



MVB6S MVB8S MVB10E MVB12E

2IN1 Video Processor

User Manual

Applicable to MVB6S MVB8S MVB10E MVB12E

Document version:: V2.0

Hardware Version: MVB6S (V2.1.2) MVB8S (V2.1.2)

Safety Instruction



This symbol reminds the user that there are important operation and maintenance instructions in the user manual of the equipment.



This symbol warns the user that there is dangerous voltage exposed in the casing of the equipment, and there is danger of electric shock.

Precautions

Reading Instructions Users must read and understand all safety and use instructions before using the equipment.

Save Instructions Users should save safety instructions for future use.

Obedience warning Users should observe all safety and operating instructions in the product and user's guide.

Avoid appending Do not use tools or appending equipment not recommended by the manufacturer of this product to avoid danger.

Warning

Power supply

This equipment can only use the power supply indicated on the product. The equipment must be powered by a power supply system with a ground wire. The third line (ground wire) is a safety facility, which cannot be used or skipped.

Unplug the power supply

In order to safely unplug the power supply from the equipment, please unplug the power cord of all equipment rear or desktop power supply, or any power cord connected to the mains system.

The power cord shall be properly wired to avoid being trampled or squeezed by heavy objects.

Maintenance

All repairs must be carried out by certified maintenance personnel. There are no parts in the equipment that can be replaced by users. To avoid the danger of electric shock, don't try to open the cover of the equipment to repair the equipment yourself.

Vent holes

Some equipment housings have vent slots or holes, which are used to prevent the sensitive components in the machine from overheating. Don't block the vent with anything.

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1 Update Records

Document version	Hardware version	Release time	Update record
V2.0	MVB6S (V2.1.2) MVB8S (V2.1.2) MVB10E (V2.1.2) MVB12E (V2.1.2)	June 23(nd), 2025	First release of document

2 Applicable Model

The product models applicable to this article are as follows:

MVB6S、MVB8S、MVB10E、MVB12E

In this paper, MVB8S Sending Controller is used to explain:

3 Product Overview

3.1 Product Introduction

The MVB8S is a powerful LED video control device featuring robust video signal acquisition and processing capabilities. It supports high-definition video signal input up to 3840×2160@60Hz with RGB444 color depth, delivering efficient audio-visual processing for computers and other devices. It supports 5 video inputs, including HDMI×2, DVI, DP, VGA, etc., with flexible switching between multiple signals. It enables arbitrary scaling and cropping of video sources, featuring robust video signal reception capabilities, ultra-high-definition image processing, and transmission capabilities.

The MVB8S single unit supports LED displays with a maximum width of 8192 pixels or a maximum height of 3840 pixels. It also incorporates a comprehensive suite of practical features, delivering flexible screen control and high-quality image display, making it ideal for large and medium-sized LED displays.

The MVB8S features 8 Ethernet ports with data transfer rates up to 8Gbps, capable of driving LED screens with up to 5.2 million pixels per unit. Powered by a Linux operating system and utilizing the MST91A4Q1 chip as its CPU for signal processing, it enables statistical analysis of operational data, control of audio/video processing services, automated execution of scheduled commands, and management of LCD display content.

The MVB8S employs proprietary data transmission and synchronization processing technology for video wall systems, significantly enhancing display quality. Utilizing a fully digital pathway and pure digital signal processing without compression, it supports functions including cropping, scaling, stitching, brightness adjustment, color temperature adjustment, image alignment, and low-brightness high-gray-scale modes.

It delivers high-performance audio decoding and video image processing services to terminal computers.

Computers and control devices can not only monitor the MVB8S's operational status, video signal resolution, screen brightness values, color temperature, receiving card temperature, and receiving card type information via the network; they can also transmit environmental data monitored by sensors—such as temperature, humidity, brightness, and smoke levels—enabling environmental alerts and signal connection monitoring. Additionally, they can retrieve internally processed video stream data from the device and display the video-processed image content on the computer desktop.

3.2 Product Features

3.2.1 Diversified Input/Output Interface

- Multiple input interfaces
 - 1×HDMI2.0、1×HDMI1.4、
 - 1×DVI
 - 1×VGA
 - 1×DP
- EDID, Support custom EDID management
- Output interface
 - 8 gigabit network ports
 - Maximum load 5.20 million pixels, custom output resolution, regular version maximum width 8192, maximum height 3840.
- Audio interface: Support audio input and output

3.2.2 Diversified Display Function

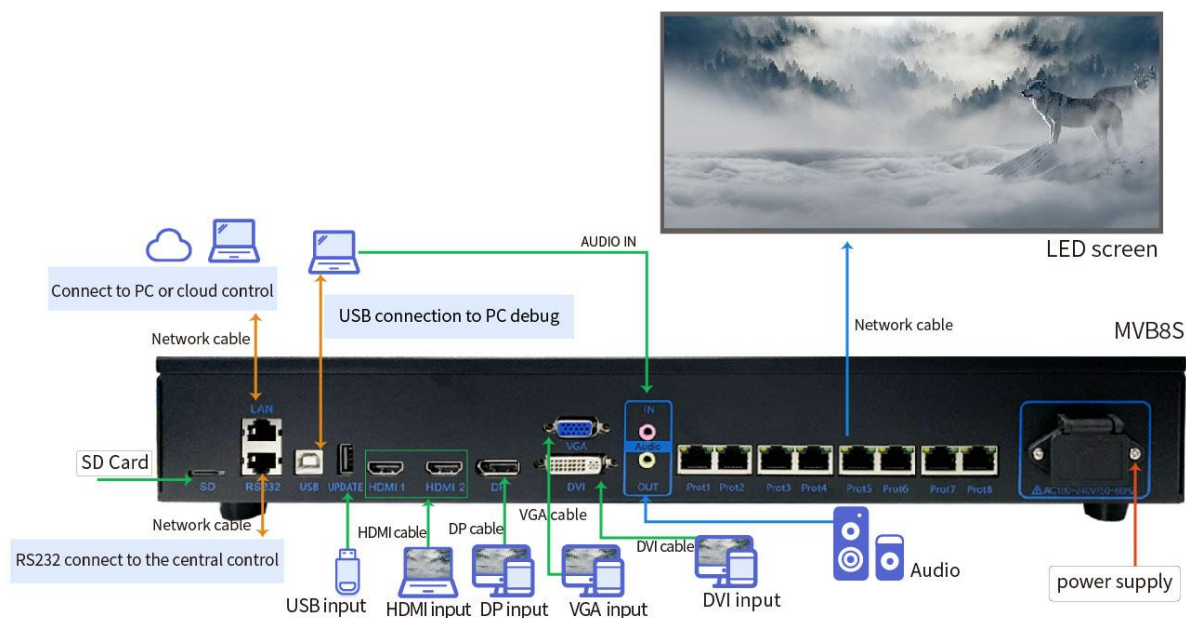
- Support U disk playback, plug and play
- Supports simultaneous display of 4 screens: Output resolution width exceeding 4096 requires single-screen display
- Supports 100Mbps Ethernet, USB, and RS232 serial port debugging control
- Supports creation of 8 user scenes as templates for direct recall, enhancing usability
- Intuitive front-panel LCD display with clear key indicator lights simplifies system control operations
- Supports one-touch entry into user scenes for template saving and recall interface
- Supports picture scaling modes: Full-screen scaling, Pixel-to-pixel scaling, Custom scaling
- Supports seamless multi-screen switching and single-layer seamless switching
- Supports quick multi-screen configuration with simple operations
- Supports window position/size adjustment and window cropping functions

- Supports external independent audio input and output
- Supports custom output resolution, supports custom input EDID
- Supports audio-video synchronized switching
- Supports partial or full-screen switching
- Supports scheduled tasks
- Supports one-touch screen blackout
- Supports built-in test pattern card
- Supports USB playback
- Supports USB firmware upgrade

4 Hardware Introduction

4.1 Wiring Topology Diagram

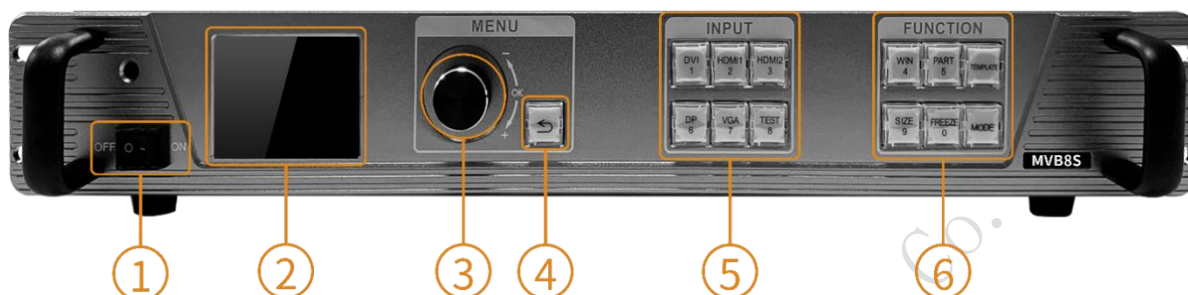
Wiring topology diagram using MVB2S devices as an example.



4.2 Hardware Interface Specifications

Taking the MVB8S device as an example.

4.2.1 Front Panel



* Product photos are for reference only, please refer to the products actually purchased.

Description of data interface:

		DP	DP Source/Num 6: Off: This source is not selected Flashing: This source is selected but no signal is present On: This source is selected and a signal is present
		VGA	VGA Source/Digital Key 7: Off: This source is not selected Flashing: This source is selected but no signal is present On: This source is selected and a signal is present
		TEST	TEST/Number 8 Key: Test Pattern Card Shortcut Key Key indicator remains off; press to enter the test pattern menu.
6	Function Button	WIN	WIN/Num 4: Layer Selection
		PART	PART/Num 5: Partial/Fullscreen Shortcut Button
		TEMPLATE	Open multiple windows; use this key to switch between them
		SIZE	SIZE/Num 9: Zoom Settings, Adjust screen size
		FREEZE	FREEZE/Num 0: Custom Black Screen or Freeze
		MODE	Load scene shortcut key

4.2.2 Rear Panel



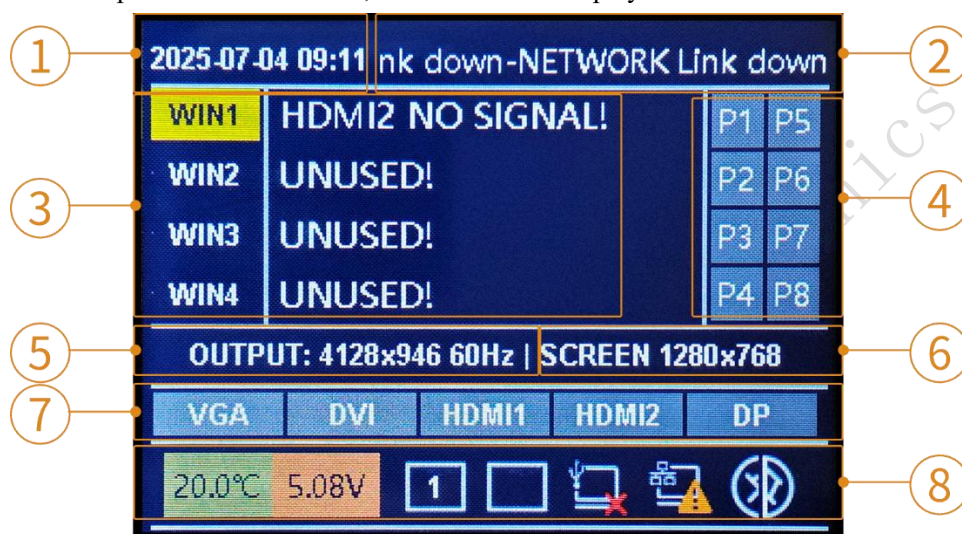
* Product photos are for reference only, please refer to the products actually purchased.

Output Interface			
#	Interface Type	QTY	Illustration
5	Network Port	8	8 Gigabit Ethernet port output connectors to the receiving card. Network port indicator light description: - Dual lights are always on: the power is turned on, but the receiving card is not detected. - Dual lights are not on: the power supply is not connected. - The yellow light is always on, the green light is flashing: the signal is normal and communication is in progress.
AUDIO Interface			
#	Interface	QTY	Illustration
4	Audio in	1	3.5mmAudio Interface Input
	Audio Out	1	3.5mmAudio Interface Output
Control Interface			
#	Interface Type	QTY	Illustration
2	LAN	1	100M Ethernet Port, Reserved Port
	RS232	1	Serial Port
	USB-B	1	Configure Port to connect to the PC
	Update	1	1×USB2.0, USB Drive Upgrade
Extended Function Interface			
#	Interface Type	QTY	Illustration
1	SD	1	SD Card: Stores large-screen configuration parameters for data inspection.

Output Interface			
#	Interface Type	QTY	Illustration
6	Power Supply	1	AC-100-240V-50/60HZ AC power interface

5 Main Interface

After the processor is turned on, the LCD screen displays the use status interface.



#	Icon	Illustration
1	Time	Real-time time display
2	USB Connection	100Mbps Ethernet/USB Debugging Connection Status: - 100Mbps Ethernet Connection Status: NET: 103-1 - USB Debugging Connection Status: USB Connected - Not Connected: No Connection

3		Currently Selected Window 1: Currently inputting HDMI1 source, but no signal! Input resolution for the currently selected input source. When no valid input is present, displays: No Signal!
		Current Window 2 is not in use.
4	Network Port	Display of output port numbers and port status
5	Output	The current output screen resolution is 3840x1080 at 60Hz.
6	SCREEN	Current screen resolution: 1280x1280
7	Input Signal Source	VGA、DVI、HDMI1、HDMI2、DP
8	21.0°C	Real-time Temperature Monitoring of Equipment
	5.08V	Real-time Power Monitoring for Equipment
	Connection Methods	 : Window number currently selected for operation  : Displayed Window Mode  : The device and control unit are not connected via LAN.  : The device and control unit are not connected via USB.  Screen freeze not enabled

6 Menu Operation

Knob:

- In the main interface, press the knob to enter the menu operation interface.
- In the menu operation interface, turn the knob to select the menu function, and the selection status is blue.
Press the knob to select the current menu or enter the submenu function.
- After selecting a menu with parameters, you can adjust the parameters by turning the knob. Please note that you need to press the knob again to confirm after the adjustment is completed.
- ESC: return key.
- Long press the knob to unlock the front panel keys.

Main Menu Function Settings: Input Settings, Output Settings, Screen Configuration, Splicing Settings, Network Settings, Scene Settings, Advanced Features, System Settings—6 major setting menus, each corresponding to different functional configurations.

As shown in the main menu below:

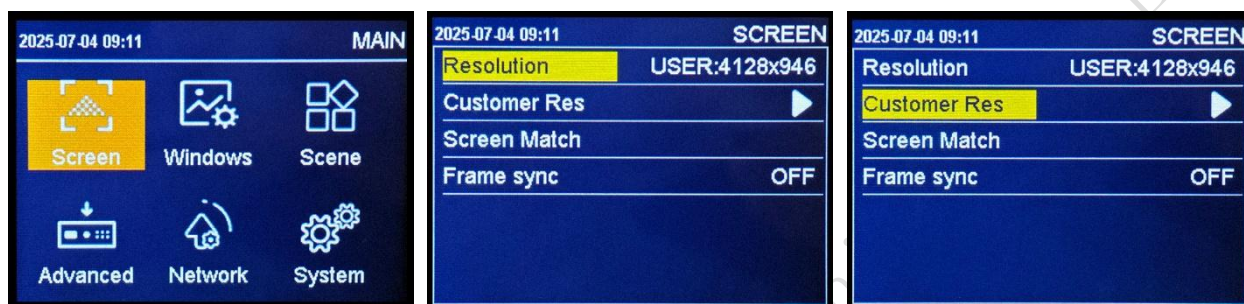


6.1 Input Settings

Steps: Rotate the knob to the **【Input Settings】** function, press the knob to enter, and configure the input source resolution.

The MVB8S supports VGA、DVI、HDMI1、HDMI2、DP video input interfaces. Input resolution can be set via two methods: common EDID or custom configuration:

Input settings as shown below:



6.1.1 Common Resolutions

Step 1: On the Input Settings screen, rotate the knob to Common EDID and press to enter resolution parameter adjustment.

Step 2: With resolution parameters selected, rotate the knob to choose Common EDID.

Step 3: Press the knob to confirm and complete Common EDID setup.

Supported Common EDIDs:

- 1024x768 @60 1024x768 @75 1024x768 @85 1024x768 @100 1024x768 @120
- 1280x1024 @60
- 1440x900 @60
- 1600x1200 @60
- 1680x1050 @60
- 1920x1080 @60 1920x1080 @50
- 2560x816 @60
- 2048x640 @60
- 1920x1200 @60
- 2304x1152 @60
- 2048x1152 @60
- 1024x1280 @60
- 1536x1536 @60

When applied to LED displays, we can choose a preset output resolution larger than the LED screen's resolution, or set the output resolution to match the LED display's resolution exactly.

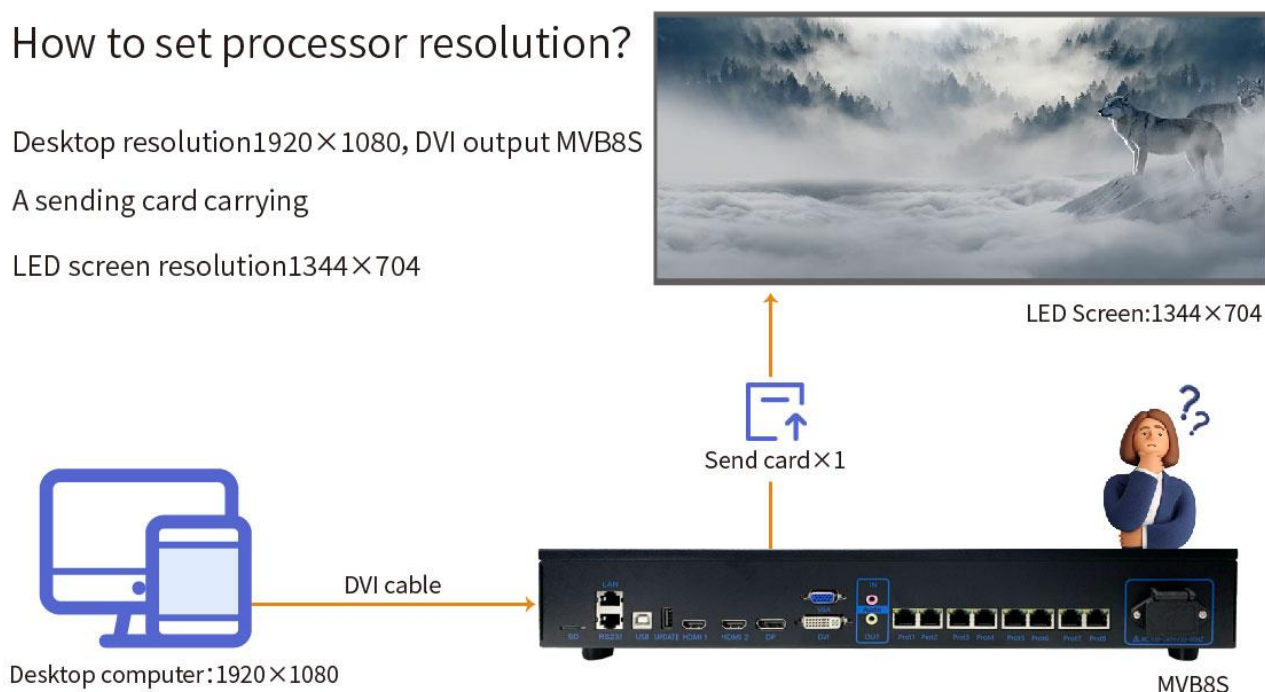
As shown in the figure:

How to set processor resolution?

Desktop resolution 1920×1080, DVI output MVB8S

A sending card carrying

LED screen resolution 1344×704

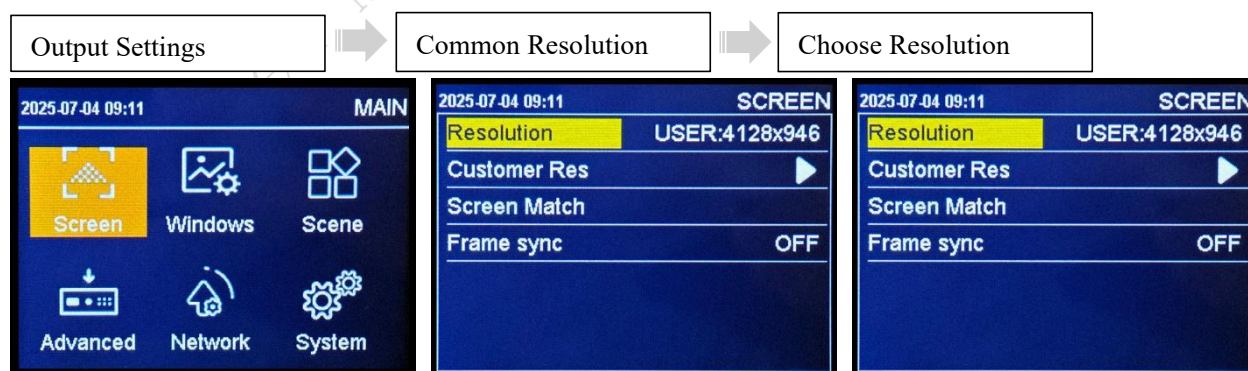


Operation Method:

Step 1: Ensure all hardware device interfaces are functioning properly and input/output cables are correctly connected.

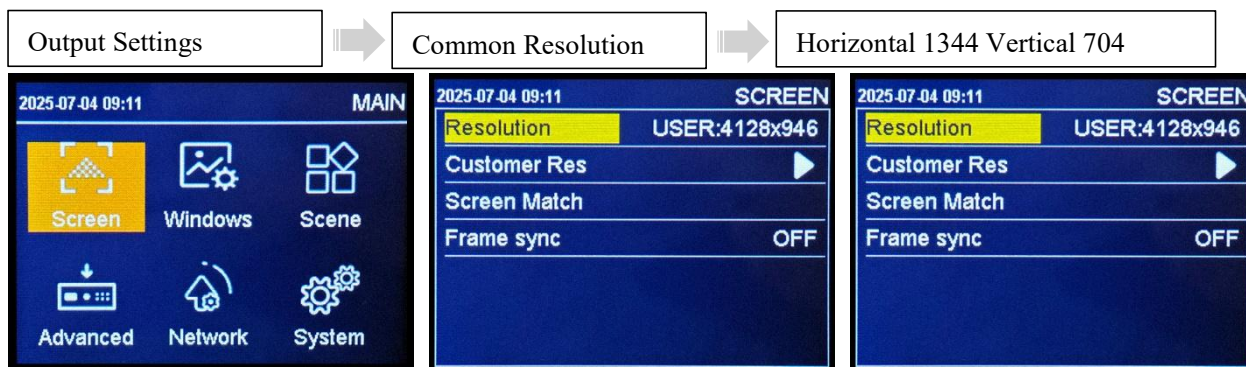
Step 2: Select a preset resolution larger than the LED screen's 1344X704, such as "1366X768, 1680X1050, 1920X1080". Press the knob to set.

As shown below:



Step 3: Set full-screen display, which scales the entire computer desktop to fit the LED screen. Specific steps: Main Menu > [Output Settings] > Enter [Custom Resolution] and modify the horizontal dimension to 1344 and the vertical dimension to 704.

As shown below:



Step 4: Set up local display. Press the “SCALE” key to toggle between full-screen and local view (default 1:1 pixel-to-pixel output).

Step 5: Save the configured parameters as a template. Procedure: Main Menu > “Scene Settings” > Save. Select one template to save.

6.1.2 Custom Resolution

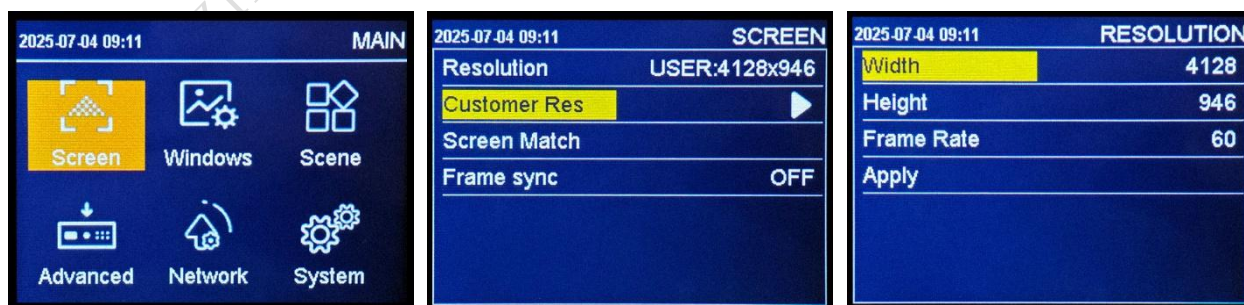
Step 1: On the Screen Settings screen, rotate the knob to Custom, then press to enter Custom EDID.

Step 2: Select Horizontal Valid, press the knob, and rotate it to manually adjust the resolution width.

Step 3: Select Vertical Valid, press the knob, and rotate it to manually adjust the resolution height.

Step 4: Select Apply, then press the knob to confirm the settings.

As shown in the figure:

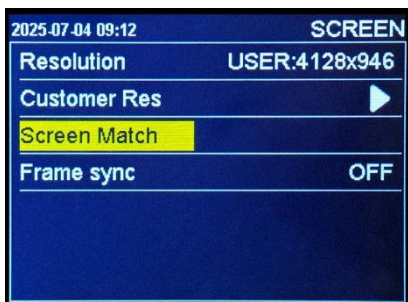


6.1.3 Screen Matching

Attention:

Step 1: On the [Screen Settings] interface, rotate the knob to [Screen Matching]. Pressing it will automatically detect the LED screen parameters configured on the host computer.

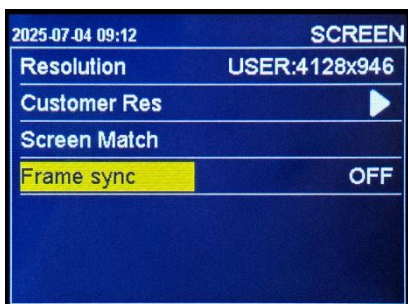
As shown below:



6.1.4 Frame synchronization

Frame synchronization can be enabled or disabled:

In scenarios involving multi-screen display, complex animation playback, or situations requiring multiple LED display devices to show identical content simultaneously, the frame synchronization feature ensures that all display units present perfectly consistent visuals. This prevents screen tearing, delays, or desynchronization. As shown below:



6.2 Window Settings

Steps: Rotate the knob to the **【Window Setting】** function, then press the knob to enter the function interface.

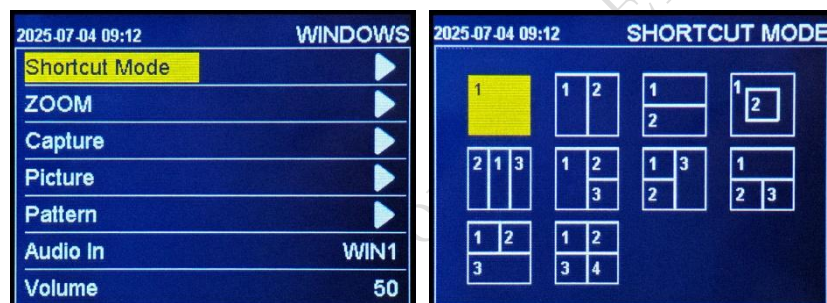
Window Display function settings: **【Quick Mapping】**, **【Scaling】**, **【Image Interception】**, **【Image Property】**, **【Test Mode】**, **【Audio Input】**, **【Volume】**, **【Image Freeze】**, **【Black Screen】**.

Image settings as shown below:

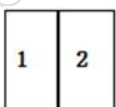
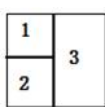


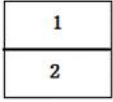
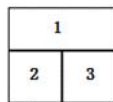
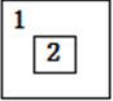
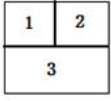
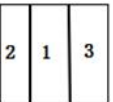
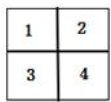
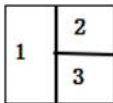
6.2.1 Window Templates

Quickly set the number and relative positions of target windows. Up to four windows can be opened, as shown below:



Attention

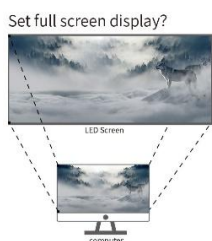
#	Window Modes	Precautions	#	Window Modes	Precautions
1		Both window 1 and 2 can not cross the vertical center line	6		The window 1,2,3 can not cross the vertical center line, but the window 1,2 can move up and down.

2		Both window 1 and 2 can not cross the horizontal center line	7		The Window 1 can freely move on the led screen, and window 2,3 can not cross the vertical center line, but is able to move up and down.
3		The starting point of the window 2 can not be next to the left and right side of the window 1, the interval is 1 column, and the window 1&2 can be freely moved on the led screen.	8		The window 3 can be freely moved on the screen, the window 1&2 can not cross the vertical center line, but can be moved up and down.
4		The window 1 can be freely moved, while the window 2&3 can not cross the vertical center line.	9		The window 1,2,3,4 can not cross the vertical center line, but can be moved up and down.
5		The window 1,2,3 can not cross the vertical center line, but the window 2&3 can be moved up and down.			

6.2.2 Image Scaling

Display the image output from the video processor in full screen on the LED display. If the resolutions match exactly, there is no need to adjust the “image scaling” setting. If the resolutions differ, scaling must be configured. The image will be scaled down or up on the LED screen. Adjust the horizontal start, vertical start, horizontal width, and vertical height to achieve the desired image dimensions.

As shown below:

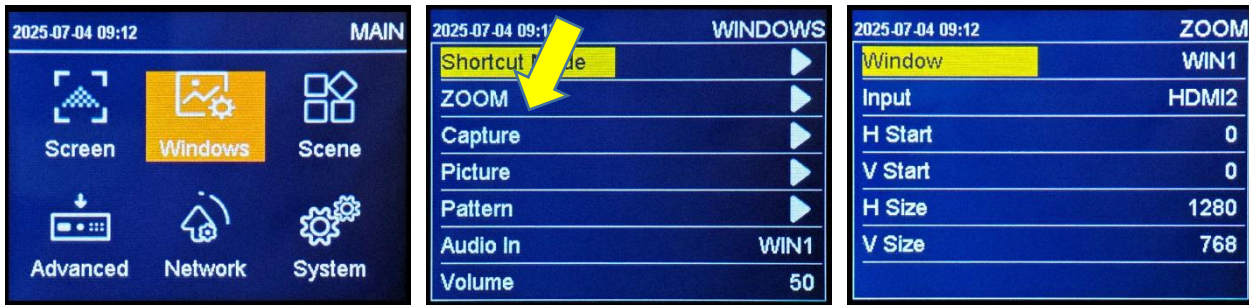


Step 1: On the [Image Settings] screen, rotate the knob to [Image Scaling] and press the knob to enter.

Step 2: Set “Horizontal Start,” “Vertical Start,” “Horizontal Width,”

and “Vertical Height.” Press the knob to confirm the settings.

Image scaling as shown below:

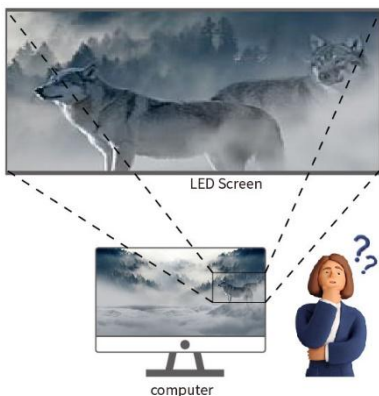


6.2.3 Input Interception

Attention:

- The system defaults to the “Off” state (all parameter adjustment options below are grayed out and cannot be modified).
- Parameters can only be effectively adjusted when the status is “On”.

How to display the captured portion in full screen on an LED screen?



Step 1: On the [Image Settings] screen, rotate the knob to [Input Interception], then press the knob to enter.

Step 2: Set “Horizontal Start,” “Vertical Start,” “Horizontal Width,” and “Vertical Height.” Press the knob to confirm the settings.



6.2.4 Image Properties

Step 1: On the [Image Settings] interface, rotate the knob to [Image Properties] and press to enter.

Step 2: Adjustable image property parameters: [Brightness], [Contrast], [Color Temperature], [Saturation], [Sharpness], [Hue]. Select each parameter (highlighted in blue) and adjust using the knob.

Step 3: Press the knob to confirm, completing the common EDID settings.

Image Properties:

Brightness: Adjusts the brightness value of the output image. System default is 50, adjustable from 0-100.

Contrast: Adjusts the contrast value of the output image. System default is 50, adjustable from 0-100.

Color Temperature: Adjusts the color temperature mode of the output image. Default is Warm; can also be set to Normal.

Saturation: Adjusts the saturation value of the output image. Default is 26, adjustable from 0-128.

Sharpness: Adjusts the sharpness value of the output image. Default system setting is 20, adjustable from 0 to 64.

Tint: Adjusts the tint value of the output image. Default system setting is 50, adjustable from 0 to 128.

Note: The three parameters—Saturation, Sharpness, and Tint—can only be adjusted in USB playback mode.



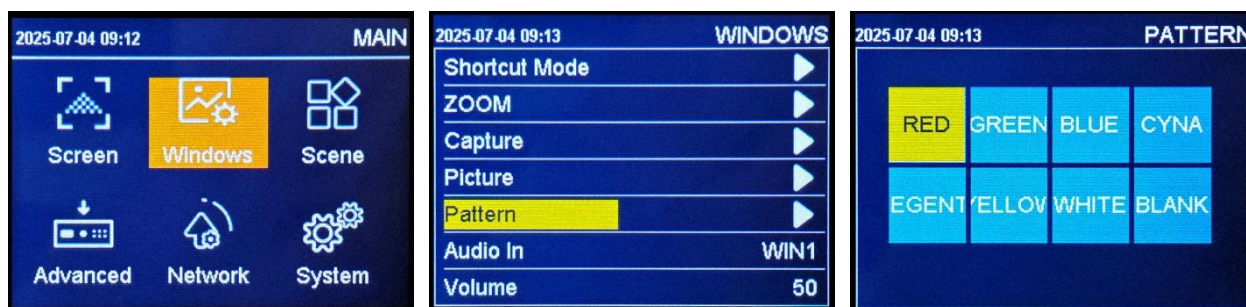
6.2.5 Test Mode

In Test Mode, you can enable or disable the output of built-in test patterns.

Step 1: On the [Window Settings] interface, rotate the knob to [Test Mode] and press to enter the settings menu.

Step 2: The default setting is disabled. After enabling, select the corresponding test color: red, green, blue, cyan, purple, yellow, white, or black.

Step 3: Press the knob to confirm and complete the parameter settings.



6.2.6 Audio Input

The audio input function determines which channel to use for audio input.

Step 1: On the [Window Settings] interface, rotate the knob to the [Audio Input] setting.

Step 2: In the audio input menu, select either the input signal corresponding to the active window or the external 3.5mm audio input.

Step 3: Press the knob to confirm and complete the parameter settings.

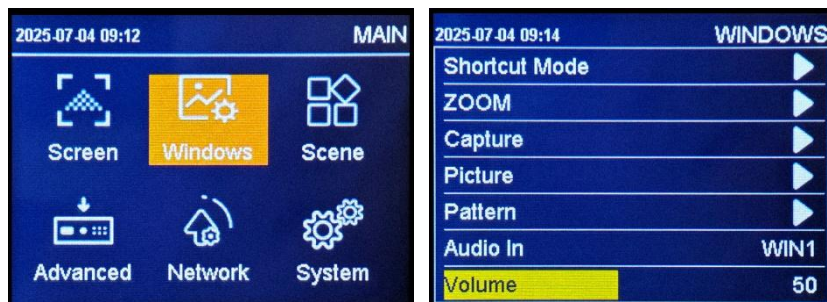


6.2.7 Volume Settings

Step 1: On the [Display] screen, rotate the knob to [Volume] and turn it to adjust the volume level.

Step 2: The default volume is 50; select a level between 0 and 100.

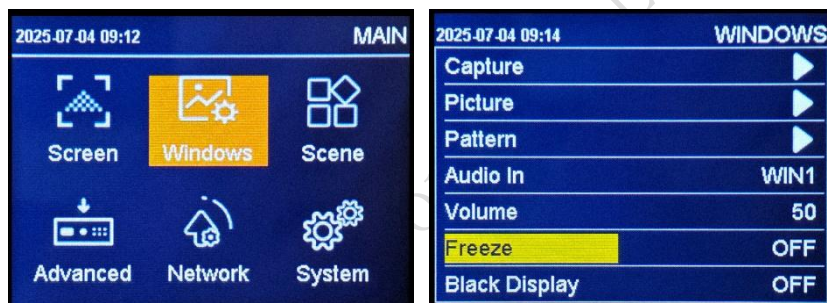
Step 3: Press the knob to confirm and complete the parameter settings



6.2.8 Freeze Image

Step 1: In the [Advanced Features] interface, rotate the knob to [Freeze].

Step 2: The default setting is “Off.” You can set it to “On.” When enabled, the output image freezes uncontrollably, achieving a dynamic pause effect. When rotated back to “Off,” the output image resumes display.



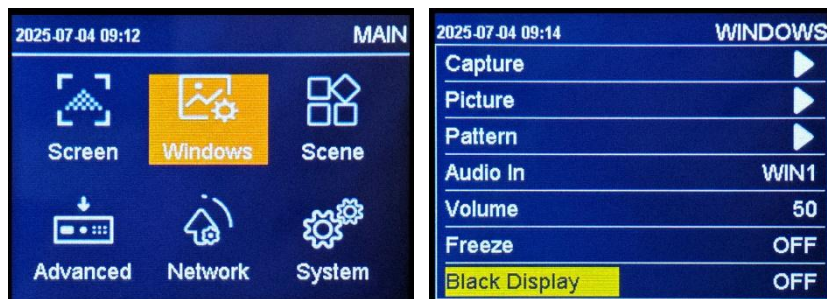
Step 2: Select “Freeze” via [Main Interface] → [Advanced Features] → [Custom Keys] to assign the “FREEZE” shortcut key on the keypad to the freeze function.

As shown below:



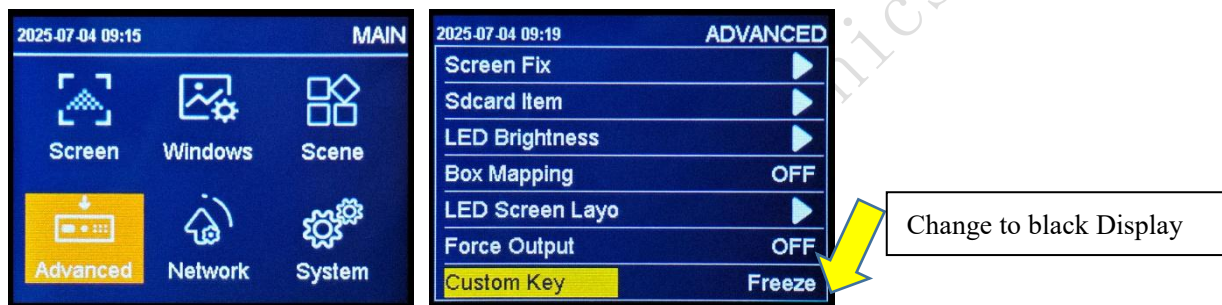
6.2.9 Black Screen

Step 1: On the [Advanced Features] interface, rotate the knob to [Black Screen] to “enable” or “disable” the feature.



Step 2: Select “Black Screen” via [Main Interface] → [Advanced Features] → [Custom Keys], then assign the “FREEZE” shortcut key on the keypad to the black screen function.

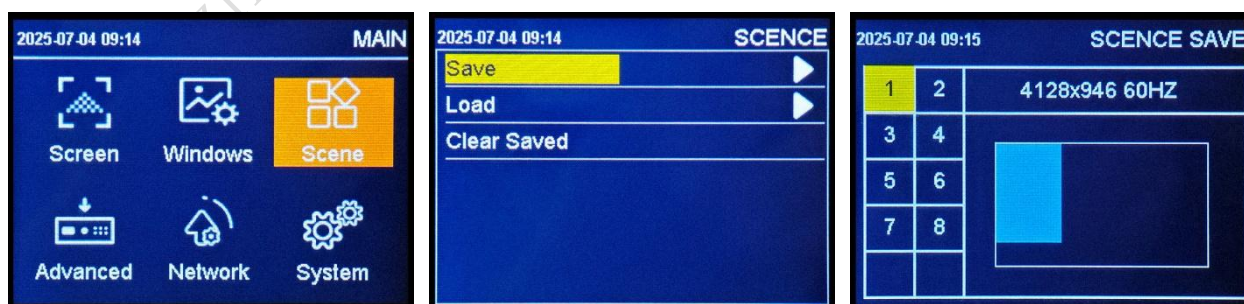
As shown below:



6.3 Scene Settings

In the scene settings, you can save and load parameters configured for the video processor, as well as clear data from saved scene presets for convenient future use. The system provides eight templates for user storage.

As shown in the scene preset below:



- **Save:** Save the current display settings as a scene. (Saved parameters: output resolution, signal source, display mode, scaling parameters, cropping, height, contrast, saturation, sharpness, hue, color temperature). If the selected scene number already has parameters, they will be overwritten by the new scene settings.
- **Load:** Recall a previously saved scene.
- **Clear Data:** Clear all saved scene parameters.

6.4 Advanced Features

Advanced Features Menu: **【VGA Calibration】**, **【EDID】**, **【Scheduled Switching】**, **【Screen Inspection】**, **【SD Card Backup】**, **【LED Screen Brightness】**, **【Cabinet Marking】**, **【LED Screen Mapping】**, **【Mandatory Output】**, **【Custom Key】**—ten function menus. As shown in the Advanced Features image below:



6.4.1 VGA Calibration

VGA calibration is a technique designed to enhance the brightness uniformity and color fidelity of LED displays. It involves collecting brightness (and chromaticity) data from each pixel (or each primary subpixel) area on the LED display, it generates correction coefficients for each primary sub-pixel or a correction coefficient matrix for each pixel. This data is fed back to the display's control system, which applies the correction coefficients to enable differential driving of each pixel (or primary sub-pixel). This process ensures a pure, detailed image with true-to-life color reproduction on the LED display.

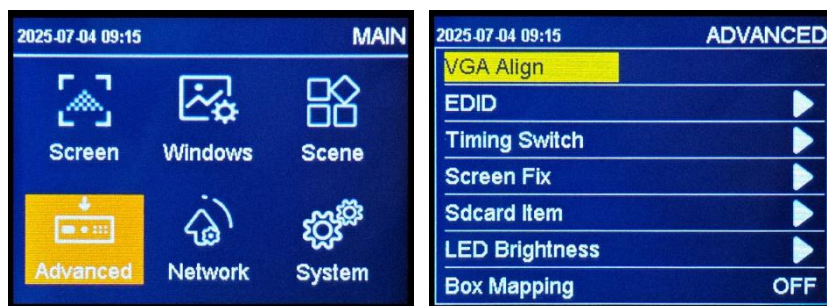
Auto Adjust: Automatically corrects VGA image display position when selected.

ADC Calibration: Performs automatic ADC calibration when selected.

Phase Adjustment: Addresses abnormal display issues (e.g., flickering, screen distortion) on the LED screen output.

Adjustable value range: 0-63.

As shown in the figure below: VGA Calibration:

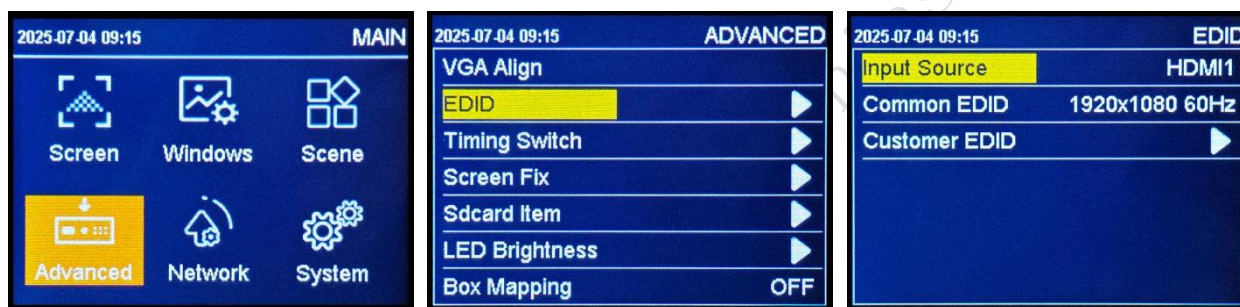


6.4.2 EDID

Step 1: On the Advanced Features screen, rotate the knob to EDID and press to enter; select the input source.

Step 2: Choose either Common EDID or Custom to adjust resolution parameters.

As shown below:



Common EDID supports the following resolutions:

- 1366x768 @60
- 1440x900 @60
- 1920x1080 @60
- 2560x1080 @60
- 3840x1080 @60
- 3840x2160 @60

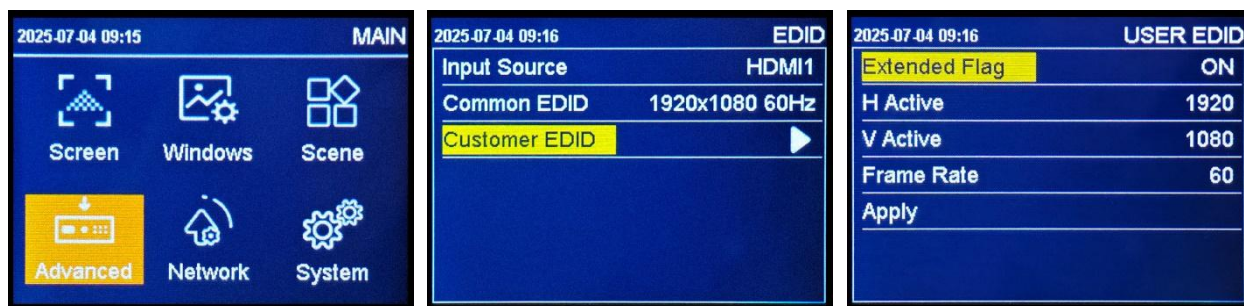
Custom:

Step 1: On the Advanced Features interface, rotate the knob to Custom and press to enter resolution parameter adjustment.

Step 2: With resolution parameters selected, set the resolution by rotating the knob.

Step 3: Press the knob to confirm the resolution setting. Select Apply and press the knob again to complete the configuration.

As shown in the figure above:



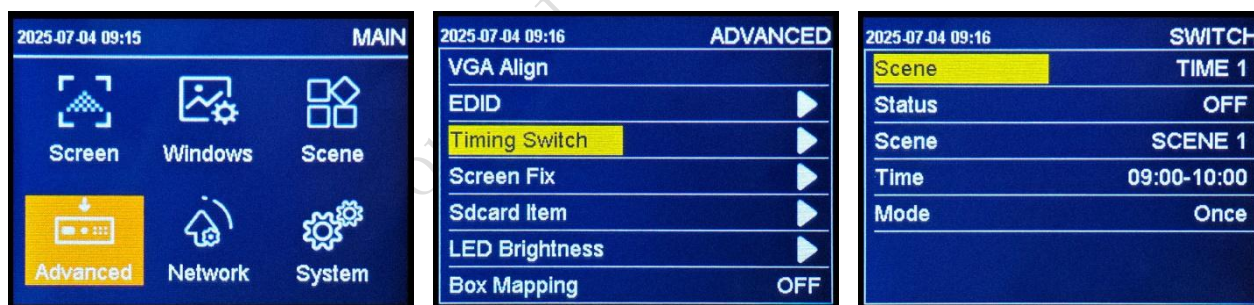
6.4.7 Scheduled Switch

Step 1: On the 【Advanced Features】 interface, rotate the knob to 【Scheduled Switching】 and press to enter.

Step 2: With the knob in yellow status, press to set parameters and press again to confirm.

Supported Timer Menu Functions:

- Periods: Set the number of timer periods, up to 5 periods maximum
- Status: Enable or disable the selected timer switching period
- Scene: Select from saved scenes
- Time: Start time - End time for the timer switch
- Frequency: Number of times this period executes, set to once or daily

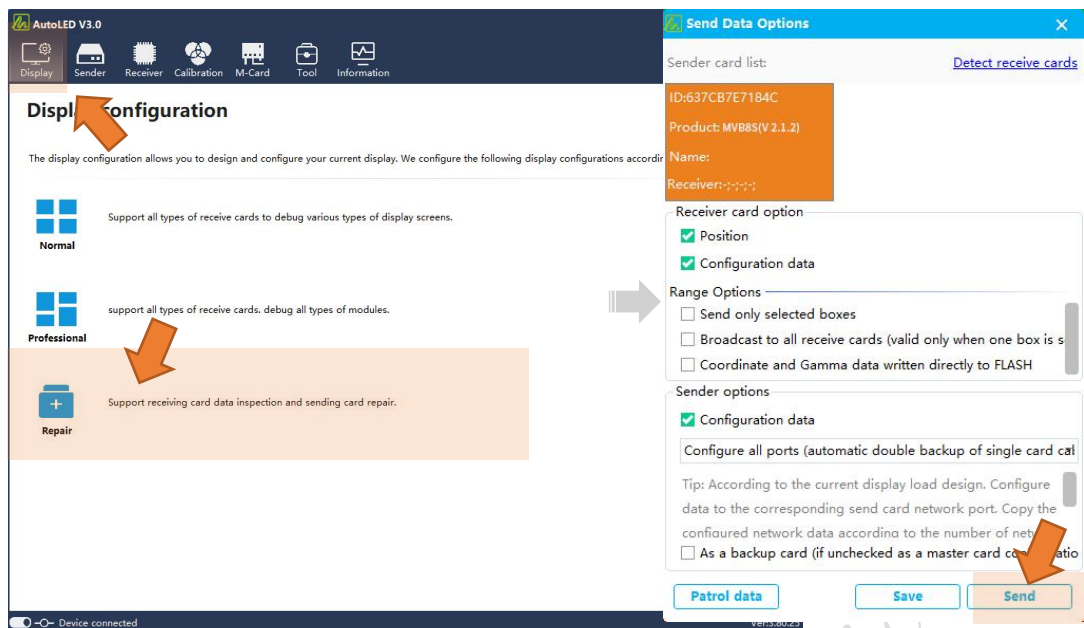


Before performing screen inspection, it is necessary to use the upper computer software to set and save the inspection data.

Operation method of setting and saving inspection data by upper computer software;

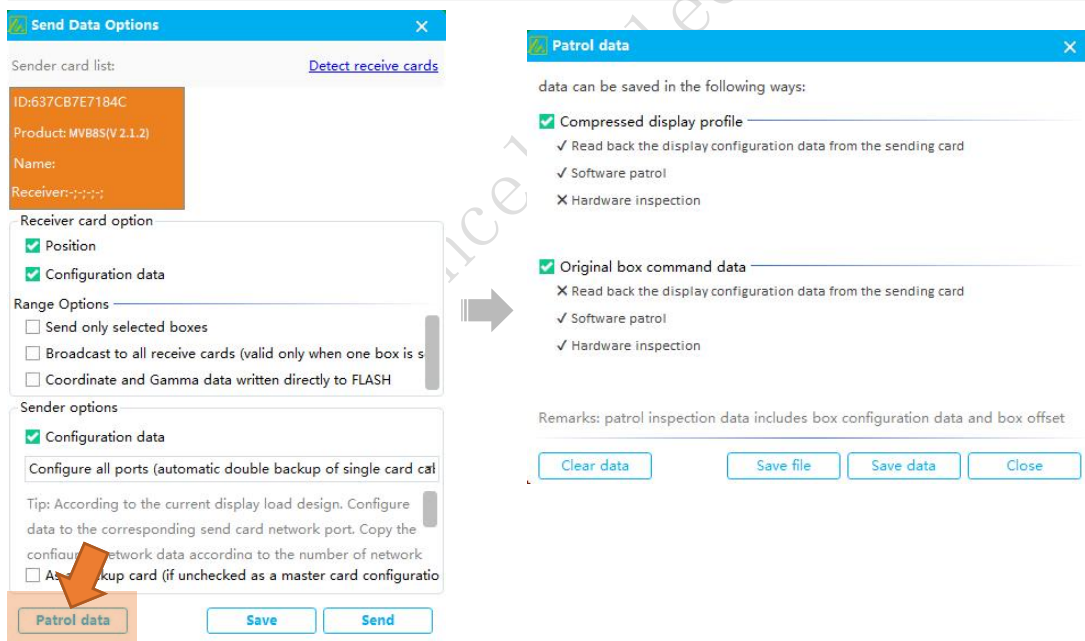
Step 1: Send the display screen connection file in the screen configuration interface of the upper computer software.

Send a screen mapping file



Step 2: Click Patrol Data to save the data.

Save inspection data



The Inspection documents can be backed up and saved to the sending card for the screen patrol function, and the parameter content of the patrol document backup is the patrol content of the "All" patrol type shown in the table below.

✧ Select the inspection type, all, sending card and receiving card;

Inspection Type	Application Scenario	Inspection Content
All	When replacing the receiving card: the parameters shown on the right will be sent to the sending card and the receiving card again to restore the backup inspection data.	Location parameters of sending card: image interception parameters, network port offset parameters, (excluding scaling parameters) Receiving card: location parameters, configuration data parameters (excluding gamma value)
Sending card	Enabled only when the sending card parameters are abnormal: the sending card parameters shown on the right will be re-distributed to the sending card to restore the backup inspection data.	Location parameters: image capture parameters, portal offset parameters, (excluding scaling parameters)
Receiving card	Enabled only when the location parameters of the receiving card are abnormal: the parameters of the sending card shown on the right will be re-distributed to the sending card to restore the backup inspection data. After the unlimited inspection is started: the automatic updating parameters can be directly changed on the screen with faults, without manual distribution.	One inspection: location parameters of sending card and receiving card. Unlimited inspection: repair the location parameters of the sending card and the receiving card for the first time, and then only repair the location parameters of the receiving card.

✧ Number of inspections: You can select "Once" or "Unlimited" when selecting the inspection of receiving card, and only "Once" is available for other types.

Note: USB must be unplugged after the receiving card is turned on. After unplugging USB, the menu cannot be operated. To temporarily turn off the wireless patrol, you can press and hold the button for 10 seconds or plug in USB again to temporarily turn it off. To permanently turn it off, you need to click Turn off the patrol on the menu.

- ✧ Start patrol inspection, and perform patrol inspection according to the selected patrol inspection type and patrol inspection times.
- ✧ Patrol solidification, patrol back to the gamma parameter, and write and save the parameter sent by patrol to the corresponding memory, so that the parameter can be directly loaded when the equipment restarts.

Tips:

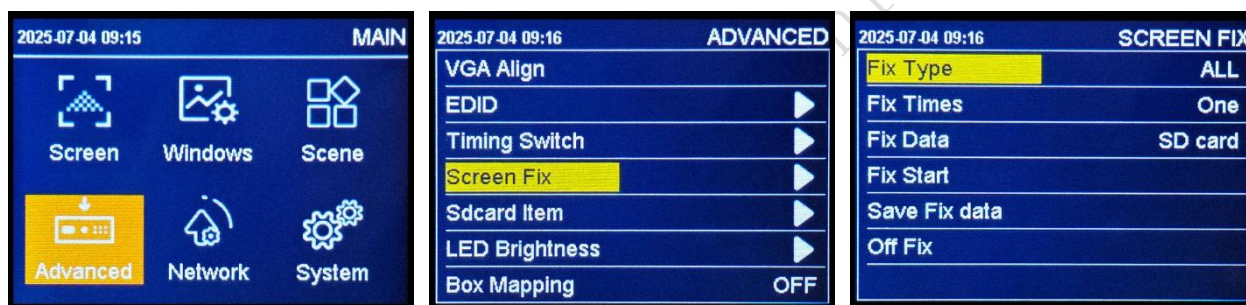
- It is necessary to start the inspection before the inspection and curing operation.
 - The solidified inspection parameters correspond to the inspection type selected during inspection.
 - During curing, the parameters of the sending card are stored in the flash of the sending card and the parameters of the receiving card are stored in the flash of the receiving card.
- ✧ Turn off the inspection. When the receiving card turns on the unlimited inspection, click to exit the inspection operation.

Screen Inspection:

Step 1: Turn the knob to [Screen Inspection], and press the knob to enter.

Step 2: Set patrol type, patrol times and patrol data; Press the knob to confirm the selection of "Turn on patrol", "Cure patrol" and "Turn off patrol".

Step 3: Wait for the inspection to be completed, or press and hold the knob to exit during the unlimited inspection of the receiving card.



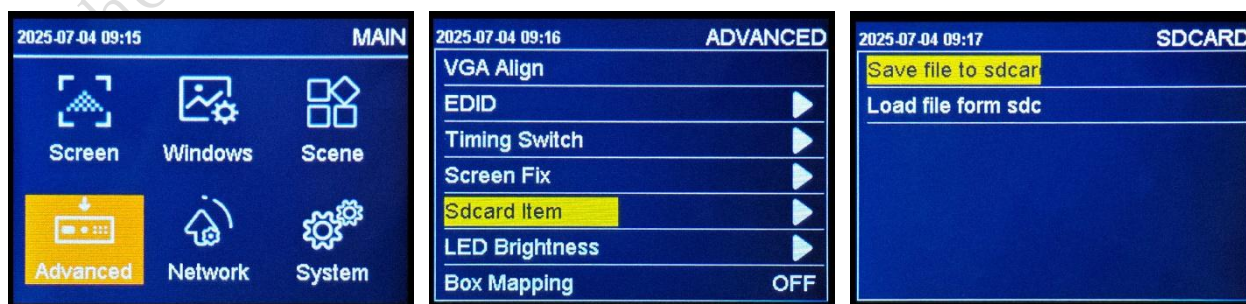
6.4.5 SD Card Backup

Step 1: On the Advanced Features screen, rotate the knob to SD Card Backup and press to enter.

Step 2: Select either Backup to SD Card or Restore from SD Card based on your needs.

Backup to SD Card: Saves device parameters to the SD card.

Restore from SD Card: Loads parameters from the SD card to the device.



6.4.6 Brightness

Step 1: On the Advanced Features screen, rotate the knob to LED Screen Brightness and press to enter.

Step 2: Adjust the Brightness, Red, Green, and Blue values as needed.

As shown below:



6.4.7 Cabinet Remark

Step 1: On the Advanced Features screen, rotate the knob to the “Cabinet Marking” position and press to enter.

Step 2: Select “On” or “Off”.

As shown below:



6.4.8 LED Screen Mapping

Attention

- The number of cabinets supported by Network Port 1 must be greater than or equal to the number supported by Network Port 2.
- The number of cabinets supported by each network port must be an integer multiple of the number of rows or columns displayed on the screen.

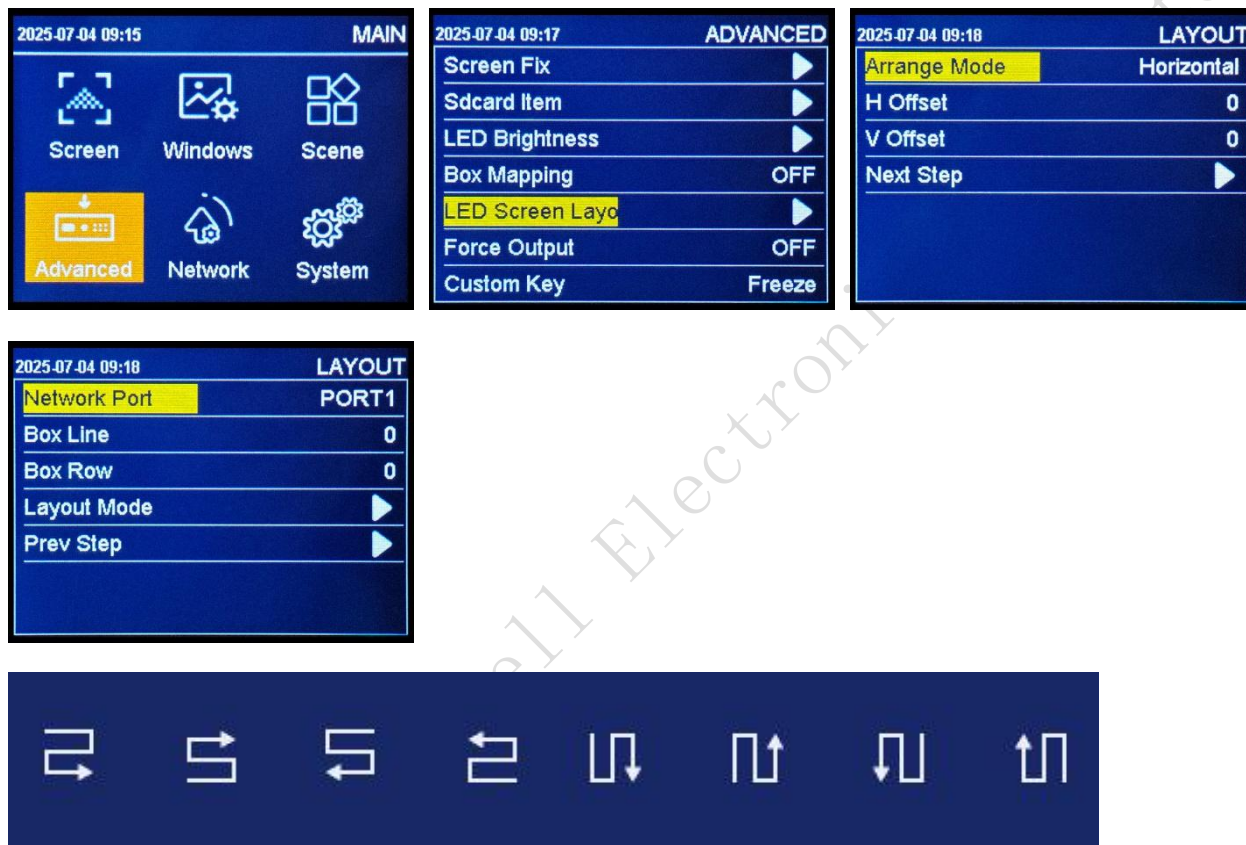
- The total number of pixels across all cabinets supported by Network Port 1 must not exceed 650,000 pixels.

Quick Screen Mapping:

Step 1: On the [Screen Configuration] interface, rotate the knob to [Quick Screen Mapping] and press to enter.

Step 2: Set the number of rows and columns for each network port cabinet. Select from eight common wiring methods.

As shown below: Quick Screen Mapping and 8 mapping Methods:

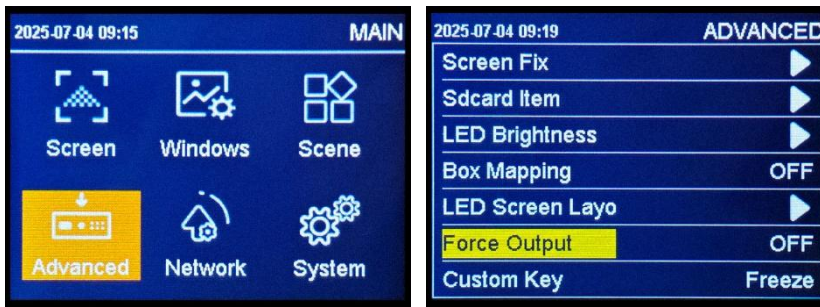


6.4.9 Mandatory Output

Step 1: On the Advanced Features screen, rotate the knob to Mandatory Output and press to enter.

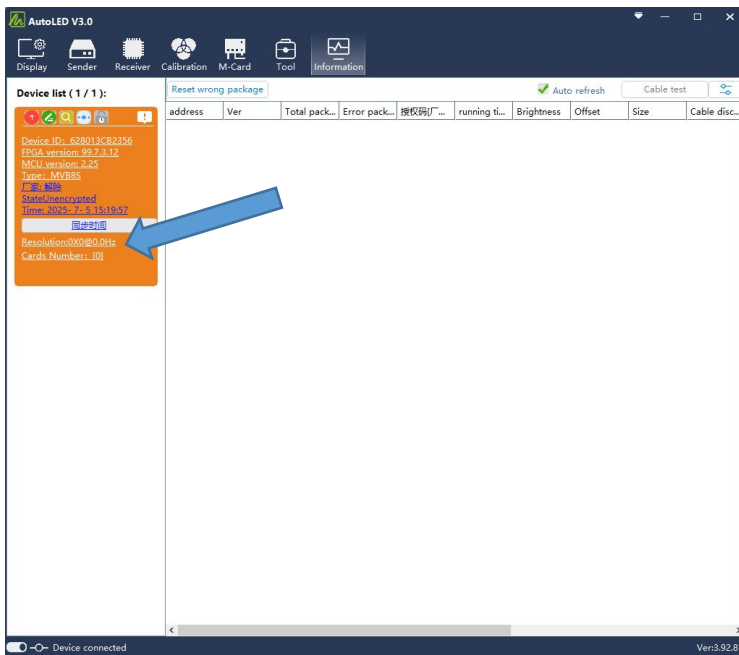
Step 2: Select “On” or “Off”.

As shown below:



When enabled: Regardless of input signal presence, the video processor will output based on the canvas resolution.

When disabled: When no input signal is connected, output resolution is 0x0@0.0Hz



6.4.10 Custom Key

Step 1: On the Advanced Features screen, rotate the knob to Custom Keys and press to enter.

Step 2: Configure the front panel “FREEZE” button to either ‘Freeze’ or “Black Screen” as needed.

As shown below:



6.5 Network Settings

Step 1: On the Advanced Features interface, rotate the knob to Network Settings and press to enter.

Step 2: DHCP On: Automatically requests IP allocation from the router. The DHCP server can automatically assign IP addresses to devices on the network, reducing manual configuration effort.

DHCP Off: Fixed IP remains unchanged.

Step 3: Configure the “Default Gateway,” “Subnet Mask,” “IP Address,” and “Port Number.”

Network Settings as shown:



6.6 System Settings

System Settings Function Menu:

Seven function menus: [Version Information], [Time Settings], [Language], [Key Lock], [RS232 Baud Rate], [Factory Settings], [Processor Upgrade].

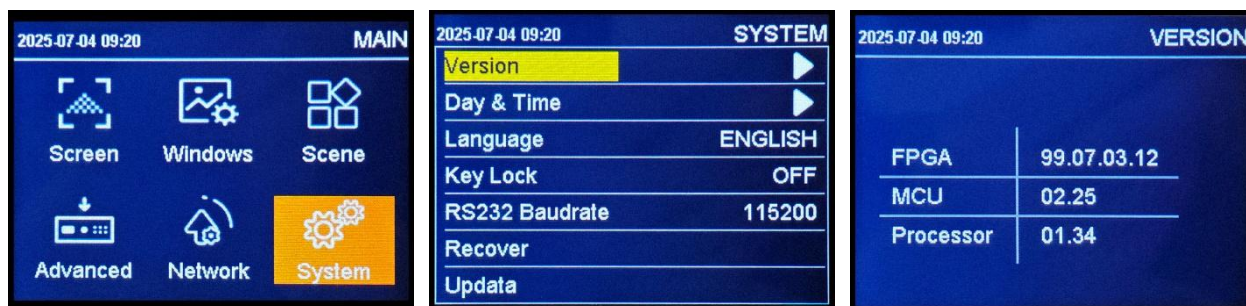
As shown in the system settings below:



6.6.1 Version Information

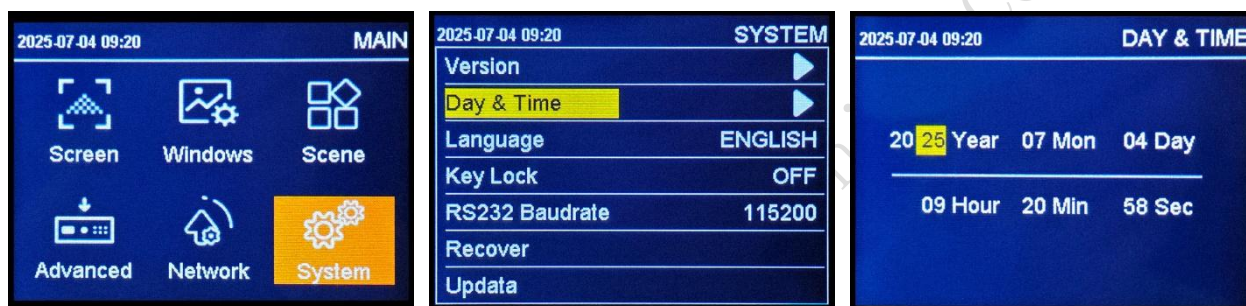
The current version number of the video processor system program.

As shown in the version information below:



6.6.2 Time Setting

Select the corresponding number and turn the knob to increase or decrease the value. Press the knob to confirm the setting. As shown in the figure below for time settings:



6.6.3 Language

The default system language is "Simplified Chinese", which can be switched to "English" and "Traditional Chinese". Press the knob to confirm.



6.6.4 Key Lock

The key lock function is turned on to prevent misoperation and lock the key function of the front panel. Default "on" state, automatic locking after 3 minutes of no operation; Unlocking method: After pressing the knob, there is a prompt, and long press the knob to unlock.



6.6.5 Baud rate of RS232

The data transmission rate from one device to another, that is, bits per second (bit/s), has typical baud rates of 300, 1200, 2400, 9600, 19200, 38400, 115200, 230400 and so on. It needs to be used with serial communication software.



6.6.6 Factory Settings

Press the knob to pop up the prompt message "Are you sure you want to restore the factory settings? (Confirm/Return) "; Press the knob to confirm, and press the Esc key to return.

Set Parameters:

- Output Resolution: 1920X1080 60Hz
- Signal Source: HDMI
- Scaling Parameters: 0, 0, 1920, 1080
- Crop: Off
- Brightness: 50
- Contrast: 50
- Saturation: 26

- Sharpness: 20
- Hue: 50
- Color Temperature: Warm
- Black Screen: Off
- Transition Effect: Fade In/Out
- Test Screen: Off
- Volume: 30
- USB Playback Settings: Video, All Loop

6.6.7 Upgrade the processor

Copy the upgrade program to a USB drive, insert it into the USB port, and select “Upgrade Processor.” After the upgrade completes and the system automatically reboots, the status screen will appear, indicating the upgrade is finished.

Note: The USB drive's file system must be NTFS, FAT32, or FAT16. exFAT (FAT64) is not supported.



WeChat Official Account Platform

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