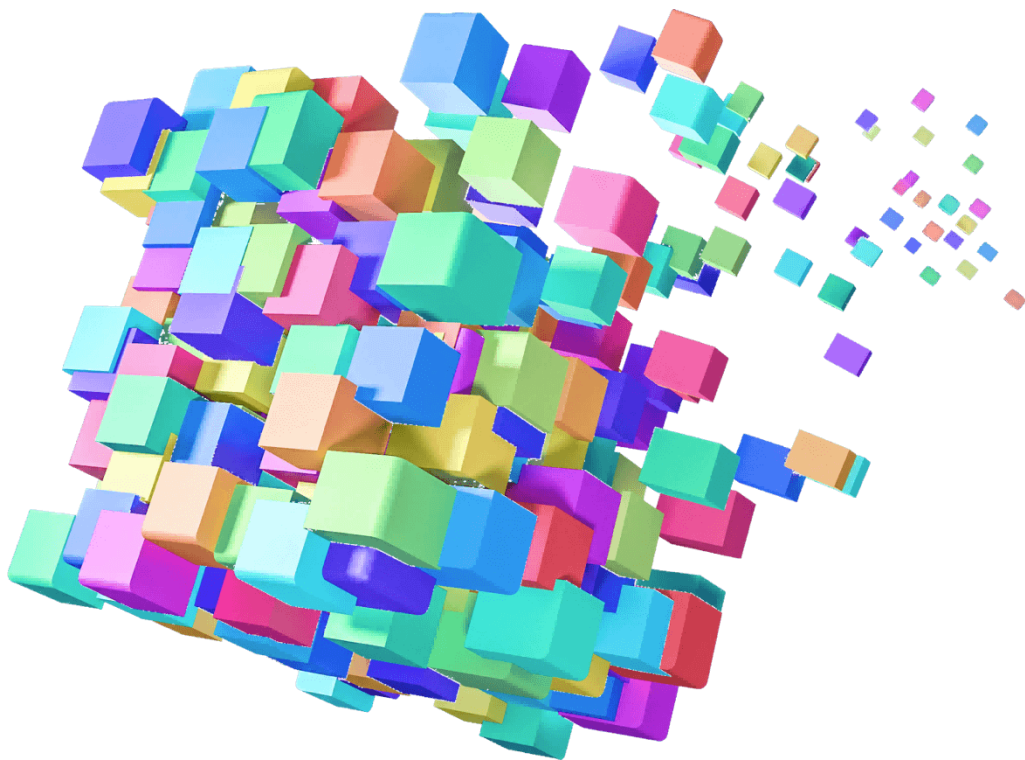




「LC16」

2-in-1 LED Controller

Specification Sheet

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Update History

VERSION	DATE	CONTENT
V1.0	2026/3/31	Initial Release
V1.1	2026/7/14	Update Rear Panel Image

Preface

Thank you very much for purchasing our company's product. Please read this specification sheet carefully before use.

All pictures in this specification sheet are for reference only; please refer to the actual product.

The descriptions in this specification sheet may not exactly correspond to the product or its accessories you purchased. Our company reserves the right to modify any information in this specification sheet at any time and will regularly improve or update the content of this specification sheet according to product function enhancements. Updated content will be included in new versions of this specification sheet without prior notice. Thank you for your understanding.

Icon Conventions

	INSTRUCTION	Necessary tips, supplements, and explanations will help you better understand the content described in the specification.
	NOTE	The instructions and guidelines for operation will guide you to use the device more conveniently and efficiently.
	WARNING	There may be potential hazards; please be aware that the device can be used safely.

Safety Precautions

To ensure the safety of persons and equipment, when installing, operating and maintaining equipment, please follow the signs on the equipment and the safety instructions in the manual to ensure the best performance of the equipment and avoid dangerous or illegal situations.



WARNING

- It is strictly prohibited to place the device in an environment with flammable, explosive gases or fumes, and no operations shall be performed in such an environment.
- Water seepage, dripping, or condensation is strictly prohibited in the device installation environment; otherwise, dehumidification equipment must be installed.
- When laying out wires, high-voltage lines and low-voltage lines must be laid separately to avoid mutual interference.
- The device must not be placed near fire sources, and containers with liquids are prohibited from being placed on or near the device.
- In case of thunderstorms or long-term non-use, please unplug the power plug.
- It is prohibited to use components not approved by the manufacturer to avoid device damage.

-
- It is prohibited to use control software not released by the manufacturer to control the device.
 - It is prohibited to alter, cover, or tear off the device information labels attached to the device.
 - If the plug power cord is damaged or worn, liquid splashes into the device, or the device is damaged by dropping, immediately unplug the power supply and hand it over to professionals for handling.
 - All maintenance work should be performed by professionals. Unauthorized maintenance is strictly prohibited to avoid device damage and electric shock hazards.
-

**NOTE**

-
- The device should work in an environment with good air circulation and appropriate temperature and humidity.
 - Please install the device on a stable, level workbench or in a standard rack, cabinet, or chassis.
 - Do not block the device's ventilation holes with any objects, and leave more than 20cm of heat dissipation space around the device.
 - Please use a single-phase three-wire AC power supply with protective grounding, ranging from 100-240V. Ensure the entire engineering system uses the same grounding. Do not use a power supply without grounding protection, and do not damage the grounding pin of the power cord.
 - Before turning on the device, ensure that signal lines, communication lines and other wires are properly connected without looseness.
 - Before moving the device, please turn off the power and add anti-collision protection to the device to avoid damage caused by electric shock, extrusion, collision, scratch, impact, etc.
-

1. Overview

The LC16 2-in-1 LED Controller integrates video processing and video transmission, supporting multiple types of signal processing and multi-window display. Its superior video signal processing capability, powerful LED loading capacity, and convenient operation and maintenance make this controller suitable for the construction of various large, medium and small LED screens. It is widely used in command and control centers, exhibitions, entertainment performances, conference releases and other scenarios, bringing a stunning visual feast effortlessly.



2. Features

Input and Output Interfaces

- Supports HDMI2.0, DP1.2, Type-C, HDMI1.3, 12G-SDI signal input;
- Supports embedded audio input and 3.5mm independent audio input and output;
- A single device supports 16-channel Gigabit Ethernet ports and 2-channel 10G optical ports for output, with a maximum loading capacity of 10.4 million pixels. The maximum horizontal size of a single screen is 16384 pixels, and the maximum vertical size is 8192 pixels;
- Supports signal source visual preview;
- Configured with 1-channel HDMI monitoring interface for real-time monitoring of the LED video wall display.

Video Processing

- Multi-layer display, supporting up to 12 windows with arbitrary layout;
- Supports saving and recalling up to 512 scenes for quick switching of video wall layouts;
- Supports 10-bit high dynamic range processing and display;
- Built-in multiple common input resolutions to support video source resolution adaptation;
- Supports signal source cropping, allowing zooming in on key areas or cropping the black edges of the signal source;
- Supports precise adjustment of brightness/color temperature/color gamut/Gamma, making the LED screen display more natural and realistic;
- One-click switching of output image scaling mode, supporting custom output image size and position;
- Adopts genlock technology to ensure synchronization and no delay of signals from various systems;

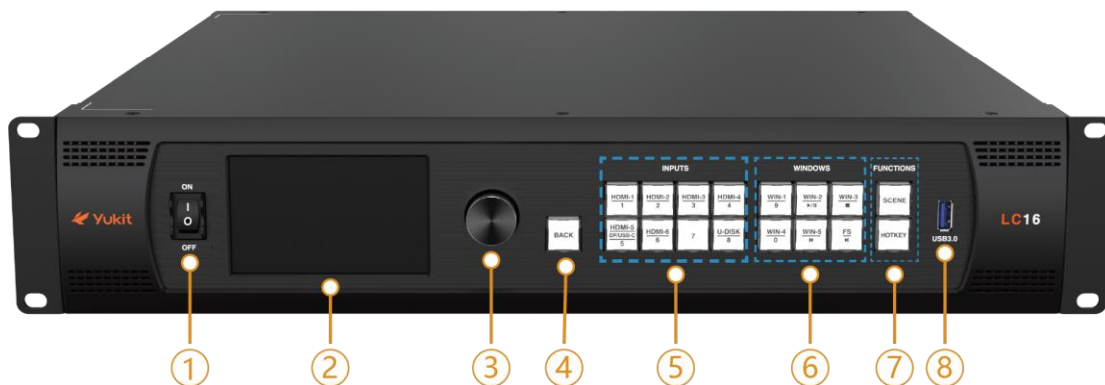
Operation and Maintenance

- Input signal sources can be switched with one-click through the front panel buttons;
- Supports EDID configuration for input interfaces (except SDI interface);
- A single device can uniformly control multiple groups of screens of different sizes and shapes;
- Supports multiple device mode switching: video controller mode and fiber converter mode;
- Supports comprehensive device backup: multi-device backup and output network port backup to ensure stable system operation;
- Obtain external environment information, such as temperature and brightness, through the sensor interface to realize automatic adjustment of the device;
- Supports device operation and maintenance, enabling real-time viewing of device status, alarm reporting, log query, etc.

3. Appearance

The following shows the schematic diagrams of the front panel and rear panel of the device. The actual product appearance shall prevail.

3.1. Front Panel



NO.	BUTTON	DESCRIPTION
①	Power Switch	The power button of the device
②	LCD Screen	Displays the current status and menu of the device.
③	Confirm Button	Press to confirm operations, rotate to select menus and adjust parameters.
④	BACK	Exit the current menu or cancel the current operation.

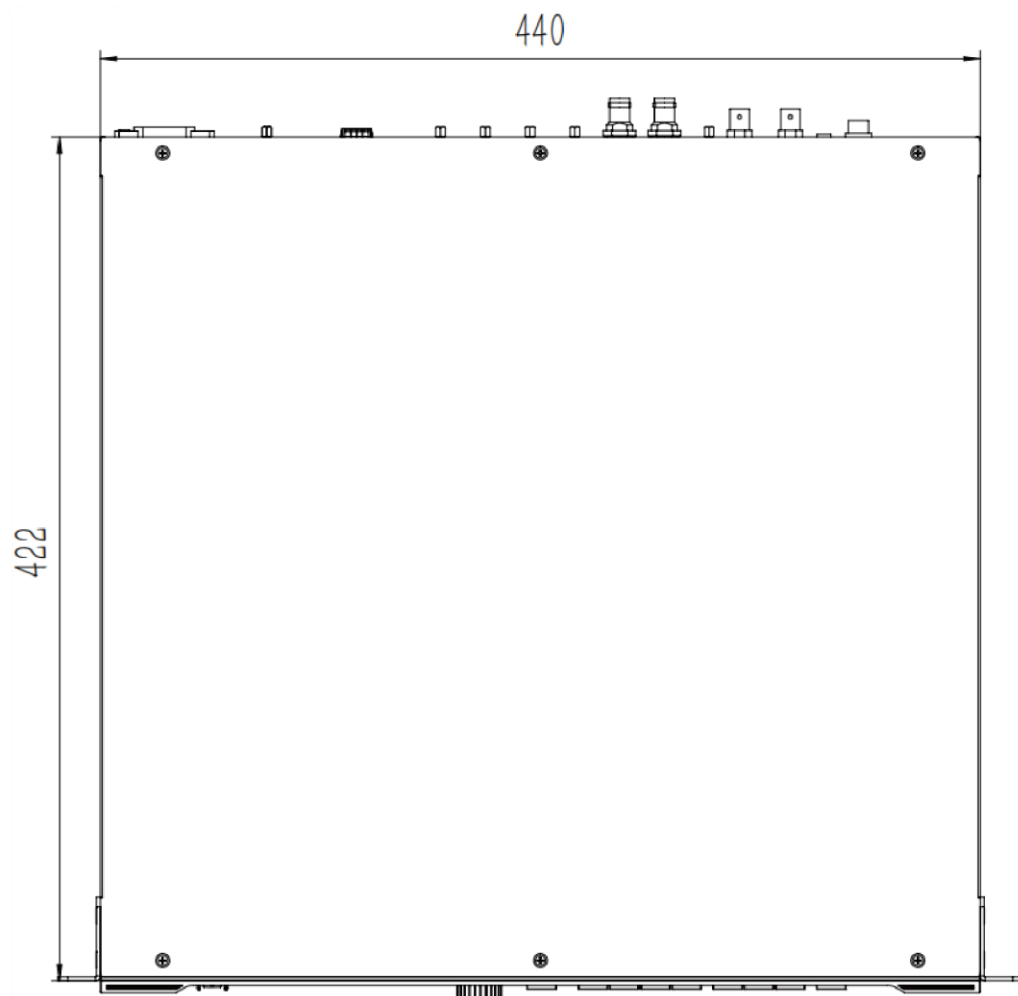
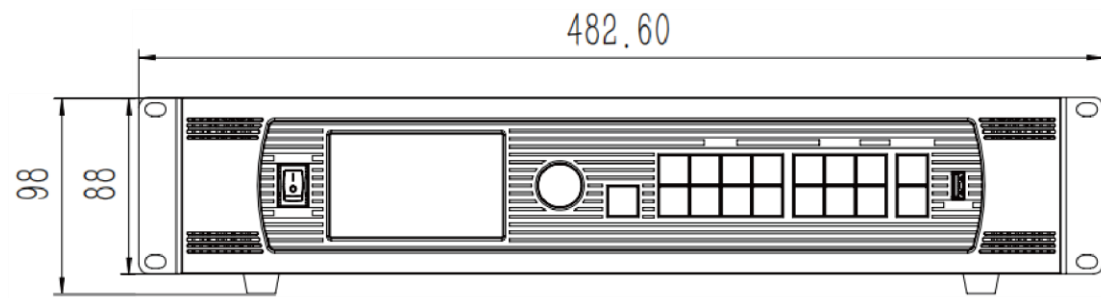
3.2. Rear Panel



TYPE	INTERFACE	DESCRIPTION
Input Interface	HDMI 1.3 (1/2/3/4)	- HDMI interface x4, HDMI 1.3 standard - Supports HDCP 1.4 - Supports maximum resolution: 2048 × 1080@60Hz - Supports custom resolution — Maximum width: 2048; Maximum height: 2048
	Type-C (5)	- Type-C interface x1, which can be used as both an input source interface and a control interface. As an input source interface: - Supports maximum resolution: 4096 × 2160@60Hz - Supports custom resolution — Maximum width: 8192; Maximum height: 4096 Note: Type-C, DP1.2, and HDMI2.0 interfaces are used one at a time As a control interface: - You can use a Type--C to Type-C cable- or a USB-A to Type--C cable to connect to a control PC, supporting device management but not visual preview. - The device will generate a virtual IP address to facilitate adding the device to the software.
	DP 1.2 (5)	- DP interface x 1, DP 1.2 standard - Supports HDCP 2.2 - Supports maximum resolution: 4096 × 2160@60Hz - Supports custom resolution — maximum width: 4096; maximum height: 4096 Note: - Horizontal-related parameters must be multiples of 4. Including: total horizontal pixels, horizontal sync width, horizontal front porch, horizontal back porch, horizontal active pixels - Type-C, DP 1.2, and HDMI 2.0 interfaces are used alternatively (choose one of three)
	HDMI 2.0 (5)	- HDMI interface x 1, HDMI 2.0 standard - Supports HDCP 2.2 - Supports maximum resolution: 4096 × 2160@60Hz - Supports custom resolution — maximum width: 8192; maximum height: 8188 Note: - Horizontal related parameters must be multiples of 4. Including: total horizontal pixels, horizontal sync width, horizontal front porch, horizontal back porch, horizontal active pixels - Type-C, DP 1.2, and HDMI 2.0 interfaces are used alternatively (choose one of three)

TYPE	INTERFACE	DESCRIPTION
Input Interface	HDMI 2.0 (6)	- HDMI interface x 1, HDMI 2.0 standard - Supports HDCP 2.2 - Supports maximum resolution: 4096 × 2160@60Hz - Supports custom resolution — maximum width: 8192; maximum height: 8188 Note: Horizontal related parameters must be multiples of 4. Including: total horizontal pixels, horizontal sync width, horizontal front porch, horizontal back porch, horizontal active pixels.
	12G-SDI (Optional)	12G-SDI interface x 1, supports 12G-SDI, 6G-SDI, 3G-SDI, HD-SDI input formats, maximum supports 4096 x 2160P@60Hz resolution signal input, does not support interlaced signal input, supports 12G-SDI signal loop-out.
Audio Interface	AUDIO IN	3.5mm audio interface x 1, independent audio input.
	AUDIO OUT	3.5mm audio interface x 1, independent audio output.
Output Interface	1~16	RJ45x16, 16-channel Gigabit Ethernet port output, connected to the receiving card.
	OPT1~2	10G optical port x 2. The function of the optical fiber interface varies depending on the device working mode. - When the working mode is "Video Controller", OPT1 and OPT2 send data for Ethernet ports 1~10 and 11~20 respectively. - When the working mode is "Fiber Converter", OPT1 and OPT2 are fiber ports for input and Ethernet ports for output.
	3D	Reserved interface
	MONITOR	HDMI interface x 1, monitors the LED screen, with a resolution of 1920 x 1080@60Hz.
Control Interface	ETHERNET 1/2	Control network port: when connected to a control PC via a network cable, it supports device management and visual preview.
	USB2.0	Reserved Interface
	RS232	3-pin Central Control Interface. RX: Signal Receiving; TX: Signal Transmitting; G: Grounding
Function Interface	SENSOR	1-channel sensor interface, which can be used for brightness and temperature-humidity monitoring.
	GENLOCK	Genlock Interface.
Power Interface	AC 100-240V	50/60Hz

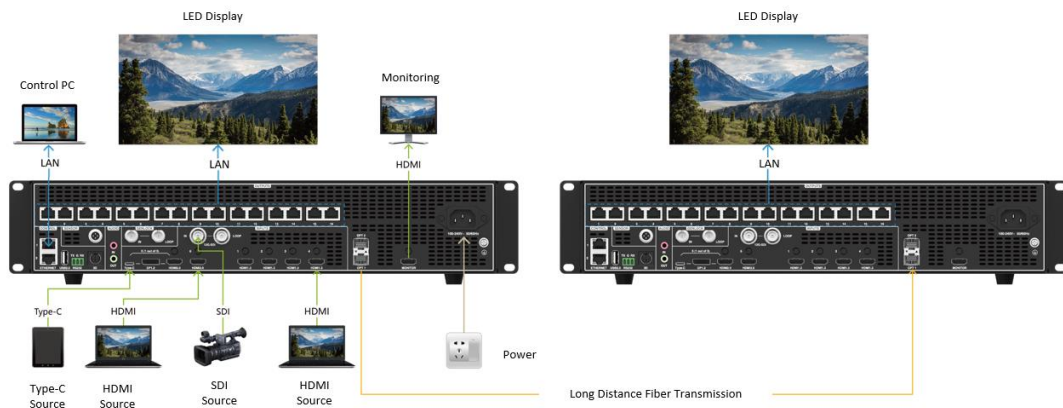
4. Dimensions



5. Specifications

CATAGORY	DESCRIPTION	
Electrical Specifications	Power Supply	AC100-240V, 50/60Hz
	Power Consumption	76W
Physical Specifications	Dimensions	482.6mm x 422mm x 88mm (L x W x H) (excluding feet and connectors)
	Net Weight	6.43kg

6. Applications



7. Menu Operations

Through the buttons and menu on the front panel of the device, you can adjust the screen brightness, set input source parameters, configure windows, control images, manage scenes, perform system settings, and configure network settings.

Button Operation Instructions:

Confirm Button:

- On the main interface, press the Confirm button to enter the menu interface;
- On the menu interface, rotate the Confirm button to select menu items, and press the Confirm button to enter the submenu or enter the current menu setting state;
- After entering the parameter menu (e.g., screen brightness) setting state, rotate the Confirm button to adjust parameters, and press the Confirm button to save parameters and exit the setting state.

BACK:

- Press to exit the current operation or return to the previous menu.

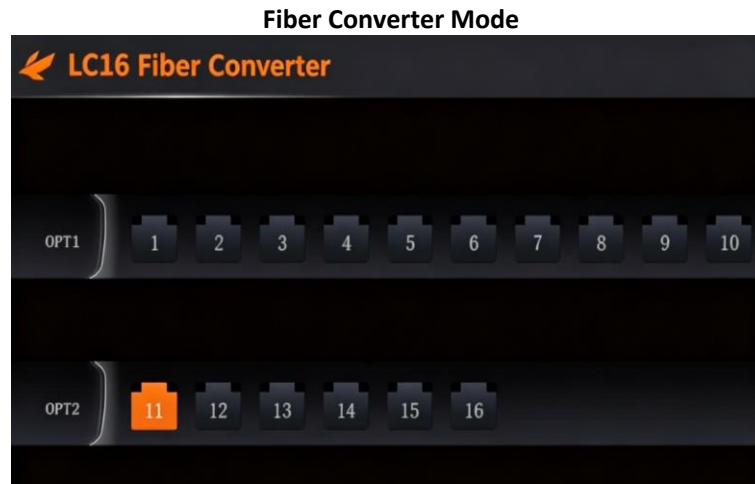
7.1. Main Interface

The device supports two working modes, including Video Controller mode and Fiber Converter mode, which can be switched through the front panel menu. The main interfaces of the two modes are as follows:

Video Controller Mode



ICON	DESCRIPTION
	Local IP
 / 	 : Unlock icon, indicating that the keys are not locked and can be operated normally.  : Lock icon, indicating that the keys are locked and cannot be operated.
	Window and input source status display. Window is on and using "HDMI 1.3-3" as the input source, with an input source resolution of 1920X1080@60Hz.
	Output image resolution.
	Display brightness value.
	LED screen display mode.  : Normal display;  : Freeze;  : Black screen;  : Test screen
	Connection status display of the device control network cable.  : Communication network cable not connected;  : Communication network cable connected.
	Network port connection status display.  : Network port connected;  : Network port not connected.
	Optical port connection status display.  : Optical port connected;  : Optical port not connected.

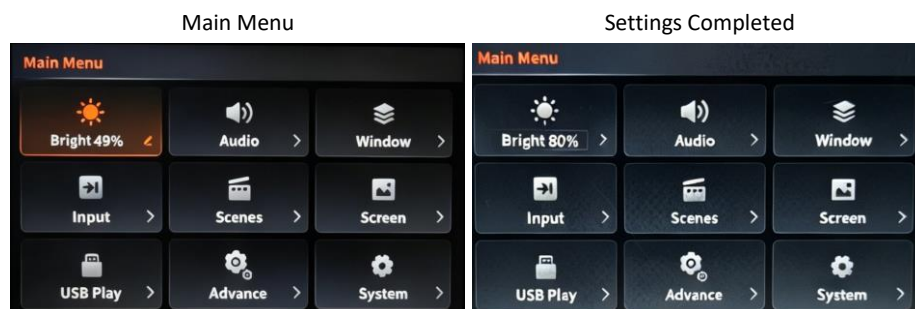


7.2. Brightness Adjustment

The brightness of the LED video wall can be manually adjusted according to the ambient brightness.

1. Press the Confirm button to enter the main menu and select "Brightness";
2. Press the Confirm button to enter the setting state, and rotate the it to adjust the brightness value.

Example: Adjust brightness from 49% to 80%.

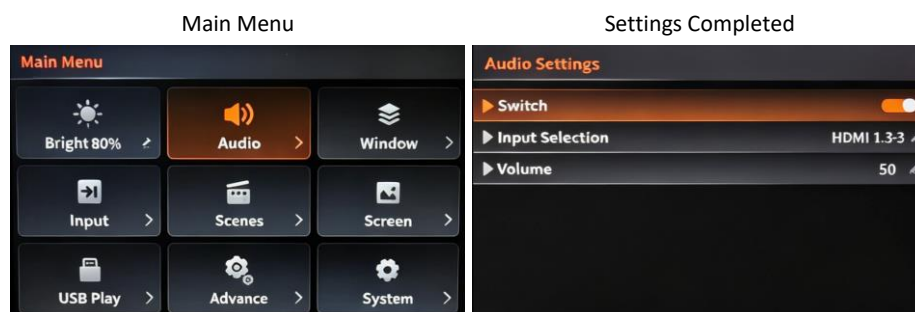


7.3. Audio Settings

This device supports enabling/disabling of embedded audio and analog audio, as well as volume adjustment.

1. Press the Confirm button to enter the main menu and select "Audio Settings";
2. Press the Confirm button to enter the [Audio Settings] menu, select "Audio Switch" to enable/disable audio; select "Input Selection" to choose the audio input source; select "Volume Level" to adjust the volume.

Example: Turn on the audio switch, select HDMI 1.3-2 as the input source, and set the volume to 50.



7.4. Window Settings

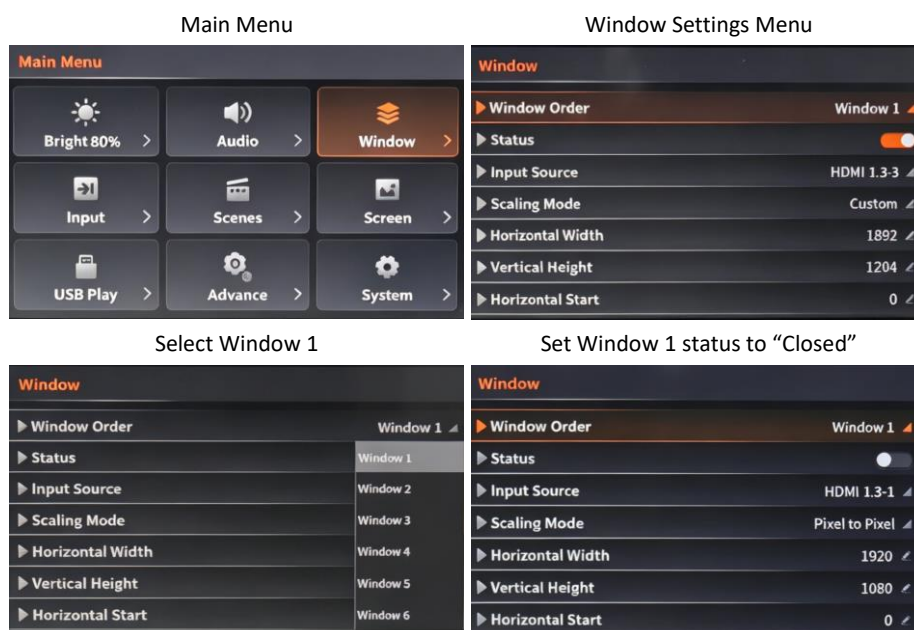
In the [Window Settings] menu, you can select specific windows for settings, control window opening/closing, switch window input sources, and adjust window positions and scaling modes.

7.4.1. Open/Close Window

The device supports opening up to 12 windows simultaneously, and you can control the opening/closing of windows through the front panel menu.

1. Press the confirm button to enter the main menu and select “Window Settings”;
2. Press the confirm button to enter the [Window Settings] menu, select “Window Number”, and choose the target window;
3. Select “Status” to set the opening/closing of the window.

Example: Close Window 1.



7.4.2. Switch Input Source

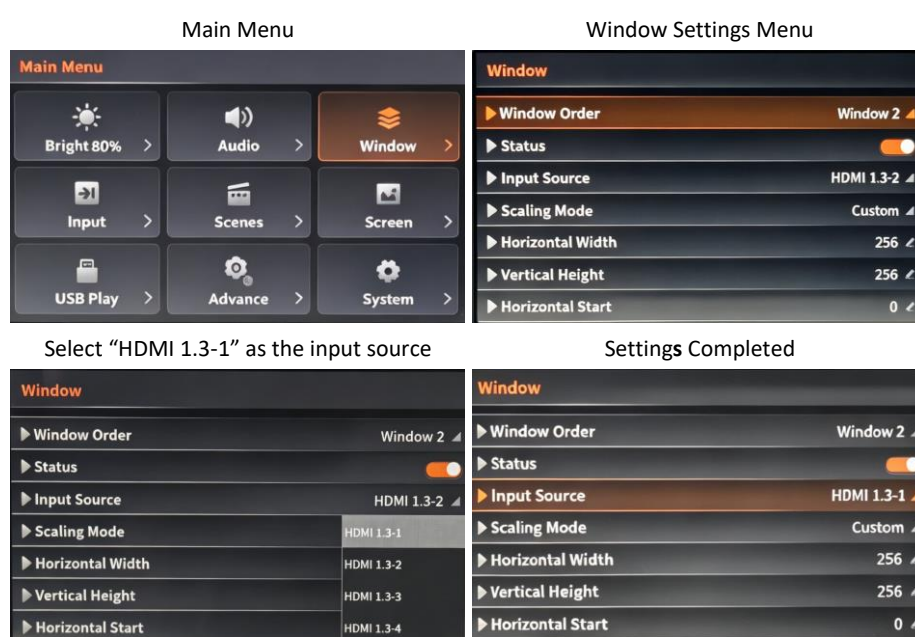
The device provides two input source switching methods:

First: Through the input source buttons in the INPUTS area of the front panel, see——[3.1 Front Panel](#) for details;

Second: Completed through the [Window Settings] menu, the operation steps are as follows:

1. Press the confirm button to enter the main menu and select “Window Settings”;
2. Press the confirm button to enter the [Window Settings] menu, select “Window Number”, and choose the target window;
3. Select “Input Source” to set the input source for the target window.

Example: Switch the input source of Window 2 from HDMI 1.3-2 to HDMI 1.3-1.

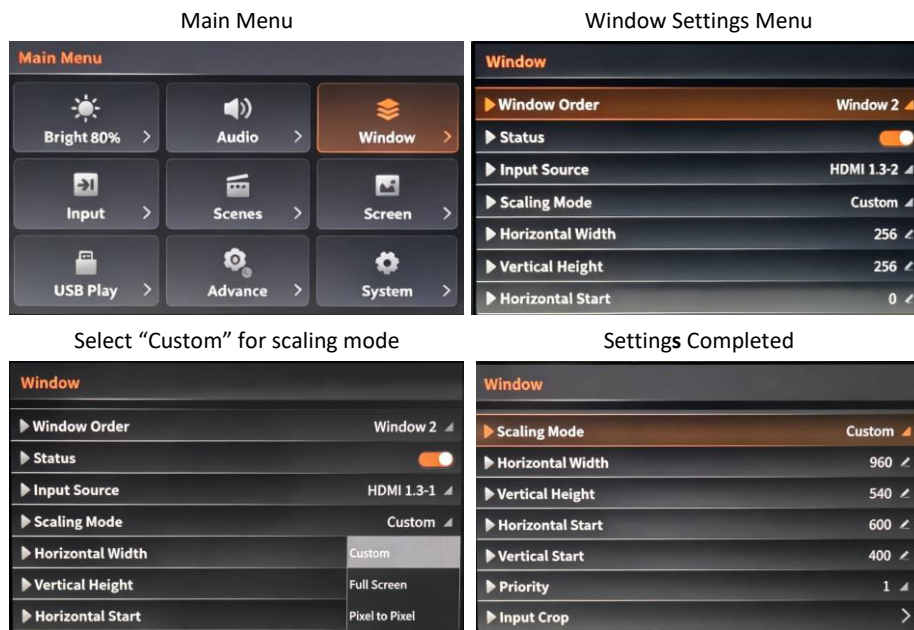


7.4.3. Scaling Mode

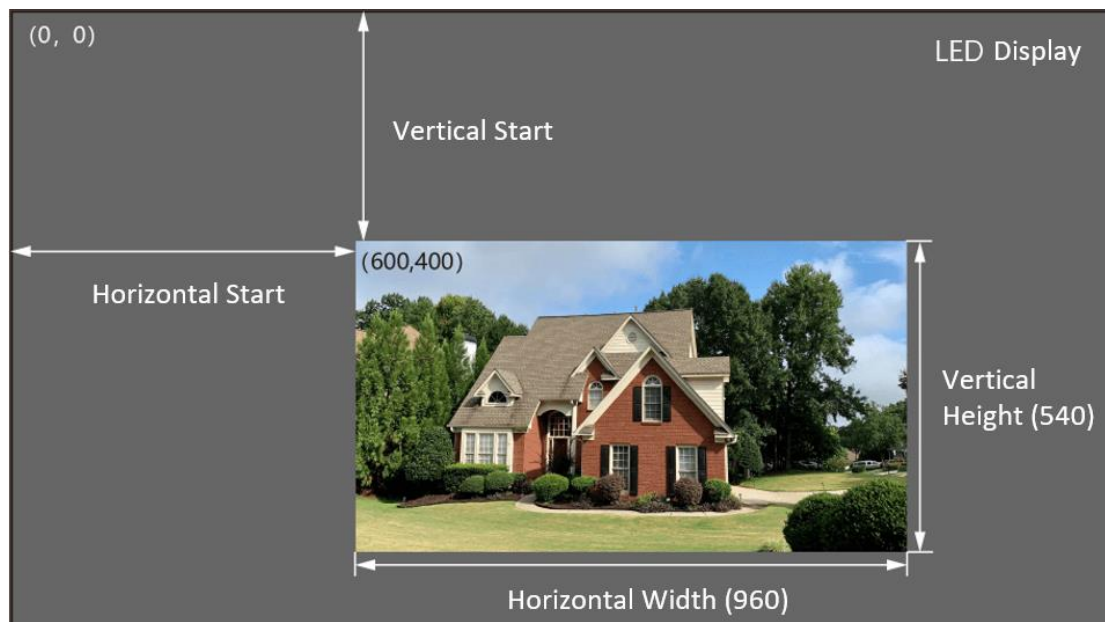
You can set the window scaling mode, including Full Screen, Pixel-to-Pixel, and Custom.

1. Press the confirm button to enter the main menu and select "Window Settings";
2. Press the confirm button to enter the [Window Settings] menu, select "Window Number", and choose the target window;
3. Select "Scaling Mode" to set different modes, here taking "Custom" as an example;
4. After selecting the scaling mode, rotate the confirm button to select and set the values of "Horizontal Start", "Vertical Start", "Horizontal Width", and "Vertical Height" in sequence.

Example: Set the scaling mode of Window 2 to Custom, with the window position at (600, 400) and window size at 960x540.



Custom Window Effect:



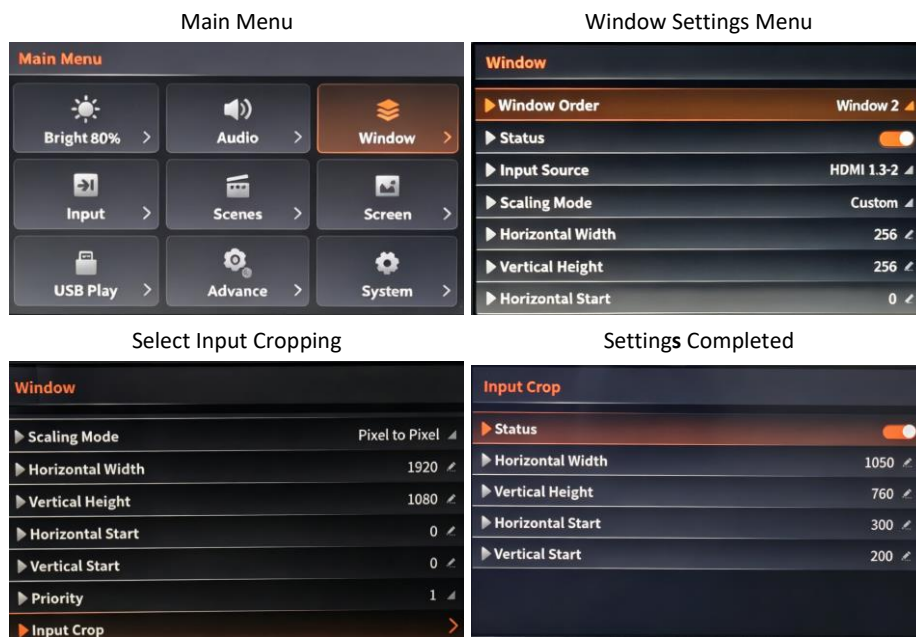
7.4.4. Input Cropping

Input cropping is to select a partial area of the current window's input source and enlarge the selected area to fill the entire window for display.

Note: 4K input sources do not support input cropping.

1. Press the confirm button to enter the main menu and select "Window Settings";
2. Press the confirm button to enter the [Window Settings] menu, select "Window Number", and choose the target window;
3. Select "Input Cropping", press the confirm button to enter the [Input Cropping] menu;
4. Set "Status" to "On", then set the values of "Horizontal Start", "Vertical Start", "Horizontal Width", and "Vertical Height" in sequence.

Example: Set input cropping for Window 2, with the cropping position at (300, 200) and cropping size at 1050x760.



Input resolution: 1920×1080



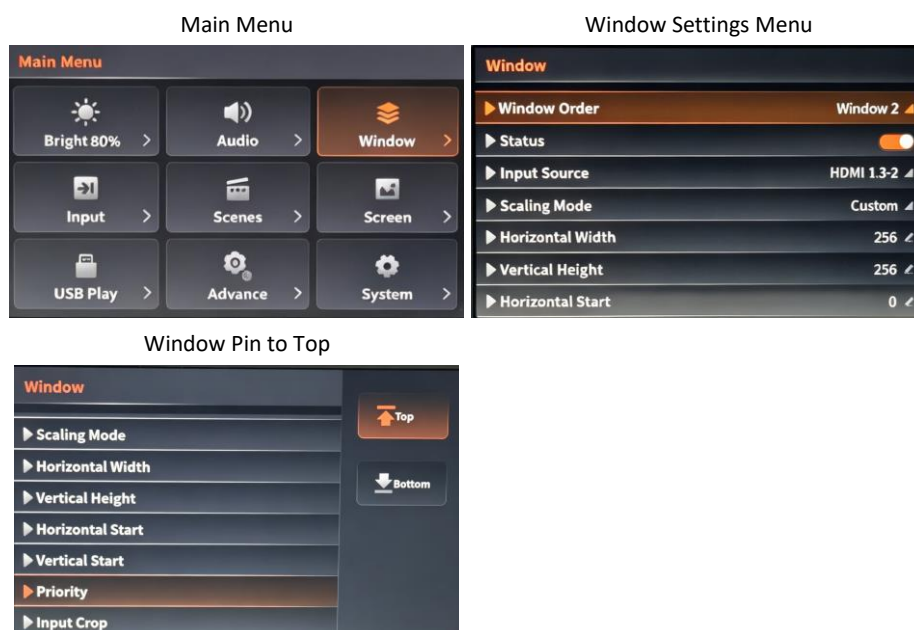
Window resolution: 1920×108

7.4.5. Priority

The device can open up to 12 windows at the same time, and the window priority can be adjusted through the LCD screen menu on the front panel. The priority is represented by numbers. The larger the number, the higher the priority and the front of the window.

1. Press the confirm button to enter the main menu and select “Window Settings”;
2. Press the confirm button to enter the [Window Settings] menu, select “Window Number”, and choose the target window;
3. Select “Priority”, press the confirm button to enter the setting state, and you can pin the target window to the top or bottom.

Example: Bring window 2 to the top.



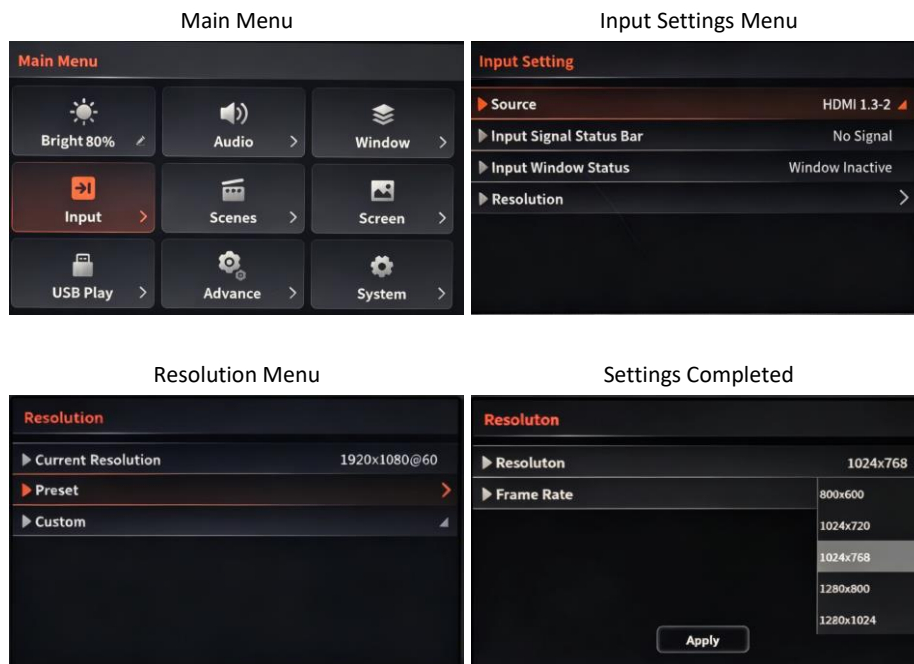
7.5. Input Settings

In the [Input Settings] menu, you can view the signal status and window opening status of the input source, and set the input source resolution. The device supports two methods: preset resolution and custom resolution.

7.5.1. Preset Resolution

1. Press the confirm button to enter the main menu and select “Input Settings”;
2. Press the confirm button to enter the [Input Settings] menu, select “Input Source”, and choose the target input source;
3. Select “Resolution”, press the confirm button to enter the [Resolution] menu;
4. Select “Preset”, press the confirm button to enter the submenu, select the target resolution and frame rate, and press the confirm button after selecting “Apply” to complete the setup.

Example: Set the resolution of HDMI 1.3-2 input source to 1024x768@60.

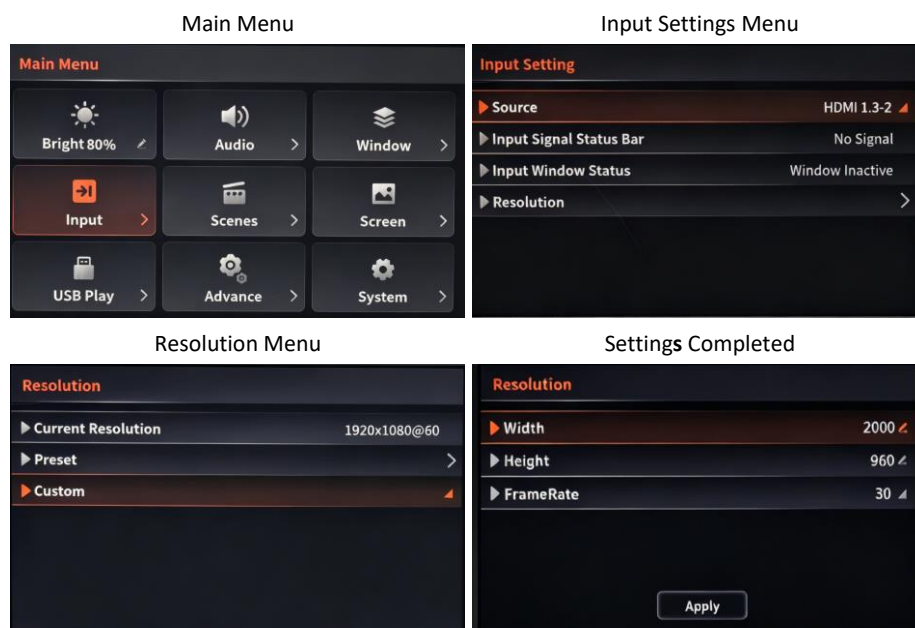


7.5.2. Custom Resolution

If the required resolution is not in the preset resolution library, you can set it customarily. The operation steps are as follows:

1. Press the confirm button to enter the main menu and select “Input Settings”;
2. Press the confirm button to enter the [Input Settings] menu, select “Input Source”, and choose the target input source;
3. Select “Resolution”, press the confirm button to enter the [Resolution] menu;
4. Select “Custom”, press the confirm button to enter the submenu, set the width, height, and frame rate in sequence, and press the confirm button after selecting “Apply” to complete the setup.

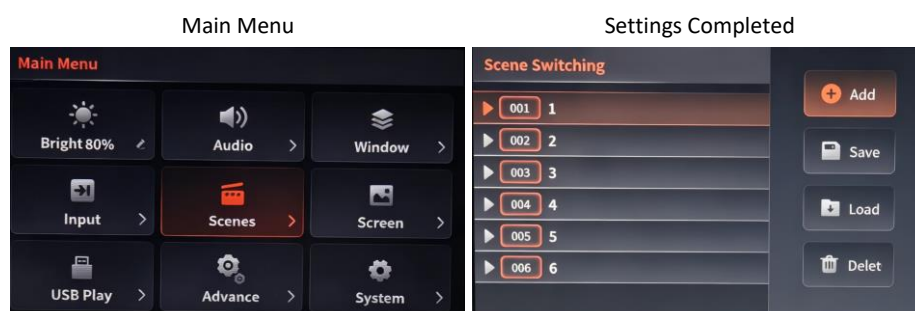
Example: Set the resolution of HDMI 1.3-2 input source to 2000X960@30Hz.



7.6. Scene Switching

The device supports saving the window layout (including window position, level, signal source and other information) as a scene, which can be called with one click when needed. It supports the operations of adding, saving, loading and deleting scenes, and supports saving up to 512 scenes.

1. Press the confirm button to enter the main menu and select "Scene Switching";
2. Select any scene, press the confirm button, select "Add", and press the confirm button to add a blank scene; select "Save", press the confirm button to save the scene; select "Load", press the confirm button to call the scene; select "Delete", press the confirm button to delete the scene.



7.7. Screen Control

In the [Screen Control] menu, you can set the LED screen display mode, including Normal, Black Screen, Freeze, and Test Pattern.

1. Press the confirm button to enter the main menu and select "Screen Control";
2. Press the confirm button to enter the [Screen Control] menu, select the required function item and press the confirm button to set it.

FUNCTION	DESCRIPTION
----------	-------------

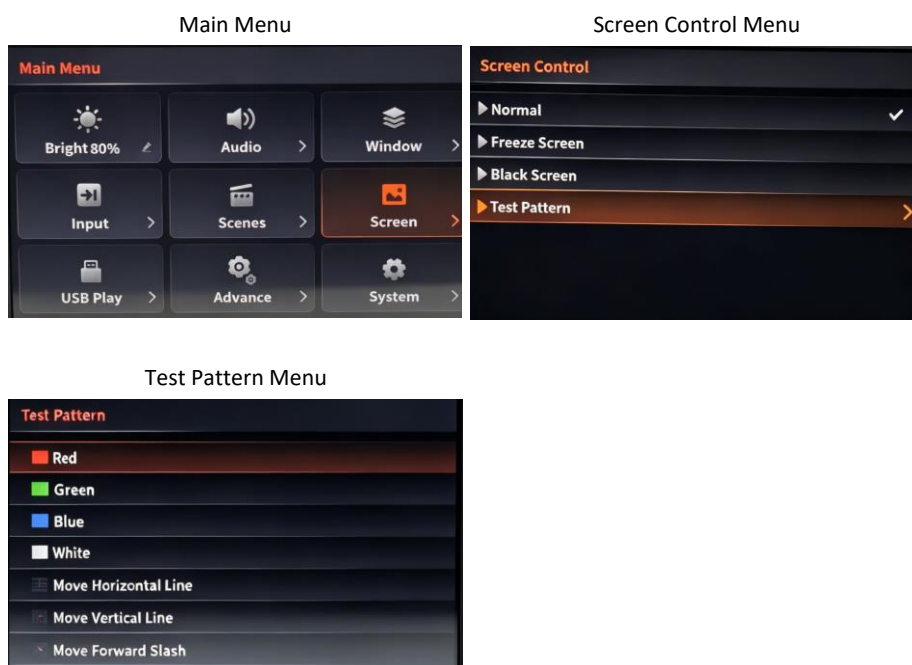
Normal	Display the input source picture normally.
--------	--

Black Screen	The LED screen becomes black.
--------------	-------------------------------

Freeze	Freeze the output screen, and the LED screen displays the last frame image of the input source.
--------	---

Test Pattern	A test pattern can be displayed on the LED screen to test the display effect, with 14 built-in test patterns for users to choose from.
--------------	--

Example: Set the test pattern to "Red".



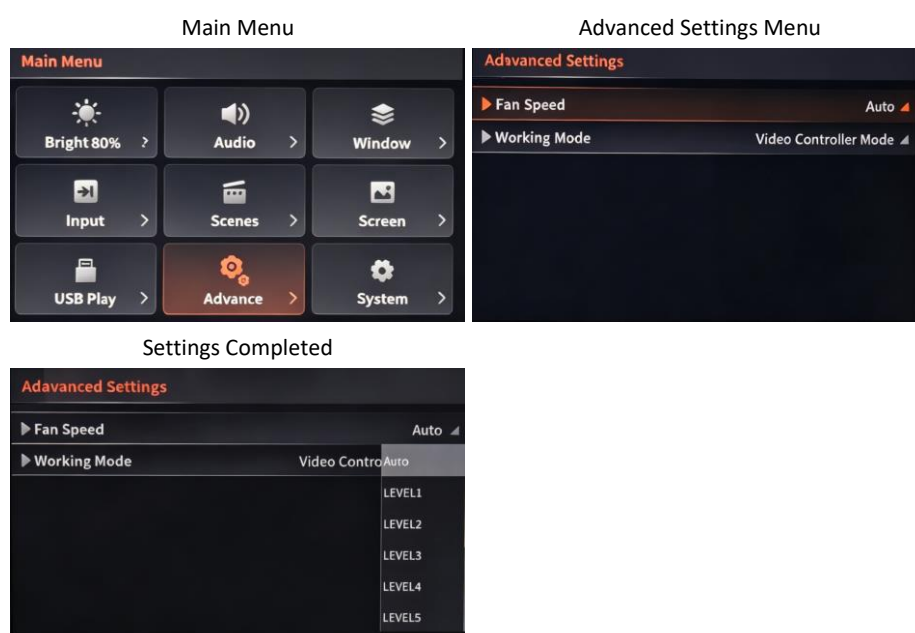
7.8. Advanced Settings

7.8.1. Fan Speed

The device supports adjustment of the cooling fan speed. Different speed levels can be selected according to the environment, supporting automatic and LEVEL 1~10.

1. Press the confirm button to enter the main menu and select "Advanced Settings";
2. Press the confirm button to enter the [Advanced Settings] menu and select "Fan Speed";
3. Press the confirm button to set the speed level, and press the confirm button again to save the settings after completion.

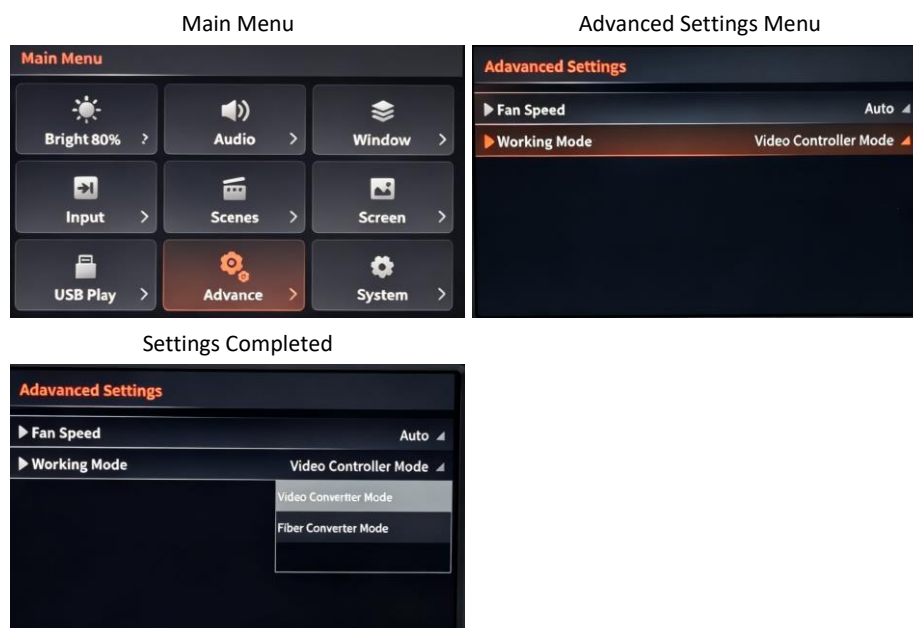
Example: Set the fan speed level to "Auto".



7.8.2. Working Mode

The device supports two working modes, including video controller mode and fiber converter mode, which can be switched through the front panel menu.

1. Press the confirm button to enter the main menu and select "Advanced Settings";
2. Press the confirm button to enter the [Advanced Settings] menu and select "Working Mode";
3. Press the confirm button to set the working mode, and press the confirm button again to save the settings after completion.

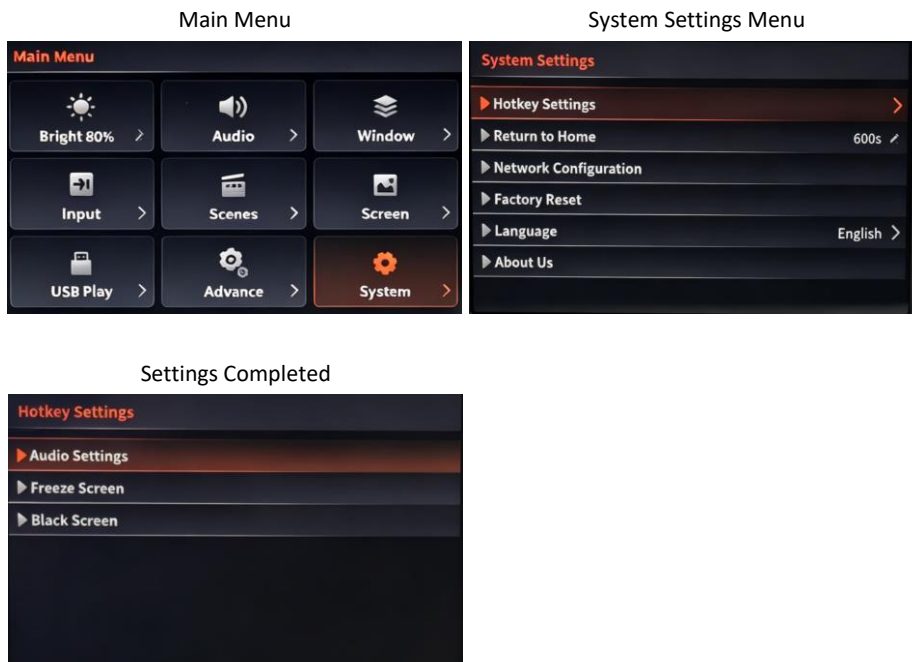


7.9. System Settings

7.9.1. Shortcut Key Settings

Set the function corresponding to the <HOTKEY> button on the front panel of the device, including audio settings, freeze, and black screen.

1. Press the confirm button to enter the main menu and select "System Settings";
2. Press the confirm button to enter the [System Settings] menu and select "Shortcut Key Settings";
3. Press the confirm button to select the shortcut key function, and press the confirm button again to save the settings after completion.



7.9.2. Return to Main Interface Timeout

When the menu interface remains idle for longer than the "Return to Main Interface Timeout", the device will automatically return to the main interface. This parameter can be modified.

1. Press the confirm button to enter the main menu and select "System Settings";
2. Press the confirm button to enter the [System Settings] menu, select "Return to Main Interface Timeout" and set the time, then press the confirm button to save the settings after completion.

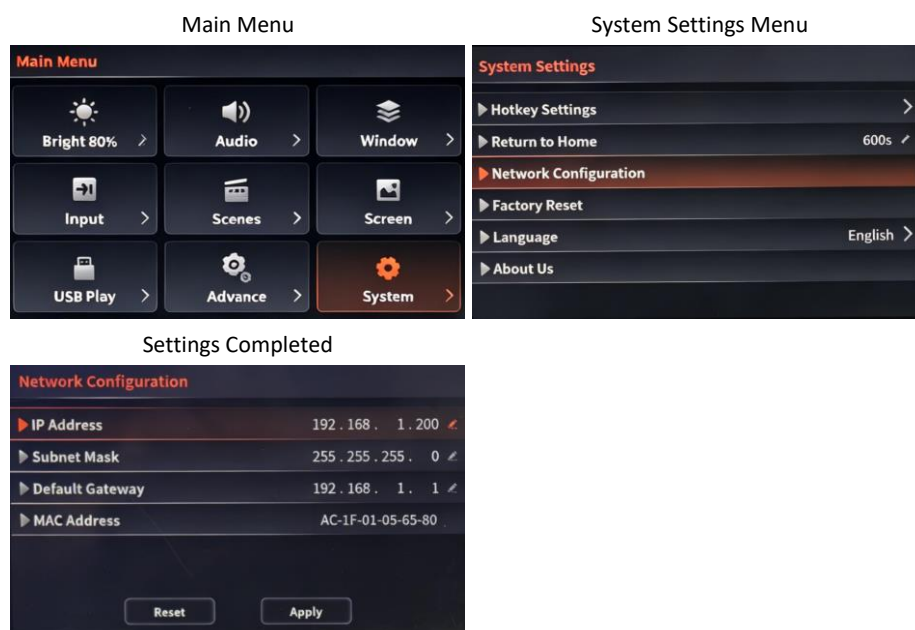
Example: Adjust the return to main interface timeout to 60s.



7.9.3. Network Configuration

The device supports modification of local IP information. When modifying information, ensure that the device and the control computer are on the same network segment, and the device IP address does not conflict with the control computer IP address.

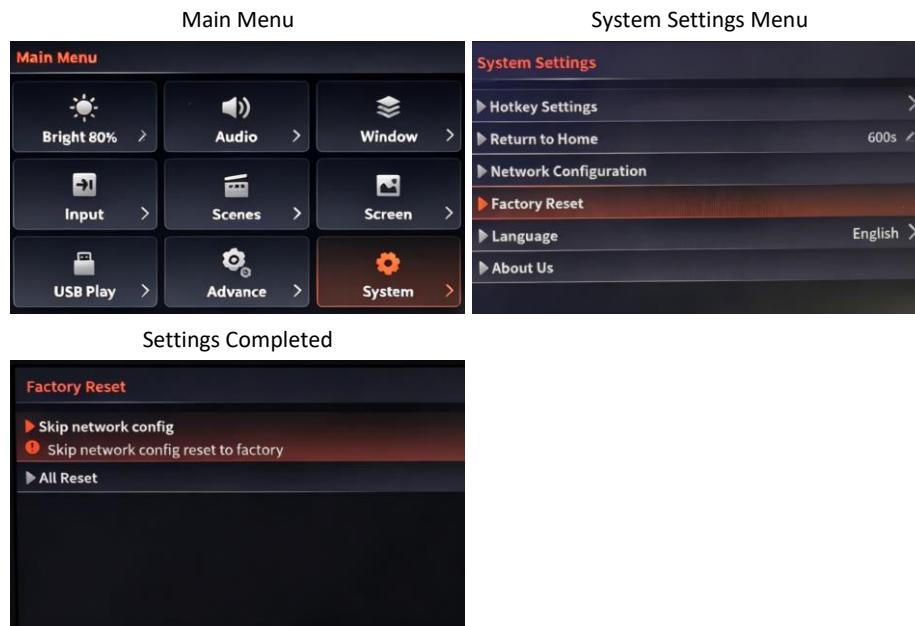
1. Press the confirm button to enter the main menu and select "System Settings";
2. Press the confirm button to enter the [System Settings] menu and select "Network Configuration";
3. Press the confirm button to enter the network configuration menu, where you can modify the IP address, subnet mask, and default gateway. After modification, select "Apply" and press the confirm button to confirm the changes.



7.9.4. Restore Factory Settings

The device supports restoring factory settings. The operation steps are as follows:

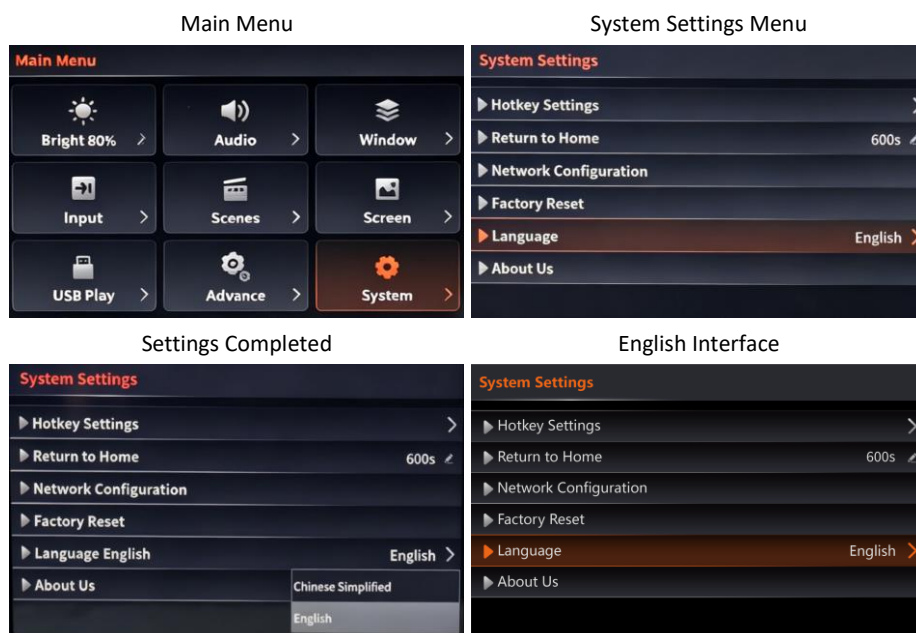
1. Press the confirm button to enter the main menu and select "System Settings";
2. Press the confirm button to enter the [System Settings] menu and select "Restore Factory Settings";
3. Press the confirm button, select "Retain Network Configuration" to retain network settings while restoring factory settings; select "Restore All" to restore all factory settings.



7.9.5. Language Settings

The device menu interface supports two languages: Simplified Chinese and English, which can be switched as needed.

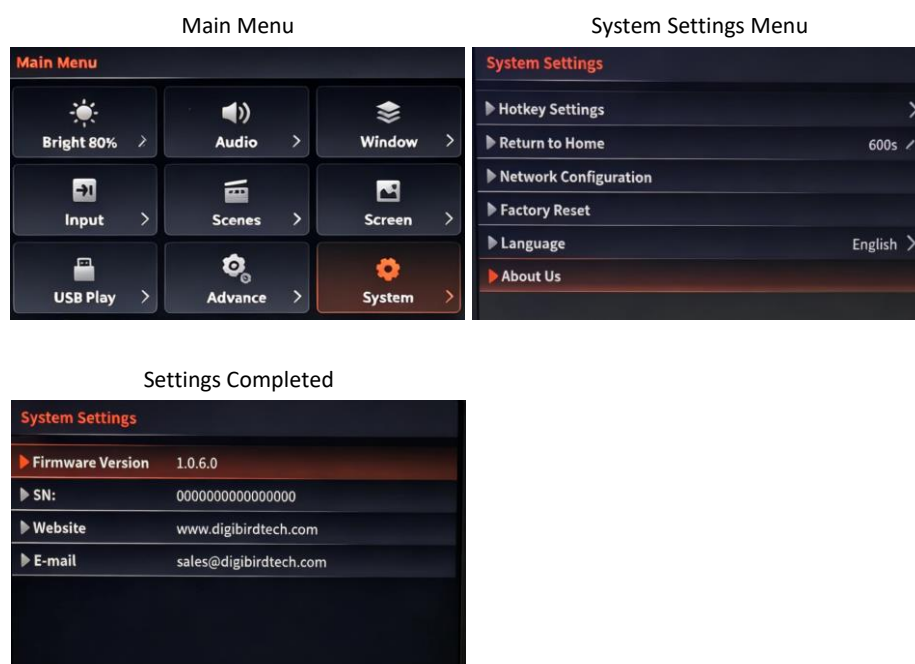
1. Press the confirm button to enter the main menu and select "System Settings";
2. Press the confirm button to enter the [System Settings] menu and select "Language Settings";
3. Press the confirm button to select Simplified Chinese or English.



7.9.6. About Us

Basic device information and company basic information can be viewed through the front panel LCD menu.

1. Press the confirm button to enter the main menu and select "System Settings";
2. Press the confirm button to enter the [System Settings] menu and select "About Us";
3. Press the confirm button to view basic device information and company basic information.



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