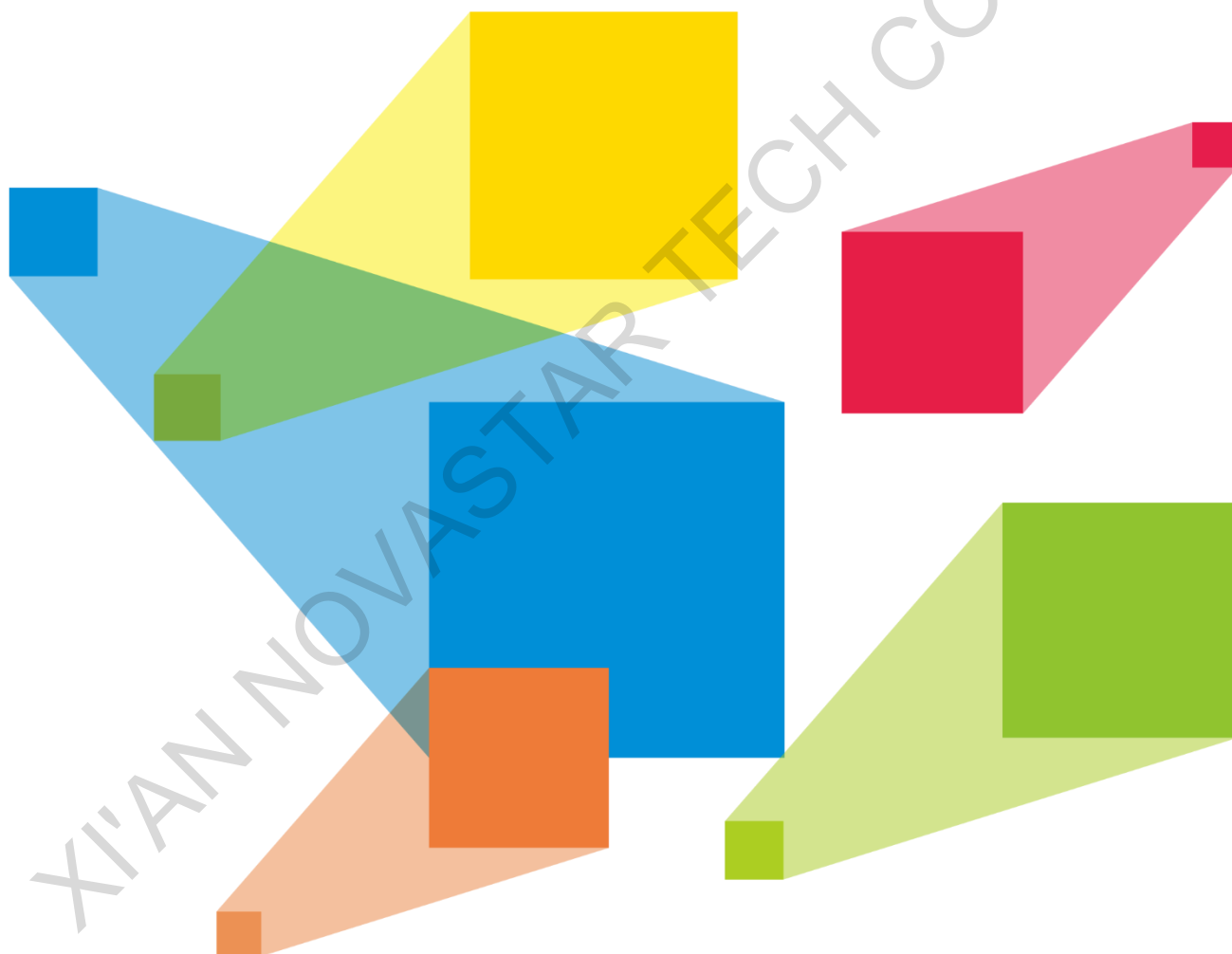


# VX6s

## All-in-One Controller

V1.3.1



User Manual

## Preface

### Reader

This document is intended for the following personnel:

- Technical support engineers
- On-site operators

### Symbols

| Symbol                                                                              | Description                                                                                                                                      |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
|    | High voltage danger: Operating voltage of the product ranges from 100 to 240 VAC.                                                                |
|    | Grounding: The product connects to the ground upon the ground wire of the power supply. Please ensure good grounding of the grounding conductor. |
|    | Electromagnetic interference: The device shall be kept away from magnet, interphone, motor or transformer.                                       |
|    | Please put the device in a dry and clean environment. In case of liquid immersing, please pull out the power plug immediately.                   |
|   | Keep the device away from explosive or flammable articles.                                                                                       |
|  | Forbid liquid or metal fragment immersing towards the machine interior to avoid security accidents.                                              |

### Change History

| Document Version | Release Date | Description                                                                                                                                                                                                                                                                                                                         |
|------------------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| V1.3.1           | 2020-12-31   | <ul style="list-style-type: none"> <li>• Updated the rear panel appearance.</li> <li>• Updated the certifications.</li> </ul>                                                                                                                                                                                                       |
| V1.3.0           | 2020-05-20   | <ul style="list-style-type: none"> <li>• Increased the maximum custom resolution width of DVI and HDMI connectors to 3,840 pixels in the direct mode.</li> <li>• Added 3 scaling modes for windows.</li> <li>• Added the product packing information.</li> <li>• Added the function of adjusting the monitor resolution.</li> </ul> |
| V1.2.0           | 2019-08-21   | <ul style="list-style-type: none"> <li>• Added the SDI1 deinterlacing function.</li> <li>• Added the SDI synchronization function.</li> <li>• Deleted the OSD function.</li> </ul>                                                                                                                                                  |
| V1.1.1           | 2019-07-17   | None                                                                                                                                                                                                                                                                                                                                |
| V1.1.0           | 2019-04-28   | <ul style="list-style-type: none"> <li>• Updated the device rear panel picture.</li> <li>• Added the hardware version description.</li> <li>• Changed part of menu names.</li> <li>• Adjusted the menu order.</li> </ul>                                                                                                            |
| V1.0.1           | 2019-03-21   | <ul style="list-style-type: none"> <li>• Optimized the description for the following points. <ul style="list-style-type: none"> <li>– The maximum video output width and height are both</li> </ul> </li> </ul>                                                                                                                     |

| Document Version | Release Date | Description                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| V1.3.1           | 2020-12-31   | <ul style="list-style-type: none"> <li>• Updated the rear panel appearance.</li> <li>• Updated the certifications.</li> </ul>                                                                                                                                                                                                                                                                                                               |
|                  |              | <p>4,096 pixels.</p> <ul style="list-style-type: none"> <li>– Updated the description for the CONTROL area on the device front panel.</li> <li>– Updated the description for the INPUTS area on the device front panel.</li> </ul> <ul style="list-style-type: none"> <li>• Added the description for getting stuck when switching the input source.</li> <li>• Added the description for the audio output of the Ethernet port.</li> </ul> |
| V1.0.0           | 2019-03-09   | First release                                                                                                                                                                                                                                                                                                                                                                                                                               |

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# 1 Overview

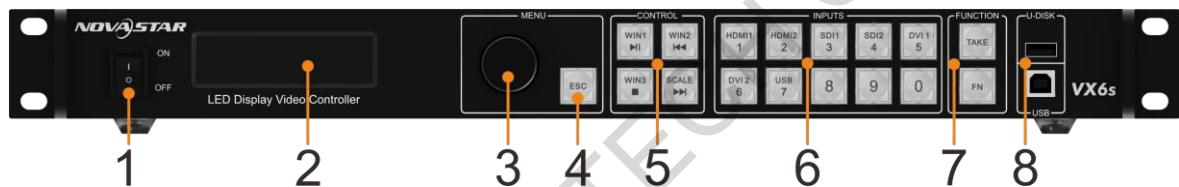
The VX6s is an all-in-one controller that integrates sending card functions with video processing. Designed with powerful video processing capability, it supports 10 video inputs and 6 Gigabit Ethernet outputs.

Based on the powerful FPGA processing platform, the VX6s supports multiple transition effects, such as quick seamless switching and fade, providing flexible display controlling and outstanding video presentations.

## 2 Appearance

### 2.1 Appearance

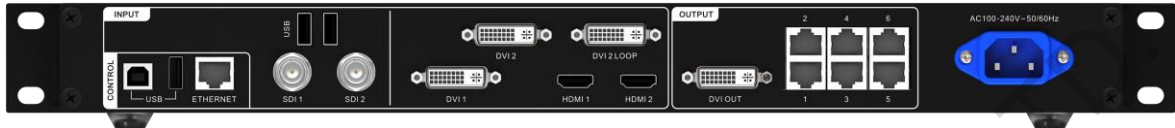
#### Front Panel



| No. | Button                 | Function                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|-----|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | ON/OFF button          | Power button                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 2   | OLED screen            | Displays the current status and setting menu of the device.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 3   | Knob                   | <ul style="list-style-type: none"> <li>Press the knob to confirm the settings or access the submenu.</li> <li>Rotate the knob to select a menu item or adjust a parameter.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4   | ESC button             | Pressing the button exits the current menu or operation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 5   | Window control buttons | Pressing a button enters the corresponding window property menu.<br>Statuses of button indicators: <ul style="list-style-type: none"> <li>On: The window is open.</li> <li>Off: The window is closed.</li> <li>Flashing: The window is being edited.</li> </ul> <ul style="list-style-type: none"> <li>When a window is open, holding down the window button can close the window.</li> <li>In the USB playback mode, you can play, pause, play previous, play next or stop current playback.</li> <li><b>SCALE</b>: This is a shortcut button for auto fit function. You can press this button to make the window of the lowest priority fit the screen.</li> </ul> |
| 6   | Input source buttons   | Pressing the button switches the input source for the window. The button indicators indicate the statuses of the input source.<br>Button indicator descriptions: <ul style="list-style-type: none"> <li>Always on: The signal source is accessed.</li> <li>Flashing: The input source is in use, but no signal source is accessed.</li> <li>Off: The input source is not in use and no signal source is accessed.</li> </ul>                                                                                                                                                                                                                                         |
| 7   | Function buttons       | <ul style="list-style-type: none"> <li><b>TAKE</b>: In the switcher mode, pressing the <b>TAKE</b> button can switch the PVW to PGM seamlessly with the transition effect set previously.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

| No. | Button | Function                                                                                                                                                        |
|-----|--------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|     |        | <ul style="list-style-type: none"> <li><b>FN:</b> A custom menu button. In USB playback mode, press the button to play the media files in USB drive.</li> </ul> |
| 8   | USB    | <ul style="list-style-type: none"> <li>USB (Type-B): Connects to the upper computer.</li> <li>USB (Type-A): A reserved port</li> </ul>                          |

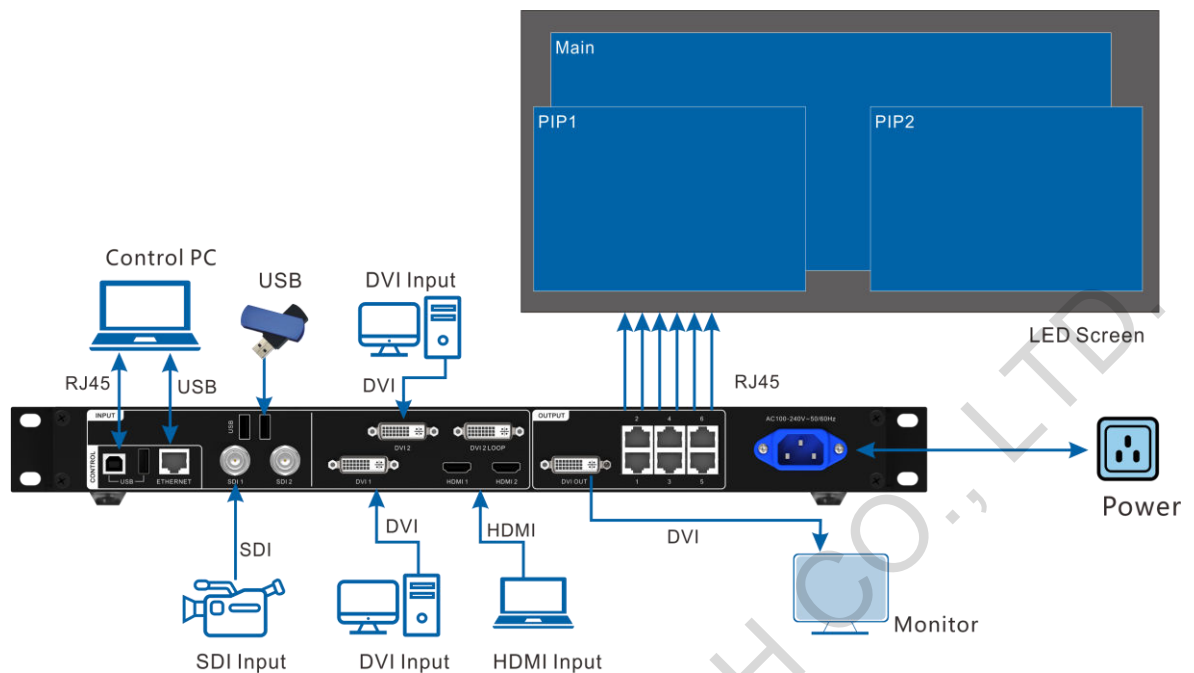
## Rear Panel



| Input     |          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connector | Quantity | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3G-SDI    | 2        | <ul style="list-style-type: none"> <li>Supports input resolutions up to 1920×1080@60Hz and downward compatibility.</li> <li>Supports both progressive and interlaced signals.</li> <li>SDI1 supports de-interlacing.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| USB 2.0   | 2        | <p>Connects to a mouse/keyboard, or connects to a USB drive to play media files stored in the drive. The supported USB drives and the formats of the media files in it are described as follows.</p> <ul style="list-style-type: none"> <li>USB drive: FAT/FAT32<br/>The USB drive cannot be a partitioned one or used as the system startup disk.</li> <li>Picture file format: JPG, JPEG, BMP, PNG and WEBP</li> <li>Video file format: MP4, AVI, MKV, MOV, 3GP, FLV and MPG<br/>Video coding: MPEG-1/2, MPEG-4, H.264/AVC, MVC, H.265/HEVC, H.263, GOOGLE VP8, VC-1 and MOTION JPEG</li> <li>Audio file format: MP3, WMA, WAV and 3GP<br/>Audio coding:               <ul style="list-style-type: none"> <li>MPEG Audio: MPEG1/2/2.5 Audio Layer1/2/3</li> <li>Windows Media Audio: WMA Version4/4.1/7/8/9, wmapro</li> <li>WAV Audio: MS-ADPCM, IMA-ADPCM, PCM</li> <li>FLAC Audio: Compress Level 0-8</li> <li>AAC Audio: ADIF, ATDS Header AAC-LC and AAC-HE, AAC-ELD</li> <li>AMR Audio: AMR-NB, AMR-WB</li> </ul> </li> </ul> |
| DVI       | 2        | <ul style="list-style-type: none"> <li>VESA standard, input resolutions up to 1920×1200@60Hz</li> <li>Support for custom resolutions:               <ul style="list-style-type: none"> <li>Direct mode: Width up to 3,840 pixels (3840×648@60Hz)</li> <li>Switcher mode: Width up to 2,048 pixels (2048×1200@60Hz)</li> <li>Height up to 1,600 pixels (1510×1600@60Hz)</li> </ul> </li> <li> HDCP 1.4 compliant</li> <li> DOES NOT support interlaced signal input.</li> </ul> <p>The frame rate of the DVI connector is 60 Hz by default and the supported frequently used standard resolutions are as follows:</p>                                                                                                                                                                                                                                                                                                                                                                                                                  |

|                  |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  |                 | <ul style="list-style-type: none"> <li>• 800×600</li> <li>• 1024×768</li> <li>• 1280×720</li> <li>• 1280×768</li> <li>• 1280×800</li> <li>• 1280×1024</li> <li>• 1366×768</li> <li>• 1440×900</li> <li>• 1600×1200</li> <li>• 1680×1050</li> <li>• 1920×1080</li> <li>• 1920×1200</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| DVI LOOP         | 1               | DVI loop output connector                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| HDMI             | 2               | <ul style="list-style-type: none"> <li>• VESA standard, input resolutions up to 1920×1200@60Hz</li> <li>• Support for custom resolutions: <ul style="list-style-type: none"> <li>– Direct mode: Width up to 3,840 pixels (3840×648@60Hz)</li> <li>– Switcher mode: Width up to 2,048 pixels (2048×1200@60Hz)</li> <li>– Height up to 1,600 pixels (1510×1600@60Hz)</li> </ul> </li> <li>• HDCP 1.4 compliant</li> <li>• DOES NOT support interlaced signal input.</li> </ul> <p>The frame rate of the DVI connector is 60 Hz by default and the supported frequently used standard resolutions are as follows:</p> <ul style="list-style-type: none"> <li>• 800×600</li> <li>• 1024×768</li> <li>• 1280×720</li> <li>• 1280×768</li> <li>• 1280×800</li> <li>• 1280×1024</li> <li>• 1366×768</li> <li>• 1440×900</li> <li>• 1600×1200</li> <li>• 1680×1050</li> <li>• 1920×1080</li> <li>• 1920×1200</li> </ul> |
| <b>Output</b>    |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Connector</b> | <b>Quantity</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Ethernet         | 6               | 6 Ethernet outputs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| DVI              | 1               | <p>A monitoring connector, which can be set to preview the editing image or monitor the PGM</p> <p>The frame rate of the monitor output is 60 Hz and the supported standard resolutions are as follows:</p> <ul style="list-style-type: none"> <li>• 800×600</li> <li>• 1024×768</li> <li>• 1280×720</li> <li>• 1280×768</li> <li>• 1280×800</li> <li>• 1280×1024</li> <li>• 1366×768</li> <li>• 1440×900</li> <li>• 1600×1200</li> <li>• 1680×1050</li> <li>• 1920×1080</li> <li>• 1920×1200</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Control</b>   |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Connector</b> | <b>Quantity</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| ETHERNET         | 1               | Connects to the PC for communication, or to the network.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| USB              | 2               | <ul style="list-style-type: none"> <li>• 1 × USB (Type-B) <ul style="list-style-type: none"> <li>– Connects to the PC for device control.</li> <li>– Used as the input connector for cascading devices</li> </ul> </li> <li>• 1 × USB (Type-A) <ul style="list-style-type: none"> <li>– Used as the output connector for cascading devices</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## 2.2 Applications



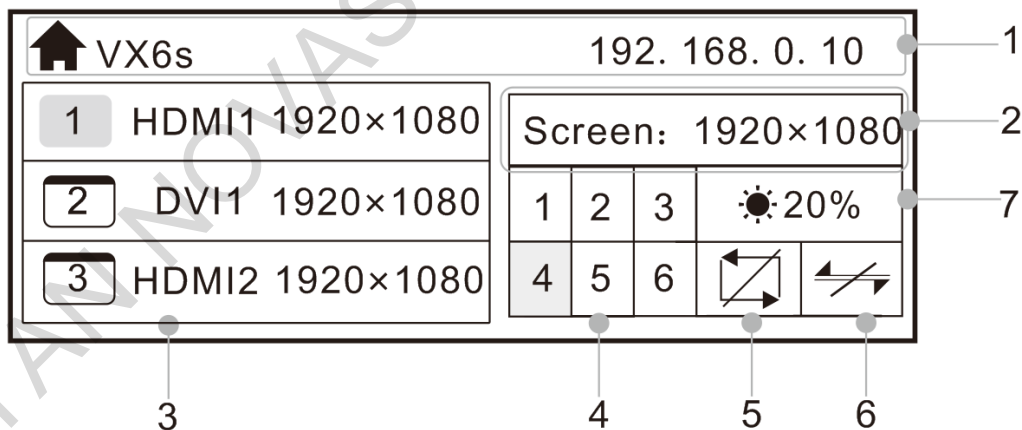
**Note:**

This product should be use horizontally only. Wall mounting is not permitted.

## 2.3 Home Screen

After the VX6s is powered on, the home screen is shown in the figure below.

Figure 2-1 Home screen



| No. | Icon    | Description                                                                                                                                                                    |
|-----|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | /       | Product name and device IP address                                                                                                                                             |
| 2   | /       | Resolution of configured screen and output refresh rate                                                                                                                        |
| 3   | 1 HDMI1 | Current window status, input source and input source resolution of each window<br>Window 1 is enabled, the input source is HDMI1 and the input source resolution is 1920×1080. |
|     | 2 DVI1  | Window 2 is enabled, the input source is DVI1 and the input source resolution is 1920×1080.                                                                                    |

|       |  |                                                                                                                                                                                                                                                      |
|-------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4     |  | Ethernet port 4 is used for output and the device works in primary mode.                                                                                                                                                                             |
|       |  | Ethernet port 4 is used for output and the device works in backup mode.<br>In backup mode, the small triangle icon at the top left flashes.                                                                                                          |
| 5     |  | Sync mode is not enabled.                                                                                                                                                                                                                            |
|       |  | Sync mode is enabled and DVI 1 is used as the sync source.<br>Set DVI 1 as sync source successfully.                                                                                                                                                 |
|       |  | Sync mode is enabled and DVI 2 is used as the sync source.<br>Set DVI 2 as sync source successfully.                                                                                                                                                 |
|       |  | Sync mode is enabled and HDMI 1 is used as the sync source.<br>Set HDMI 1 as sync source successfully.                                                                                                                                               |
|       |  | Sync mode is enabled and HDMI 2 is used as the sync source.<br>Set HDMI 2 as sync source successfully.                                                                                                                                               |
|       |  | Sync mode is enabled and SDI 1 is used as the sync source.<br>Set SDI 1 as sync source successfully.                                                                                                                                                 |
|       |  | Sync mode is enabled and SDI 2 is used as the sync source.<br>Set SDI 2 as sync source successfully.                                                                                                                                                 |
| 6     |  | The device is not connected to the control computer.                                                                                                                                                                                                 |
|       |  | The device is connected to the control computer via USB port.                                                                                                                                                                                        |
|       |  | The device is connected to the control computer via Ethernet port.                                                                                                                                                                                   |
| 7     |  | LED screen brightness                                                                                                                                                                                                                                |
| Other |  | <ul style="list-style-type: none"> <li>Hold down the knob and ESC button simultaneously to lock or unlock all the buttons.</li> <li>If the icon  appears on the home screen, all the buttons are locked currently and cannot be operated.</li> </ul> |
|       |  | All the buttons are unlocked.                                                                                                                                                                                                                        |

# 3

## Menu Operations

The VX6s has powerful functions and is easy to operate. By using the knob and ESC button, you can perform any operations. Besides, you can switch the input sources by pressing only one button.

### 3.1 Operation Instructions

#### Knob

- On the home screen, pressing the knob enters the operation menu screen.
- On the operation menu screen, rotating the knob selects a menu item, and pressing the knob confirms the selection or enters the submenu.
- When a menu item with parameters is selected, you can rotate the knob to adjust the parameters. Please note that after adjustment, you need to press the knob again to confirm the adjustment.

## ESC

This is a return button used to exit current menu or operation.

## Button Locking and Unlocking

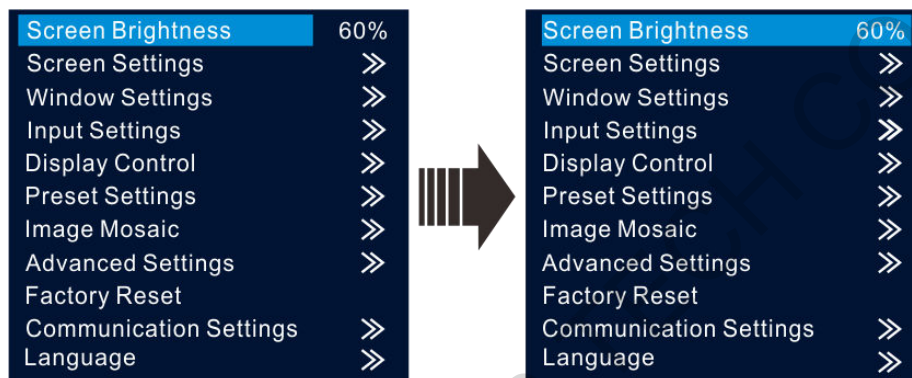
Hold down the knob and **ESC** button simultaneously for 3s or longer to lock or unlock all the buttons.

## 3.2 Screen Brightness

This function is used to adjust the LED display brightness.

On the home screen, press the knob to enter the menu. Then, rotate the knob to select **Screen Brightness** and press the knob to enter the brightness adjustment status. At last, rotate the knob to adjust the brightness value. After you set the brightness value, press the knob to confirm it.

Figure 3-1 Screen brightness



## 3.3 Screen Settings

### 3.3.1 Quick Configuration

#### Prerequisites

- The LED screen is a regular one, not an irregular one.
- The cabinets of the LED screen are regular, and each cabinet has the same resolution.
- The cabinet connection (data flow) must be one of the following 8 patterns. The physical connection of cabinets loaded by each Ethernet port must be along the same direction.

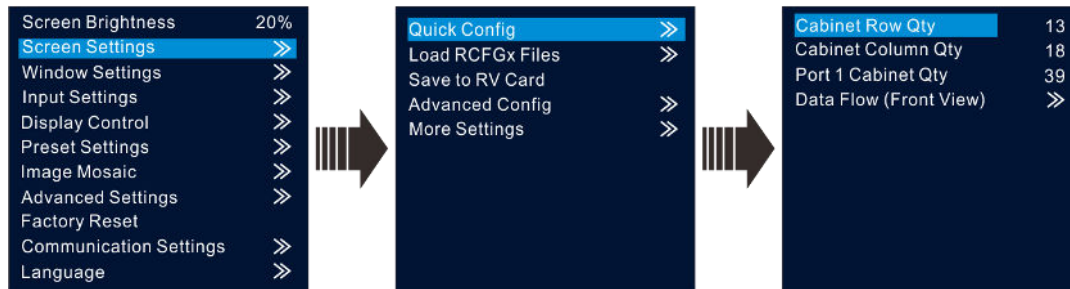


- During data flow settings, ensure that the Ethernet port 1 is at the beginning position of the whole physical connection and the ports must be connected in order.

## Operating Procedure

- Step 1 Power on the LED screen.
- Step 2 On the menu page, choose **Screen Settings** > **Quick Config** to enter the **Quick Config** page.
- Step 3 Set **Cabinet Row Qty** and **Cabinet Column Qty** (number of cabinet rows and columns) based on actual conditions of the LED screen.

Figure 3-2 Quick configuration



- Step 4 Rotate the knob to select **Port 1 Cabinet Qty** (number of cabinets loaded by Ethernet port 1) and set the number of cabinets.

**Note:**

The number of cabinets loaded by Ethernet port should follow the rules below.

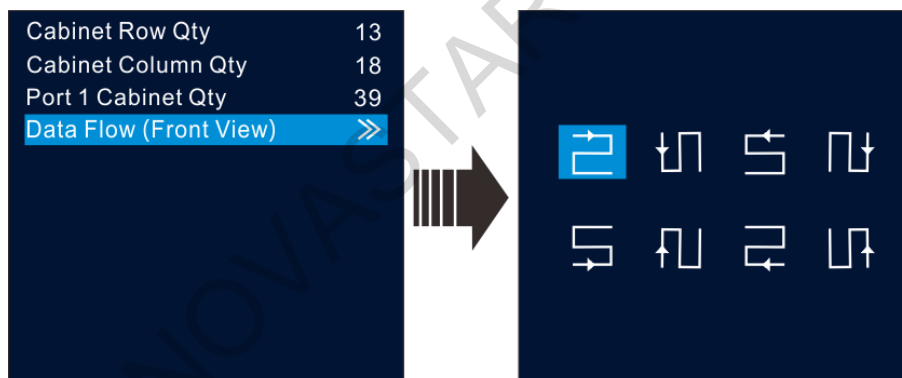
Ethernet port 1 ≥ Ethernet port 2 ≥ Ethernet port 3 ≥ Ethernet port 4 ≥ Ethernet port 5 ≥ Ethernet port 6

The number of cabinets loaded by each Ethernet port must be the integral multiple of the number of cabinet rows or columns in the LED screen.

- Step 5 Rotate the knob to select **Data Flow (Front View)** and press the knob to select one data flow according to current cabinet connection.

When setting the data flow, you can view the results of different data flow patterns in real time on LED display by rotating the knob. When you are satisfied with the LED display image in which no image parts are overlapped or displayed repeatedly, press the knob to apply and save the selected data flow. If you press the **ESC** button, you will exit current operation and the data flow in preview will not be saved.

Figure 3-3 Data flow

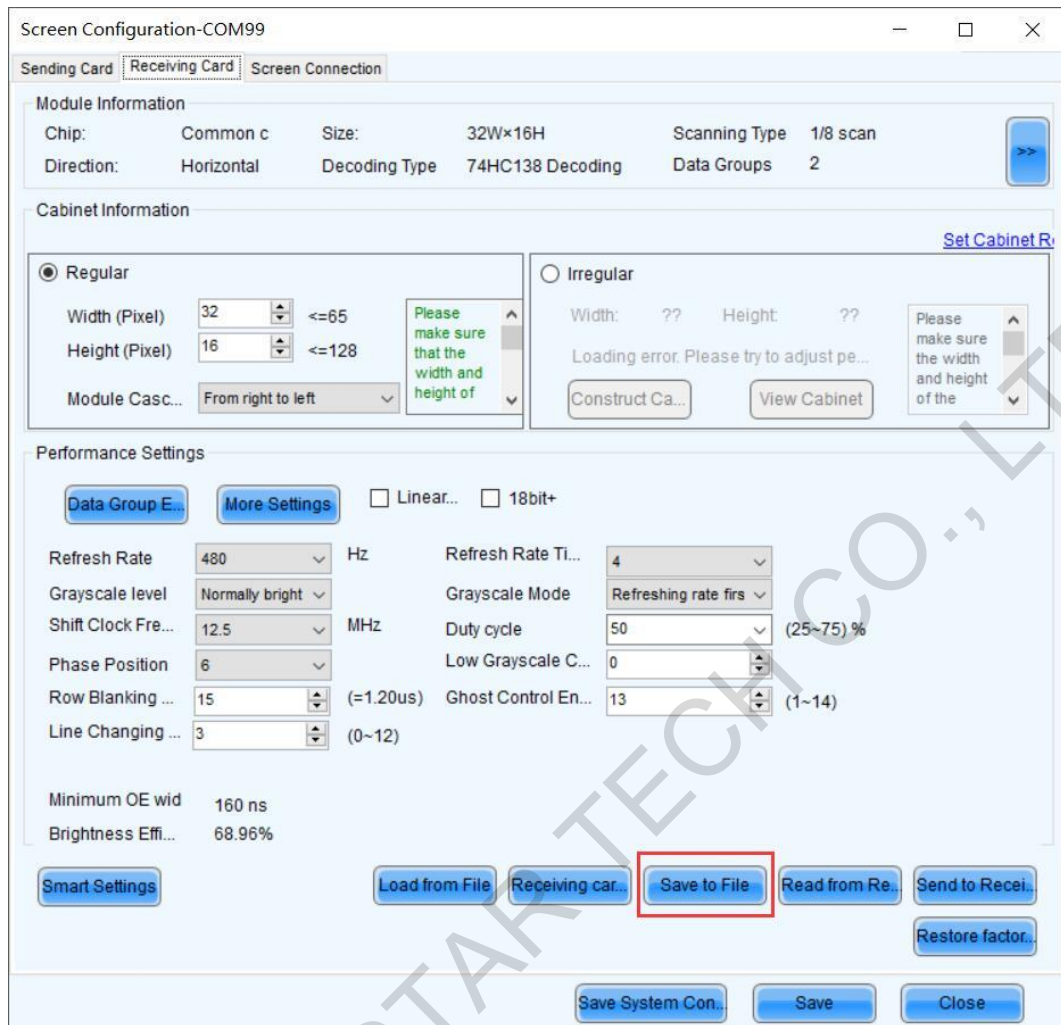


### 3.3.2 Loading RCFGx Files

After the LED screen is powered on, if a certain cabinet or the entire LED screen cannot be lit, you can load the receiving card configuration files (namely RCFGx files) that have been configured on NovaLCT software to the VX6s.

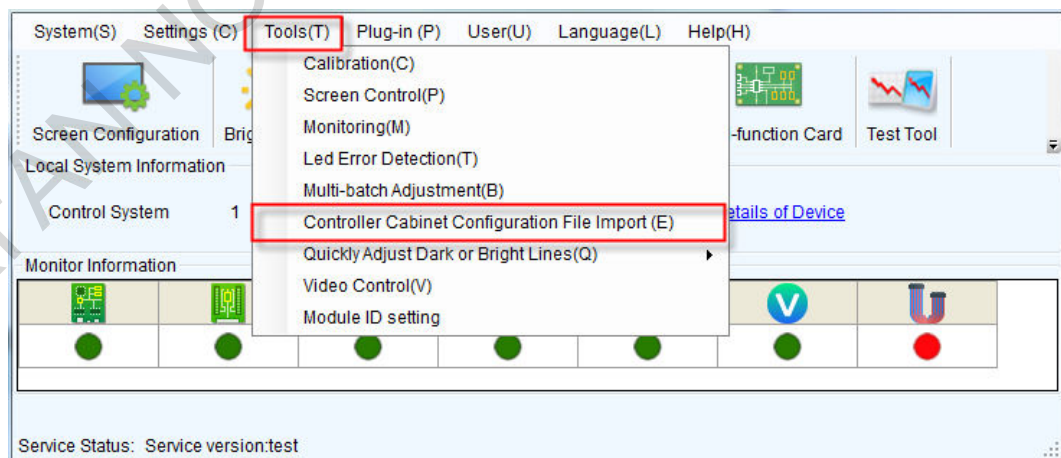
- Step 1 On NovaLCT, after you configured the screen, click **Save to File** to save the configuration file to PC.

Figure 3-4 Saving receiving card configuration file



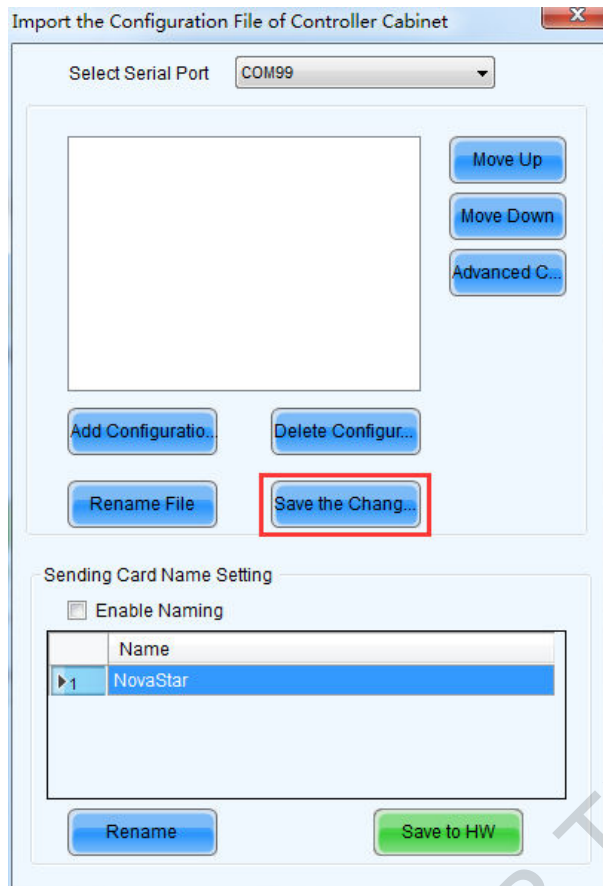
- Step 2 On NovaLCT, choose **Tools > Controller Cabinet Configuration File Import**, click **Add Configuration File** and select the configuration file you have saved to PC in step 1.

Figure 3-5 Importing controller cabinet configuration file



- Step 3 Review the configuration file name and click **Save the Change to HW** to save the configuration file to the VX6s.

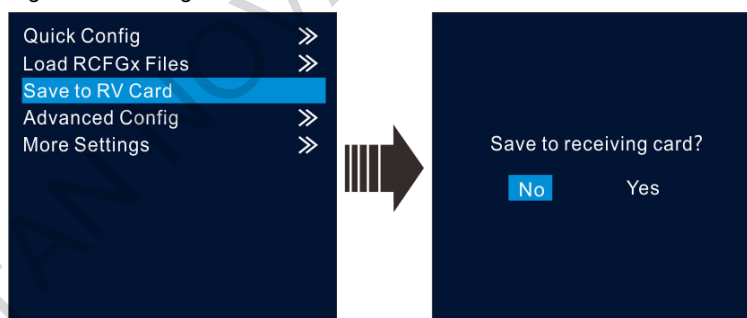
Figure 3-6 Saving configuration file to VX6s



### 3.3.3 Saving to RV Card

After the cabinet configuration file is loaded or the receiving card color is changed, if you save the configuration data to receiving card by using the **Save to RV Card** function, the configuration data will not be lost even if power failure occurred.

Figure 3-7 Saving to hardware

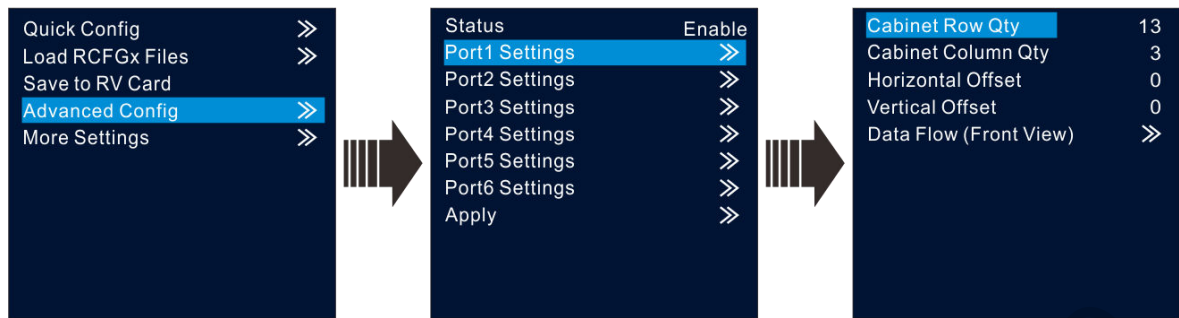


### 3.3.4 Advanced Configuration

The connection of cabinets loaded by each Ethernet port must follow the 8 data flow patterns provided in the VX6s.

In advanced configuration, you must manually set the **Cabinet Row Qty**, **Cabinet Column Qty**, **Horizontal Offset**, **Vertical Offset** and **Data Flow** for each Ethernet port. It is recommended that you use this function under guidance of technical personnel.

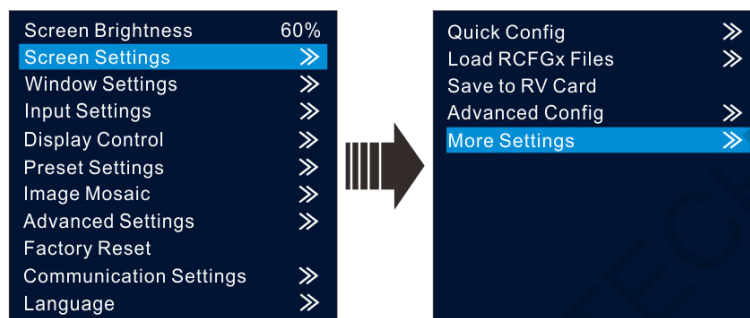
Figure 3-8 Advanced configuration



### 3.3.5 More Settings

You can set the LED screen color, configuration template and cabinet mapping information.

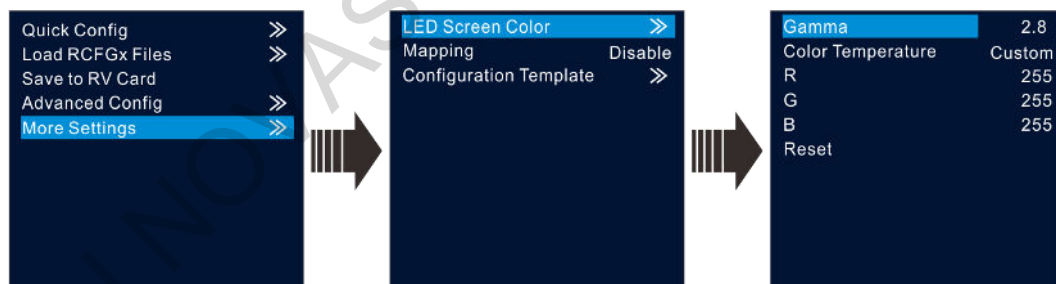
Figure 3-9 More settings



### LED Screen Color

You can adjust the color (namely image quality) of the images displayed on the screen, including Gamma, color temperature, red/green/blue brightness (R/G/B), and reset the image quality to the default values.

Figure 3-10 LED screen color



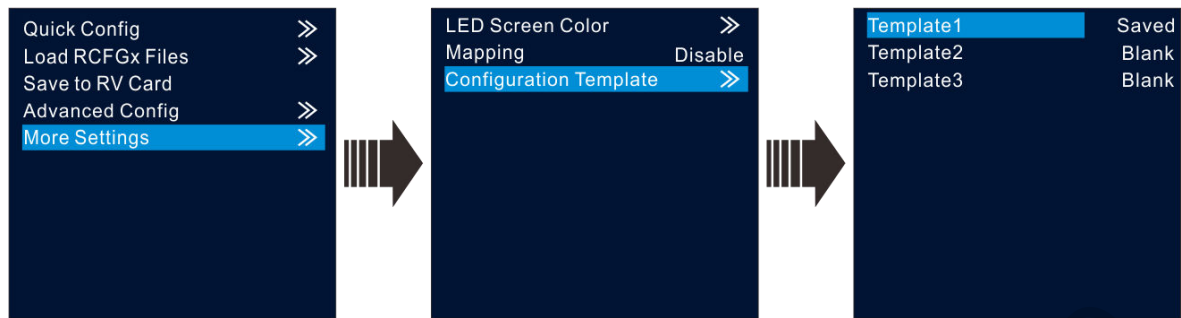
### Mapping

When the **Mapping** function is enabled, each cabinet's receiving card No. and Ethernet port information will be displayed on the LED display, which makes it convenient to check the cabinet information.

### Configuration Template

The VX6s supports configuring 3 templates of screen configuration. After the screen is configured, save the configuration parameters as a configuration template. The screen configuration parameters can be directly applied by choosing a template.

Figure 3-11 Configuration template



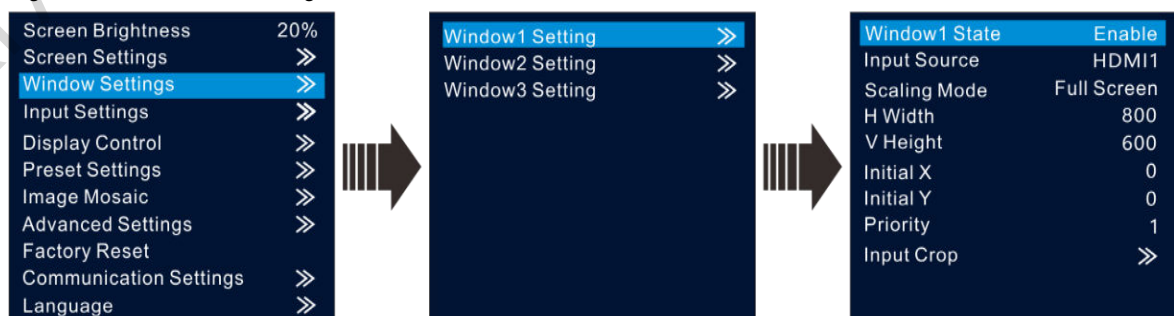
### 3.4 Window Settings

The VX6s supports up to 3 windows. The input source, size, position, priority and input cropping of each window can be set.

#### Window Settings

- Step 1 Rotate the knob to select **Window1 Setting**, and press the knob to enter the submenu.
- Step 2 Rotate the knob to select a parameter item you want to adjust and press the knob to enter the parameter adjustment status. Then, rotate the knob to adjust the parameter value. At last, press the knob again to confirm the parameter value.
- **Window1 State:** The status of current window
  - **Input Source:** The input source used by current window
  - **Scaling Mode:** Three scaling modes are provided. The options are **Full Screen**, **Pixel to Pixel** and **Custom**.
    - **Full Screen:** Make the window image display in full screen.
    - **Pixel to Pixel:** The window size is the same as the input source image resolution.
    - **Custom:** Customize the image size.
  - **H Width:** The number of pixels in the horizontal direction
  - **V Height:** The number of pixels in the vertical direction
  - **Initial X:** The initial horizontal coordinate of the window
  - **Initial Y:** The initial vertical coordinate of the window
  - **Priority:** The displaying order of the window
  - **Input Crop:** The function of cropping the input source and displaying the cropped input source on current window

Figure 3-12 Window settings



## 3.5 Input Settings

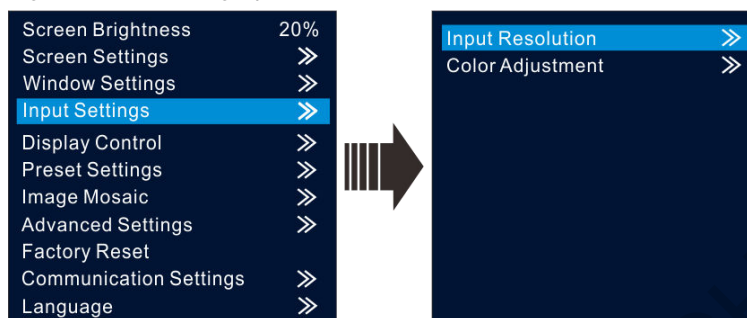
The resolutions of input sources can be changed on the VX6s. Currently, only HDMI and DVI connectors support the input resolution settings. To change the resolutions of other connectors, the only way is to change the output resolutions on the front-end devices.

### 3.5.1 Input Resolution

The input resolution can be set through either of the following ways.

- Choosing a standard resolution
- Customizing a resolution

Figure 3-13 Setting input resolution

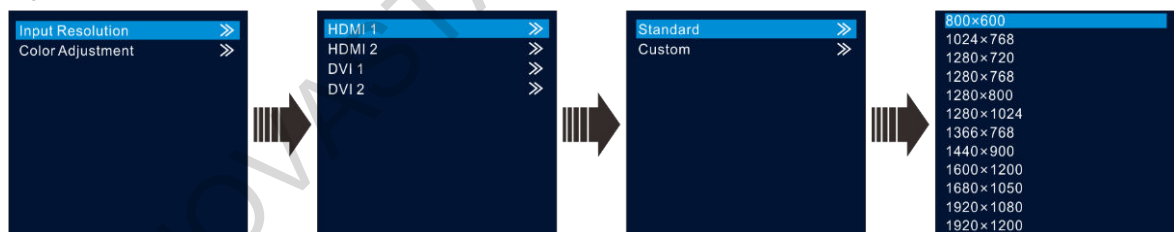


### Standard Resolution

The refresh rate of standard resolutions defaults to 60 Hz. If you want to change the refresh rate, go to the **Custom** menu.

Standard resolutions: 800×600, 1024×768, 1280×720, 1280×768, 1280×800, 1280×1024, 1366×768, 1440×900, 1600×1200, 1680×1050, 1920×1080, 1920×1200.

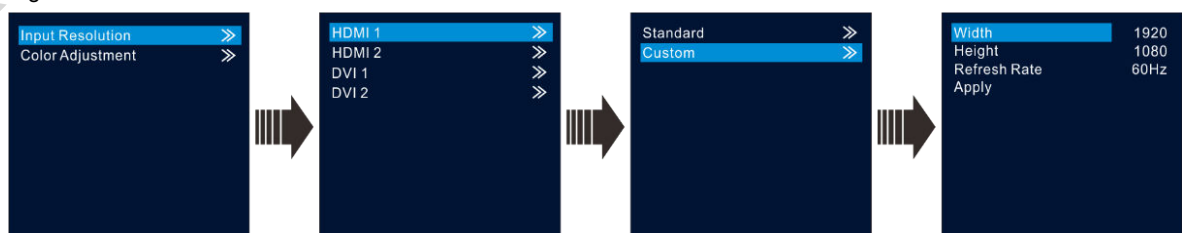
Figure 3-14 Standard resolution



### Custom Resolution

Rotate the knob to set a custom width (increasing by even numbers), height and refresh rate. After setting these parameters, rotate the knob to select **Apply** and press the knob to apply the settings. If you do not press the knob to apply the settings, the custom resolution will not take effect.

Figure 3-15 Custom resolution

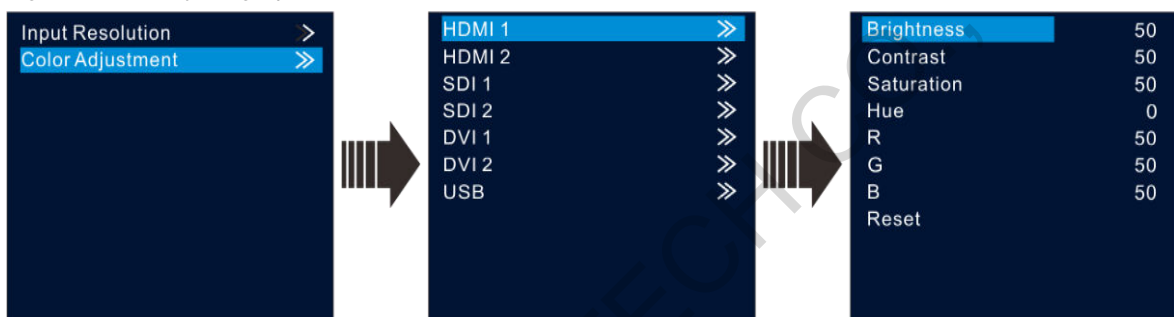


### 3.5.2 Color Adjustment

The VX6s supports adjustment of the input color (namely image quality), including brightness, contrast, saturation, hue and red/green/blue brightness (**R/G/B**).

- Step 1 Choose **Color Adjustment** > **HDMI 1** to enter the color adjustment page of HDMI 1 input source.
- Step 2 Rotate the knob to select a parameter item you want to adjust and press the knob to enter the parameter adjustment status. Then, rotate the knob to adjust the parameter value. At last, press the knob again to confirm the adjustment.
- **Brightness**: The brightness of the input source
  - **Contrast**: The ratio of the luminance of the brightest color (white) to that of the darkest color (black)
  - **Saturation**: The degree of how deep or how light the colors of the input source image is
  - **Hue**: The category of the colors of the input source image, namely red, green and blue
  - **R**: The color cast of input source images. When the red parameter value is greater, the image color is redder. The **G** and **B** have the same meaning.
  - **Reset**: Reset all parameters in the input color adjustment menu to the original default values.

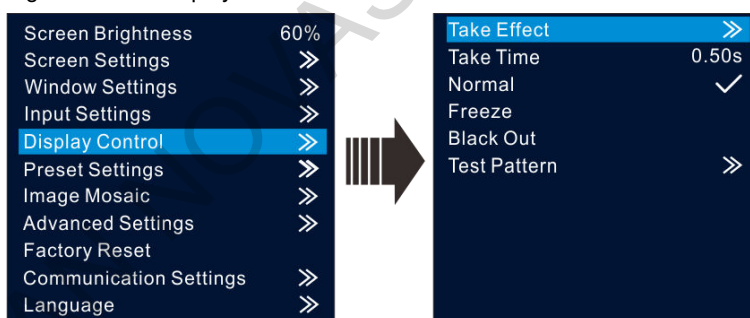
Figure 3-16 Adjusting input color



### 3.6 Display Control

This function is used to control the display. You can set the display to go black, display a test pattern, or go to normal display. You can also set the Take effect and Take speed.

Figure 3-17 Display control



- **Take Effect**: The transition effects of sending PVW image to PGM. There are 22 effects in total, such as cut, fade, wipe from top, wipe from bottom, etc.
- **Take Time**: Set the duration of the transition effect. The value range is 0.50s–2.00s.
- **Normal**: The LED screen displays the content of current input source normally.
- **Freeze**: The current frame is frozen and always displayed.
- **Black Out**: The screen goes black and does not display the content.
- **Test Pattern**: There are 22 test patterns in total, including pure colors, gradients and grids. You can adjust the brightness, space and speed of the test pattern based on test needs.

Figure 3-18 Test pattern

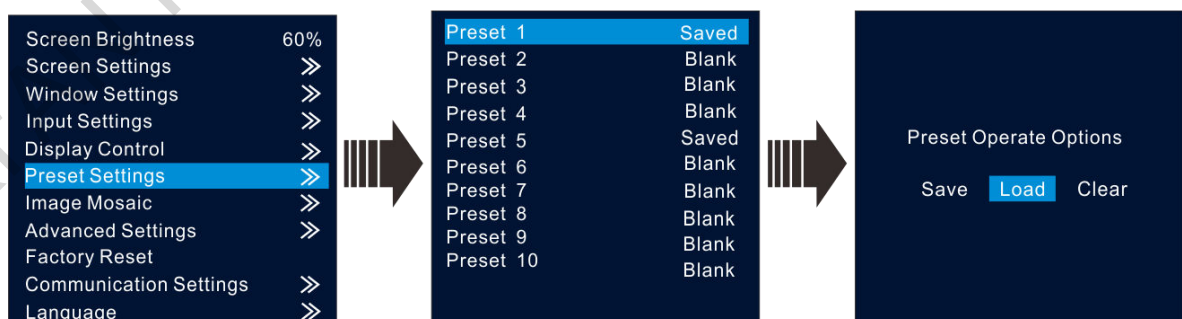


### 3.7 Preset Settings

The VX6s supports 16 user presets. After the preset data is configured, you can load and use the configured presets by pressing the number buttons on device front panel directly.

- Step 1 On the main menu screen, rotate the knob to select **Preset Settings**.
- Step 2 Rotate and press the knob to select a preset. Then rotate the knob to select **Save** to save the settings to the selected preset.
- Step 3 You can load a preset through either of the following ways.
  - Rotate the knob to **Load** and press the knob to load the selected preset.
  - Press the number button on the device front panel to load a preset.

Figure 3-19 Preset settings



### 3.8 Image Mosaic

When the pixel count of the LED screen is larger than the loading capacity of a single VX6s unit, the image mosaic function is required. The total loading capacity of all cascaded VX6s units should be greater than or equal to the total pixel count of the LED screen. The options are **Disable**, **Equal** and **Unequal**.

- **Disable**

Disable the image mosaic function.

- **Equal**

The areas loaded by all VX6s units are the same. You need to set the total H pixels, total V pixels, row quantity, column quantity and current load area position.

- **Unequal**

The areas loaded by all VX6s units are not the same. You need to set the total H pixels, total V pixels, load area width, load area height, as well as the start X and Y of the load area.

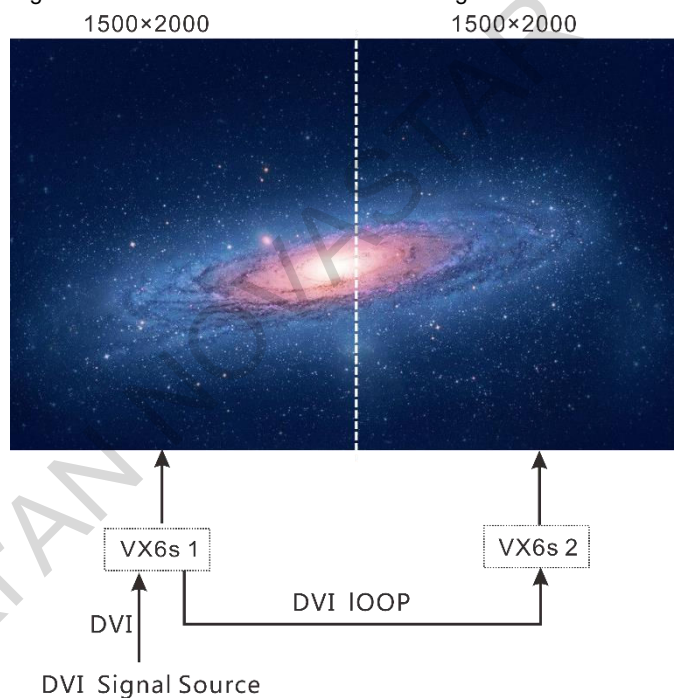
#### Note:

- When the image mosaic function is enabled, **Scale** function will be disabled automatically.
- When HDMI or SDI input source is used for image mosaic, it is suggested you use video splicers or video splitters in the front end.
- When the image mosaic function is enabled, it is suggested you select the current playback source as the sync source.

#### Example:

The total pixels of the LED screen is 3000×2000, which exceeds the loading capacity of a single VX6s unit. You can use two VX6s units for image mosaic. The connection is shown as below.

Figure 3-20 Hardware connection for image mosaic



The parameter settings for **Equal** and **Unequal** are shown in the below table.

| Equal               |        |        |
|---------------------|--------|--------|
|                     | VX6s 1 | VX6s 2 |
| Total Width Pixels  | 3000   |        |
| Total Height Pixels | 2000   |        |

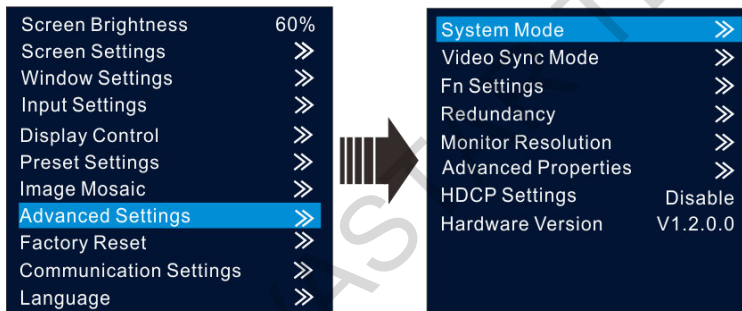
|                    |    |   |
|--------------------|----|---|
| Mosaic Row Qty     | 16 |   |
| Mosaic Column Qty  | 24 |   |
| Load Area Position | 1  | 2 |

| Unequal             |        |        |
|---------------------|--------|--------|
|                     | VX6s 1 | VX6s 2 |
| Total Width Pixels  | 3000   |        |
| Total Height Pixels | 2000   |        |
| Load Area Width     | 1500   | 1500   |
| Load Area Height    | 2000   | 2000   |
| Load Area Start X   | 0      | 1500   |
| Load Area Start Y   | 0      | 0      |

### 3.9 Advanced Settings

The advanced settings include system mode, video sync mode, Fn settings, redundancy, monitor resolution, advanced properties, HDCP settings, factory reset and hardware version, as shown in the figure below.

Figure 3-21 Advanced settings



#### System Mode

You can set the system mode of VX6s here, including switcher and direct modes.

Figure 3-22 System mode



- **Switcher:** Monitor the image being edited. The edited image is displayed on the monitoring screen first, and then click TAKE to send the image to the LED screen.
- **Direct:** Monitor the image being displayed on the LED screen. The edited image is displayed on both the monitoring screen and LED screen simultaneously.

## Video Sync Mode

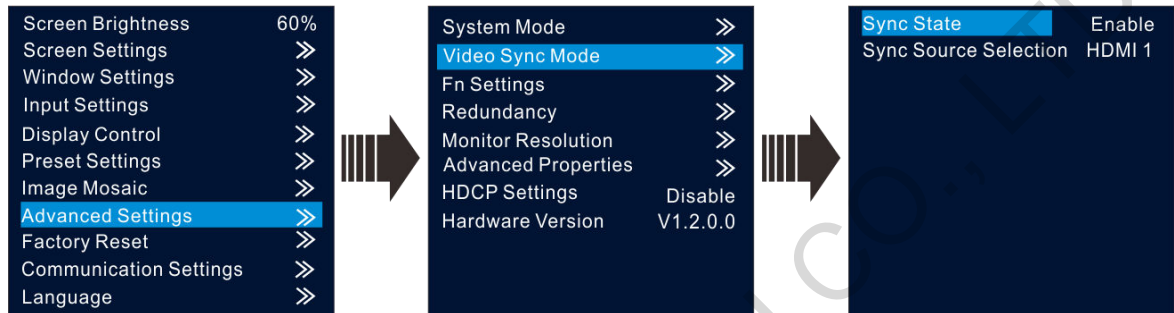
You can select a synchronization source for all the cascaded devices to realize the synchronization between the output images and selected synchronization source.

Step 1 Rotate the knob to select **Video Sync Mode** and press the knob to enter the submenu.

Step 2 Set the sync state and sync source, and then press the knob to confirm the settings.

- **Sync State:** Enable or disable the sync mode. It is disabled by default.
- **Sync Source Selection:** Select an input source as the sync source.

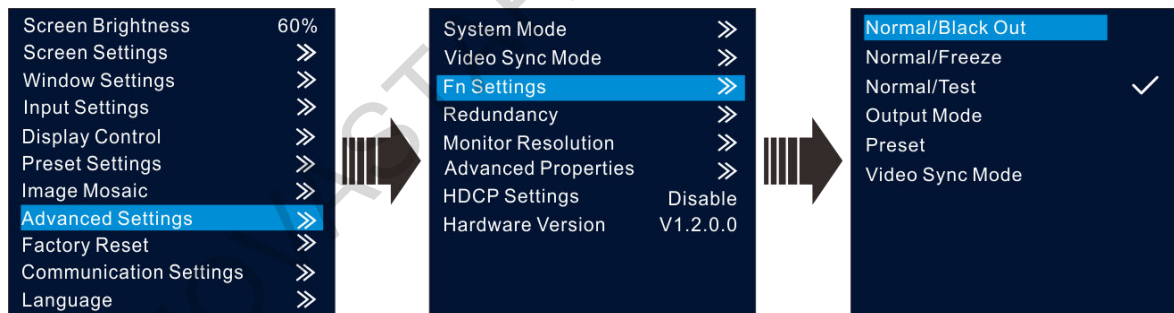
Figure 3-23 Video sync mode



## Fn Settings

You can customize the function of the **FN** button on the front panel. Its function can be set as black out, freeze, test pattern, output mode, preset, and video Sync mode. After setting, when you press the **FN** button, the corresponding function set to the button will directly be enabled.

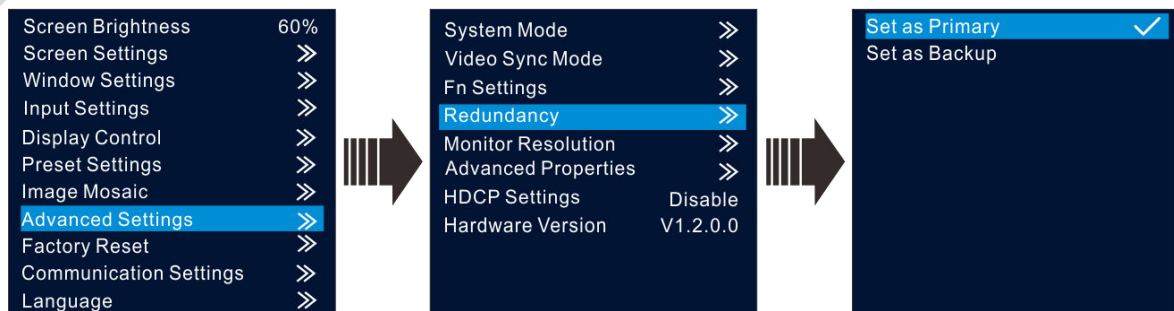
Figure 3-24 Fn settings



## Redundancy

The VX6s supports redundancy settings. You can set current device as the primary or backup device. If the primary device becomes abnormal, the backup device can take over the work immediately. This can prevent black out of display.

Figure 3-25 Redundancy

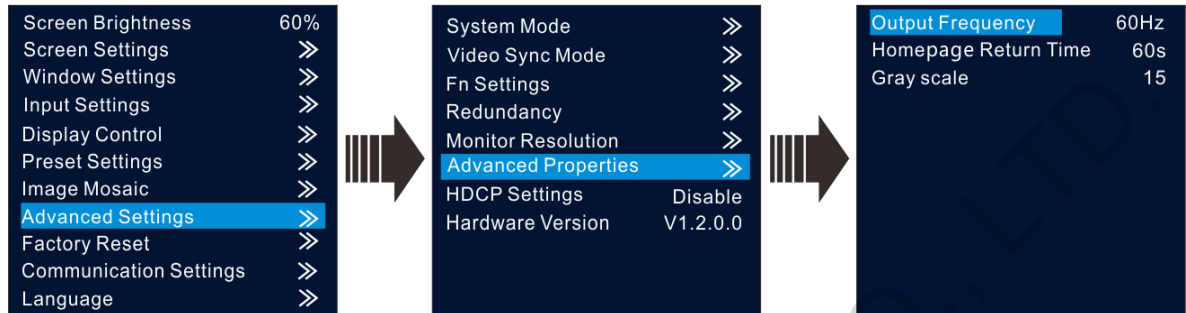


## Monitor Resolution

In this function, you can adjust the resolution of images displayed on the monitor connected to the DVI connector. The resolution can be set to 1024×768, 1280×720, 1366×768, 1440×900, and 1920×1080.

## Advanced Properties

Figure 3-26 Advanced properties



- **Output Frequency:** Adjust the output frequency of sending card. The range is 24 Hz–60 Hz.
- **Homepage Return Time:** Set the period of time during which the system stays at the current page before returning to the homepage automatically when there is no operation performed.
- **Grayscale:** Adjust the grayscale of the OLED screen. The range is 4–15.

## HDCP Settings

Set whether the HDMI and DVI connectors support the HDCP-encrypted video source.

- **Enable:** The HDMI and DVI connectors support the HDCP-encrypted video source.
- **Disable:** The HDMI and DVI connectors do not support the HDCP-encrypted video source.

## Hardware Version

This function is used to check the hardware version of the VX6s. If a new version is released, you can log in to NovaLCT on the PC to update the firmware programs of the VX6s.

### 3.10 Factory Reset

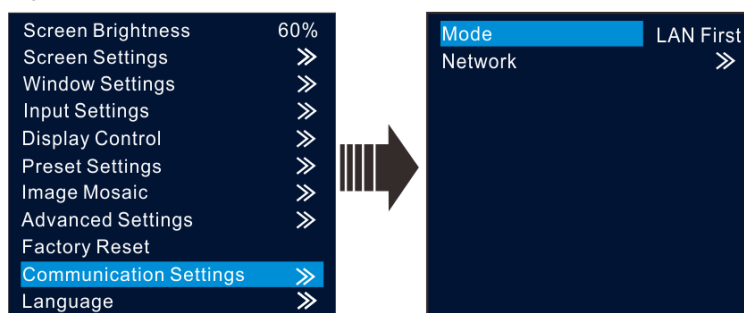
You can reset the device to factory settings.

### 3.11 Communication Settings

This function is used to set the communication mode and network parameters.

#### Mode

Figure 3-27 Communication mode



- USB first

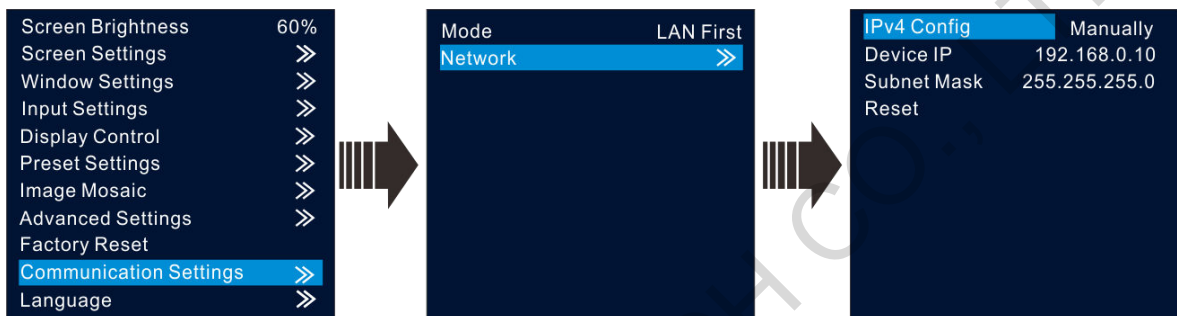
When the VX6s is connected to the control computer via both the USB and Ethernet ports, if the communication mode is set as **USB First**, the control computer will communicate with the VX6s via the USB port.

- LAN first

When the VX6s is connected to the control computer via both the USB and Ethernet ports, if the communication mode is set as **LAN First**, the control computer will communicate with the VX6s via the Ethernet port.

## Network

Figure 3-28 Network



The network parameters can be set manually and automatically. When you set the network manually, the IP address of current device cannot conflict with IP addresses of other devices. You can use the **Reset** function to reset the **Device IP** and **Subnet Mask** values to the defaults.

### 3.12 Language

The UI language of VX6s currently supports Chinese and English. You can change the language freely as you need.

Figure 3-29 Language



## 4

### USB Playback

By using the ViPlex Mplayer software, you can play the media stored in the USB drive, set playback orders and sort the media.

USB playback function supports mouse or knob operations.

## Preparation

- Step 1 Store the media files to the USB drive.
- Step 2 Insert the USB drive into the USB port on the rear panel of the VX6s.
- Step 3 Connect the mouse to the VX6s via the USB port of the expansion card on the rear panel.
- Step 4 Connect the monitor to the VX6s via the DVI OUT connector in the OUTPUT area.
- Step 5 Press the window button on the front panel to add a window.
- Step 6 Then press USB button on the front panel to set the input source of current window to USB.
- Step 7 Press ESC button to return to the home screen.
- Step 8 Hold down **USB** button to enable the USB input source.

After holding down the USB button, the OLED screen displays the USB playback screen where you can control the playback via knob operations.



## Playing Media

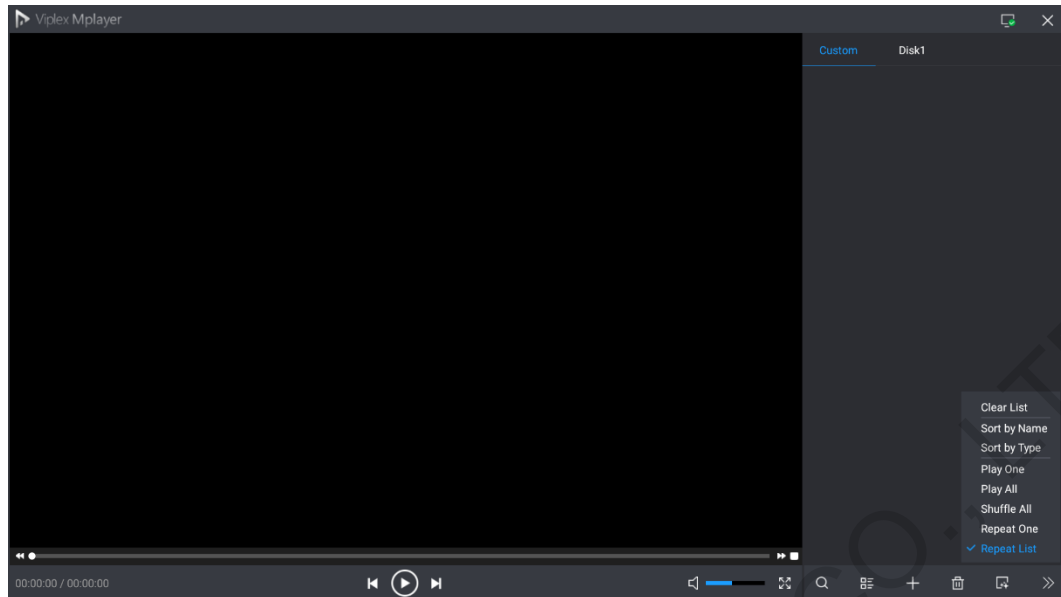
- Step 1 Click the ViPlex Mplayer icon to start the player software.  
The player will automatically read the files that can be played in the USB drive and then show the files under the **Disk1** tab.
- Step 2 Click the **Disk1** tab to open the list of media in USB drive.
- Step 3 Click the media file you want to play and the media will be played.
  - Click , select the files you want to delete, and then click **Delete Selected** to delete the selected files.
  - Click  to select the transition effect for switching files.
  - Click  to show more settings where you can clear the playback list, sort the media and set the playback order.

---

Note:

- If the playback file is texts, the coded format of the texts must be ANSI codes.
  - Rotate the knob to select an item, and press the knob to confirm the selection.
-

Figure 4-1 More settings

**Note:**

- When the USB drive is the input source, you can hold down **USB** button on the front panel to enter the USB playback operation status, and press **USB** button to exit the USB playback.
- During USB playback, you can press **Fn** button to play the media in USB drive. When you press the pause button (namely the **WIN3** button), the content being played on LED screen will be paused.
- During USB playback, the four buttons in the **CONTROL** area of the front panel will all be lighted and can be used as playback operation buttons.
- When the input source is set as **USB**, the VX6s will automatically detect the files that can be played in the USB drive and then automatically play the files in full screen. Besides, the last playback settings are remembered.

# 5

## Specifications

| Overall Specifications  |                   |                                  |
|-------------------------|-------------------|----------------------------------|
| Electrical Parameters   | Power consumption | 65 W                             |
|                         | Power supply      | AC100-240V~ 50/60Hz              |
| Operating Environment   | Temperature       | 0°C to +45°C                     |
|                         | Humidity          | 20% RH to 90% RH non-condensing  |
| storage environment     | Humidity          | 10% RH to 95% RH non-condensing  |
| Physical Specifications | Dimensions        | 483.6mm × 276.4mm × 51.4mm       |
|                         | Net weight        | 2.71 kg                          |
|                         | Total weight      | 5.9 kg                           |
| Packing Information     | Carrying case     | 540 mm × 370 mm × 140 mm         |
|                         | Accessory box     | 1 × power cable<br>1 × USB cable |

|                                 |             |                                                                                                               |
|---------------------------------|-------------|---------------------------------------------------------------------------------------------------------------|
|                                 |             | 1 × DVI cable<br>1 × HDMI cable<br>1 × Ethernet cable<br>1 × Quick Start Guide<br>1 × Certificate of Approval |
|                                 | Packing box | 555mm × 405mm × 180mm                                                                                         |
| Certifications                  |             | CE, RoHS, FCC, IC, RCM, CB, KC, UL, EAC                                                                       |
| Noise Level (Typical 25°C/77°F) |             | 40 dB(A)                                                                                                      |

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