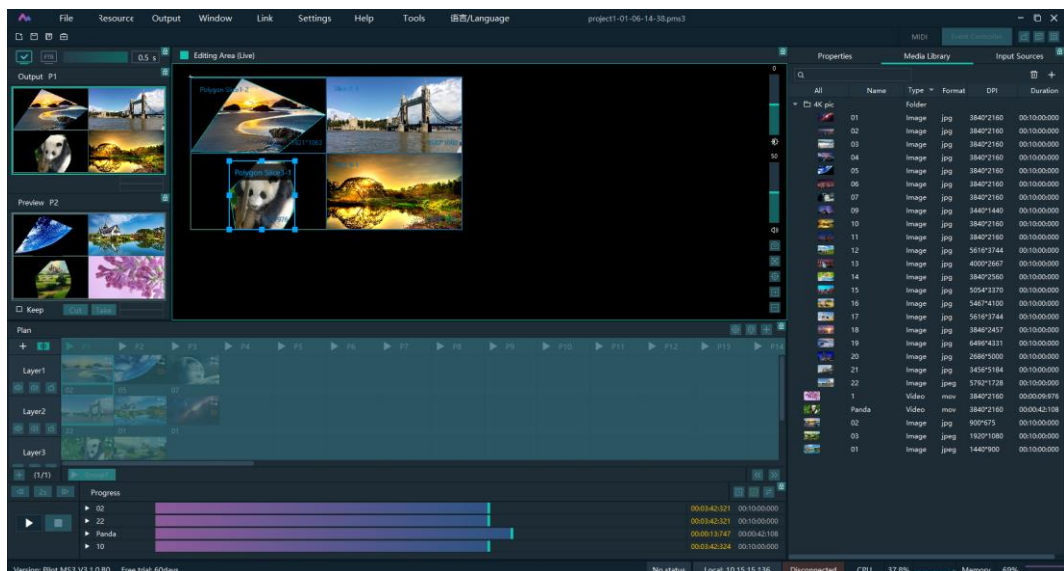


- Step 2 Pilot MS3 will automatically recognize all the connected MIDI keyboards.
- Step 3 Select the desired MIDI keyboard from the **MIDI List**.
- Step 4 Click **Connect** to complete the connection.

5.4.2 Bind MIDI

- Step 1 Go to **Settings > MIDI Binding** to show the MIDI binding page. You can see all the available functions that can be bound with a MIDI keyboard are highlighted.

Figure 5-8 Available functions for MIDI binding



- Step 2 Select the target function in Pilot MS3 and then press the desired key on the MIDI keyboard to complete the binding.

After a successful binding, go to **Settings > Complete MIDI Binding** to make the binding take effect and exit the binding page.

6 Help

About This Chapter

This chapter introduces you the software-related and company-related information that may help you during the use.

Overview

- User Manual
- Software Updates
- About

6.1 User Manual

Go to **Help > User Manual** on the menu bar to open and view the product user manual.

6.2 Software Updates

Check the current version of the software. When a new software version is detected, the system will download the latest version and then you can follow the instructions to complete the update.

6.3 About

View the software version, license agreement and other company-related information.

7 Tools

About This Chapter

To better meet onsite playback requirements, Pilot MS3 has integrated some tools that can be used to edit video files.

Overview

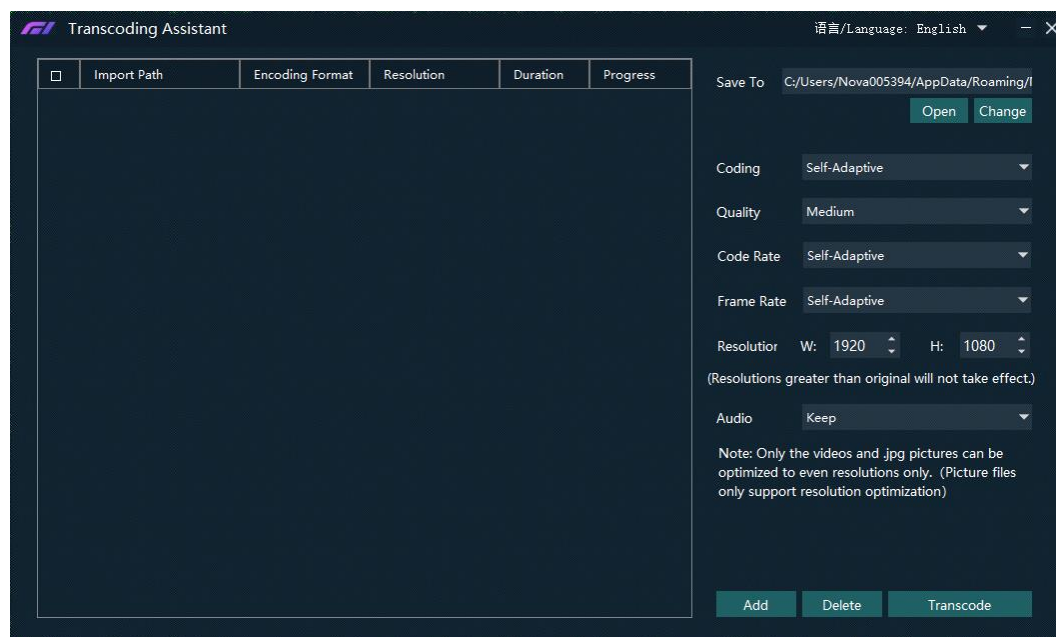
- Transcoding Assistant

7.1 Transcoding Assistant

Pilot MS3 supports the conversion of the video coding format, code rate, resolution, and frame rate to satisfy the requirements of different playback scenarios.

Step 1 Go to **Tools > Media Transcoding** to open the transcoding assistant window.

Figure 7-1 Transcoding assistant



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

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

Step 3 Click **Add** to add them into the assistant.

Step 4 Select the target video file.

Step 5 On the right side, set the parameters of **Coding**, **Quality**, **Code Rate**, **Frame Rate**, **Resolution** and **Audio**.

- **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.
- **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 the recommended maximum value is 8192
 - H: Set the vertical size of the transcoded video. The value defaults to 1080 and the recommended maximum value is 8192.
 - If the set resolution after the transcoding is greater than the resolution of the original one, the resolution of the transcoded one will be the original resolution.
- 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 display pure images without any audio.

Step 6 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**.

- Click **Open** to open the local folder where you can view the transcoded files.
- Click **Change** to change the save path.

Step 7 Click **Delete** at the bottom to delete the selected video files.

8 Graphic Card Mosaic

About This Chapter

This chapter helps you to configure the graphics card mosaic function.

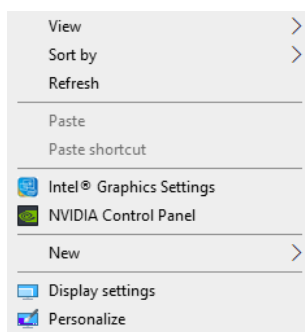
Overview

- Set Main Display
- Change Resolutions
- EDID Management
- Output Mosaic

8.1 Set Main Display

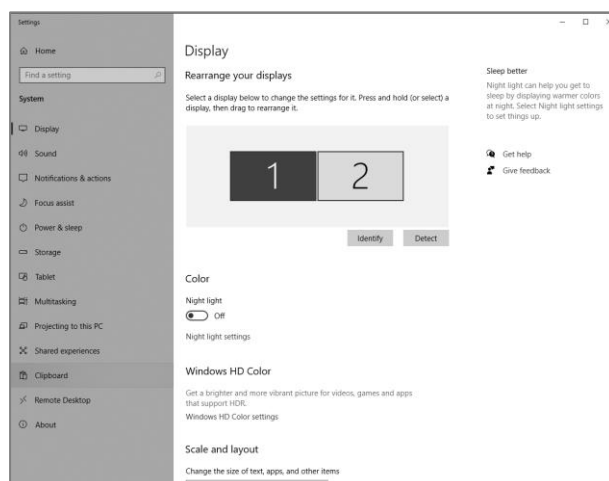
Step 1 Right click on your desktop and select **Display settings**.

Figure 8-1 Display settings



Step 2 Select a display to set it as the main display.

Figure 8-2 Multiple displays-1

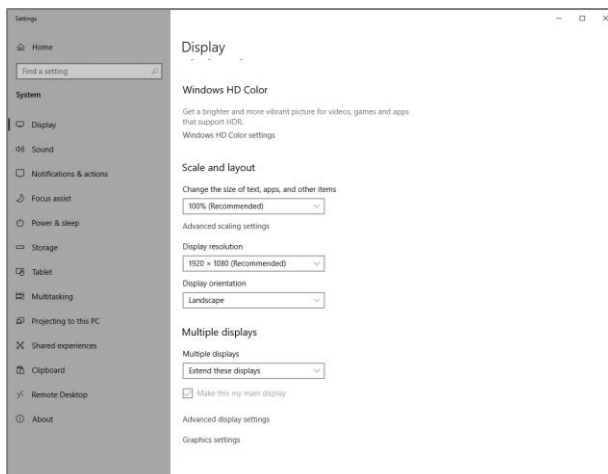


Note

When multiple displays are connected, you can click **Identify** to show the number at the bottom left corner on each display.

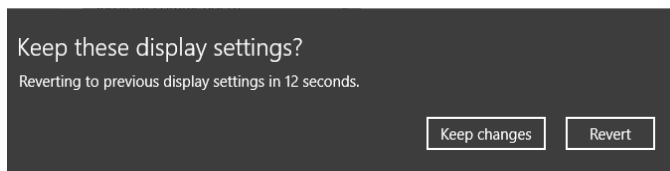
Step 3 For the Multiple displays item, select Extend these displays.

Figure 8-3 Multiple displays-2



Step 4 On the window that appears, select **Keep changes**.

Figure 8-4 Confirmation



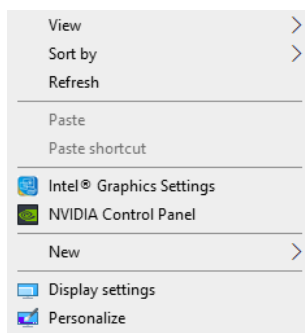
Step 5 Check the box next to Make this my main display.

8.2 Change Resolutions

8.2.1 Set Standard Resolutions

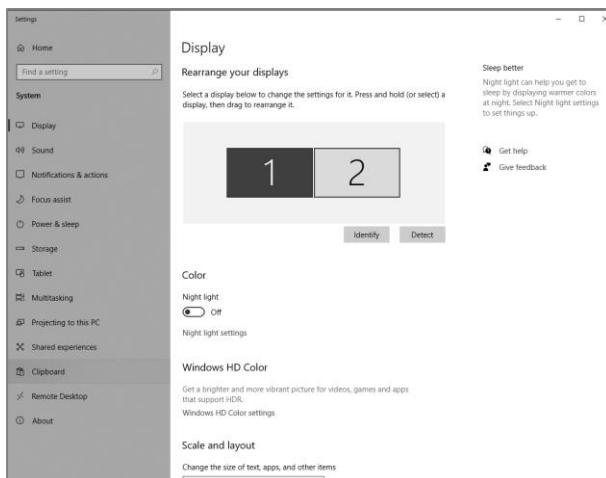
Step 1 Right click on your desktop and select **Display settings**.

Figure 8-5 Display settings



Step 2 Select a display to set it as the main display.

Figure 8-6 Multiple displays-1

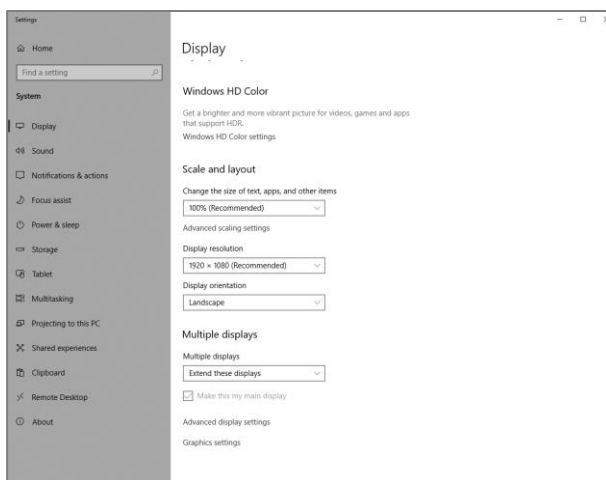


Note

When multiple displays are connected, you can click **Identify** to show the number at the bottom left corner on each display.

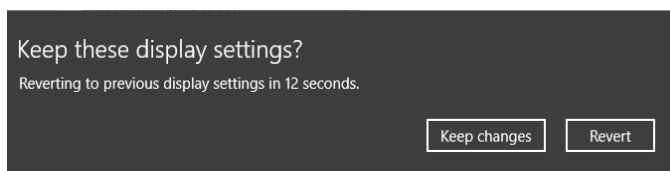
Step 3 For the **Display resolution** item, select the desired output resolution.

Figure 8-7 Multiple displays-2



Step 4 On the window that appears, select **Keep changes**.

Figure 8-8 Confirmation

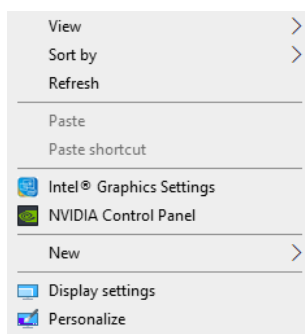


Step 5 Repeat Step 2 to Step 4 to complete the resolution settings for other displays.

8.2.2 Set Custom Resolutions

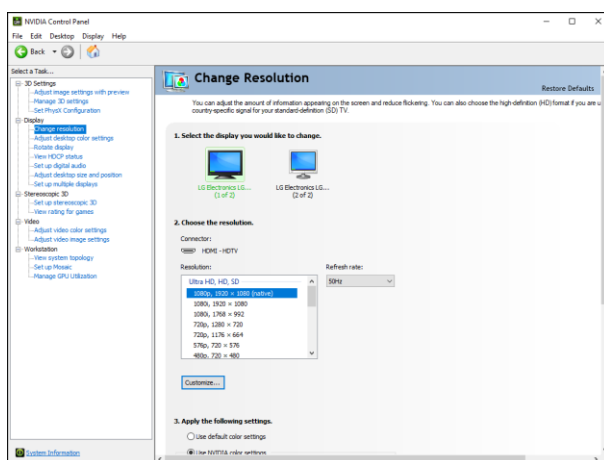
Step 1 Right click on your desktop and select **NVIDIA Control Panel**.

Figure 8-9 NVIDIA control panel



Step 2 On the NVIDIA Control Panel interface, go to Display > Change resolution.

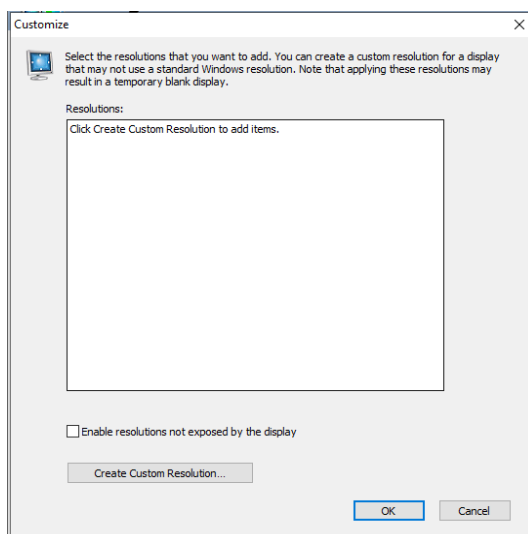
Figure 8-10 Change resolutions



Step 3 Select the desired display.

Step 4 Click **Customize** to show the customize window.

Figure 8-11 Custom resolution-1

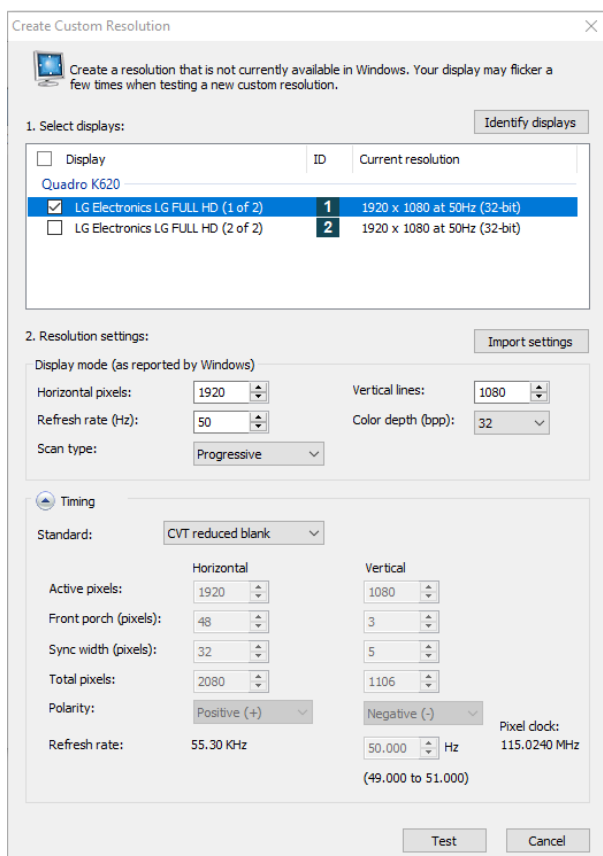


Step 5 Click Create Custom Resolution.

Step 6 Read the disclaimer information carefully and click **Accept** to show the **Create Custom Resolution** window.

Step 7 Select the desired display.

Figure 8-12 Custom resolution-2



Step 8 Set the horizontal pixels, vertical lines, refresh rate and scan type.

Step 9 Click **Test** and then click **Yes** on the window that appears.

Figure 8-13 Confirmation

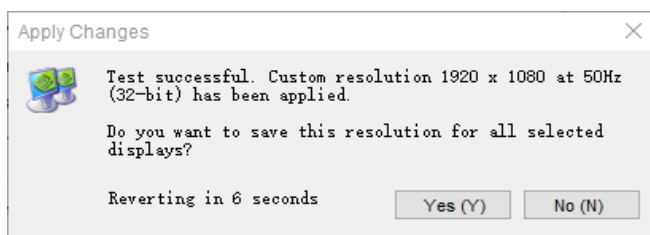
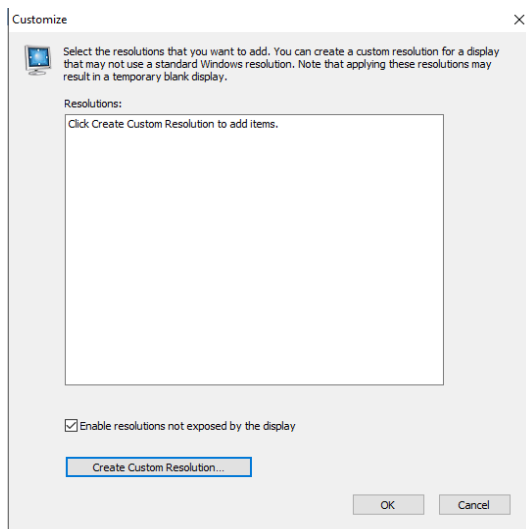


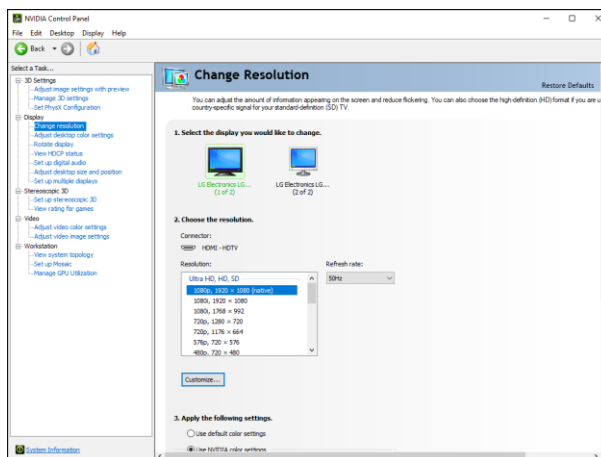
Figure 8-14 Custom resolution-3



Step 10 Click **OK** to complete the custom resolution settings.

After a custom resolution is created successfully, it will appear in the custom area as shown in the figure below.

Figure 8-15 Custom resolution-4



8.3 EDID Management

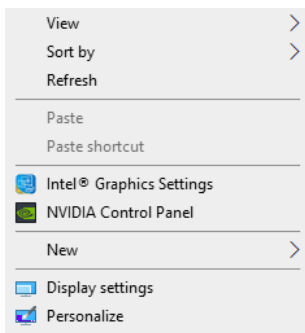
After the display resolution settings, you need to manage the EDID for precise identification of display properties and to avoid the on-site screen display disorder.

Load EDID

The procedure of how to load the EDID is as follows.

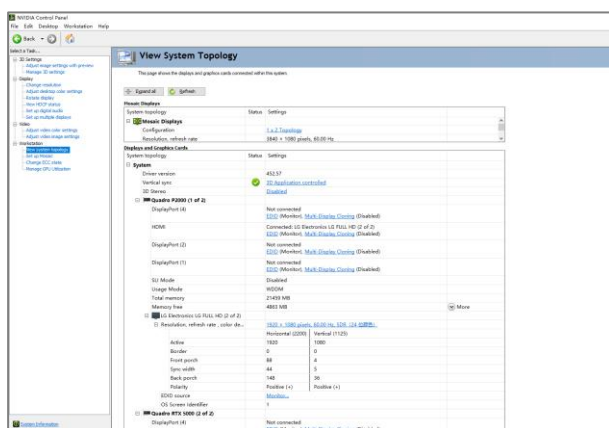
Step 1 Right click on your desktop and select **NVIDIA Control Panel**.

Figure 8-16 NVIDIA control panel



Step 2 On the NVIDIA Control Panel interface, go to **Workstation > View system topology**.

Figure 8-17 NVIDIA control panel



Step 3 Click **EDID (Monitor)** next to a desired output connector of the current graphics card to show the EDID management window.

Figure 8-18 EDID (Monitor)

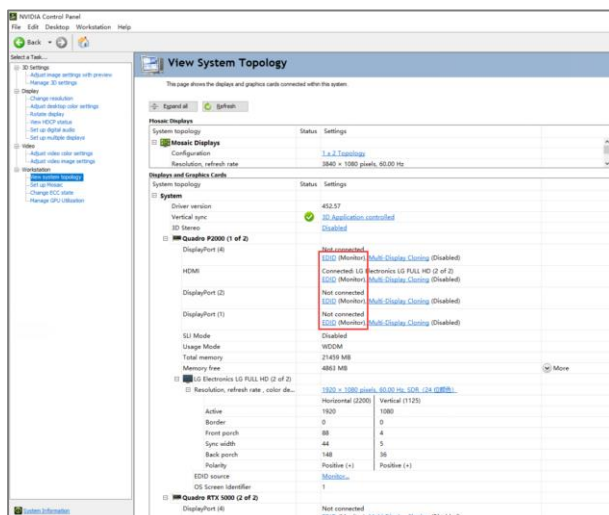
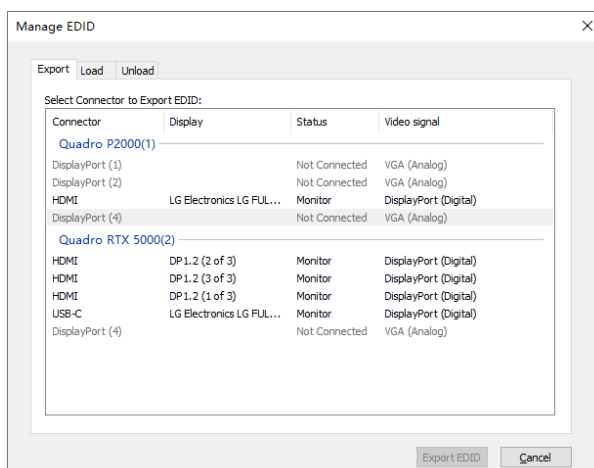
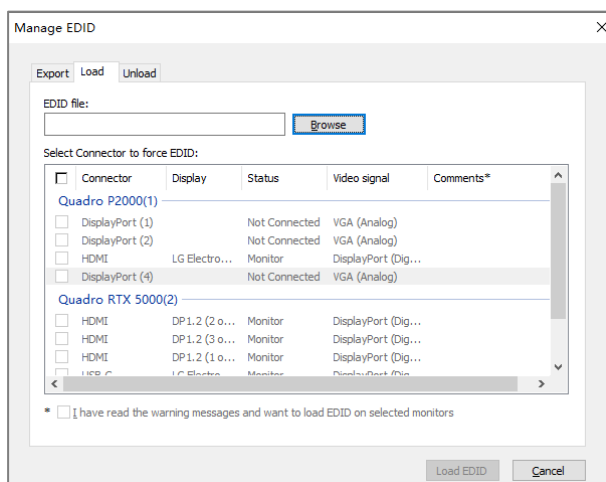


Figure 8-19 Manage EDID



- Step 4 Click **Export EDID** and then name the exported EDID file in the window that appears.
- Step 5 Select the **Load** tab to show the EDID loading window.
- Step 6 Click **Browse** and then select the EDID file exported in [Step 4](#).
- Step 7 In the **Select Connector to force EDID** area, select the desired connector.

Figure 8-20 Load EDID



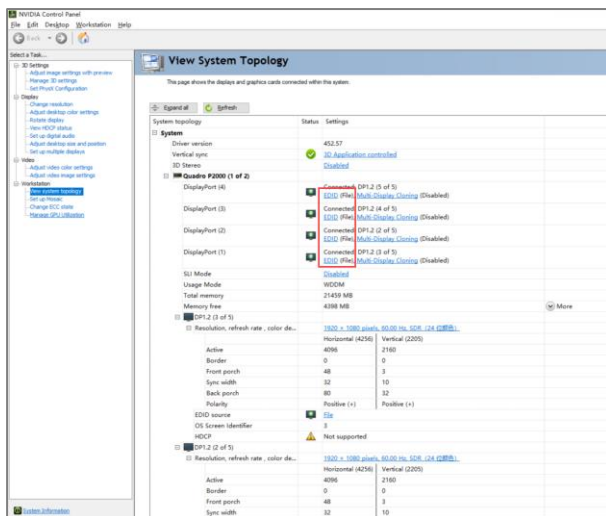
- Step 8 Click Load EDID.
- Step 9 On the dialog box that appears, click **OK** to complete loading the EDID.

Figure 8-21 EDID loaded successfully



- Step 10 Go back to **Workstation > View system topology** to check the EDID status. If the original **EDID (Monitor)** changes to **EDID (File)**, the EDID is loaded successfully.

Figure 8-22 EDID loaded successfully

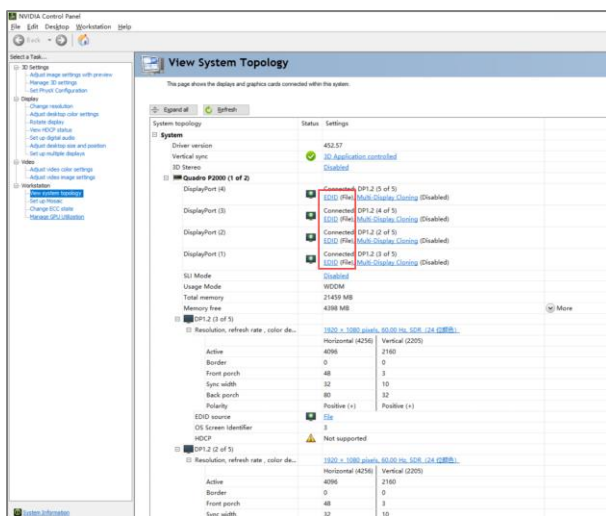


Unload EDID

The procedure of how to unload the EDID is as follows.

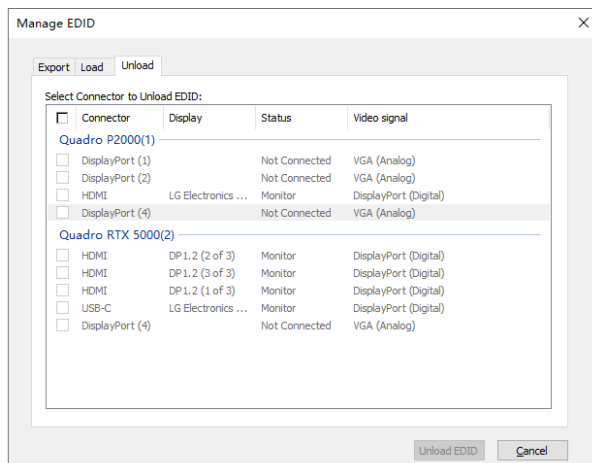
- Step 1 On the NVIDIA Control Panel interface, go to **Workstation > View system topology**.
- Step 2 Click **EDID (File)** to show the EDID management window.

Figure 8-23 EDID (File)



- Step 3 Select the **Unload** tab and then select the desired connectors.

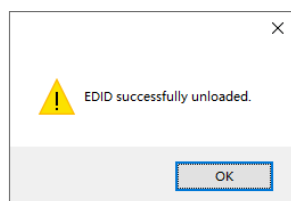
Figure 8-24 Unload EDID



Step 4 Click Unload EDID.

Step 5 After the EDID is unloaded successfully, click **OK** on the dialog box that appears.

Figure 8-25 EDID unloaded successfully



Step 6 Go back to **Workstation > View system topology** to check the EDID status. If the **EDID (File)** changes to **EDID (Monitor)**, the EDID is unloaded successfully.

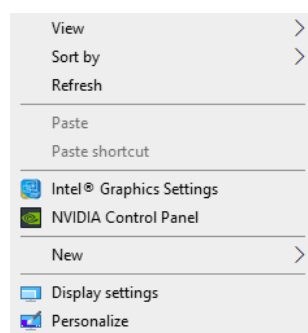
8.4 Output Mosaic

The graphics card supports connector mosaic output. The output connector mosaic must observe the following rules.

- The graphics card does not support irregular mosaic layouts. The mosaic layout must be 1×2, 1×3, 1×4, 2×2, 2×1, 3×1 or 4×1.
- The output resolutions of the graphics card connectors that are used for mosaic must be the same.

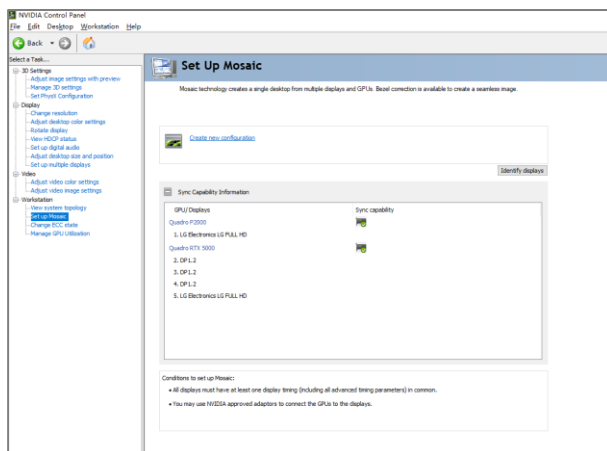
Step 1 Right click on your desktop and select **NVIDIA Control Panel**.

Figure 8-26 NVIDIA control panel



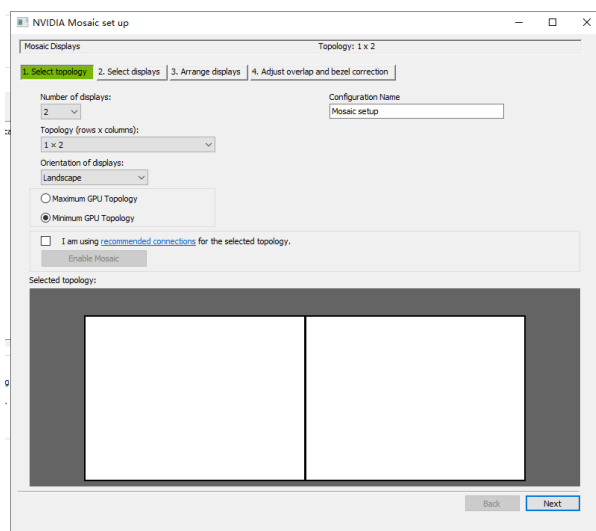
Step 2 On the NVIDIA Control Panel interface, go to Workstation > Set up Mosaic.

Figure 8-27 Set up mosaic



Step 3 Click **Create new configuration** to show the mosaic settings window.

Figure 8-28 Mosaic settings



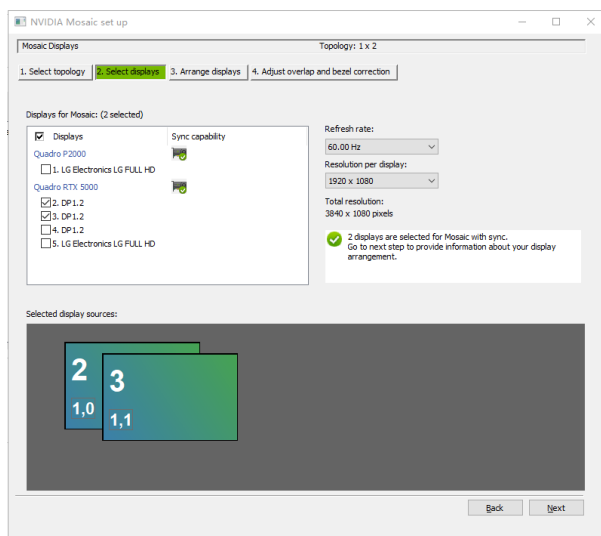
Step 4 Select the screen number from the drop-down list of **Number of displays**.

Step 5 Select the screen mosaic layout from the drop-down list of **Topology (rows x columns)**.

Step 6 Select the screen orientation from the drop-down list of **Orientation of displays**.

Step 7 Click **Next** to proceed.

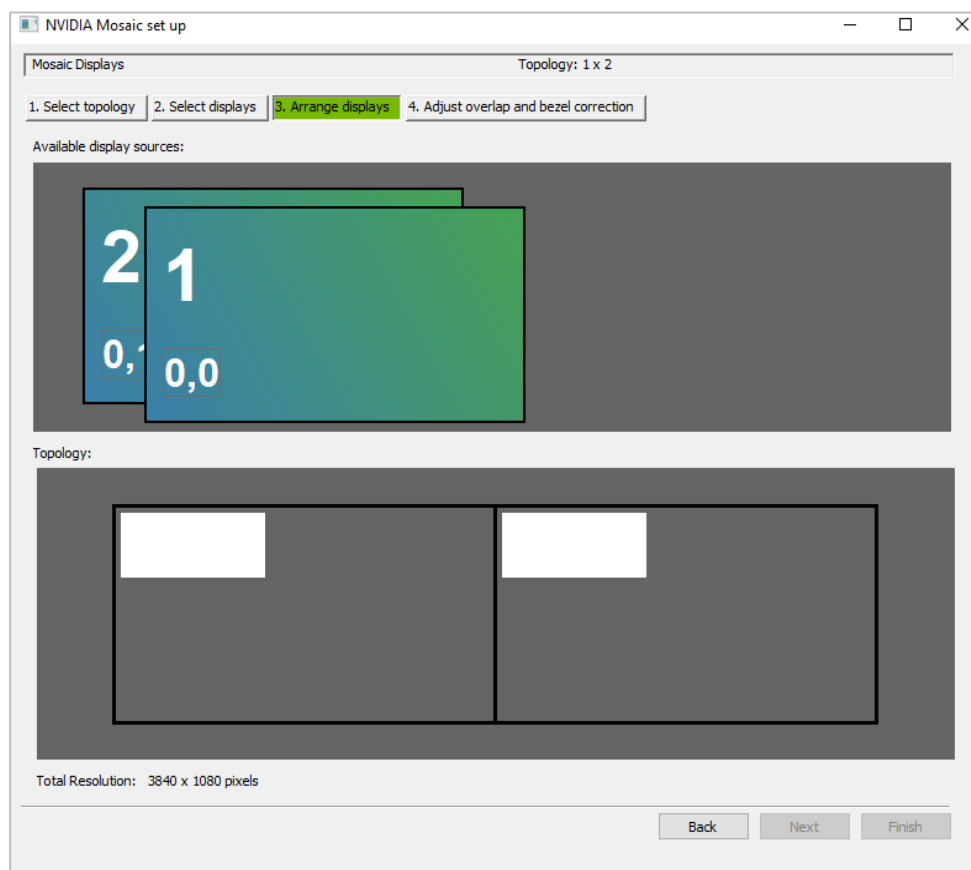
Figure 8-29 Select displays



Step 8 Select the connected displays and then select their refresh rate and resolution.

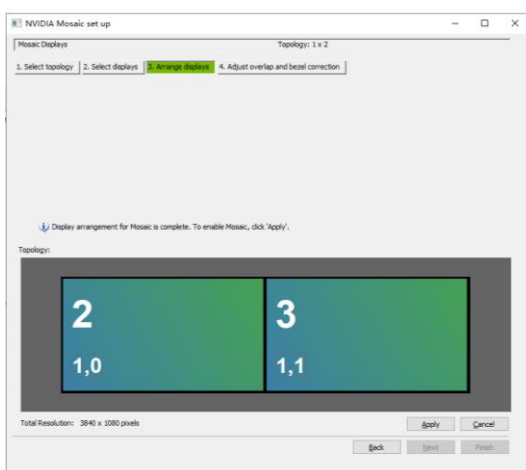
Step 9 Click **Next** to proceed.

Figure 8-30 Arrange displays



Step 10 Arrange the displays according to the screen arrangement and structure by dragging the available displays to the corresponding topology areas.

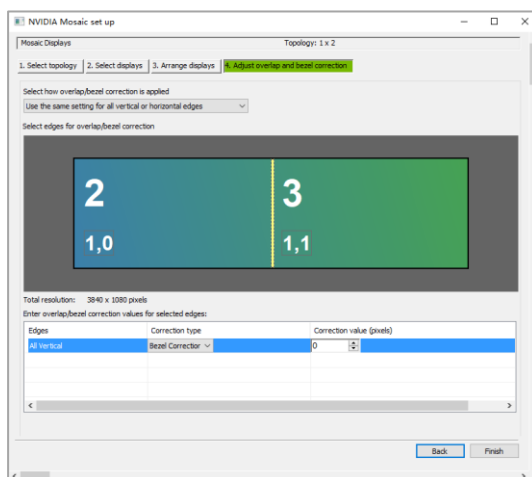
Figure 8-31 Arrange displays



Step 11 Click **Apply** and then click **Yes** on the confirmation window.

Step 12 Click **Next** to proceed.

Figure 8-32 Adjust overlap and bezel correction

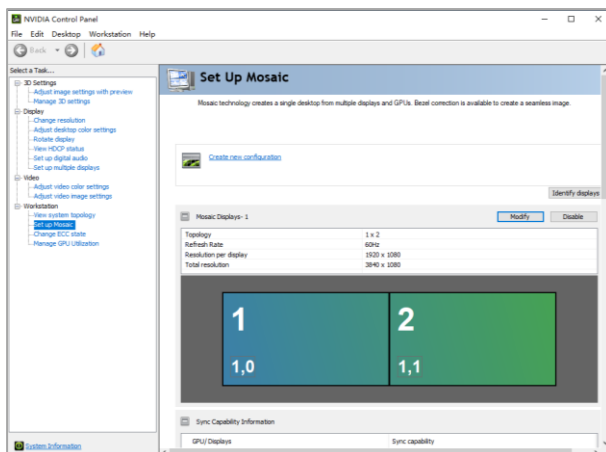


You can perform overlapping adjustment or bezel correction to the vertical or horizontal edges of the display as needed.

1. Select whether to use the same settings for all the vertical or horizontal edges of the display in the **Select how overlap/bezel correction is applied** area.
2. Select the desired edges and then enter the overlap or bezel correction values for the selected edges. Click **Apply** after the settings are done.

Step 13 Click **Finish** to complete the mosaic settings.

Figure 8-33 Mosaic completed



9 External Control

About This Chapter

This chapter guides you how to control and use Pilot MS3 on an event controller or other third-party devices.

Overview

- Control via Event Controller
- Control via Stream Deck

9.1 Control via Event Controller

If you are using Pilot MS3 (X400 media server) for your event, you can easily control it on the U3 and U5 series (U5 and U5 Pro) event controllers from PIXELHUE. This can be achieved through the joint control method and the KVM control method, providing convenient on-site device control.

In the joint control scenario, the Pilot MS3 programs can be read and displayed on the event controller. You can then bind these programs to the event controller's preset buttons, allowing you to effortlessly switch and play them.

In the KVM control scenario, the Pilot MS3 user interface can be displayed on the event controller, enabling you to perform all Pilot MS3 operations using the event controller's mouse and keyboard, especially switching and playing programs.

Furthermore, the above two control methods can be seamlessly combined, offering enhanced flexibility in managing the Pilot MS3 for your event.

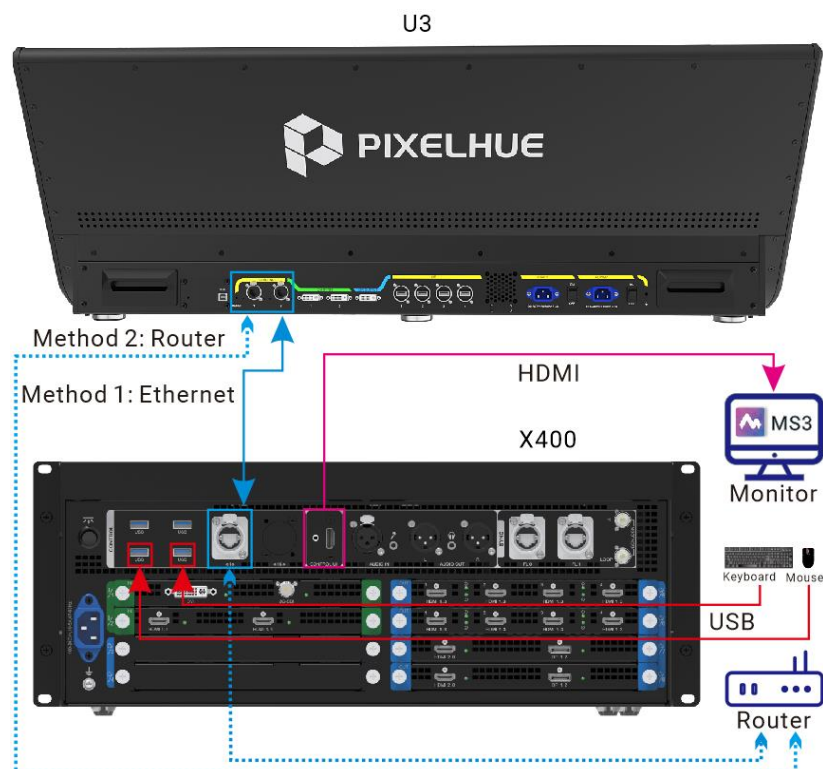
9.1.1 Joint Control

U3 Event Controller

Step 1 Complete the physical connections.

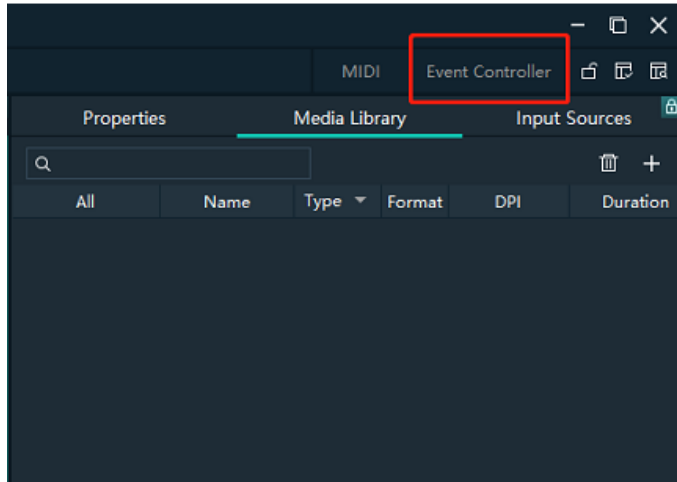
1. Connect the U3 and X400 to the same local area network by either directly connecting them with an Ethernet cable or connecting them through a router.
2. Connect the X400's CONTROL UI connector to a monitor using an HDMI cable.
3. Connect the X400's Type-A ports to a keyboard and a mouse using USB cables.

Figure 9-1 Physical connections between the U3 and X400



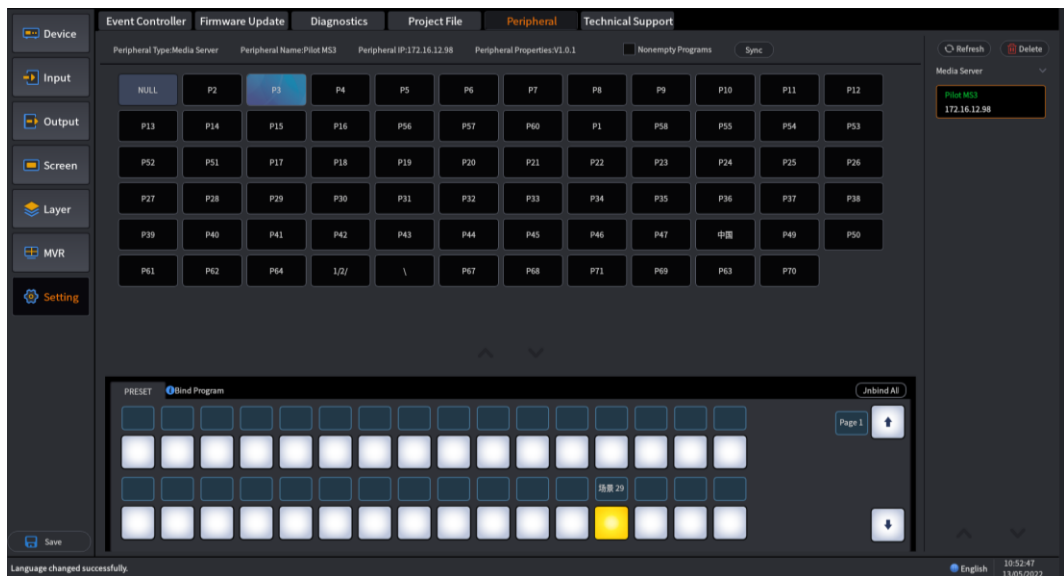
Step 2 In Pilot MS3 on the monitor, click **Event Controller** in the upper right corner, as shown in [Figure 9-2](#), to enable the X400 to be discovered by the U3 and displayed in the device list on the right side of the U3 primary screen, as shown in [Figure 9-3](#).

Figure 9-2 Enabling the X400 to be discovered by the U3



Step 3 Go to **Settings > Peripheral** on the event controller to enter the peripheral management page.

Figure 9-3 Peripheral management



Step 4 From the device list of the U3 primary screen, select your online media server.

- Green: The media server is online.
- Gray: The media server is offline.

Operations:

- Refresh: All the peripheral devices are automatically identified and listed here. You can also tap **Refresh** to manually refresh the device list.
- Delete: Select the target device and tap **Delete**.

Step 5 On the U3 primary screen, select a program and drag it to the target preset button to bind the program to the desired preset button.

Binding rules are as follows:

- One program can be bound to different buttons.
- One button can be bound to only one program of a device.
- One button can be bound to programs from different devices.

Operations:

- Sync: After a different device is selected or a program changes, the program list will be synchronized automatically to the event controller. You can also tap **Sync** to manually synchronize the programs.
- Nonempty Programs: Select this option to view the programs that have the content.

Preset button status LEDs:

- Yellow: Only the switcher preset is bound to the button.
- Blue: Only the media server program is bound to the button.
- Purple: Both program and preset are bound to the button.
- Green: The preset is selected.
- Off: The preset is not used.

Step 6 Perform other necessary operations as required.

- Unbind a single button: Tap and drag **NULL** at the top to the target button.
- Unbind all buttons: Tap **Unbind All**.

Step 7 Press the preset button on the front panel to switch the program.

Step 8 Press the **CUT** or **TAKE** button, or push the T-bar to play the programs.

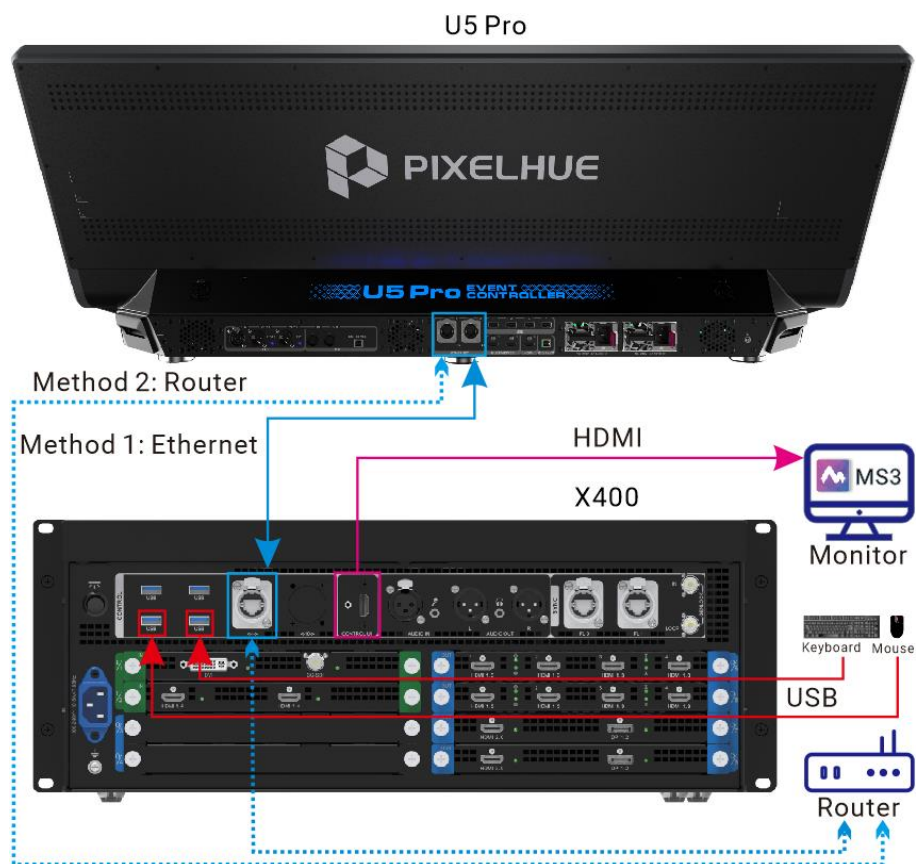
U5 and U5 Pro Event Controllers

The control operations and settings on the U5 and U5 Pro are basically the same. Here we take the U5 Pro to illustrate.

Step 1 Complete the physical connections.

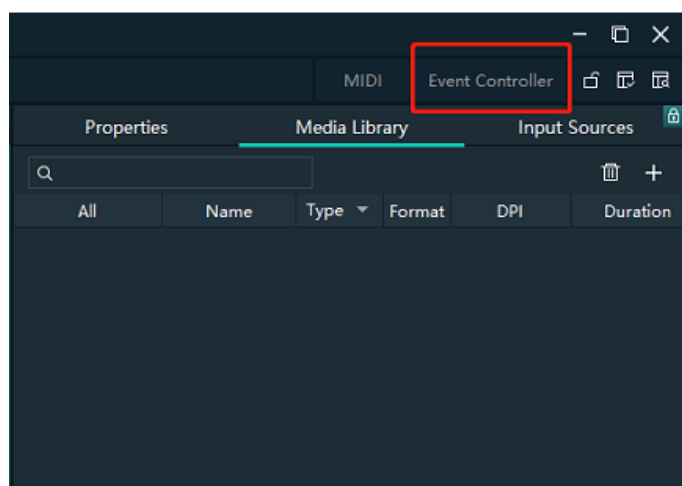
1. Connect the U5 Pro and X400 to the same local area network by either directly connecting them with an Ethernet cable or connecting them through a router.
2. Connect the X400's CONTROL UI connector to a monitor using an HDMI cable.
3. Connect the X400's Type-A ports to a keyboard and a mouse using USB cables.

Figure 9-4 Physical connections between the U5 Pro and X400



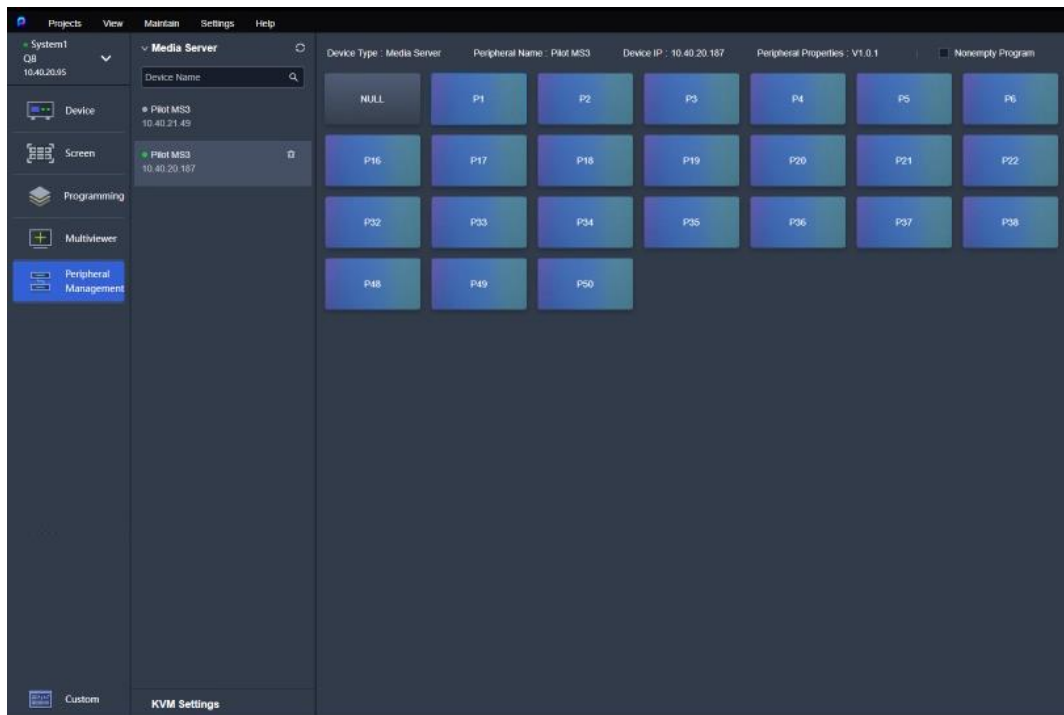
Step 2 In Pilot MS3 on the monitor, click **Event Controller** in the upper right corner, as shown in Figure 9-5, to enable the X400 to be discovered by the U5 Pro and displayed in the device list of the U5 Pro screen, as shown in Figure 9-6.

Figure 9-5 Enabling the X400 to be discovered by the U5 Pro



Step 3 On the U5 Pro, select the target switcher, double tap it to enter the device operation page, and then tap **Peripheral Management**.

Figure 9-6 Peripheral management



Step 4 From the device list of the U5 Pro screen, select your online media server.

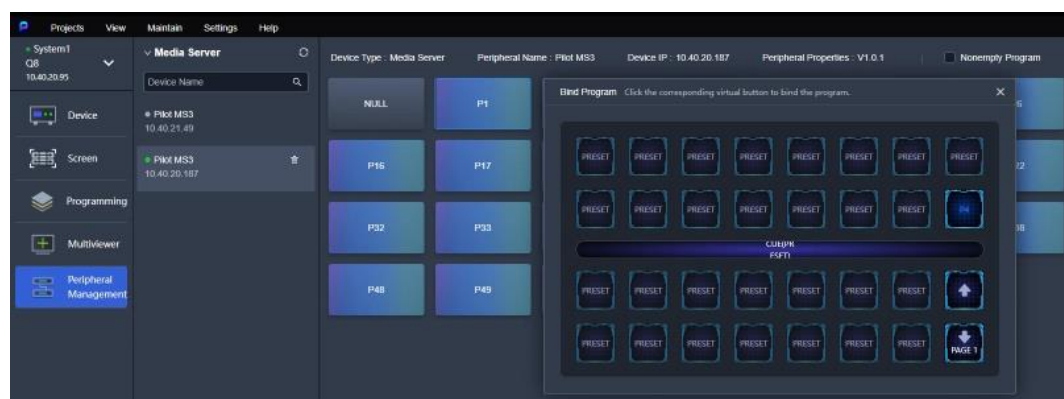
- Green: The media server is online.
- Gray: The media server is offline.

Operations:

- : All the peripheral devices are automatically identified and listed here. You can also tap this icon to manually refresh the device list.
- : Select the target device and tap this icon to delete the selected device.

Step 5 On the U5 Pro screen, tap to select a program and on the displayed virtual preset button page, tap the target preset button to bind the program to the desired preset button.

Figure 9-7 Binding program to preset button



Binding rules are as follows:

- One program can be bound to different buttons.
- One button can be bound to only one program of a device.

Operations:

- Sync: After a different device is selected or a program changes, the program list will be synchronized automatically to the event controller.
- Nonempty Program: Select this option to view the programs that have the content.

Preset button status LEDs:

- Yellow: Only the switcher preset is bound to the button.
- Blue: Only the media server program is bound to the button.
- Purple: Both program and preset are bound to the button.
- Green: The preset is selected.
- Off: The preset is not used.

Step 6 Perform other necessary operations as required.

- Unbind a single button: Tap **NULL** and on the displayed virtual preset button page, tap the target preset button.
- Unbind all buttons: Tap **Unbind**.

Step 7 Press the preset button on the front panel to switch the program.

Step 8 Do the following to play the programs.

- If the connected switcher is in PGM only mode, the selected program will be played directly after you press the preset button.
- If the connected switcher is in switcher mode, press the **CUT** or **TAKE** button, or push the T-bar to play the programs.

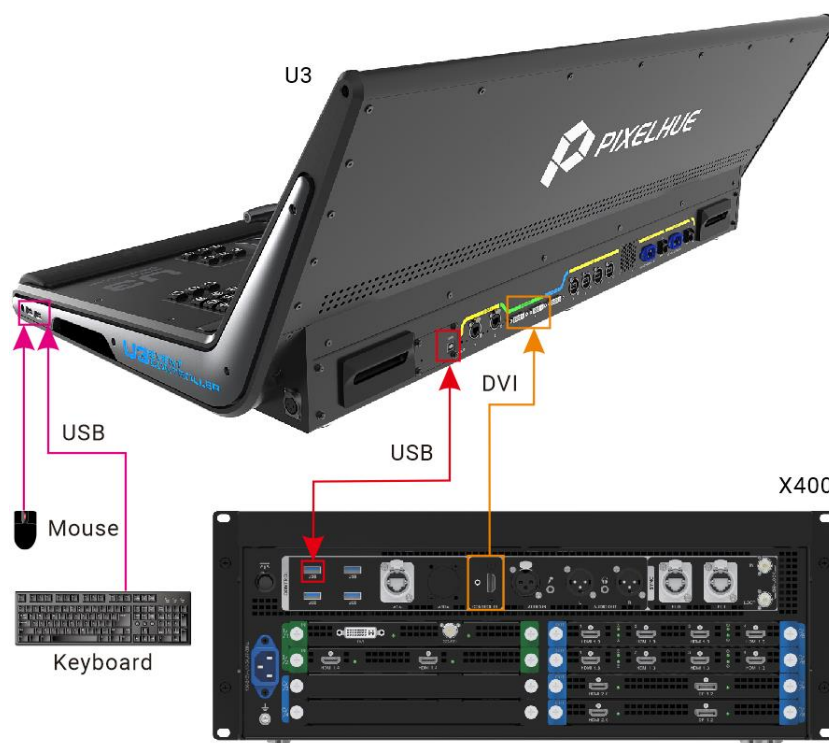
9.1.2 KVM Control

U3 Event Controller

Step 1 Complete the physical connections.

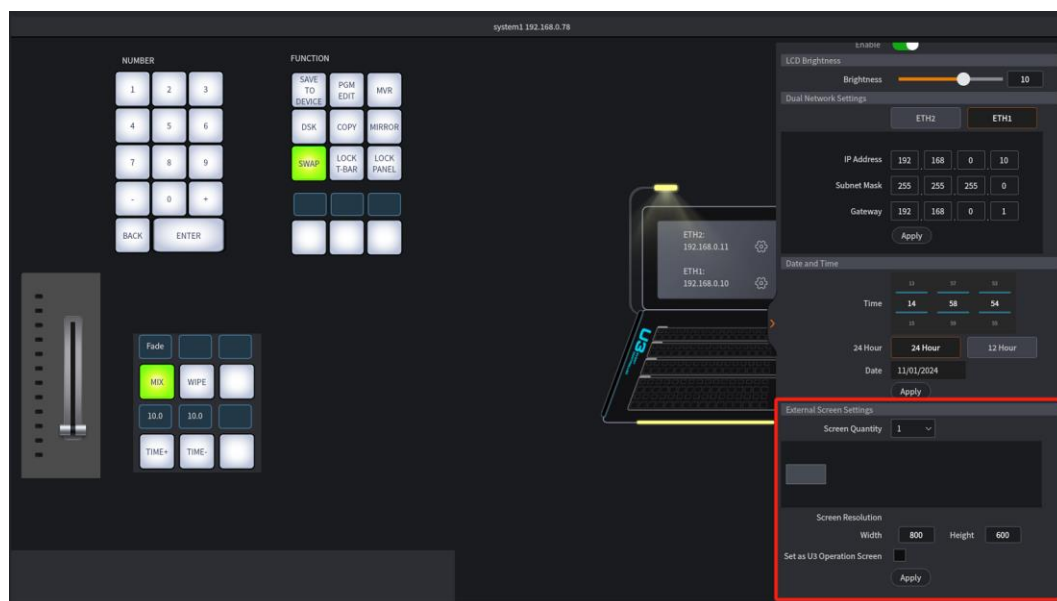
1. Connect the U3's DVI INPUT connector to the X400's CONTROL UI connector using a DVI to HDMI cable.
2. Connect the U3's Type-B port to the X400's Type-A port using a USB cable.
3. Connect a mouse and keyboard to the U3's USB ports on the right side.

Figure 9-8 Physical connections between the U3 and X400



- Step 2 Press the **MVR** button in the **FUNCTION** area on the U3 front panel, and the MVR button indicator turns green, indicating the U3 secondary screen is dedicated to the media server and displays the Pilot MS3 user interface.
- Step 3 On the U3, go to **Settings > Event Controller** to enter the virtual controller page.
- Step 4 On the secondary screen, complete the external screen settings.

Figure 9-9 Secondary screen – external screen settings



- **Screen Quantity:** Set the quantity of the screens loaded by the media server. The screen quantity equals the quantity of available output connectors on the output cards of the media server plus one.

To confirm the screen quantity, click on the Pilot MS3 desktop to open **Display settings** and you will directly see the screen quantity. After the screen quantity is set, the screens will be displayed graphically under **Screen Quantity**.

- Width & Height: Set the resolution of each screen.
- Set as U3 Operation Screen: Set which of the screens is the one that displays the Pilot MS3 user interface.

Step 5 Once you are done, use the mouse and keyboard of the event controller to operate the Pilot MS3 user interface. Any operations in Pilot MS3 can be easily done with the mouse and keyboard, such as program switching and playback.

- When you move the cursor to the secondary screen, all your mouse and keyboard operations apply to Pilot MS3.
- When you move the cursor to the primary screen, all your mouse and keyboard operations apply to the event controller.

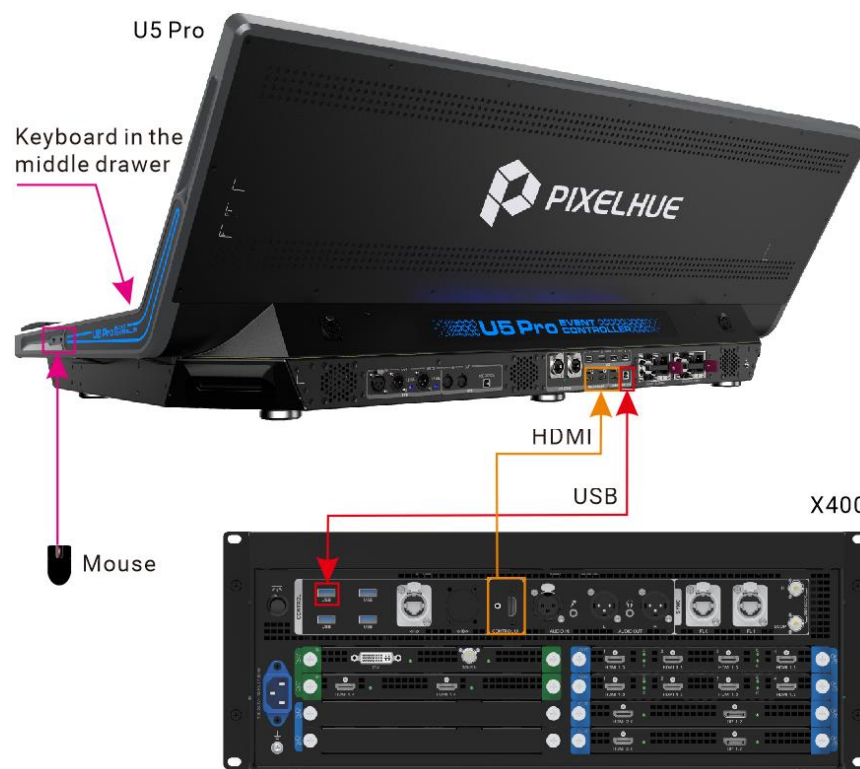
U5 and U5 Pro Event Controllers

The control operations and settings on the U5 and U5 Pro are basically the same. Here we take the U5 Pro to illustrate.

Step 1 Complete the physical connections.

1. Connect the U5 Pro's MVR1, MVR2 or HDMI IN connector to the X400's CONTROL UI connector using an HDMI cable.
2. Connect the U5 Pro's MIDI/KVM port to the X400's USB port using a USB cable.
3. Connect a mouse to the U5 Pro's USB port on the right side. For the U5, you need to connect a mouse and keyboard to the U5's USB ports on the right side because the U5 Pro has a built-in keyboard in the middle drawer on the front panel.

Figure 9-10 Physical connections between the U5 Pro and X400



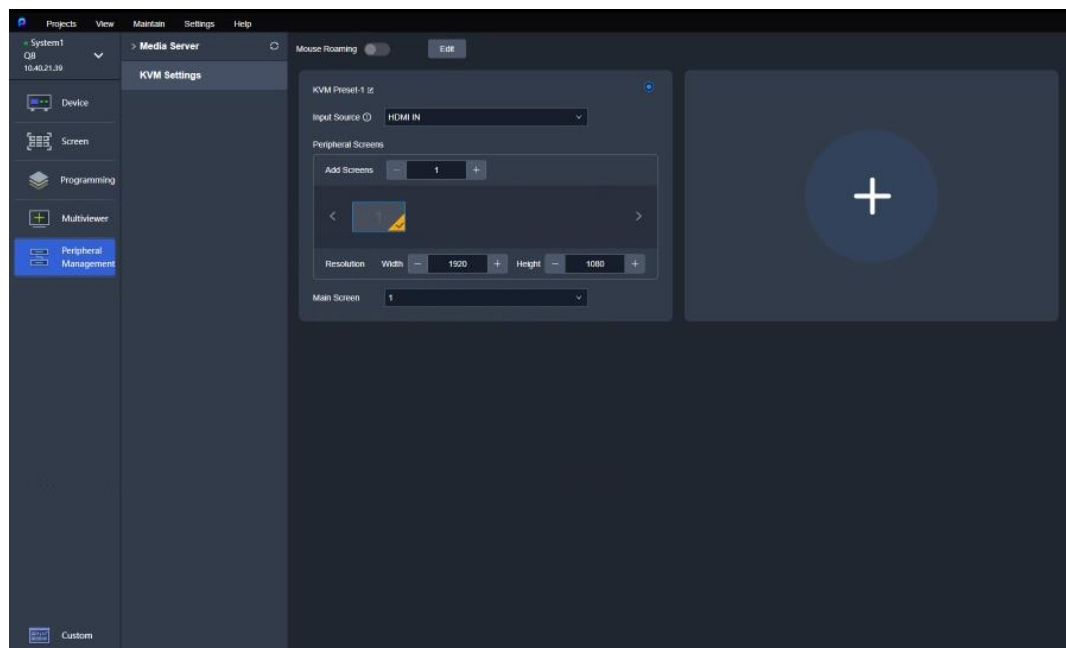
Step 2 Press the MVR button on the U5 Pro front panel, and the MVR button indicator turns green. The ultrawide primary screen is divided into two screens. The secondary screen on the right half is dedicated to the Pilot MS3 user interface.

For the U5, the primary screen will be dedicated to the Pilot MS3 user interface.

Step 3 On the U5 Pro, select the target switcher, double tap it to enter the device operation page, and then tap **KVM Settings**.

Step 4 On the displayed page, complete the KVM settings.


Figure 9-11 KVM settings



- **Mouse Roaming:** Toggle this switch to enable or disable the mouse roaming function. When enabled (🔘), your mouse can roam across the event controller's primary screen and the Pilot MS3 screen. You can also press the **MEDIA** button on the event controller front panel to enable or disable this function.
- **Input Source:** Select the input connector on the event controller that the HDMI cable is connected to: MVR1, MVR2, or HDMI IN. This is to tell the event controller which input connector is used to display the Pilot MS3 user interface. Only when the correct input connector is selected, all your mouse and keyboard operations can successfully apply to Pilot MS3.
- **Add Screens:** Set the quantity of the screens loaded by the media server. The screen quantity equals the quantity of available output connectors on the output cards on the media server plus one.

To confirm the screen quantity, click on the Pilot MS3 desktop to open **Display settings** and you will directly see the screen quantity. After the screen quantity is set, the screens will be displayed graphically under **Add Screens**.

- **Width and Height:** Set the resolution of each screen.
- **Main Screen:** Set which of the added screens is the main screen that displays the Pilot MS3 user interface.
- **+**: You can tap this icon to add a new KVM preset.

- : Each KVM preset area has a radio button in the upper right corner. You can tap this button to select and enable the KVM preset.
- **Edit**: If you want to manage the added KVM presets, tap **Edit** first. Then, you can change the KVM preset name, modify the KVM settings, or delete the KVM presets.

Step 5 Once you are done, use the mouse and keyboard of the event controller to operate the Pilot MS3 user interface. Any operations in Pilot MS3 can be easily done with the mouse and keyboard, such as program switching and playback.

- When you move the cursor to the secondary screen, all your mouse and keyboard operations apply to Pilot MS3.
- When you move the cursor to the primary screen, all your mouse and keyboard operations apply to the event controller.

9.2 Control via Stream Deck

Pilot MS3 supports control through a third-party device (Stream Deck). When controlling through Stream Deck, it is necessary to complete the configuration of Stream Deck device through the Companion software.

9.2.1 Software Obtaining and Preparations

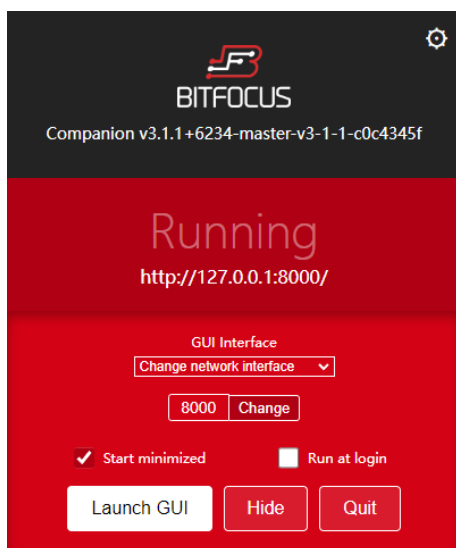
- User registration has been completed in companion official website (<https://bitfocus.io/companion>).
- The supported Companion software version has been obtained from Pilot MS3 technical support.
- The computer with Companion installed is on the same network segment as the device with Pilot MS3.
- The connection between Stream Deck and the device with Pilot MS3 has been completed.

9.2.2 Software Configuration

Step 1 After downloading the Companion installation package, double click the package to install the software.

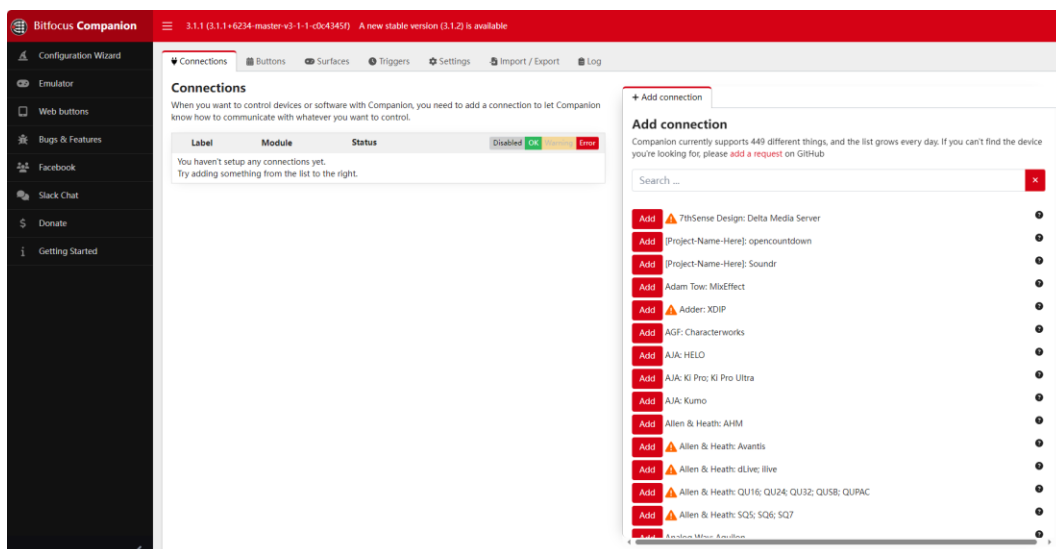
Step 2 After the installation, double click the Companion software shortcut to open the software.

Figure 9-12 Companion software interface



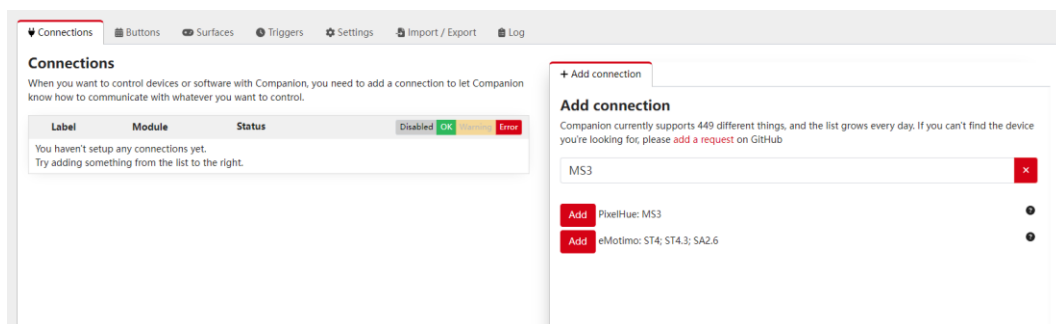
Step 3 Click **Launch GUI** to enter the Companion configuration page.

Figure 9-13 Companion configuration page



Step 4 Enter the desired device or software name in the **Add connection** area search box on the **Connections** interface, and the system will automatically display all relevant product models or software names.

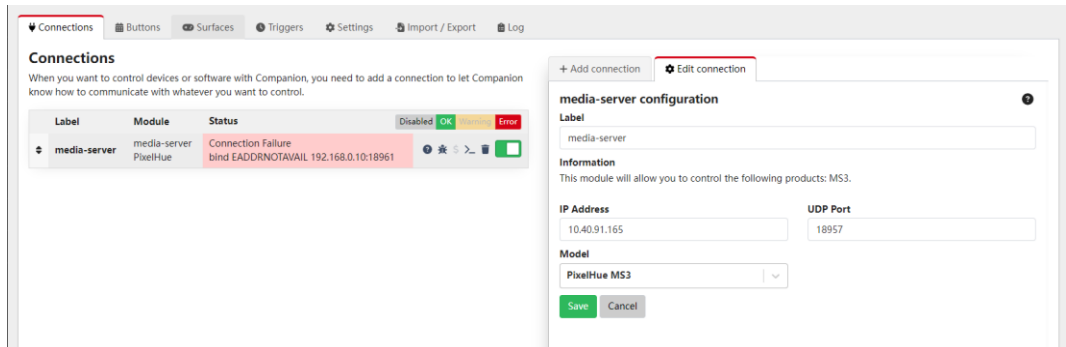
Figure 9-14 Search software



Step 5 Click **Add** before the device model or software name you want to control.

Step 6 After adding the device or software, the system enters the **Edit Connection** configuration interface.

Figure 9-15 Connection configuration



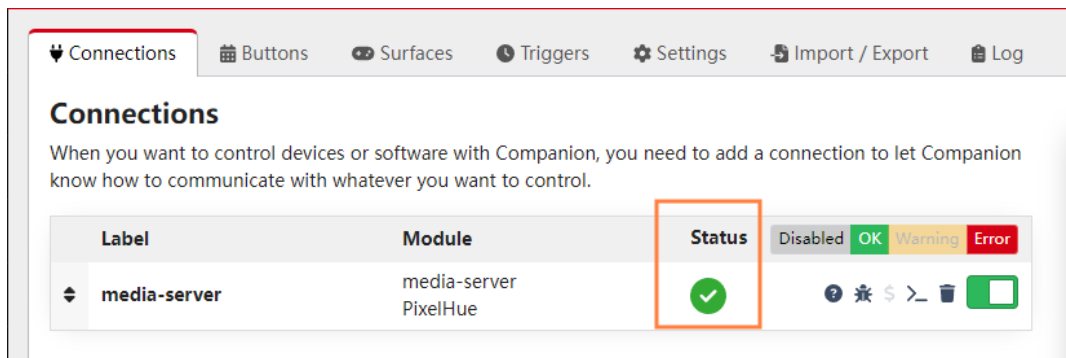
Step 7 Configure the control device or program.

- **Label:** The name of the control device is required. The name can only contain letters, numbers, underscores and dashes.
- **IP Address:** Enter the IP Address of the device to be controlled. If you control the software, you need to enter the IP Address of the device where the software is located.
- **UDP Port:** Companion communicates with the controlled device through UDP. Fill in the UDP port number here, which defaults to 18960. If there is any change, please fill in the changed UDP port number.
- **Model:** Select the controlled device or program. When there are multiple controllable programs on the device with the configured IP address, you need to select the controlled program name here.

Step 8 Click **Save** to complete the connection configuration.

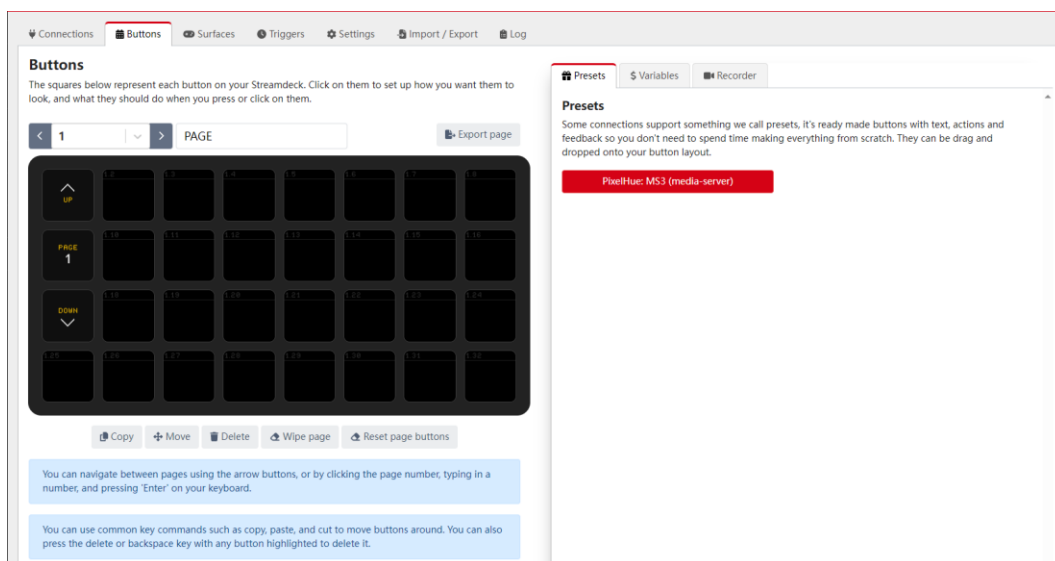
If the configuration is correct, under the **Connections** tab, the status of the connected device is displayed as .

Figure 9-16 Device connection complete



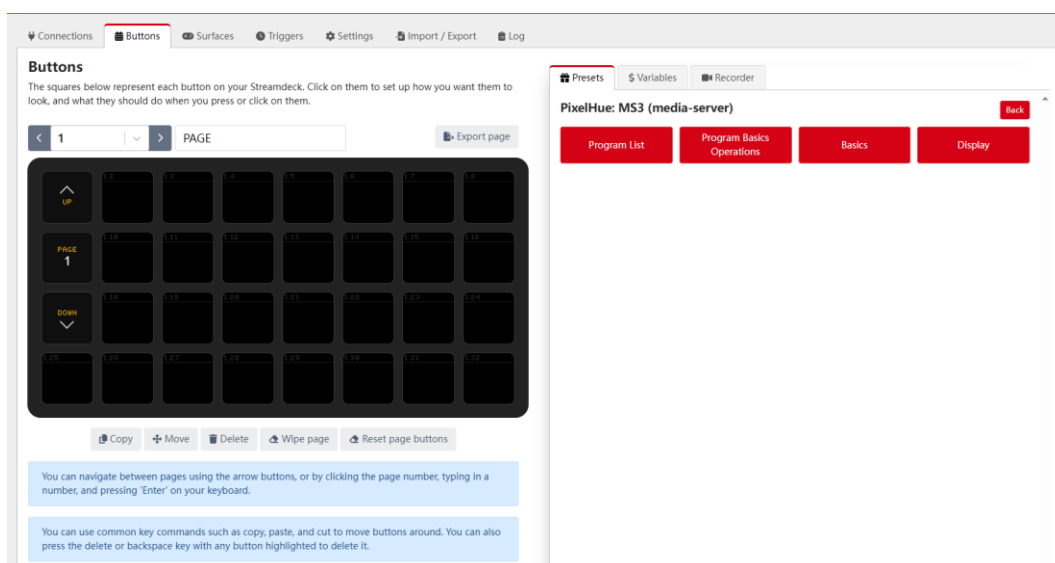
Step 9 Click **Buttons** to enter the Stream Deck button configuration interface.

Figure 9-17 Stream Deck button configuration



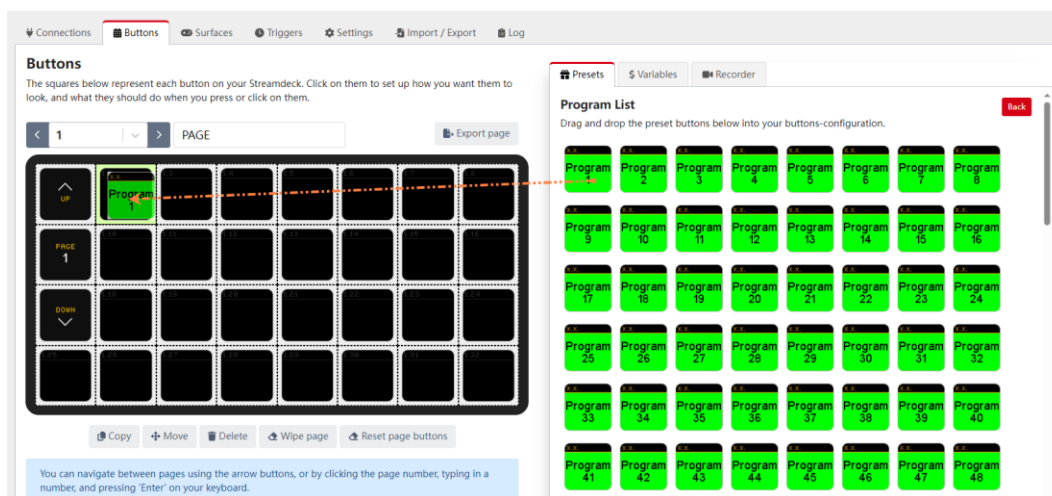
Step 10 In the **Presets** area on the right, click the added control device or program to expand the preset function menu.

Figure 9-18 Preset function menu



Step 11 Expand the preset list on the right side, drag the preset buttons on the right side to the buttons of Stream Deck on the left side, and complete the button binding between the control function and Stream Deck.

Figure 9-19 Function binding

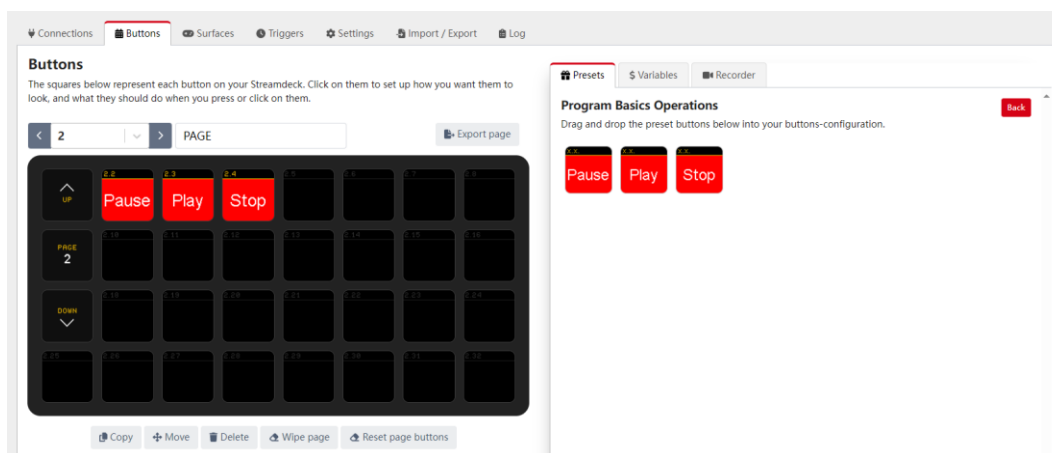


Note

Since Stream Deck does not support page navigation horizontally, when adding functions to the buttons on the Stream Deck, make sure the number of buttons horizontally matches the physical device.

Step 12 Click **Back** to select different function menu and complete more function bindings.

Figure 9-20 More function binding



Step 13 After the configuration is completed, the function name will be displayed on the button of Stream Deck. Press the corresponding button, and check whether the function bound to the button is triggered in the control program.

- Yes => Stream Deck is successfully configured.
- No => Contact your technical support to find out the reason and reconfigure.

Other operations

- Replace button function
Directly drag a new function from the right side list to the target button to replace the existing function.
- Delete button function

Click **Delete** at the bottom to activate button function deletion. Click the function on the button that needs to be deleted to delete the corresponding function.

- Clear button functions

Select the button page that needs to be cleared, click **Wipe page** at the bottom to clear all the added buttons functions on that page.



Note

For more information, please refer to the Companion user manual.
