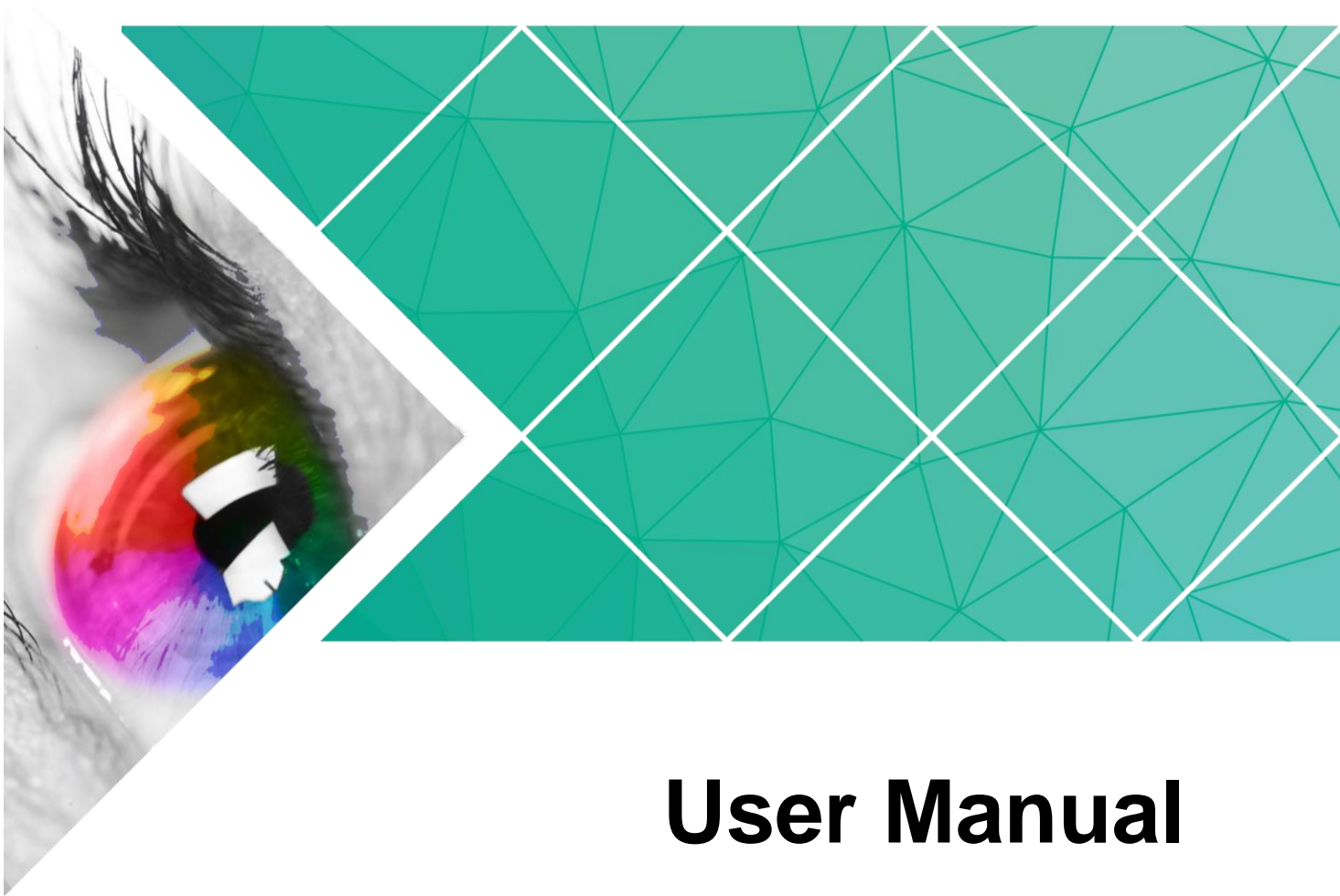


V-Can

Video Control Software



User Manual

Document Version: V3.5.0

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1 Overview

V-Can is a smart control platform for video processors (such as J6, N9) and all-in-one controllers (such as VX5s, VX6s), allowing users to easily control and manage video processing devices and all-in-one controllers on Windows PC and Mac. When connected with different devices, V-Can offers different user interfaces and functions.

Features:

- User-friendly UI
- Visualized operation, easy to use and operate
- Applicable systems: Windows and Mac
- Capable of connecting multiple video processors and all-in-one controllers

2 Installation

2.1 Obtaining

Log into NovaStar official website <http://www.novastar.tech> to download the appropriate software according to your device and PC system version.

2.2 Installation

Requirements of Software Operating Environment

- Processor: CPU: 32/64 bits, 1 GHz or greater
- RAM: 2 GB or greater
- GPU: DirectX 9 128M and above
- HD space: 16 GB or greater
- Monitor: Resolution greater than or equal to 1280×720 pixels
- OS: Windows 7 or later, MAC OS 10.10 or later
- It is not recommended you connect a Mac system to the device through Ethernet port directly.

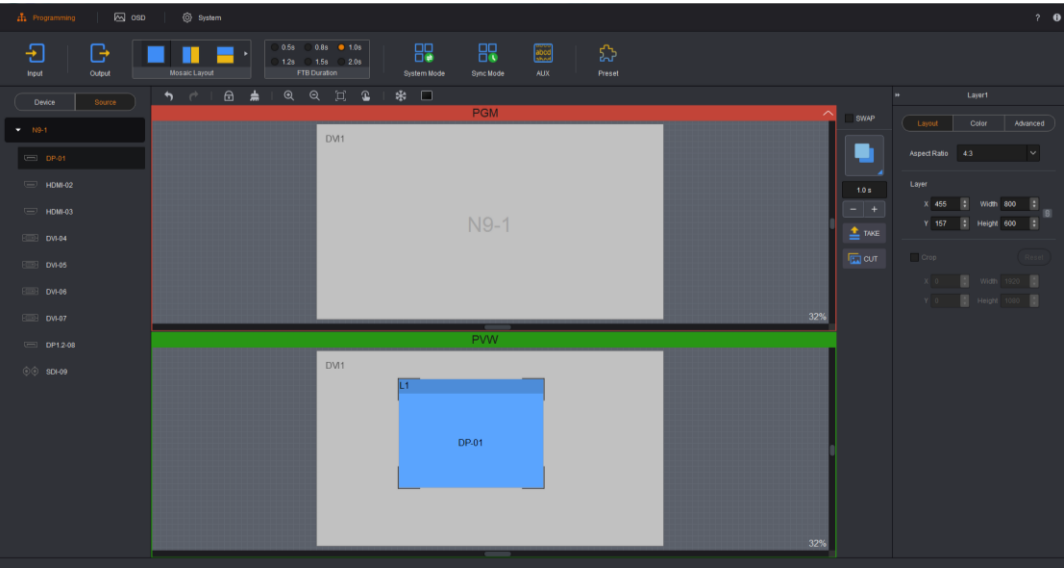
Software Installation

Just like the installation of other common software, follow the setup wizard to install V-Can.

2.3 Running

After successful installation, double click  on the desktop to run V-Can. The main user interface for V-Can is shown in [Figure 2-1](#).

Figure 2-1 UI for V-Can



2.4 User Interface

The user interface for V-Can can be divided into 8 sections, as shown in [Figure 2-2](#). Each section is described in [Table 2-1](#). When connected with different devices, V-Can offers different user interfaces. This document takes the N9 to illustrate.

Figure 2-2 UI sections for V-Can

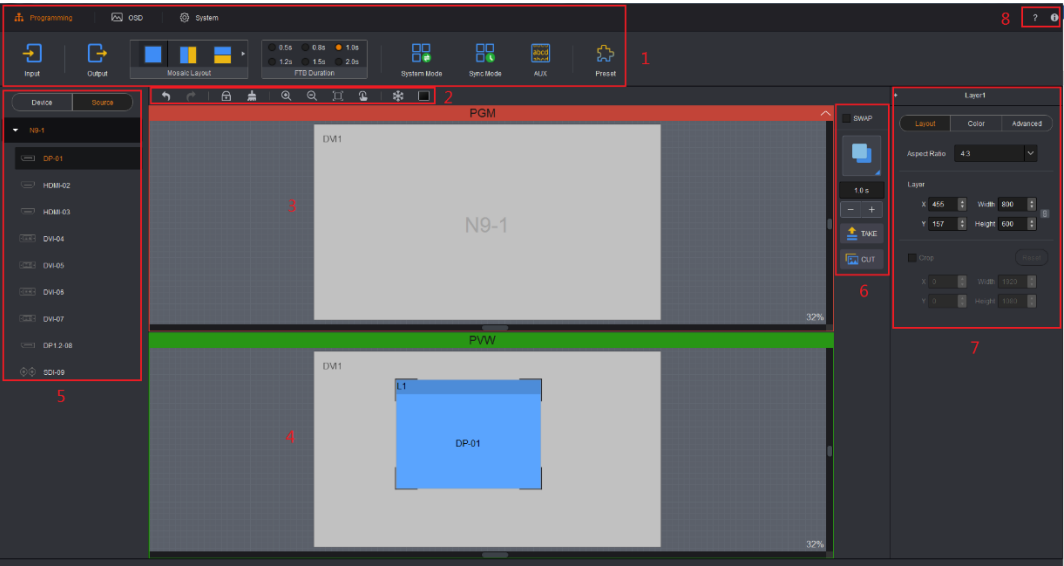


Table 2-1 Section descriptions

No.	Name	Description
1	Menu bar	Display three major function modules of V-Can, including System , Settings and OSD , and basic functions under each function module.

No.	Name	Description
2	Shortcut buttons	<p>Quick operation buttons for video editing:</p> <ul style="list-style-type: none"> • Undo: Cancel the result of a previous action. • Redo: Restore the result of a previous action that was canceled. • Lock the existing layers/Unlocks all the layers. • Clear all the layers in video editing area. • Zoom in/Zoom out/Auto fits the video editing area. • Restore all the layers to default size, that is, half width of input resolution*half height of input resolution, and arrange the layers in Z-order. The 1st layer starts from the top left corner (starting point), and every subsequent layer gets a 50-pixel offset both horizontally and vertically from its previous layer. • Freeze/Unfreeze the PGM. • Make/Unmake the PGM blackout.
3	PGM	<p>PGM display area</p> <p>Note:</p> <p>When the video splicers or all-in-one devices are connected, there will be no PGM and PVW.</p>
4	PVW	<ul style="list-style-type: none"> • Display screen mosaic layout. • Add, edit or delete a layer. • Set the position and size of OSD, BKG and LOGO.
5	Device/Signal source	<ul style="list-style-type: none"> • Device: Display the connected devices, and allow you to delete the current device. • Source: Display the accessed signal sources and input connector types, and allow you to rename the signal sources.
6	Switching	<ul style="list-style-type: none"> • SWAP: <ul style="list-style-type: none"> When SWAP is selected, click TAKE, CUT or drag the T-bar to swap the contents displayed on PVW and PGM. When SWAP is not selected, click TAKE, CUT or drag the T-bar to copy the contents displayed on PVW to PGM. • TAKE: Send the layers in PVW to PGM with transition effects. • CUT: Send the layers in PVW to PGM directly with no transition effects.
7	Properties	<ul style="list-style-type: none"> • Layout: Set the aspect ratio, size, position, mask and cropping of the layer. • Color: Set the layer image quality. • Advanced: Set the layer border, keying and cloning.
8	Help and About	<ul style="list-style-type: none"> • Help: Provide V-Can User Manual. • About: Display the version, copyright and other

No.	Name	Description
		information of V-Can.

3 Functions

When connected with different devices, V-Can offers different user interfaces and functions. For detailed descriptions, please refer to [Table 3-1](#).

Table 3-1 V-Can functions and the supported devices

V-Can Function	Supported Devices
Image mosaic	VX5s, VX6s, NovaPro UHD Jr
Firmware update	J6-V1.x.x.x, N9, VX5s, VX6s, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr, VE7
Self-test	J6-V1.x.x.x, N9, VX5s, VX6s, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr
Factory reset	J6-V1.x.x.x, N9, VX5s, VX6s, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr
Network settings	J6-V1.x.x.x, N9, VX5s, VX6s, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr
Language	J6-V1.x.x.x, N9, VX5s, VX6s, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr
System mode	J6-V1.x.x.x, J6-V2.x.x.x, N9, VX5s, VX6s
Sync mode	J6-V1.x.x.x, N9, VX5s, VX6s, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr
Input resolution	J6-V1.x.x.x, N9, VX5s, VX6s, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr
Input color	J6-V1.x.x.x, N9, VX5s, VX6s, J6-V2.x.x.x, VS7-V2.x.x.x
Output resolution	J6-V1.x.x.x, N9, J6-V2.x.x.x, VS7-V2.x.x.x
Output color	J6-V1.x.x.x, N9, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr
Connector mosaic	J6-V1.x.x.x, N9, J6-V2.x.x.x, VS7-V2.x.x.x
Image mosaic	NovaPro UHD Jr
Transition effect	J6-V1.x.x.x, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr

V-Can Function	Supported Devices
Take effect	J6-V1.x.x.x, N9, VX5s, VX6s, J6-V2.x.x.x
AUX	N9
HDR	NovaPro UHD Jr
Layer layout	J6-V1.x.x.x, N9, VX5s, VX6s, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr
Layer color	J6-V1.x.x.x, N9, VX5s, VX6s, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr
Layer border	J6-V1.x.x.x, N9, J6-V2.x.x.x, VS7-V2.x.x.x
Layer copy	J6-V1.x.x.x
Preset	N9
Preset renaming	J6-V1.x.x.x, N9, VX5s, VX6s, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr
Preset copying	J6-V1.x.x.x, VX5s, VX6s, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr
Preset playing	NovaPro UHD Jr
OSD	J6-V1.x.x.x
BKG	J6-V1.x.x.x
Screen freeze and blackout	N9, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr
One-click restore	J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr
Keying	N9, VX5s, VX6s, J6-V2.x.x.x, VS7-V2.x.x.x, NovaPro UHD Jr

3.1 Programming

V-Can allows you to set the input, output, mosaic, transition, preset, system mode, sync mode, AUX, HDR and output mapping.

3.1.1 Input Settings

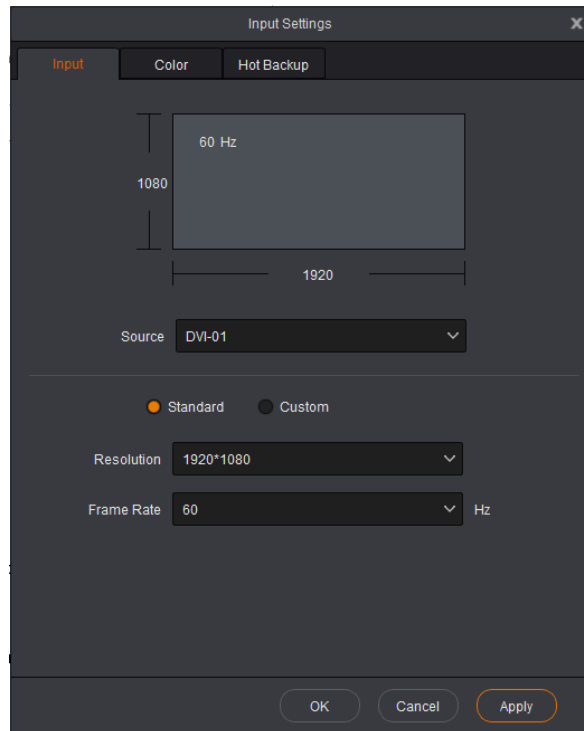
3.1.1.1 Input

V-Can allows you to set the resolution and frame rate of the input source. Only DVI, HDMI and DP connectors support input resolution and frame rate settings.

Operating Procedure

- Step 1 Go to **Programming > Input > Input**. The input settings window appears, as shown in [Figure 3-1](#).

Figure 3-1 Input resolution



Step 2 Click the drop-down arrow next to **Source**. In the drop-down box that appears, select different input sources.

- When **Standard** is selected, select a standard resolution and frame rate from the drop-down list directly.
- When **Custom** is selected, drag the slider or enter a number to set the width or height.

Step 3 Click **Apply** or **OK** to complete the settings.

Input Mosaic

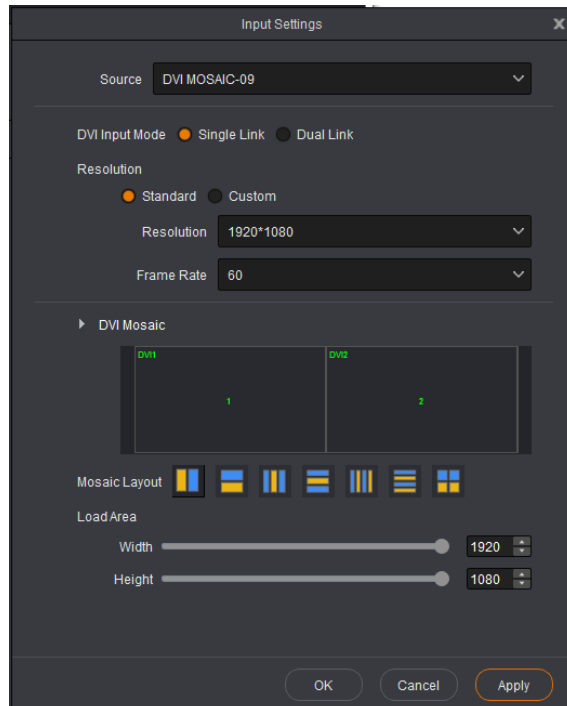
The NovaPro UHD Jr supports the DVI mosaic function. A maximum of four 4 DVI inputs can be used to form one input source.

The procedure is described as below.

Step 1 Go to **Programming > Input** to enter the input settings page.

Step 2 Click the drop-down arrow next to **Source** and select **DVI MOSAIC** from the drop-down box that appears as shown in [Figure 3-2](#).

Figure 3-2 Input settings



Step 3 Set **DVI Input Mode**.

DVI input mode includes single link mode and dual link mode. The former supports DVI mosaic of at most 4 DVI connectors and the latter supports DVI mosaic of at most 2 DVI connectors.

Step 4 (Optional) Set the DVI input resolution.

Step 5 Select a layout from **Mosaic Layout**.

Step 6 (Optional) Set the **Width** and **Height** of each input source after cropping in **Load Area**.

Note:

The starting point of input source cropping is the top left corner.

3.1.1.2 Color

V-Can allows you to set the brightness, contrast, hue, saturation and Gamma of the input source accessed to each device.

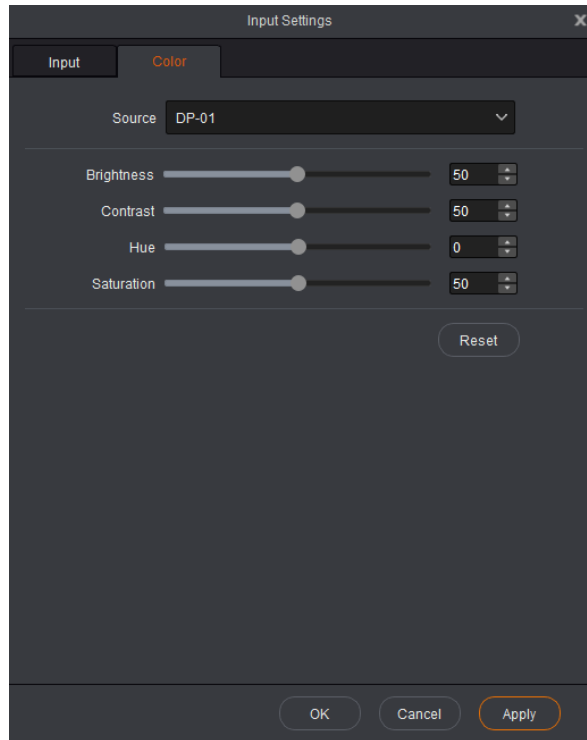
Note:

When the connected device is the NovaPro UHD Jr, input color settings are not supported.

Operating Procedure

- Step 1 Go to **Programming > Input > Color**. The input color settings window appears, as shown in [Figure 3-3](#).

Figure 3-3 Input color



Step 2 Click the drop-down arrow next to **Source**. In the drop-down box that appears, select different input sources.

Step 3 Drag the slider or enter a number to set each parameter.

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

Click **Reset** to reset all the parameters to their default values.

3.1.1.3 Hot Backup

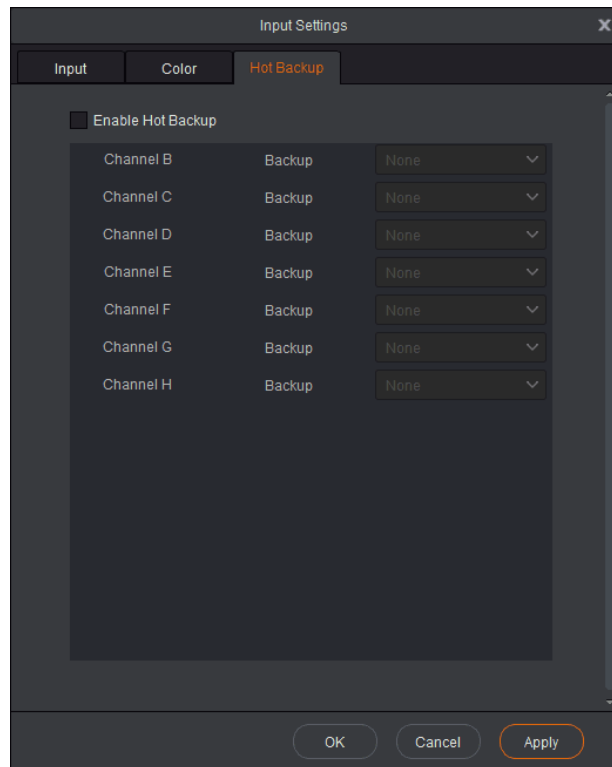
V-Can allows you set input backup channels in case of input connector failures. When fault occurs on input connector, the backup channel can be a timely alternative to avoid black screen and other display abnormalities.

When the connected device is the N6 or J6, this function is not supported.

Operating Procedure

Step 1 Go to **Programming > Input > Hot Backup**. The hot backup settings window appears, as shown in [Figure 3-4](#).

Figure 3-4 Hot backup



Step 2 Select **Enable Hot Backup**.

Step 3 Click the drop-down arrows to select the backup channels.

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

3.1.2 Output Settings

When the connected device is all-in-one controller, this function is not supported.

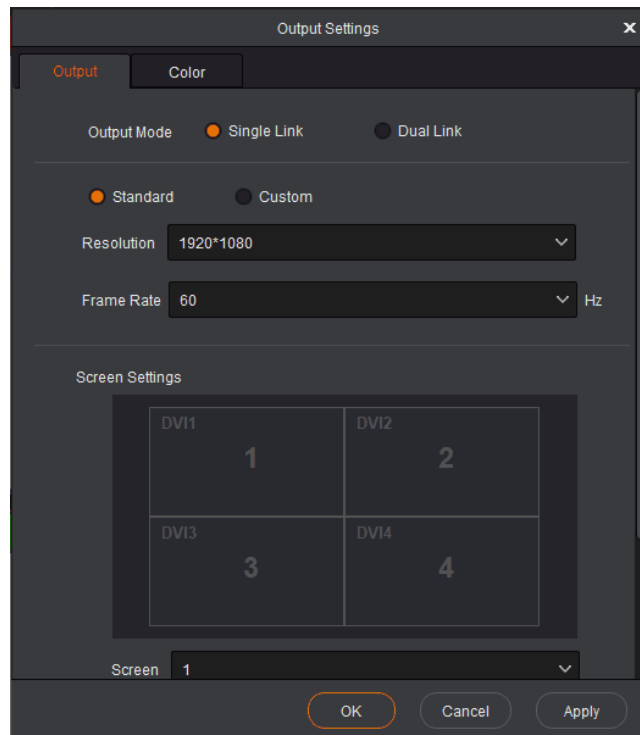
3.1.2.1 Output

V-Can allows you to set the output resolution and screen.

Operating Procedure

Step 1 Go to **Programming > Output > Output**. The output settings window appears, as shown in [Figure 3-5](#).

Figure 3-5 Output settings



Step 2 Set the output mode.

The DVI output connector of video processor supports single link and dual link output modes.

- Single Link: All output connectors of the video processor are used for output. Each output connector supports up to 1920×1200@60Hz output resolution.
- Dual Link: Half output connectors of the video processor are used for output, and the other half are unavailable. Each connector for output supports up to 3840×1080@60Hz output resolution.

Step 3 Set the output resolution.

- When **Standard** is selected, select a standard resolution and frame rate from the drop-down list directly.
- When **Custom** is selected, set the width, height and frame rate respectively.

Step 4 Set the screen width and height according to the actual size of the screen.

1. Click the drop-down arrow next to **Screen**. In the drop-down box that appears, select the screen you want to set.
2. Set the screen width and height.

Step 5 Click **Apply** or **OK** to complete the Programming.

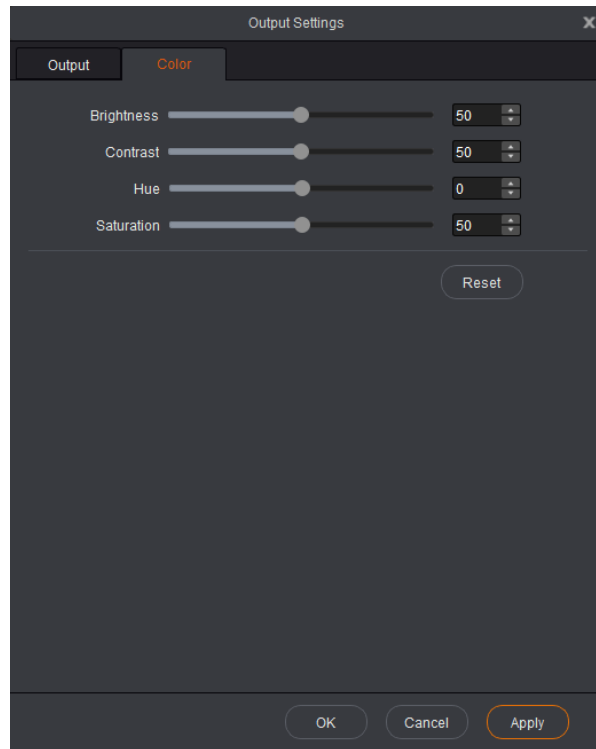
3.1.2.2 Color

V-Can allows you to set the brightness, contrast, hue and saturation of the output image.

Operating Procedure

Step 1 Go to **Programming > Output > Color**. The output color settings window appears, as shown in [Figure 3-6](#).

Figure 3-6 Output color



Step 2 Drag the slider or enter a number to set each parameter.

Step 3 Click **Apply** or **OK** to complete the settings.

Click **Reset** to reset all the parameters to their default values.

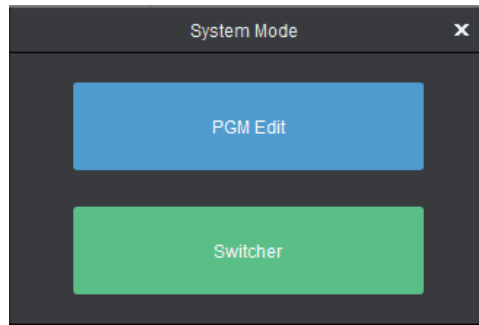
3.1.3 System Mode

When connected with different devices, V-Can offers different user interfaces.

- When the connected device is the J6 or N6, V-Can supports **Splicer** and **Switcher** modes.
- When the connected device is the VX5s or VX6s, V-Can supports **Direct** and **Switcher** modes.
- When the connected device is the N9, V-Can supports **PGM Edit** and **Switcher** modes.

Click **System Mode** to enter the system mode setting page.

Figure 3-7 System mode

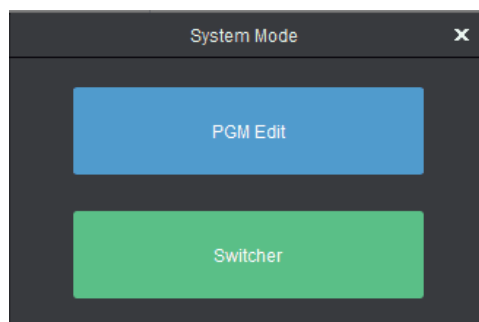


- **PGM Edit:** In PGM edit mode, you can directly edit layers displayed on PGM.
- **Splicer/Direct:** In splicer or direct mode, your Programming on the layer will be synchronously displayed on the LED screen.
- **Switcher:** In switcher mode, you can add and edit layer information only in PVW area. After the layer information is edited, click **Take** at the top right to send the edited layer to the LED screen.

Operating Procedure

Step 1 Go to **Programming > System Mode**. The system mode window appears, as shown in [Figure 3-8](#).

Figure 3-8 System mode



Step 2 Click a mode to change the system mode for video processors.

- Click **PGM Edit** to switch to PGM edit mode, and you can directly edit layers displayed on PGM.
- Click **Splicer** to switch to splicer mode.

Note:

The N6 and J6 support **Splicer** and **Switcher** modes. Click **Splicer** to switch to splicer mode. In this mode, no PVW is available and the edited layers will be sent to LED screen directly.

The VX5s and VX6s support **Direct** and **Switcher** modes.

3.1.4 Output Mosaic

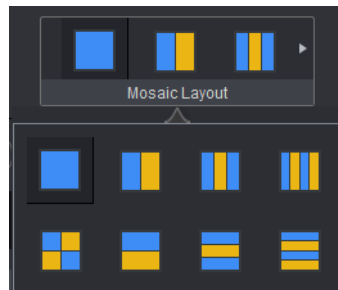
V-Can supports output connector mosaic for seamless switchers.

You can configure the mosaic layout according to the size of the LED screen connected to the current device or the loading capacity of current device. V-Can supports two modes: **Splicer** and **Switcher**. For the descriptions of these two modes, see [3.1.3 System Mode](#).

When the connected device is video processor, mosaic layout can be set. Different video processors support different mosaic layouts. Here take the J6 as an example.

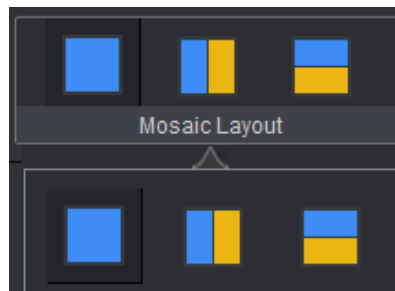
- In splicer mode, V-Can supports the following mosaic layouts: 1×1, 1×2, 1×3, 1×4, 2×1, 3×1, 4×1 and 2×2.



Figure 3-9 Mosaic layouts in splicer mode



- In switcher mode, V-Can supports the following 3 mosaic layouts: 1×1, 1×2, and 2×1.

Figure 3-10 Mosaic layouts in switcher mode



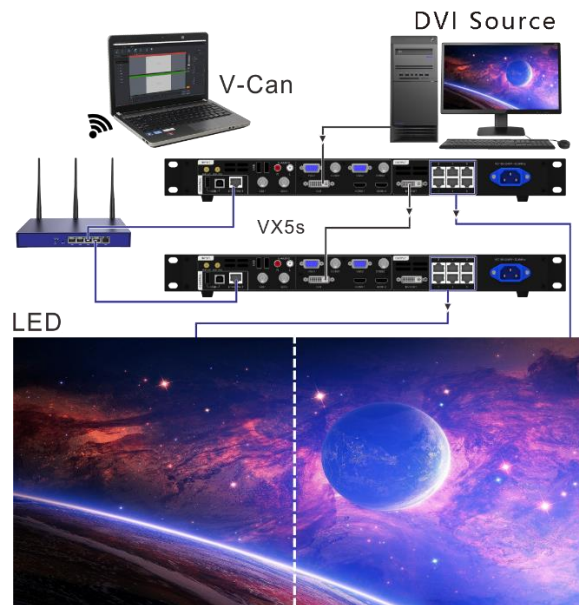
Click  in the **Mosaic Layout** area to select a layout, or click  below **Mosaic Layout** to expand the mosaic layouts and select a layout. The layout of the video editing area is based on the mosaic layout you selected.

3.1.5 Device Group Control

Image Mosaic

Two or more same all-in-one controllers can be used for image mosaic to realize larger loading capacity. Currently the VX5s and VX6s all-in-one controllers support the image mosaic function.

Here take two VX5s units to illustrate the device connections.



V-Can operation procedure:

- Step 1 V-Can will connect all the online devices automatically after the device connections.
- Step 2 Click **Device** in the left to enter the device list.
- Step 3 Click and drag one of the device names to another device name to form a mosaic group as shown in [Figure 3-11](#).

The system will assign a name for the group or you can name the group as shown in [Figure 3-11](#).




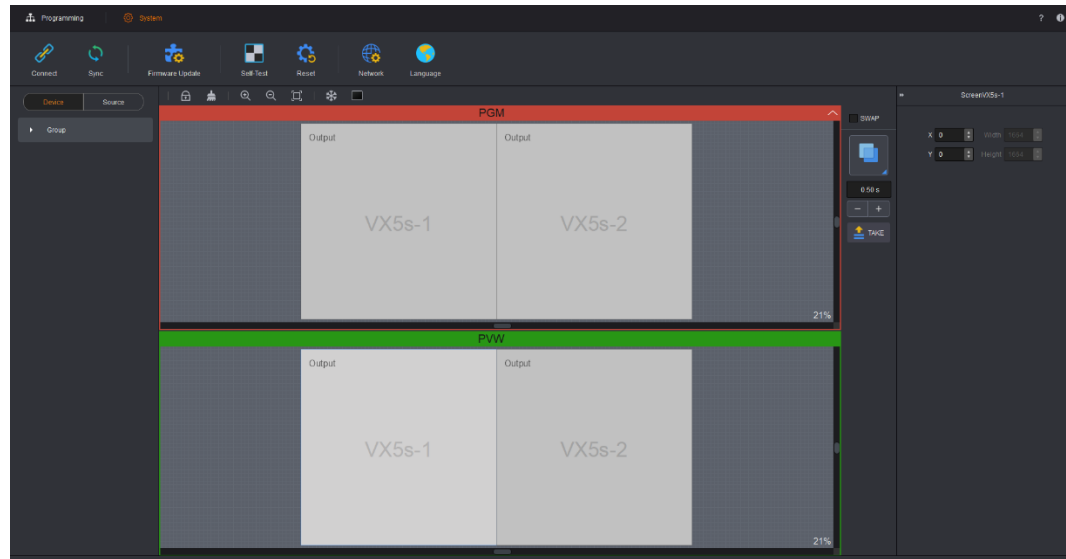
- Click  next to the group name to change the group name.
- Click  next to the group name to ungroup the current group.
- Click  next to the device name to remove the device from the current group.

Figure 3-11 Device group



- Step 4 In PVW area, click and drag the **Output** area to set the mosaic mode based on the loaded screen.
- Step 5 Click **Source** to enter the signal source list of the mosaic device. Signal source indicator statuses are described as below.
- Green: The signal is accessed to the same connectors on each device.
 - White: No signal is accessed or no signal source is accessed to one or more connectors on mosaic device.
- Step 6 Click and drag a signal source to the PVW area and then release it to add an 800×600 layer.
- The added layer crosses over several devices.
When the same signal source is accessed to the LOOP connector or video splitter, each device will display the image area loaded by itself and all the image areas together form a complete image.
When different signal sources are accessed to the devices, each device will display its own image.
 - The added layer does not cross over several devices.
The image will be output only by the device that loads the screen.

Note:

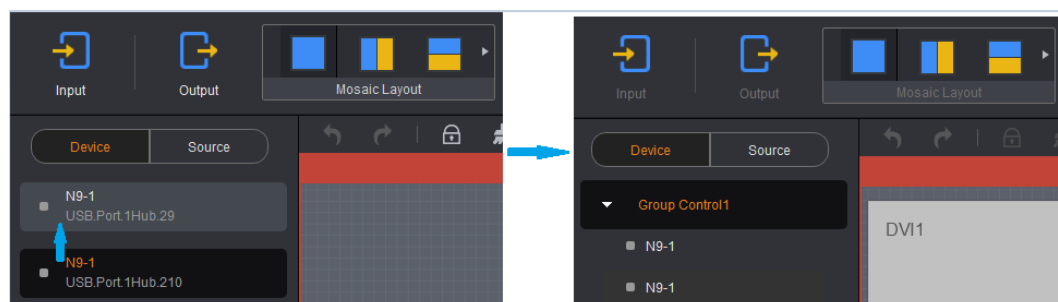
- If the added layer does not cross over the devices, the layer will only occupy the current device resources.
- If the added layer crosses over several devices, the layer will occupy the resources of these devices.
- After the layers have been added, the mosaic layout cannot be set. If you need to select a different mosaic layout, please delete all the layers first.





Group Control

V-Can supports the control of multiple same video processors. You can perform preset switching, take, cut, FTB and freeze operations to these video processors simultaneously.

- **Note**
In group control, all the video processors and control PC must be on the same network segment.
- **Procedure**
 1. Click **Device** to enter the device list.
 2. Click a device name and drag the device to another device that will be in group control to make a group.
If there is a third device required, drag the device name to this group.

Figure 3-12 Group control



- When all the presets with the same number in both devices within the group are not empty, both presets will be loaded on the device respectively.
- When all the presets are empty, the presets will not be loaded.
- When some of the presets are empty and some are not, only the not-empty ones will be loaded.
- Click  /  to make all the output images black or not.
- Click  /  to freeze or unfreeze all the output images.

3.1.6 Adding Layers

Step 1 Select the signal source to be displayed.

Step 2 In video editing area, press and hold down the left mouse button, move the mouse to the video editing area and then release the left mouse button. A custom-sized layer appears.








On a signal source, press and hold down the left mouse button, drag the source to the video editing area, and then release the left mouse button. A layer appears.

Note:

- For online devices, the resolution of the newly-added layer is the half of the input source resolution. For example, if the input source resolution is 1920×1080, the resolution of the new layer is 960×540 by default.
- If the input source resolution is smaller than 800×600, the resolution of the new layer is 800×600 by default.

- For offline devices, the resolution of the new layer is 800×600 by default.
-
- **Layer**
Hover the mouse over the edge of a layer. When the mouse pointer changes into a double arrow, press and hold down the left mouse button, move the mouse to adjust the size of the layer.
Move the mouse within a layer, press and hold down the left mouse button, drag the layer to move it to any position.
When you hover the mouse over the layer, four buttons appear at the top right of the layer. The functions of the buttons are shown in [Table 3-2](#).

Table 3-2 Layer buttons

Icon	Description
	Click this icon to make the layer fill the area loaded by the output connector where the layer locates. Click this icon again to make the layer fill the whole screen.
	Click this icon again to make the layer fill the whole screen.
	Click this icon to exit the full screen display and restore the layer to its original size and position.
	Click this icon to close the layer.
	Click this icon to unlock the selected layer.
	Click this icon to lock the layer.
	Click this icon to make the layer display the input source image in pixel-to-pixel mode.

- After a layer is locked, right click the layer and select **Unlock** to unlock it.
- Following operations can be done by right clicking a layer.
 - Select **Switch Source** to switch the input source of the selected layer.
 - Select **Bring to Front** to send the selected layer to the top.
 - Select **Send to Back** to send the selected layer to the bottom.
 - Select **Bring Forward** or **Send Backward** to move the selected layer one level up or down.
 - Select **Lock** or **Unlock** to lock or unlock the selected layer.
 - Select **Close Current Layer** to close the selected layer.
 - Select **Close All Layers** to close all the layers.

3.1.7 Setting Layer Properties

BKG does not support property settings and OSD only supports position adjustment.

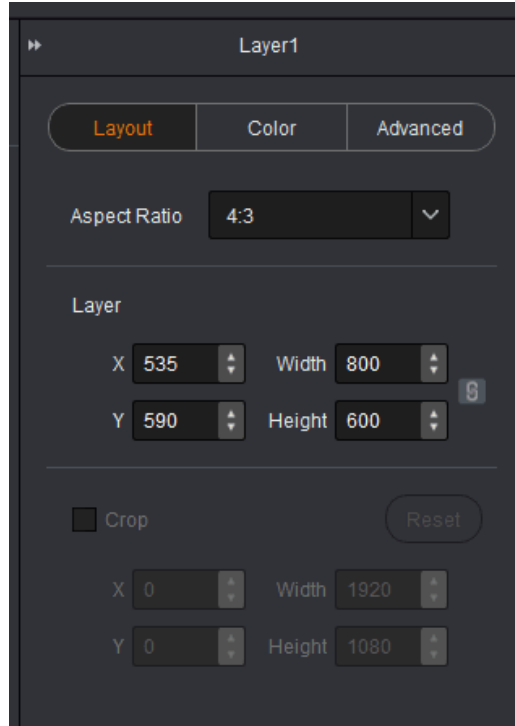
Layout

In **Layout** settings page, you can set the aspect ratio, position and size of a layer, as well as crop the input source of the selected layer.


Step 1 Click to select the layer you want to set.

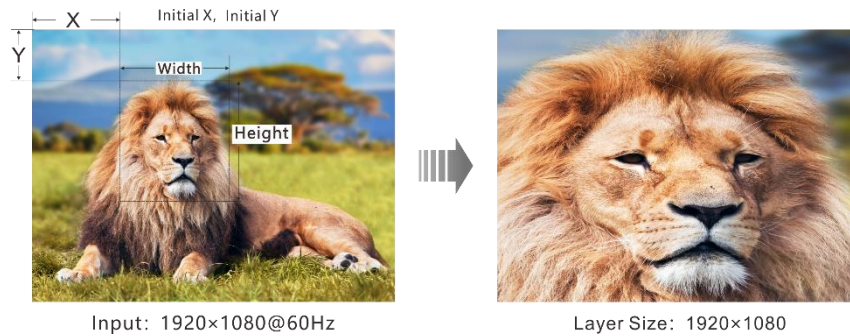
Step 2 Select **Layout** to enter the layout settings page, as shown in [Figure 3-13](#).

Figure 3-13 Layout



Step 3 Set the aspect ratio, size, position, mask and input source cropping of the layer according to your actual needs.

- **Aspect Ratio:** The ratio of layer width to height. You can set either a fixed or custom aspect ratio.
When you set a fixed aspect ratio value, the lock icon beside the width and height sliders is highlighted which indicates the ratio of layer width to height is locked. You can adjust the width or height value to change the layer size with the aspect ratio unchanged.
- **Layer:** You can adjust the layer position and size.
X: Adjust the layers' horizontal initial position on the screen.
Y: Adjust the layers' vertical initial position on the screen.
Width: Adjust the layers' width.
Height: Adjust the layer's height.
Click  to lock the layer aspect ratio. At this time, only one parameter (width or height) can be adjusted, and the other parameter (height or width) will be calculated and adjusted automatically according to the aspect ratio you set.
- **Crop:** You can crop the input source of the layer and then make the left part fill the whole screen.



- X: Set the horizontal initial position of the input source cropping.
- Y: Set the vertical initial position of the input source cropping.
- Width: Set the image width after cropping.
- Height: Set the image height after cropping.

Click **Reset** to reset all the parameters to their default values.

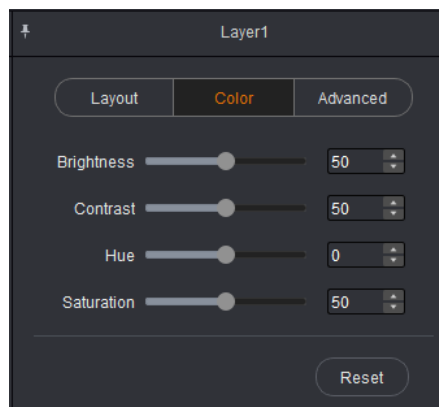
Color

In **Color** settings page, you can set the brightness, contrast, hue, saturation and opacity of the selected layer.

Step 1 Click to select the layer you want to set.

Step 2 Select **Color** to enter the color settings page, as shown in [Figure 3-14](#).

Figure 3-14 Color



Step 3 You can drag the slider or enter a number to set the brightness, contrast, hue, saturation and opacity.

Note:

When the connected device is J6, the individual RGB brightness can be set.

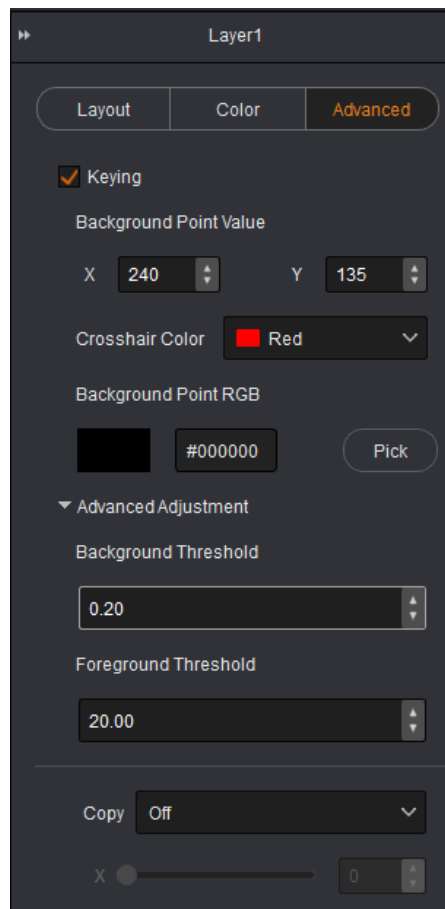
Advanced

When connected with different devices, V-Can offers different advanced user interfaces.

Step 1 Click to select the layer you want to set.

Step 2 Select **Advanced** to enter the advanced settings page, as shown in [Figure 3-15](#).

Figure 3-15 Advanced



- When the connected device is the N9-V3.0 or earlier version, you can set the layer copying and mirroring. The setting procedure is as below.
 - a. Click to select the layer in the PVW area.
 - Click the drop-down arrow next to **Copy** and select **Clone** in the drop-down box that appears. V-Can will create a copy for the selected layer. The two layers are the same size, but in a symmetric position with the respect to the screen center.
 - Click the drop-down arrow next to **Copy** and select **Mirror** in the drop-down box that appears. V-Can will create a copy for the selected layer. The two layers are the same size, but in a symmetric position with the respect to the screen center. The new layer displays the mirrored image.
 - Click the drop-down arrow next to **Copy** and select **Off** in the drop-down box that appears to disable the layer copying function.
 - b. Drag the slider next to **X** to adjust the horizontal coordinate of the cloned or mirrored layer.

Note:

- When the original layer moves, the original layer and the cloned/mirrored layer will move together vertically.
- When the size of the original layer is adjusted, the size of the cloned/mirrored layer will keep the same with that of the original layer.

- The original layer and the cloned/mirrored layer cannot be placed on the screen loaded by the same connector.
 - The input source and color of the cloned/mirrored layer are the same as that of the original layer.
 - When the mosaic layout is 1×2, 1×3, 1×4 or 2×2, layer cloning and mirroring functions are supported.
-
- When the connected device is the N9-V2.1.0.0 or later version, you can set the layer keying. The setting procedure is as below.
 - c. Select **Keying** to enable the layer keying function.
 - d. Set the **X** and **Y** values in the **Background Point Value** area to set the color position to be keyed. At this time, a crosshair appears on the input source monitoring window to locate the color.
 - e. Set the crosshair color.

It is recommended you set a color that is quite different from the input source image color, which would be easier for you to check the background point position.
 - f. Click **Pick** to check the selected color and color value in the **Background Point RGB** area.
 - g. (Optional) Go to **Advanced > Background Threshold** to set the background threshold value to perform keying more precisely.

The range for the background threshold is 0–100.
The green background range is 0–0.4 and the default value is 0.20. The adjustment stepping is 0.01.
 - h. (Optional) Go to **Advanced > Foreground Threshold** to set the foreground threshold value to perform keying more precisely.

The range for the foreground threshold is 0–100.
The green background range is 15–25 and the default value is 20. The adjustment stepping is 0.01.

3.1.8 Effects

V-Can supports multiple transition effects which make the display more flexible and vivid. When connected with different devices, the effect quantity will be different.

3.1.8.1 Transition Effects

The transition effects are available only when the connected device is J6 and the system mode should be in splicer mode.



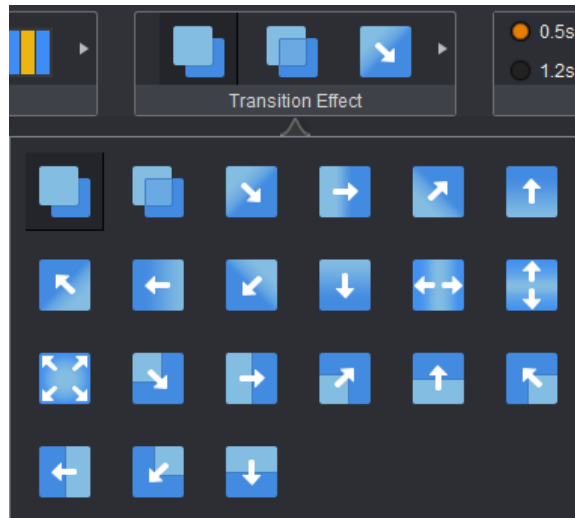
Click  in the **Transition Effect** area to select a transition effect, or click  below **Transition Effect** to expand all the effects and select an effect. When you right click a layer, select **Switch Source** and select a source, the input source will be switched from one source to another and you can see the transition effect.

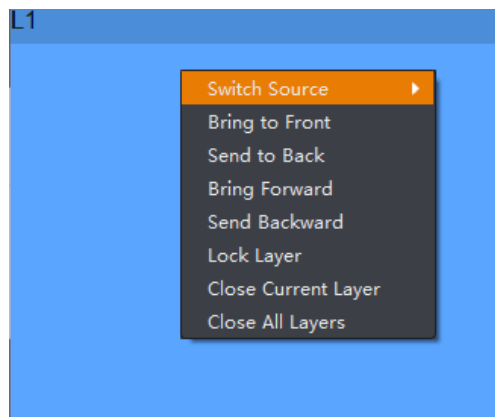
Figure 3-16 Transition effects



Switching Layer Input Source

Step 1 Right click the desired layer and select **Switch source**.

Figure 3-17 Switching layer input source



Step 2 Select the desired input source for the layer.

3.1.8.2 Take Effects

In switcher mode, only the Take effects are available. A Take effect refers to the display effect shown on PGM after you click **Take** to switch the layer from PVW to PGM.



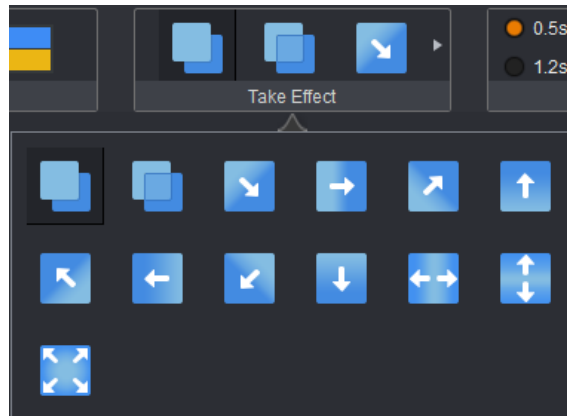
Click  in the **Take Effect** area to select an effect, or click  below **Take Effect** to expand all the effects and select an effect. Click **Take**, and you can see the effect on PGM.

Figure 3-18 Take effects



3.1.9 Transition Duration

Duration is the length of the time a transition effect or Take effect continues.

The duration range is 0.5s–2.0s.

You can set the effect duration through one of the following methods.



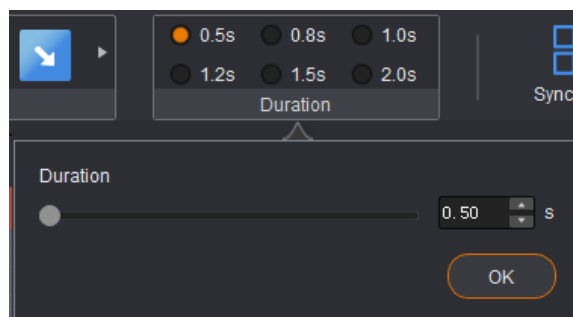
- Select a commonly used time value in the **Duration** area.
- Click  below **Duration** and drag the slider, then click **OK**.
- Click  below **Duration** and enter a value, then click **OK**.

Figure 3-19 Duration



Note:



If the connected device is VX5s or VX6s, the duration includes six levels. When the duration is set to 1, the effect duration is the shortest. When the duration is set to 6, the effect duration is the longest. Rather than adjust the duration freely, you can only select an existing duration.

3.1.10 FTB Duration

When the connected device is N9-V3.x.x.x, you can set the FTB duration. The FTB duration specifies the time length from the moment the output image starts to turn black to the moment the output image turns black totally.

The range for FTB duration is 0.5–2.0s.

You can set the FT duration through one of the following methods.

- Select a commonly used time value in the **Duration** area.
- Click  below **Duration** and drag the slider, then click **OK**.
- Click  below **Duration** and enter a value, then click **OK**.

3.1.11 Sync Mode

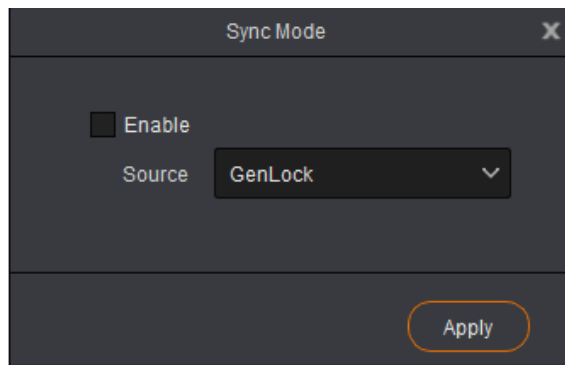
When multiple devices are cascaded, the sync mode must be enabled. Synchronization between signal sources makes sure the display of the mosaic screen is intact and consistent.

When devices such as cameras are connected, enabling sync mode can remove scan lines.

Operating Procedure

- Step 1 Go to **Programming > Sync Mode**. The sync mode window appears, as shown in [Figure 3-20](#).

Figure 3-20 Sync mode



- Step 2 Select the check box of **Enable**.
- Step 3 Click the drop-down arrow next to **Source** and select a signal source from the drop-down box that appears.
- **Genlock**: Use an external signal source as the sync source.
 - Other connector names: Use an internal input source as the sync source.
- Step 4 Click **Apply**.

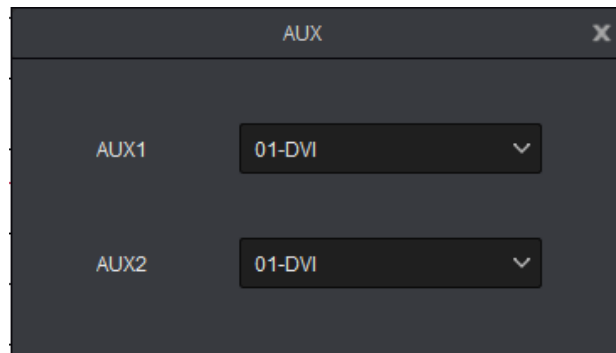
3.1.12 AUX

When the connected device supports auxiliary output function, you can set the input source for AUX output in V-Can. Currently the N9 supports AUX settings.

- For the N9 of earlier versions before V2.1.0.0, the AUX settings are as follows.

- Step 1 Go to **Programming > AUX**. The AUX settings window appears, as shown in [Figure 3-21](#).

Figure 3-21 AUX settings

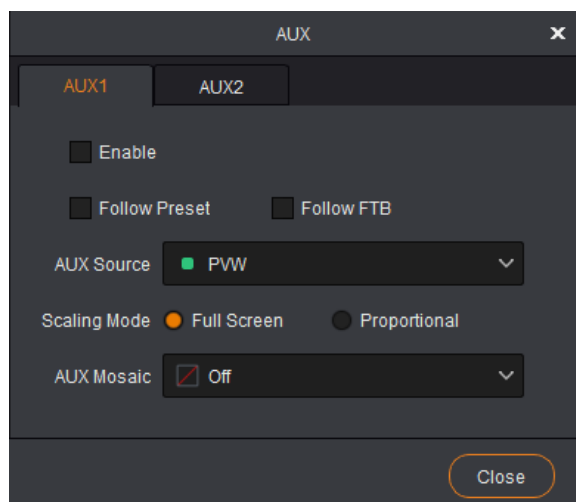


Step 2 Click the drop-down arrows next to **AUX1** and **AUX2** and set the input sources for AUX 1 and AUX 2.

- For the N9 of later versions after V2.1.0.0, the AUX s are as follows.

Step 1 Go to **Programming > AUX**. The AUX settings window appears, as shown in [Figure 3-212](#).

Figure 3-22 AUX settings



Step 2 Click the **AUX1** or **AUX2** tab to enter the AUX 1 or AUX 2 settings screen.

Step 3 Select **Enable** to enable the AUX function.

Step 4 Select the desired source next to **AUX Source**.

Step 5 Select **Follow Preset**.

- When selected, after the AUX is changed, you need to click Take or Cut to send the changed information to the AUX screen.
- When deselected, after the AUX is changed, you can send the changed information to AUX screen directly.

Step 6 Select **Follow FTB**.



- When selected, if the LED screen fades to black, the AUX will follow the screen to fade to black.

- When selected, if the LED screen fades to black, the AUX will not follow the screen to fade to black.

Step 7 Set the AUX scaling mode.

- Full Screen: Make the AUX output image display in full screen.
- Proportional: Scale the AUX output image proportionally based on the aspect ratio of the input source, and then display the image in full screen (with image width or height display in full size).

Step 8 Set the AUX mosaic.

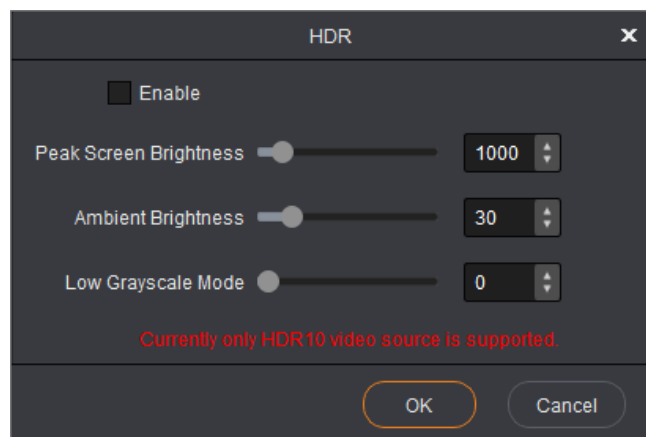
- Off: Disable the AUX mosaic output. At this time, AUX 1 and AUX 2 can be set respectively.
-  / : Select a desired mosaic layout. At this time, AUX 2 cannot be set.

3.1.13 HDR

HDR stands for High Dynamic Range. When worked with the A8s receiving card, enabling the HDR function can greatly enhance the display quality and make the image more clear and vivid. Currently the NovaPro UHD Jr supports HDR function and only supports HDR10 input source.

Step 1 Go to **Programming > HDR** to enter the HDR settings screen as shown in [Figure 3-23](#).

Figure 3-23 HDR settings



Step 2 Select **Enable** to enter the HDR function.

Step 3 Set **Screen Peak Brightness** and **Ambient Brightness** to adjust the display effect.

- **Peak Screen Brightness:** Set the screen brightness under normal operation. The value range is 100–10000 and the default value is 1000.
- **Ambient Brightness:** Set the brightness of the surrounding environment where the screen locates. This brightness value can be obtained by measuring. The value range is 0–200 and the default value is 30.
- **Low Grayscale Mode:** Set the grayscale value of the image displayed on the screen. The value range is 0–50 and the default value is 15.

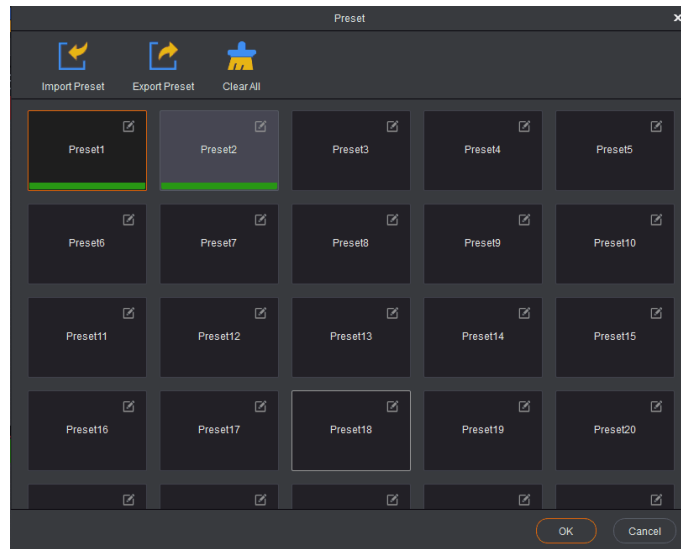
3.1.14 Presets

Saving Presets

- When the connected device is the N6 and J6, the preset will be saved automatically.

Step 1 Go to **Settings** > **Preset** to enter the preset setting page.

Figure 3-24 Selecting presets



Step 2 Select and click a preset and click **OK**.

Step 3 Add a layer in the layer editing area and change the layer properties. Then the system will automatically save the edited layer information to the selected preset.

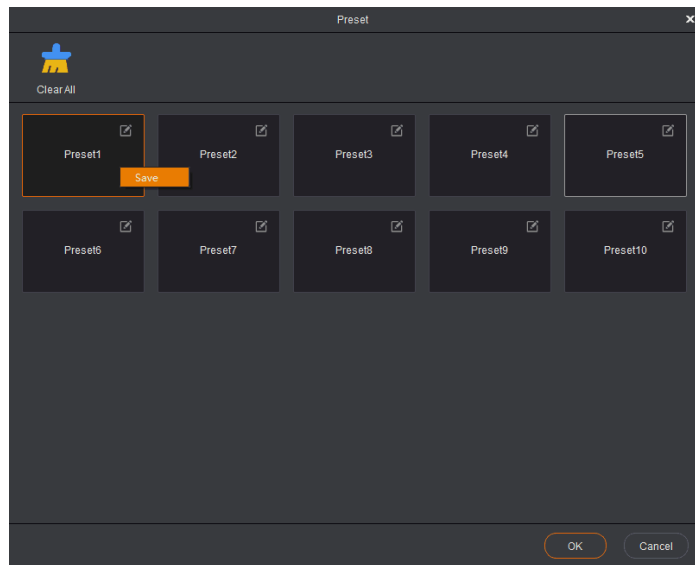
- When the connected device is not the N6 and J6, the preset must be saved manually.

Step 1 Add a layer in the layer editing area and change the layer properties.

Step 2 Go to **Programming** > **Preset** to enter the preset setting page.

Step 3 Right click the preset and select **Save** to save the edited layer information to the selected preset.

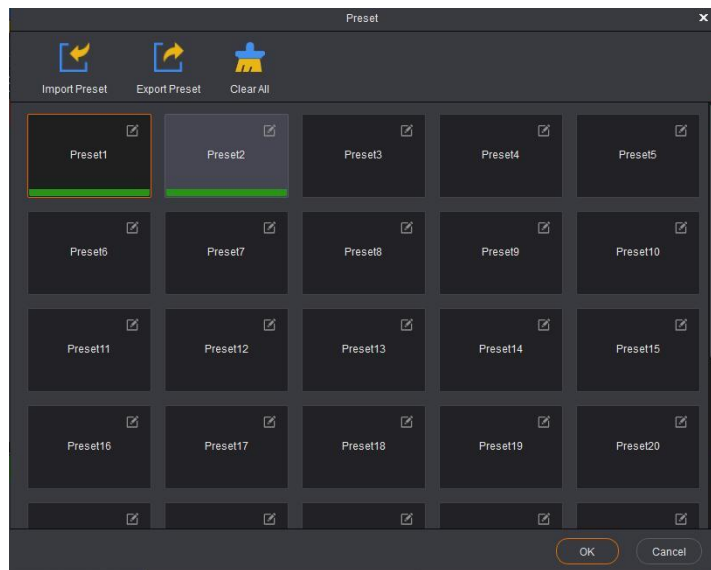
Figure 3-25 Saving presets



Loading Presets

Step 1 Go to **Programming > Preset** to enter the preset setting page.

Figure 3-26 Presets



Note:

- Green ones are the saved presets, and others are empty presets which cannot be loaded.
- Right click a saved preset and select **Clear** to clear the data in the preset.

Step 2 Click a saved preset to load the preset to PVW or screen.

Renaming Presets


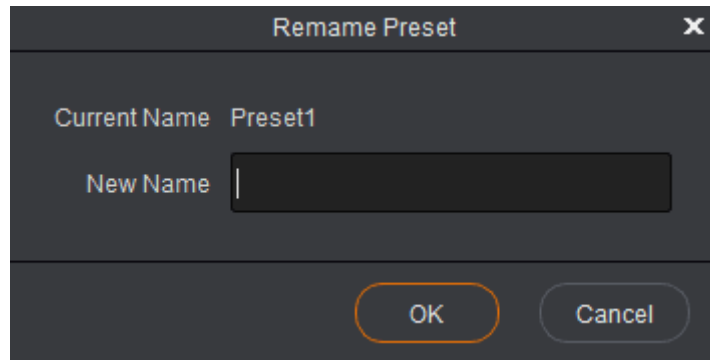
- Step 1 Go **Programming** > **Preset** to enter the preset setting page.
- Step 2 Double click the  icon at the top right, and you can rename the preset in the dialog box appears.

Figure 3-27 Renaming presets



Note:

Empty presets cannot be renamed.

The N9 does not support preset renaming.

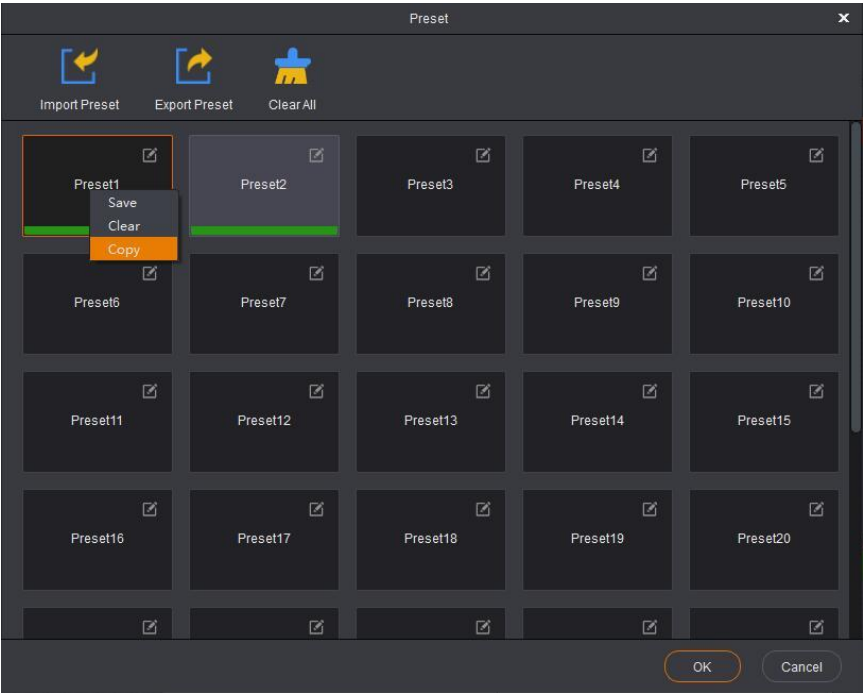
- Step 3 Click **OK** to save the settings.

Copying Presets

When the connected device is the NovaPro UHD Jr, this function is available.

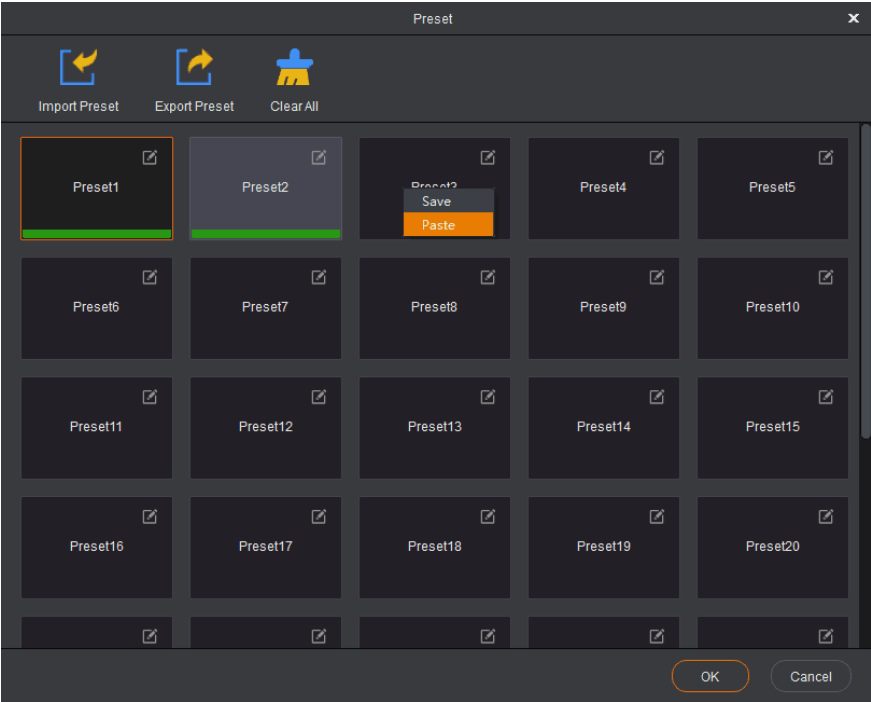
- Step 1 Go to **Programming** > **Preset** to enter the preset setting page.
- Step 2 Right click the desired preset and select **Copy**.

Figure 3-28 Copying presets



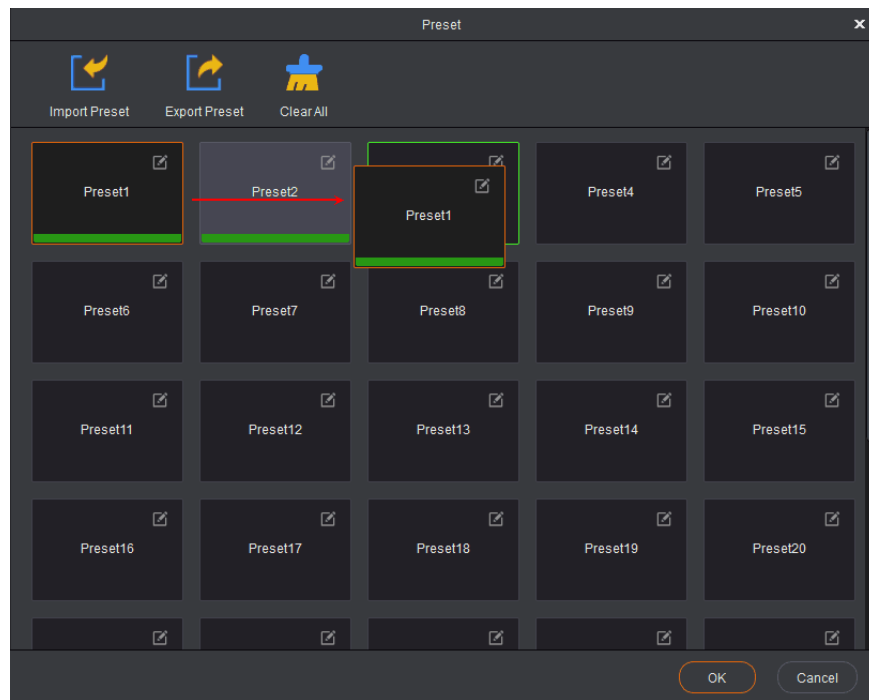
Step 3 Right click the target preset and select **Paste** to paste the preset.

Figure 3-29 Pasting presets



Note:
Quick copy method:

Click and drag a saved preset to the target preset, then release the mouse to quickly copy the preset.

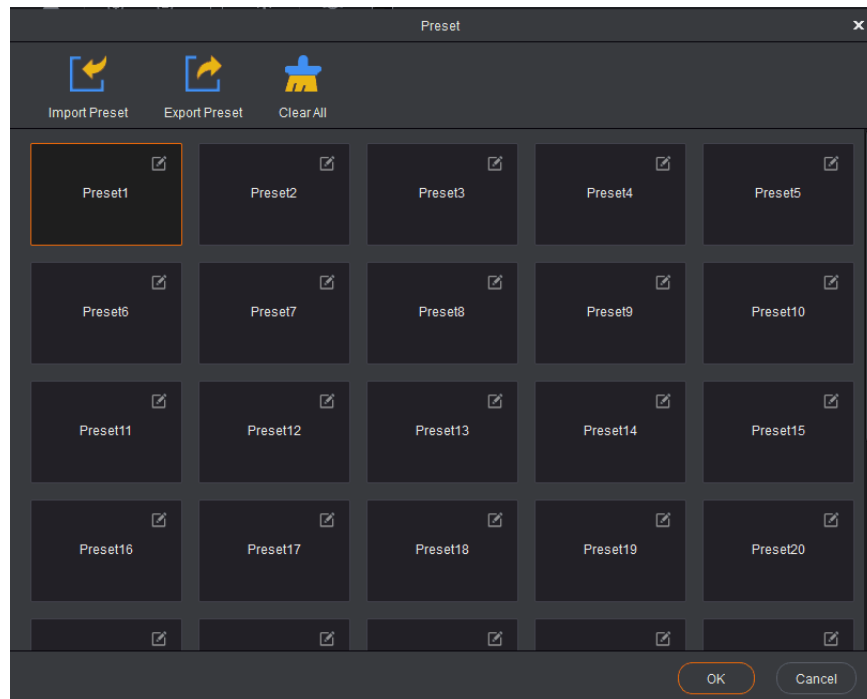


Importing and Exporting Presets

When the connected device is N9 V2.3.X or later version, you can import and export the presets.

Go to **Programming > Preset** to enter the preset importing and exporting page.

Figure 3-30 Importing and exporting presets



- Import Preset: Import the presets to the N9 and overwrite the existing presets saved in the N9.
- Export Preset: Export the presets saved in the N9 to your local hard drive for future use.

3.1.15 Preset Playing

When the connected device is the J6 or N6, V-Can supports the preset playing function. After each preset is configured, V-Can will send and save the preset information to the video processor. After the start times to play the presets are set, the layers in each preset will start to play according to the time you set.

The preset playing function of the J6 or N6 is available when the system mode is set to Splicer mode.

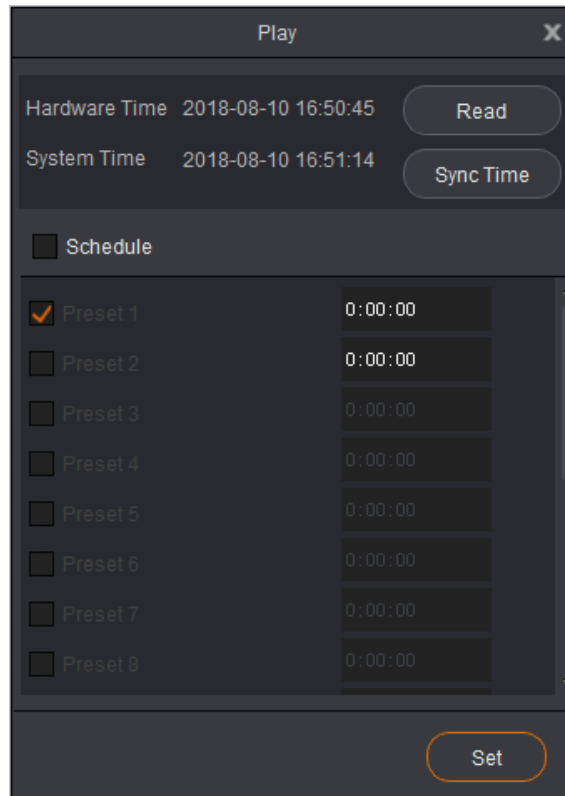
Before You Begin

Complete the settings of presets.

Operating Procedure

- Step 1 Go to **Programming > Play**. The preset playing window appears, as shown in [Figure 3-31](#).

Figure 3-31 Preset playing



Step 2 Click **Read** to read the system time.

Step 3 If **Hardware Time** and **System Time** are not synchronized, click **Sync Time** to synchronize the hardware time with the system time.

Step 4 Select the check box next to **Schedule**.

Step 5 Select the check boxes of presets and set the start times to play the presets.

Note:

- Repeated start times are not allowed.
 - To see the effect of automatic playing, you need to set start times of two presets at least.
-

Step 6 Click **Set** to complete the preset playing settings.

3.2 OSD

OSD allows you to set the OSD image, OSD text, BKG and LOGO. The sub-menu items are different when different devices are connected.

3.2.1 OSD Settings

V-Can allows you to add an image on the LED screen as the background or foreground and add text as an on-screen prompt.

When the connected device is the J6 or N6, please follow the below procedure to add OSDs.

Inserting Images

An image can be used as OSD and displayed on the LED screen as the background or foreground. The format of the image used as OSD only can be bmp, jpg and jpeg. Only one image OSD can be inserted in each mosaic screen.

You can select either image or text as OSD.

Step 1 Go to **OSD > Image**. The image selection window appears.

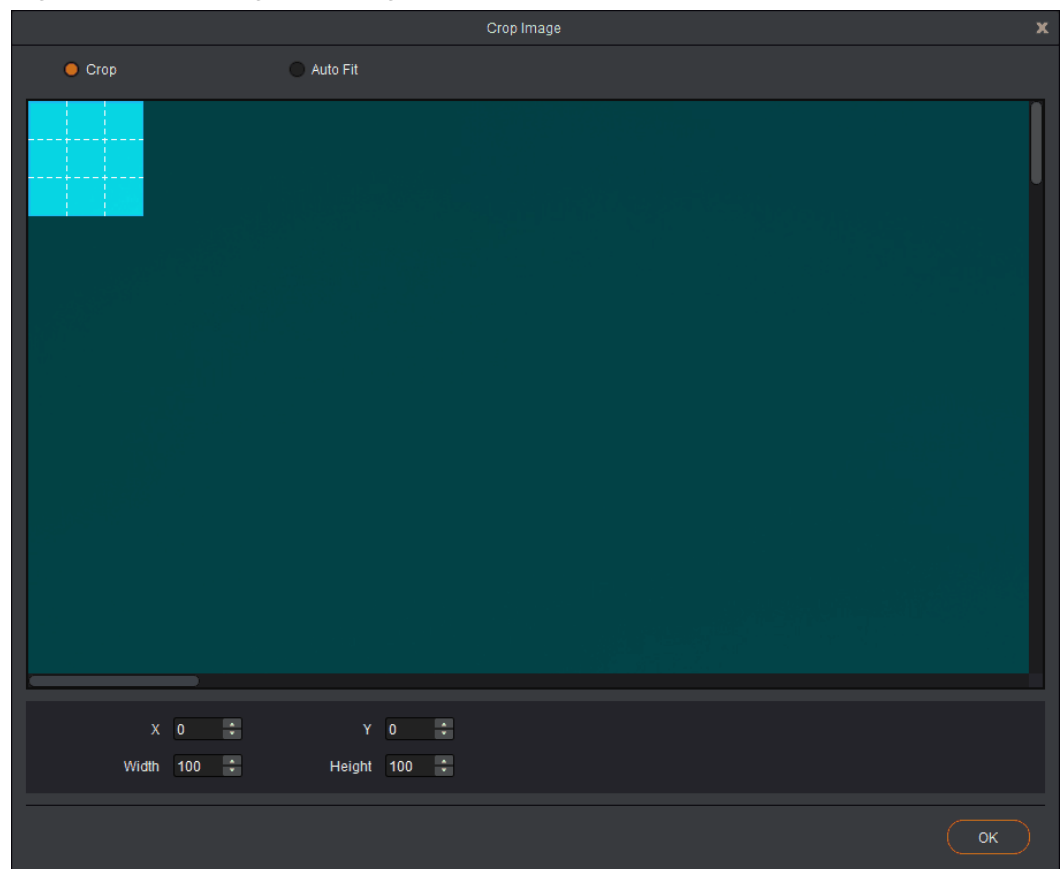
Step 2 Select the image which will be displayed.

Step 3 Click **Open**. V-Can will send information about the selected image to the device or the control system.

If the image size is greater than the screen resolution, the below window appears. The dashed area is the cropped area.

3. Hover the mouse over the edge of the dashed area. When the mouse pointer changes into a double arrow, press and hold down the left mouse button, move the mouse to adjust the size of the cropped area. You can also directly enter the values for **Width** and **Height** to adjust the size of the cropped area.
4. Click and drag the dashed area to adjust the position of the cropped area. You can also directly enter the values for **X** and **Y** to adjust the position of the cropped area.
5. Click **OK** to complete the image cropping settings.

Figure 3-32 Cropping OSD image



If the image size is smaller than the screen resolution, the image is inserted directly.

Step 4 Right click the inserted image, and you can do the following operations.

- **Bring to Front:** Move the inserted image to the top.
- **Send to Back:** Move the inserted image to the bottom. If the size of the inserted image is smaller than the layer, the inserted image will not be seen.
- **Remove OSD:** Delete the inserted image.
- **Crop:** Set the initial position and size of the cropped area.
- **Enable Crop:** Select it to display the content according to the settings in **Crop**. Unselect it to display the original OSD image.

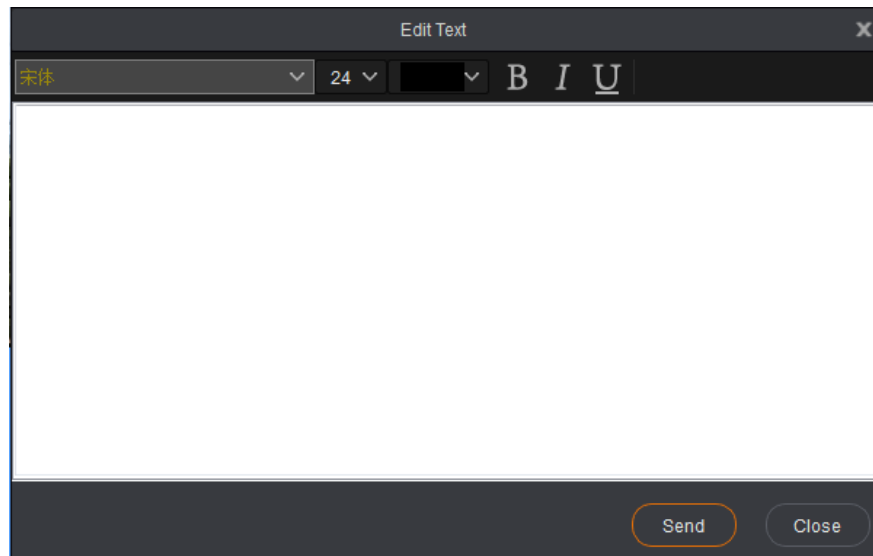
Inserting Texts

Text can be used as OSD and displayed on the LED screen as the background or foreground. Only one text OSD can be inserted in each mosaic screen. The inserted text will be displayed in the form of an image.

You can select either image or text as OSD.

Step 1 Go to **OSD > Text**. The text editing window appears, as shown in [Figure 3-33](#).

Figure 3-33 Inserting text



- Step 2 Set the information of the text to be displayed, such as font type, size and color, bold, italic, and underline.
- Step 3 In the blank text field, enter the text to be displayed.
- Step 4 Click **Send** to send the text to the connected device or the control system.
- Step 5 Right click the inserted text, and you can do the following operations.
- **Bring to Front:** Move the inserted text image to the top.
 - **Send to Back:** Move the inserted text image to the bottom. If the size of the inserted text image is smaller than the layer, the inserted image will not be seen.
 - **Remove OSD:** Delete the inserted text image.

Enabling/Disabling OSD

You can enable or disable the OSD function. When disabled, the OSD function will be automatically enabled after image or text is inserted.

- When the OSD function is enabled, click **Disable OSD** to disable the function.
- When the OSD function is disabled, click **Enable OSD** to enable the function.

3.2.2 OSD/BKG Settings

When the connected device is not the J6, N6 or VS7-V2.x.x.x and the device supports OSD function, please follow the below procedure to add OSDs.

3.2.2.1 Adding OSDs


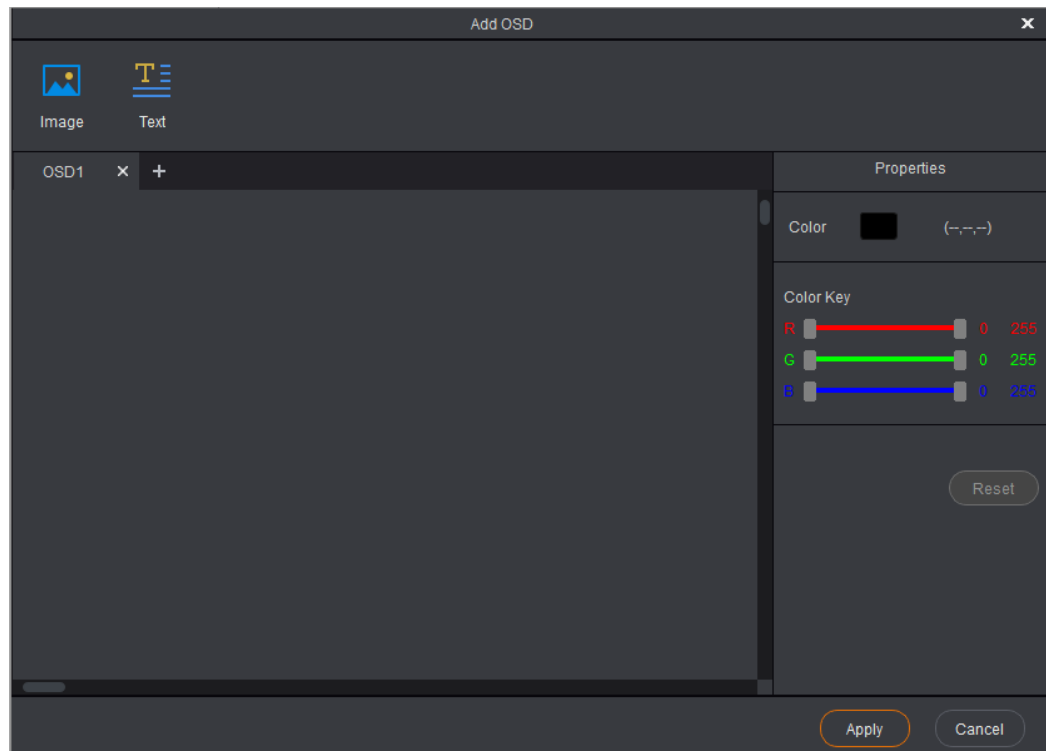
- Step 1 Go to **OSD > OSD** to enter the OSD settings page.
- Step 2 Click  in the OSD area to enter the OSD adding window, as shown in [Figure 3-34](#).

Figure 3-34 Adding OSD images



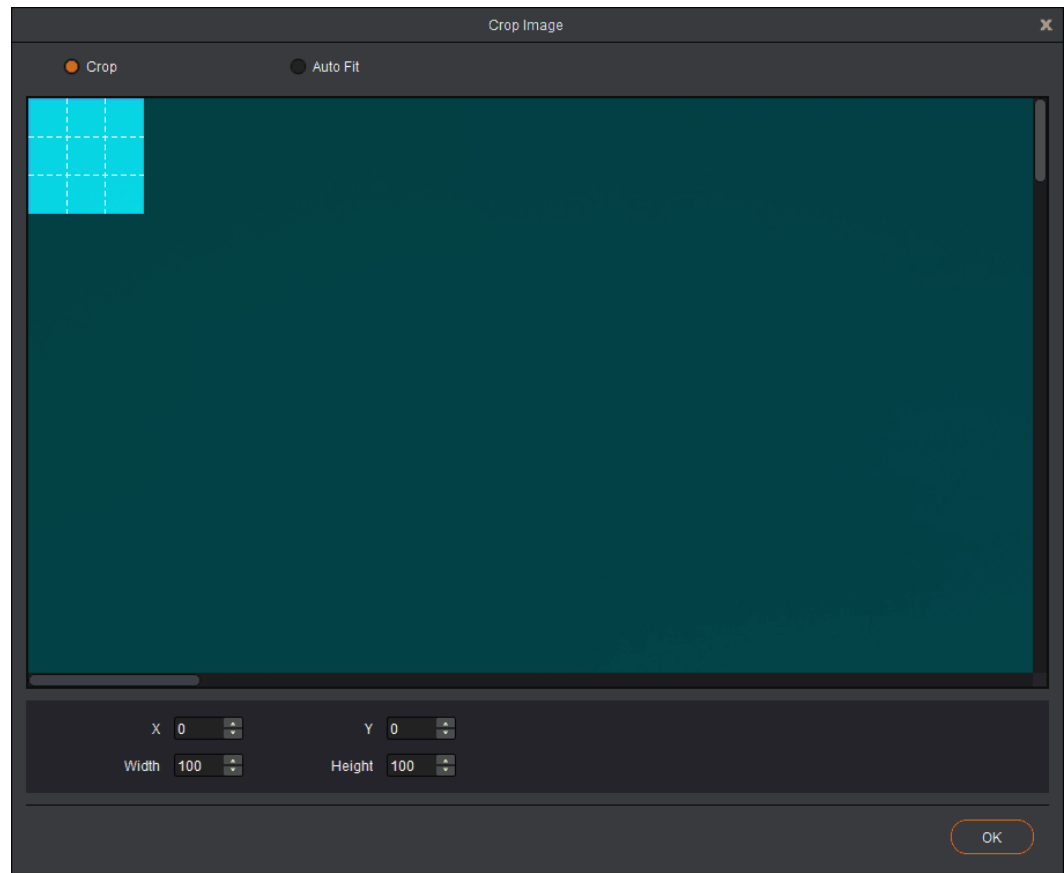
Step 3 Click **Image** to select the desired OSD image in the window appears.

Step 4 After an image is selected, click **Open** to complete the adding.

The maximum resolution supported by an OSD image is 1920×1080.

- If the image size is greater than the screen resolution, the below window appears. The dashed area is the cropped area.
 1. Hover the mouse over the edge of the dashed area. When the mouse pointer changes into a double arrow, press and hold down the left mouse button, move the mouse to adjust the size of the cropped area. You can also directly enter the values for **Width** and **Height** to adjust the size of the cropped area.
 2. Click and drag the dashed area to adjust the position of the cropped area. You can also directly enter the values for **X** and **Y** to adjust the position of the cropped area.
 3. Click **OK** to complete the image cropping settings.

Figure 3-35 Cropping OSD images



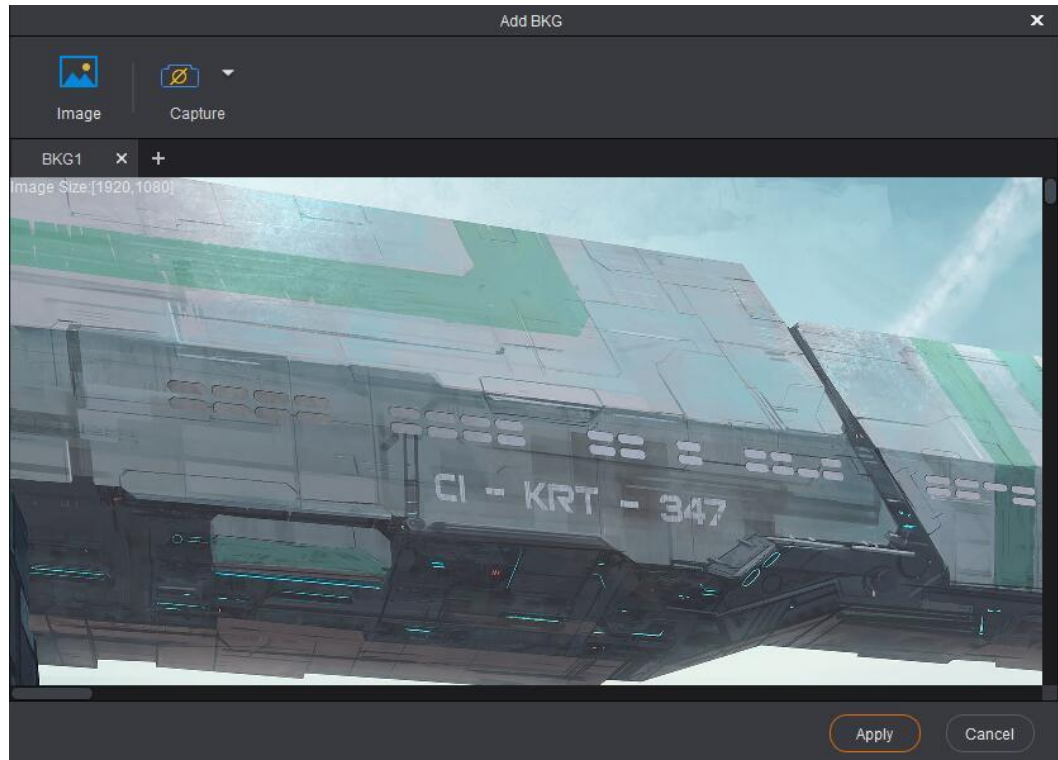
Note:

You can select **Auto Fit** to fit the image to the whole screen.

- If the image size is smaller than the screen resolution, the image is added directly.

After the image is added successfully, it is as shown in [Figure 3-36](#).

Figure 3-36 Adding OSD images



3.2.2.2 Adding BKGs

Adding BKG Images

Step 1 Go to **OSD > BKG** to enter the BKG setting page.


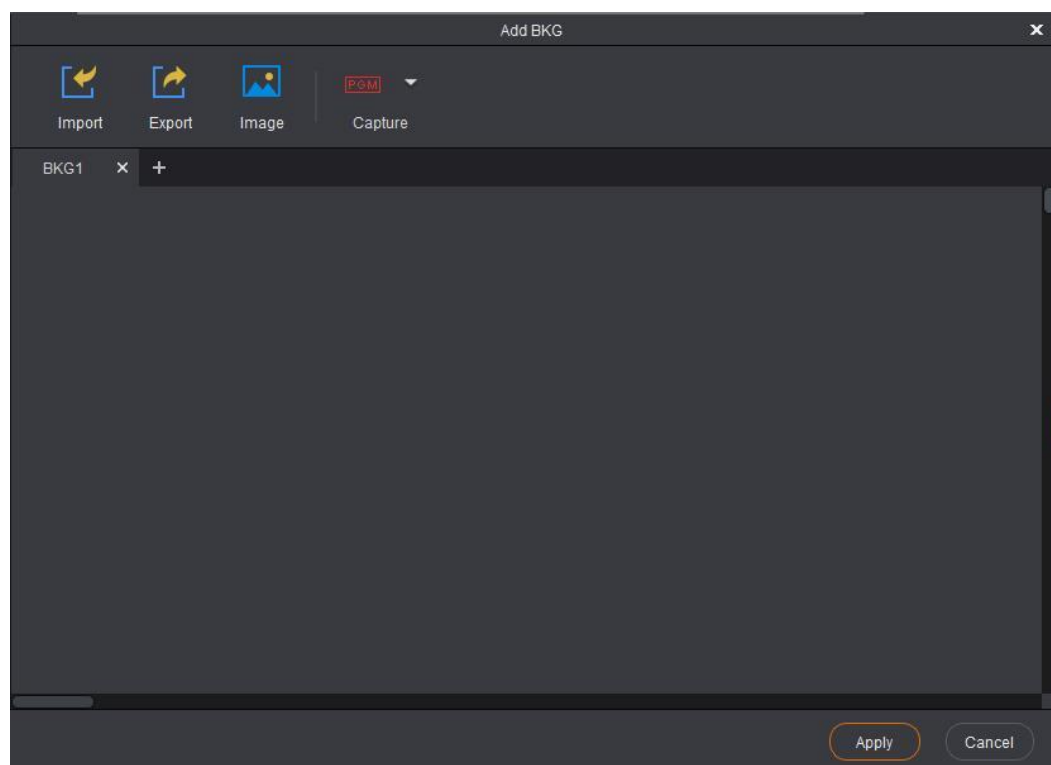
Step 2 Click  in the BKG area to enter the BKG adding window, as shown in [Figure 3-37](#).

Figure 3-37 Adding BKG images

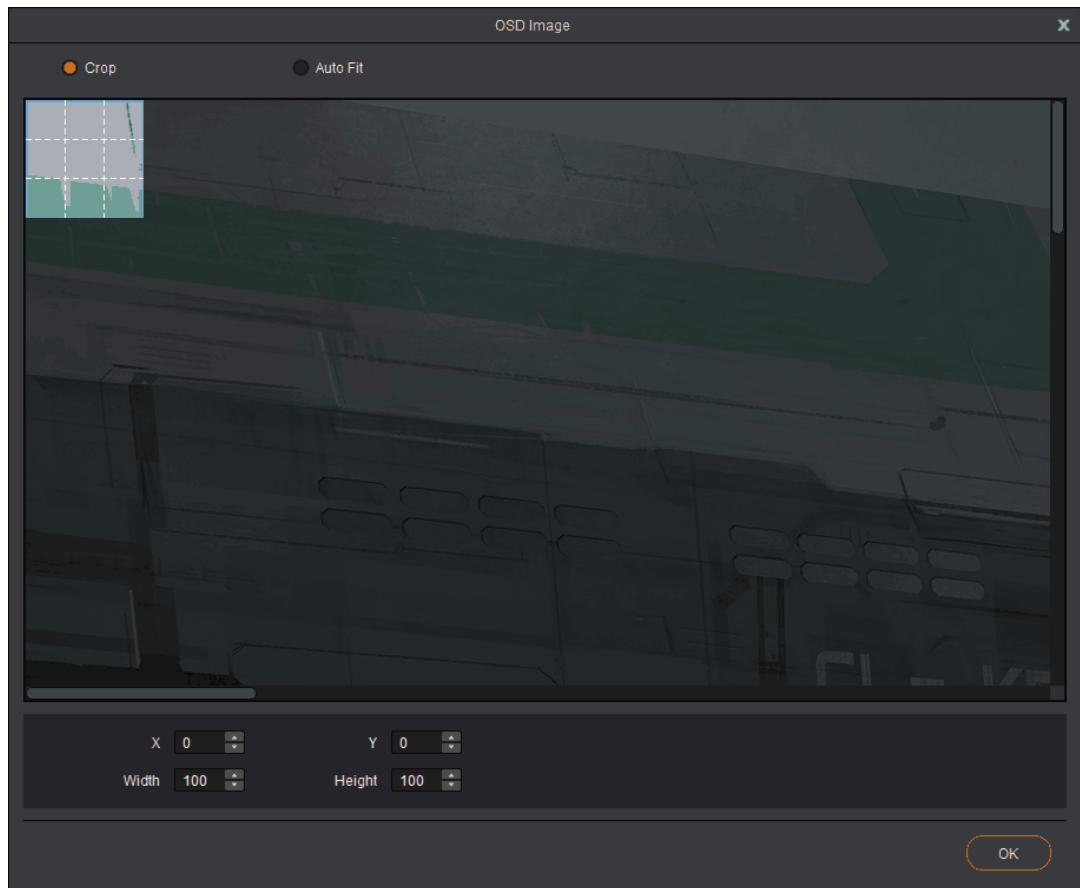


Step 3 Click **Image** to select the desired BKG image in the window appears.

Step 4 After an image is selected, click **Open** to complete the adding.

- If the image size is greater than the screen resolution, the below window appears, as shown in [Figure 3-38](#). The dashed area is the cropped area.
 1. Hover the mouse over the edge of the dashed area. When the mouse pointer changes into a double arrow, press and hold down the left mouse button, move the mouse to adjust the size of the cropped area. You can also directly enter the values for **Width** and **Height** to adjust the size of the cropped area.
 2. Click and drag the dashed area to adjust the position of the cropped area. You can also directly enter the values for **X** and **Y** to adjust the position of the cropped area.
 3. Click **OK** to complete the image cropping settings.

Figure 3-38 Cropping BKG images



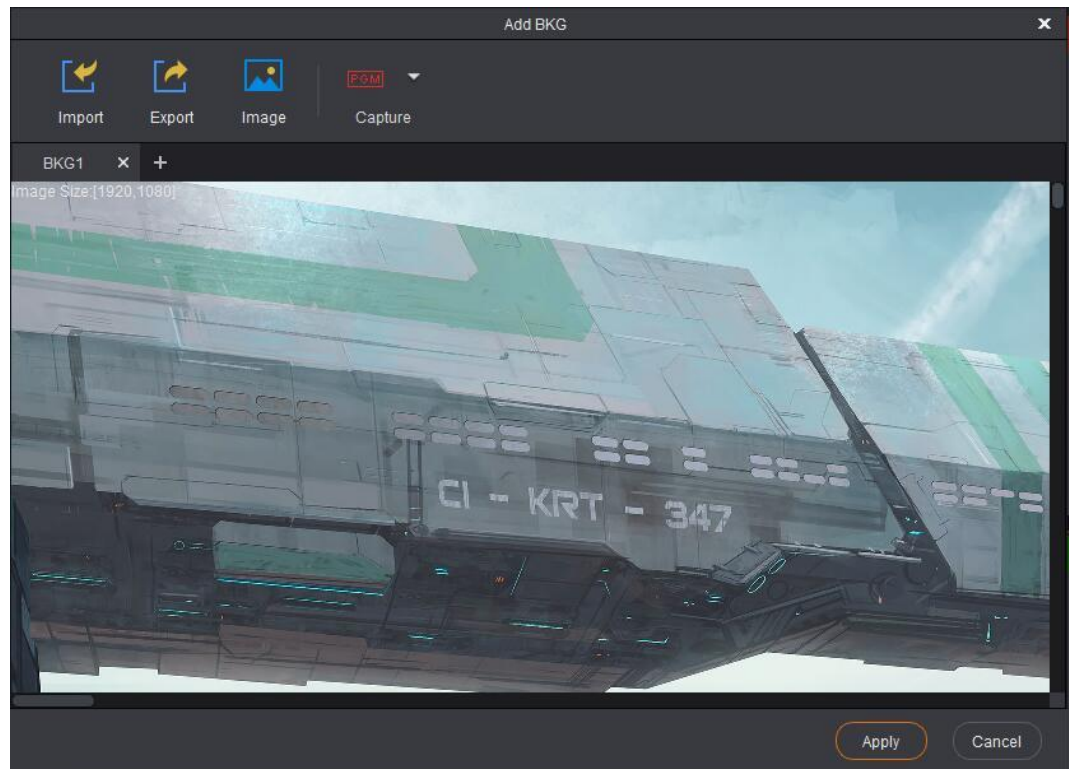
Note:

You can select **Auto Fit** to fit the image to the whole screen.

- If the image size is smaller than the screen resolution, the image is added directly.

After the image is added successfully, it is as shown in [Figure 3-39](#).

Figure 3-39 Adding BKG images




Step 5 Click **Apply** to complete adding a BKG image.

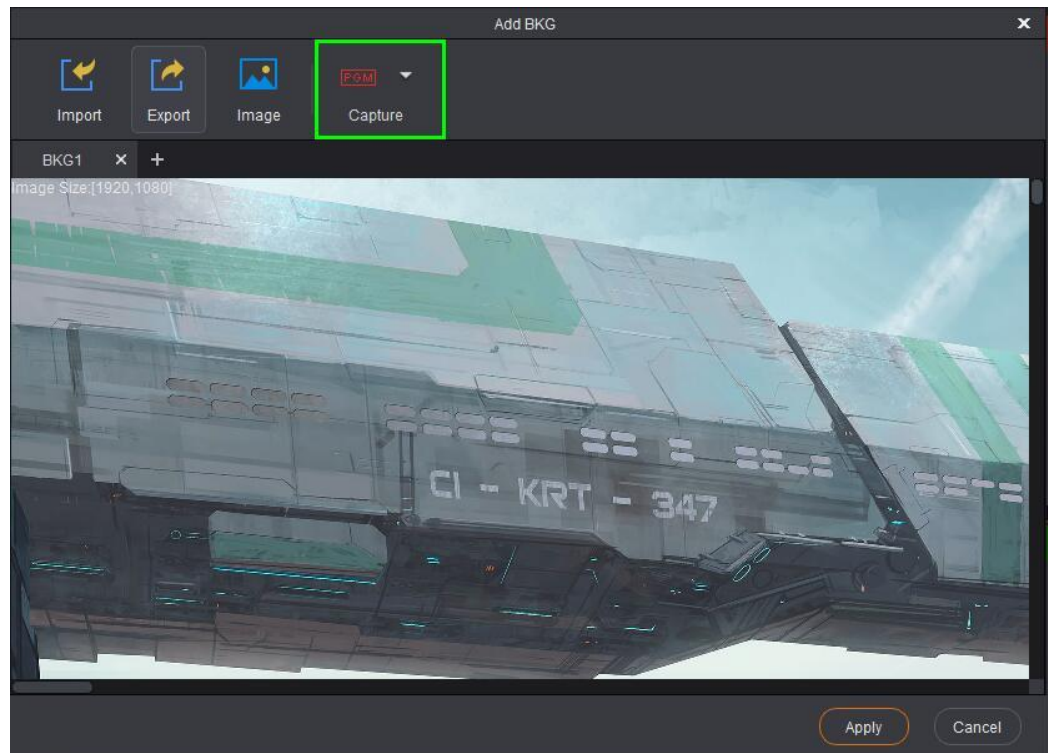
Adding Captured BKGs

You can capture the current frame of the input source and save the captured image as a BKG image.

Step 1 Click **OSD** to enter the OSD setting page.

Step 2 Click the  icon in BKG area to enter the BKG setting page.

Step 3 Click **Capture** to select the desired input source from the drop-down list, and the system will capture the input source image automatically.



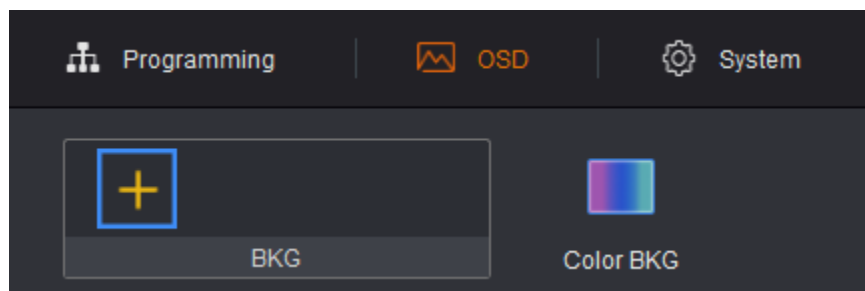
Right click the BKG area to select **Read Back**, **Read Back All** or **Delete** to perform corresponding operation to the captured BKG image.

- Read Back: Read back the current captured BKG image to V-Can.
- Read Back All: Read back all the captured BKG images to V-Can.
- Delete: Delete the current captured BKG image.

Adding Pure Color BKGs

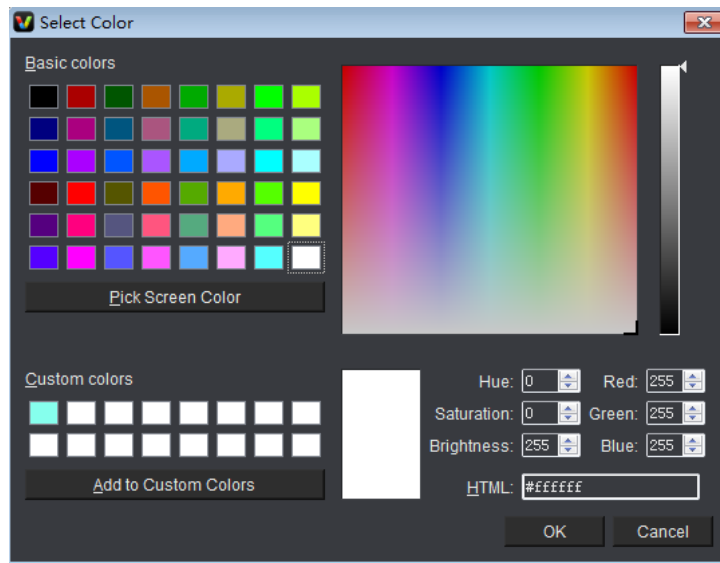
Step 1 Click **OSD** to enter the OSD setting page.

Figure 3-40 OSD menu



Step 2 Click **Pure Color** and the **Select Color** window appears, as shown in [Figure 3-41](#).

Figure 3-41 Selecting color



Step 3 Select the desired color.

Step 4 Click **OK** to complete adding the pure color BKG.

Import and Exporting BKGs

V-Can allows you to export the configured BKG files to your local hard drive and import them back again when needed.

Note:

When the connected device is N9 V2.3.X or later version, you can import and export the BKG files.

3.3 System

On the main user interface, click **System** to enter the system operation page.

The following operations can be done to manage the devices.

- **Connect:** Connect V-Can to the video processor or all-in-one controller.
- **Sync:** Keep V-Can in sync with the configuration information of the video processor or all-in-one controller.
- **Firmware:** View the versions of the related firmware of the connected devices and to update firmware.
- **Self-Test:** Check whether the display connected to the current device is normal.
- **Reset:** Reset the configuration information of the connected device to factory settings.
- **Network:** Set the IP address and subnet mask of the controlled device.
- **Language:** Select the UI language for V-Can.

3.3.1 Connecting Device

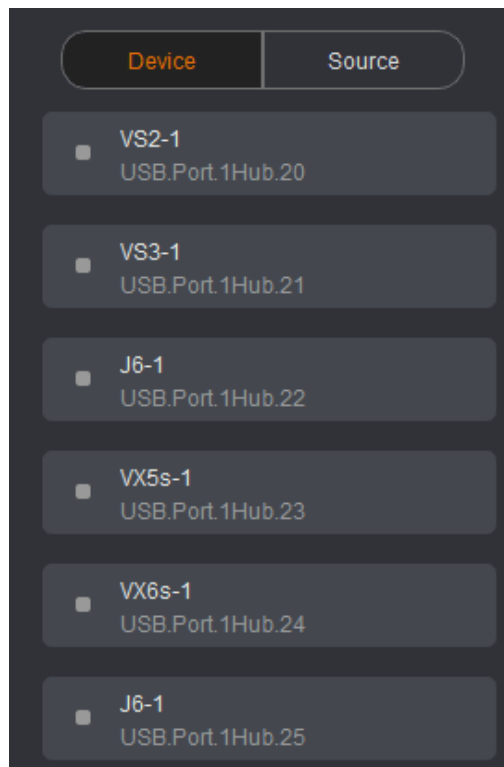
Before You Begin

Connect the video processor or all-in-one controller to PC with Ethernet cable or USB cable.

Operating Procedure

- Step 1 Go to **System > Connect**. The system will search for and connect the devices automatically.
- Step 2 Click **Device** to view the names of the connected devices, as shown in [Figure 3-42](#).

Figure 3-42 Device list



- Step 3 Click **Source** to view the connection and working status of the signal sources of the connected device.

3.3.2 Synchronization

V-Can is capable of reading the configuration data of the current device and displaying the configuration data on the interface for V-Can.

Before You Begin

Connect V-Can to the current device.

Operating Procedure

Go to **System > Sync** to synchronize the configuration information of the current device with V-Can and then display the information in V-Can.

3.3.3 Firmware Update

This function allows you to view the versions of the related firmware of the connected devices and to update firmware.

Before You Begin

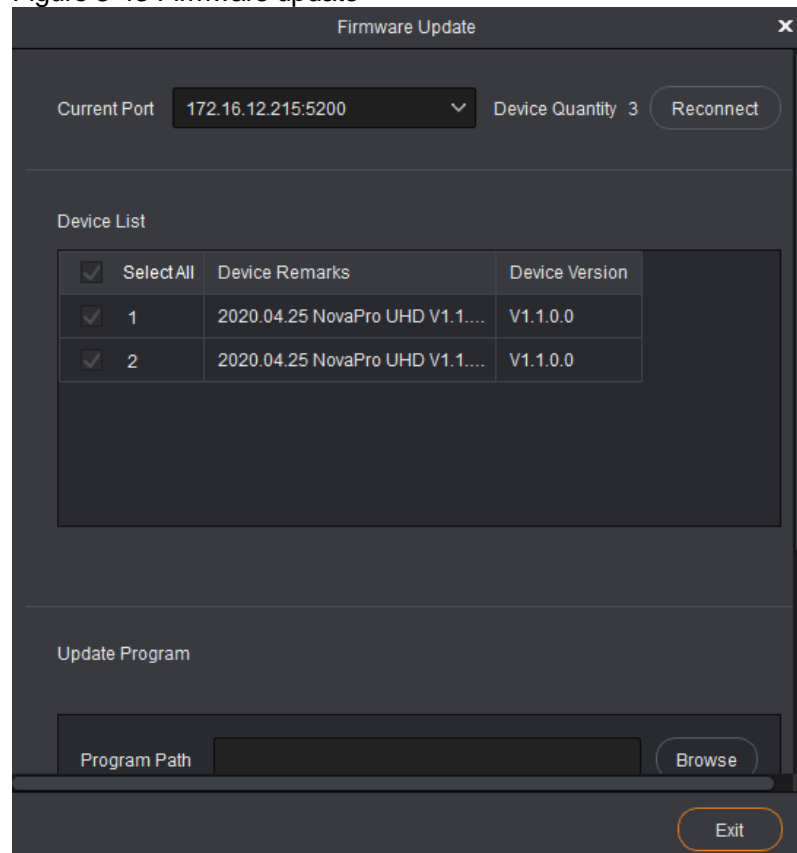
- Connect V-Can to the current device.
- Get the software version supported by the current device.

Operating Procedure

- View firmware version information.
Go to **System > Firmware**. You can view the MCU version, FPGA version and gallery version in the dialog box that appears.
- Update firmware.

Step 1 Go to **System > Firmware**. The **Firmware** dialog box appears.

Figure 3-43 Firmware update



Step 2 Select the desired communication port.

When multiple control devices are connected to V-Can, select the desired port from the drop-down list next to **Current Port**.

When the update devices are cascaded, V-Can will read the quantity of connected automatically and show the quantity in **Device Quantity**.

Device List shows the versions, MCU versions, FPGA versions, gallery versions and font versions of the all connected devices.

Step 3 Click **Browse** to select the version that has been downloaded to your local PC from the window appears.

Step 4 Click **Update** to update the firmware of the connected device.

Note:

Click **Advanced** and type “**admin**” to enter the advanced mode where you can update the device MCU, FPGA_A, FPGA_B, gallery and text font.

3.3.4 Self-Test

Use the built-in test patterns to check whether the display of the video wall connected to the current device is normal.

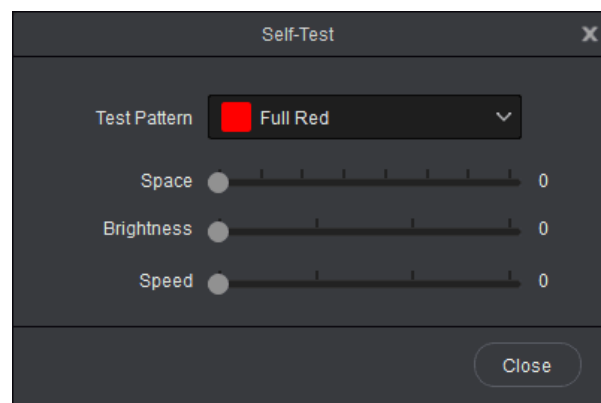
Before You Begin

- Connect V-Can to the current device.
- Connect the current device to a video display device.

Operating Procedure

Step 1 Go to **System > Self-Test** to enter the self-test configuration page, as shown in [Figure 3-44](#).

Figure 3-44 Self-test



Step 2 Click the drop-down arrow next to **Test Pattern**. In the drop-down box that appears, select different test patterns.

Step 3 You can also set the space between lines, brightness and moving speed of the test pattern.

Step 4 Check whether the test patterns are displayed normally on the LED screen connected to the device.

- Yes => The LED screen is normal.
- No => The LED screen is abnormal. Please calibrate the LED screen and check again.

Step 5 Select **Normal** or click **Close** to exit self-test.

3.3.5 Factory Reset

If you want to clear device configuration information or user preset information, this function allows you to clear the configuration information of current device with one click.

Before You Begin

Connect V-Can to the current device.

Operating Procedure

Step 1 Go to **System > Reset**.

Step 2 Please carefully read the prompt message that appears. Clicking **Yes** will clear all the configuration information of the current device.

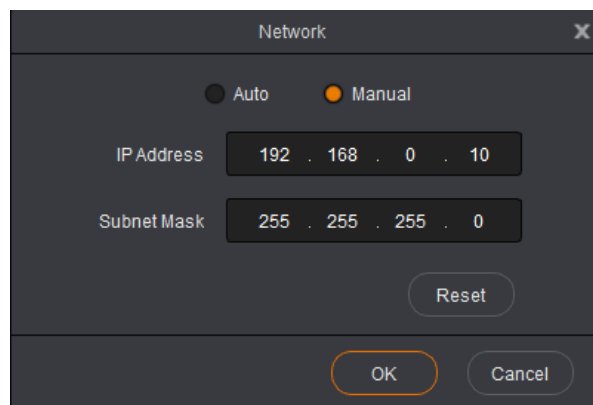
3.3.6 Network Settings

V-Can can be connected to hardware device through RJ45 Ethernet cable. The IP address and subnet mask can be set in V-Can.

Operating Procedure

Step 1 Go to **System > Network**. The network settings window appears, as shown in [Figure 3-45](#).

Figure 3-45 Network settings



Step 2 Select **Auto** or **Manual** mode.

- Auto => The device will automatically acquire an IP address and subnet mask.
- Manual => Go to [Step 3](#).

Step 3 Enter the IP address and subnet mask.

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

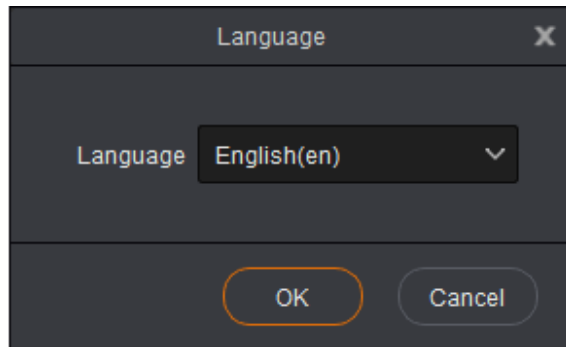
3.3.7 Language

V-Can allows users to change the UI language based on their preferences.

Operating Procedure

- Step 1 Go to **System > Language**. The language setting window appears, as shown in [Figure 3-46](#).

Figure 3-46 Language setting



- Step 2 Select English or Chinese as the UI language.
- Step 3 Click **OK** to complete the settings.