灰度科技
HUIDU TECHNOLOGY

Product Instructions

Two-in-one video processor HD-VP630/830

V1.0 20240816

1 Introduction

HD-VP630/830 is a two-in-one video processor for LED display screens with a new architecture. It integrates 6/8-channel Gigabit Ethernet output and supports three-screen display. It comes with Wi-Fi function as standard and supports wireless control via mobile phone APP. It has 2 HDMI, 1 SDI and 1 DVI signal inputs, and supports seamless switching of multiple synchronous signals. It can be used in hotels, shopping malls, conference rooms, exhibitions, studios and other occasions that require synchronous playback.

Product Features

Input

- Support 2-channel HDMI, 1-channel DVI, 1-channel SDI, and seamless switching of multiple video signals;
- Support 1-way TRS 3.5mm standard two-channel audio input and HDMI audio input.

Output

- Standard 6/8-channel Gigabit Ethernet ports, directly cascaded to receiving cards;
- Maximum control of 3.9/5.2 million pixels, maximum horizontal support of 8192 pixels, maximum vertical support of 4096 pixels;
- 1 TRS 3.5mm standard dual-channel audio output.

Function

- Wi-Fi is standard, and supports wireless control via mobile phone APP;
- Infrared wireless remote control function is standard;
- Supports RS232 centralized control (connecting to central control device);

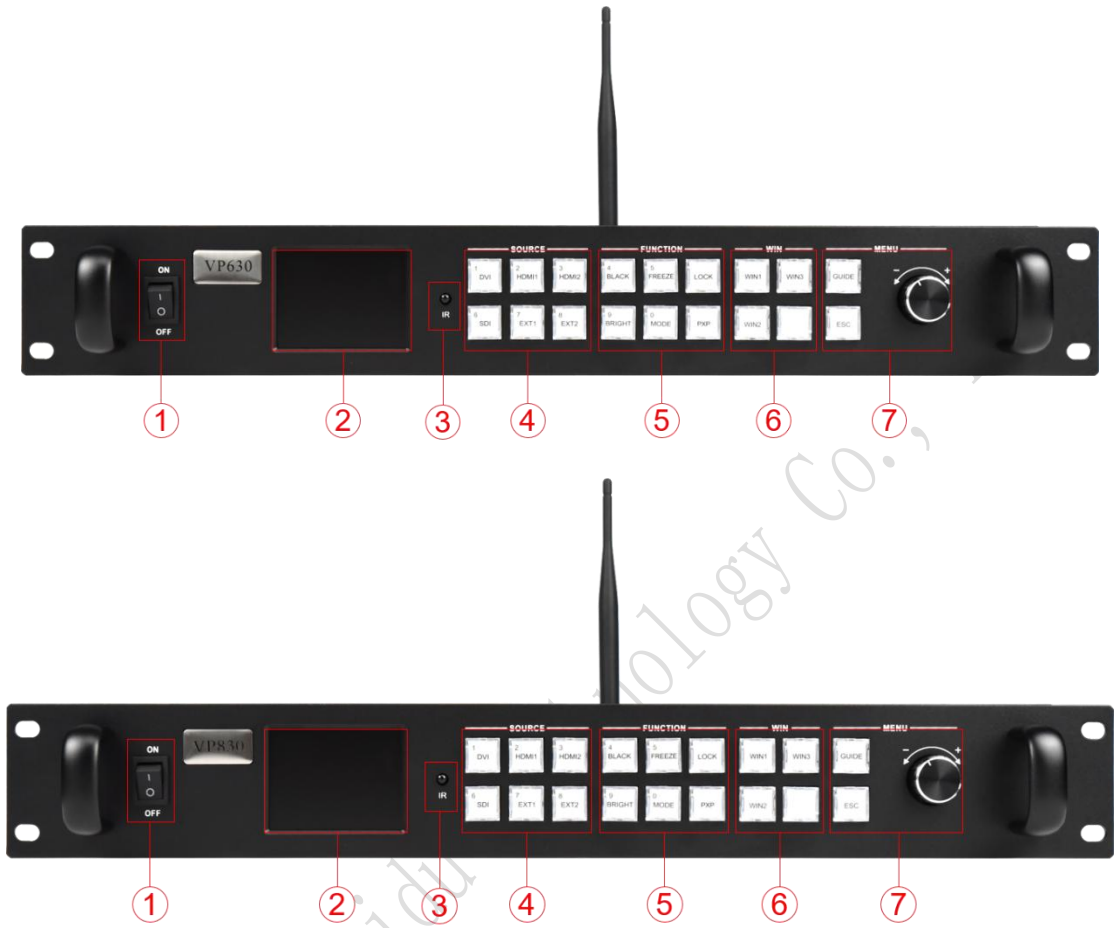
- Supports instant saving technology, and parameters are automatically saved;
- Supports brightness adjustment and key lock functions;
- Supports 8 scene presets and calls;
- Supports three-screen display, and supports picture-in-picture (PIP) and picture-outside-picture (POP) functions.

2 Application Scenarios

Connection diagram

3 Appearance

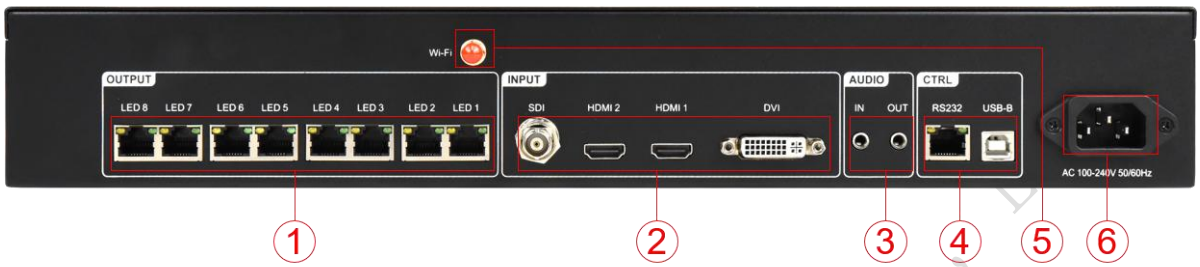
Front Panel



Key Description		
Serial number	Button	illustrate
1	Power switch	controls AC power input
2	LCD display	debugs display menus, screen parameters and other information
3	IR wireless	switches signal source, brightness settings, volume adjustment and

	receiver	other functions
4	SOURCE	signal source selection key, select the corresponding signal source according to the silk screen mark, the key multiplexing function is digital selection, generally used when setting the resolution
5	FUNCTION	function key, the key multiplexing function is digital selection, generally used when setting the resolution BLACK: One-click black screen FREEZE: One-click freeze screen LOCK: Key lock to prevent misoperation BRIGHT: Quickly call out the brightness setting key MODE: Quickly call out the preset mode call menu PXP: Quickly enter the screen layout menu
6	WIN	Select an open window
7	MENU	Selection button: Rotate to select, press to confirm GUIDE: Quickly call up the "Smart Navigation" setting interface ESC: Exit/Return key

Rear Panel



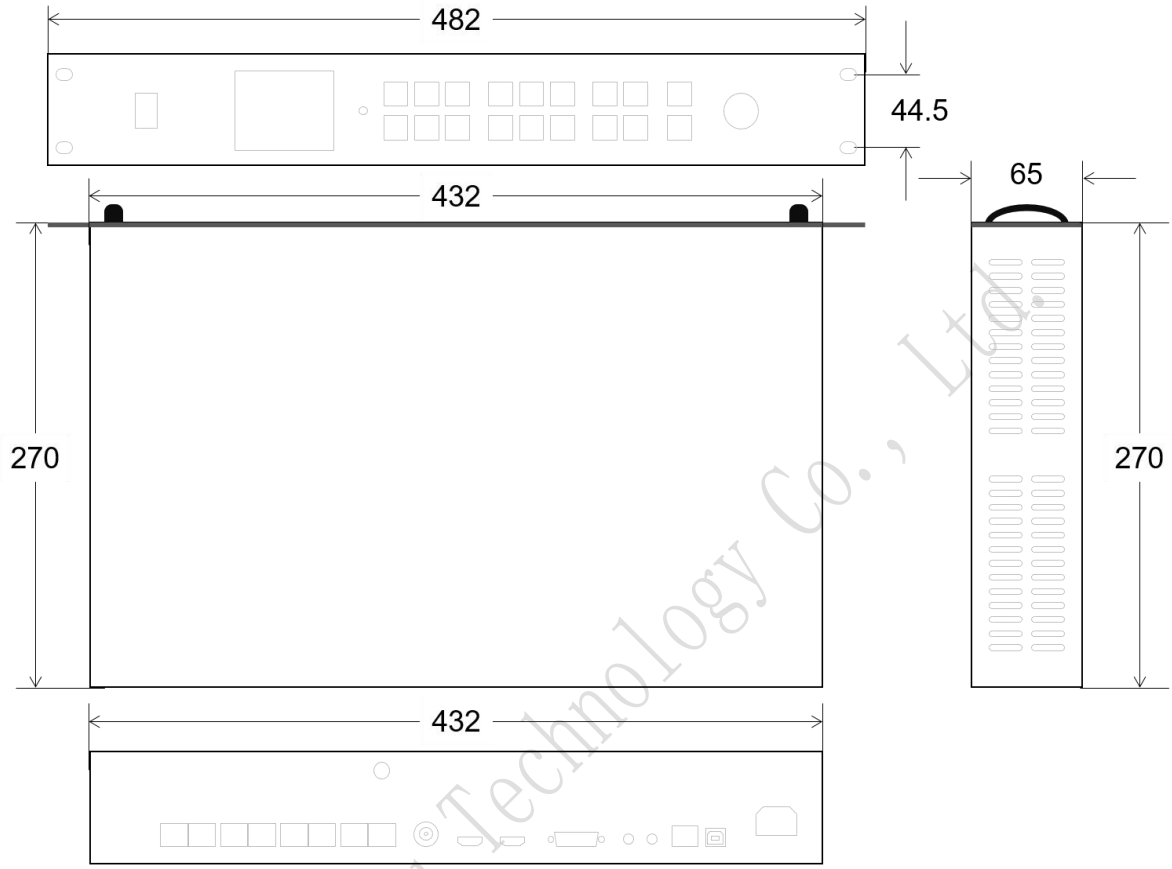
Input Interface			
Serial number	Interface Name	quantity	illustrate
2	HDMI	2	HDMI input interface Interface type: HDMI-A Signal standard: HDMI1.3 backward compatible Resolution: VESA standard, ≤1920×1080p@60Hz Support audio input
	DVI	1	DVI input interface Interface form: DVI-I socket Signal standard: DVI1.0 backward compatible Resolution: VESA standard, PC to 1920x1080, HD to 1080p
	SDI	1	SDI Input Interface Interface type: BNC Signal standards: SD-SDI, HD-SDI, 3G-SDI Resolution: VESA standard, ≤1920x1080@60Hz
3	AUDIO IN	1	TRS 3.5mm dual-channel audio input interface
6	power supply	1	AC 100-240V, 50 /60Hz

Output Interface			
Serial number	Interface Name	quantity	illustrate
1	Gigabit Ethernet	6	Used to cascade receiving cards and transmit RGB data stream Each network port controls a range of 650,000 pixels .

3	AUDIO OUT	1	TRS 3.5mm dual-channel audio output interface Connect to an audio amplifier for high-power external speakers

Control interface			
Serial number	Interface Name	quantity	illustrate
4	USB-B	1	Connect to a computer for debugging the device
	RS232	1	Connect to central control equipment for centralized control
5	Wi-Fi	1	Connect a Wi-Fi antenna to enhance Wi-Fi signal

4 Dimensions



5 Product Use

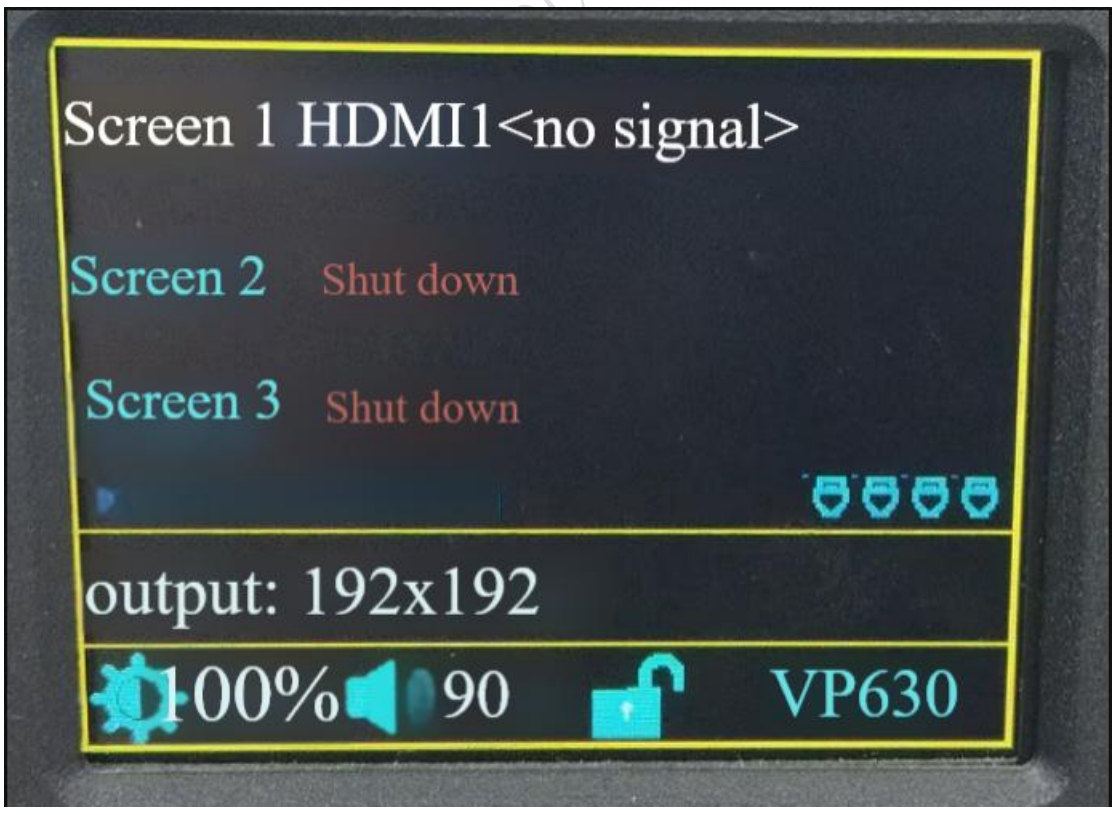
5.1 Operation steps

Step 1 Connect the display power supply to power on the screen
Step 2 Connect a playable input source to HD-VP630/830
Step 3 Use the USB serial port to connect to the computer to debug screen parameters

5.2 Input source switching

HD-VP630/830 supports simultaneous access to three signal sources and can switch to the input source to be played at any time according to needs.
Switch input source
There are two ways to switch input sources. One is to press the "SOURCE" area button on the front panel to switch quickly. The other is to select the input source through the menu interface.
Step 1 Press the knob to select "Advanced Settings → Input Resolution" to enter the input resolution interface;
Step 2 Rotate the knob to select the required resolution or select a custom resolution setting;
Step 3 After setting the resolution, press the knob to confirm the resolution.

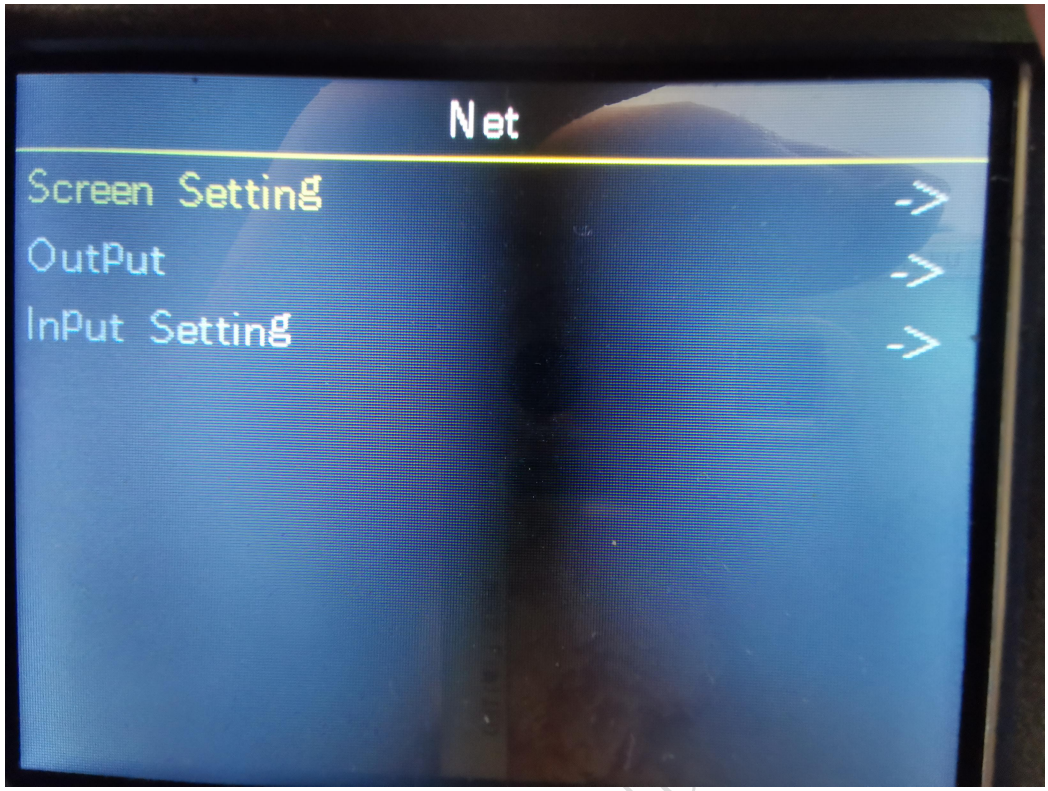
5.3 Interface Description



Main Interface

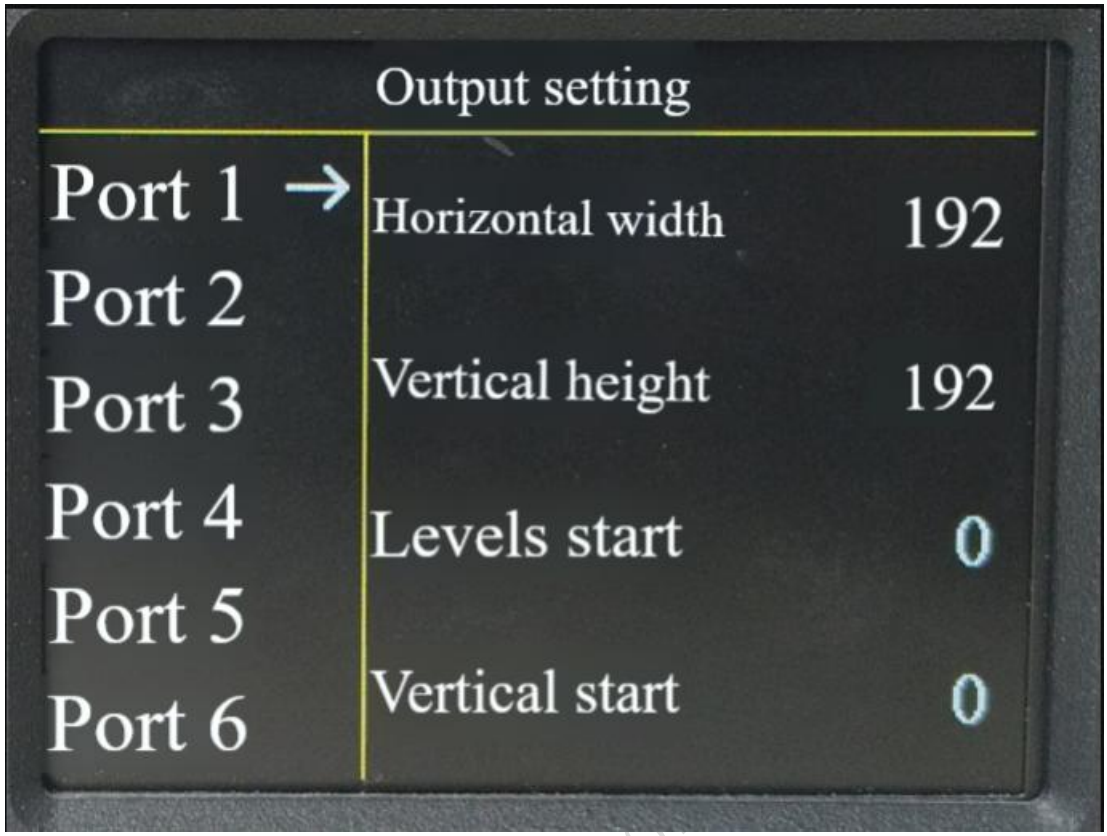
Navigation interface

1. The network port setting is used to set the load range and connection relationship of the sending card network port.



Network port settings

Screen width and height settings: Set the screen width and height



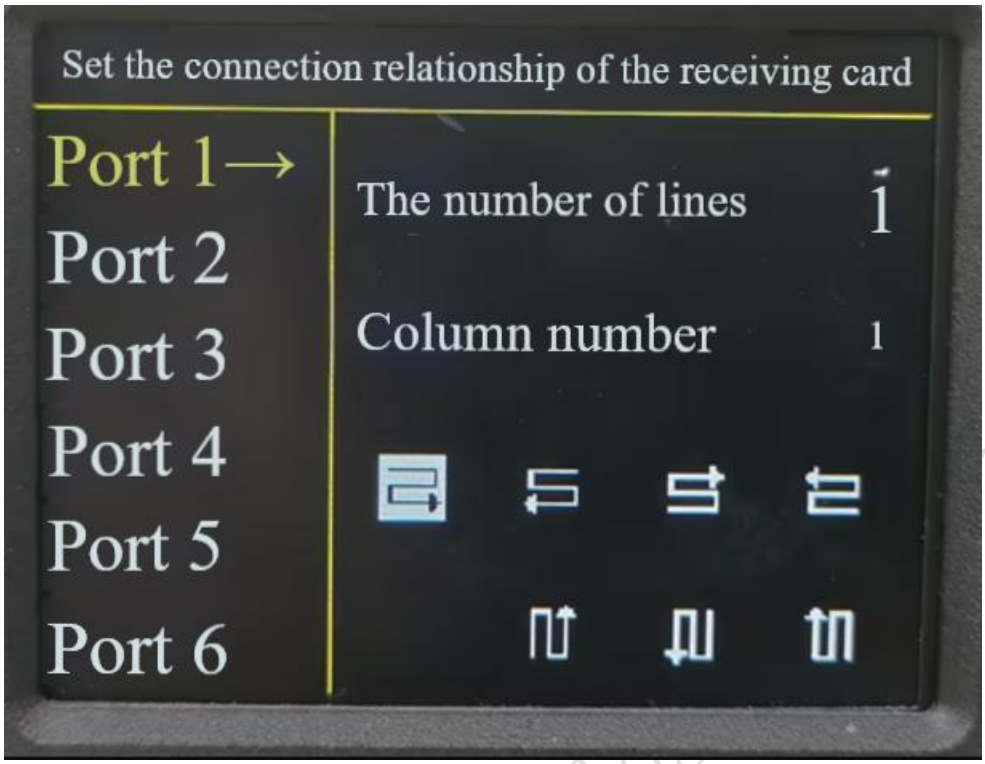
Output settings: used to set the coordinates and range of the network port

Horizontal width: 256 - the width of the LED screen

Vertical height: 128 - the height of the LED screen

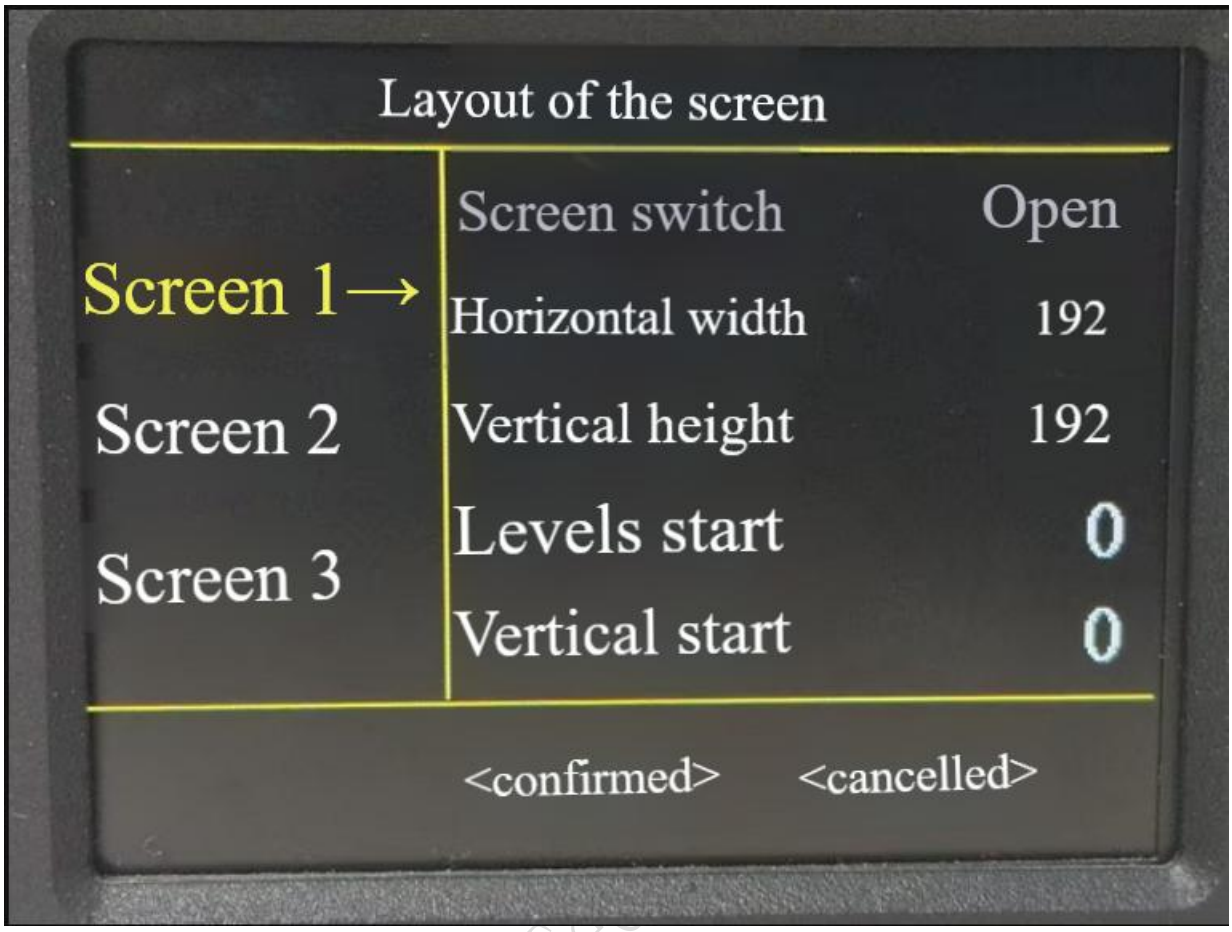
Horizontal start: Set parameter range = LED screen width - horizontal width

Vertical start: Set parameter range = LED screen height - vertical height



Connection relationship setting: The connection relationship processing of the receiving card currently only supports the standard general mode, and complex connection relationships are not supported.

2. The screen layout is used to set the output screen, and supports up to 2 screens to be displayed simultaneously.

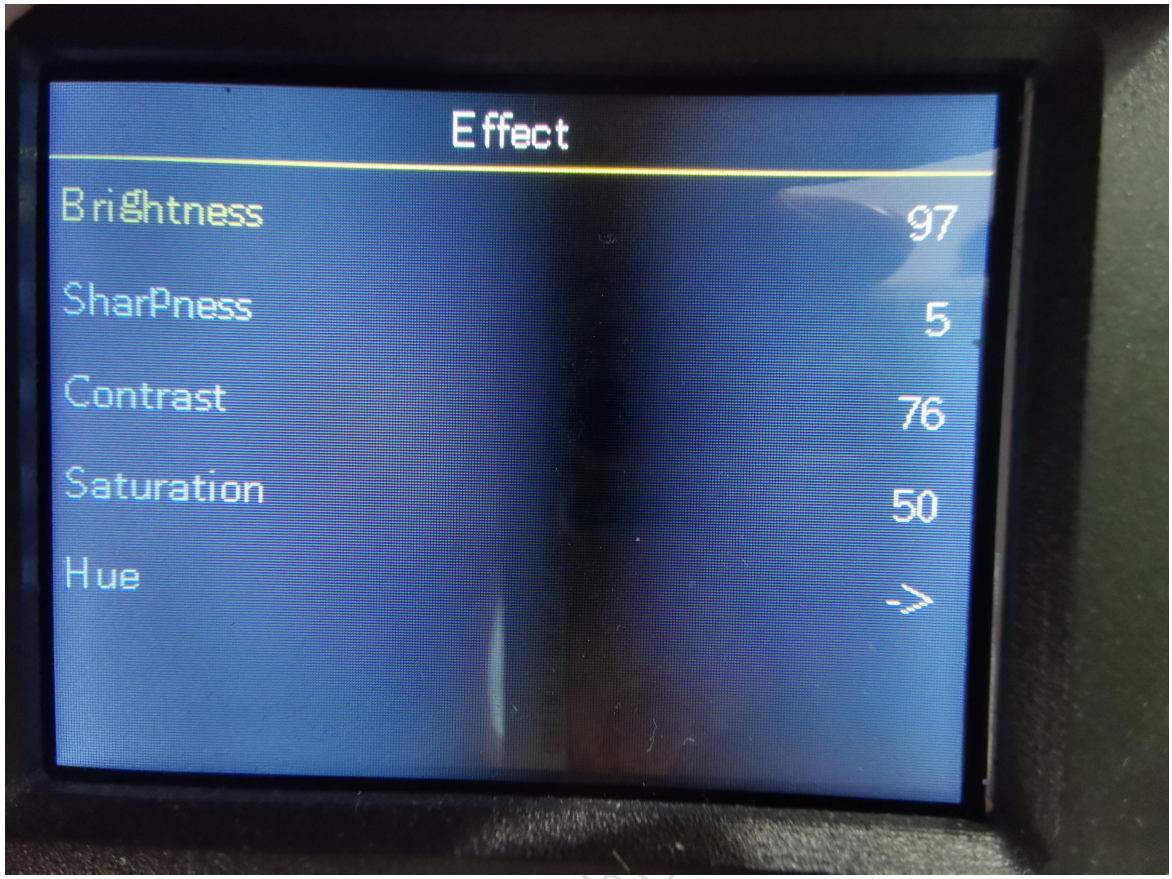


The screen switch setting of screen 1 cannot be set to off

The horizontal start data + horizontal width cannot exceed the width of the LED screen

Vertical start data + vertical width cannot exceed the height of the LED screen

3. Image effects are used to set picture sharpness, saturation, color temperature, brightness and other settings.



Brightness: 0-100, default 50

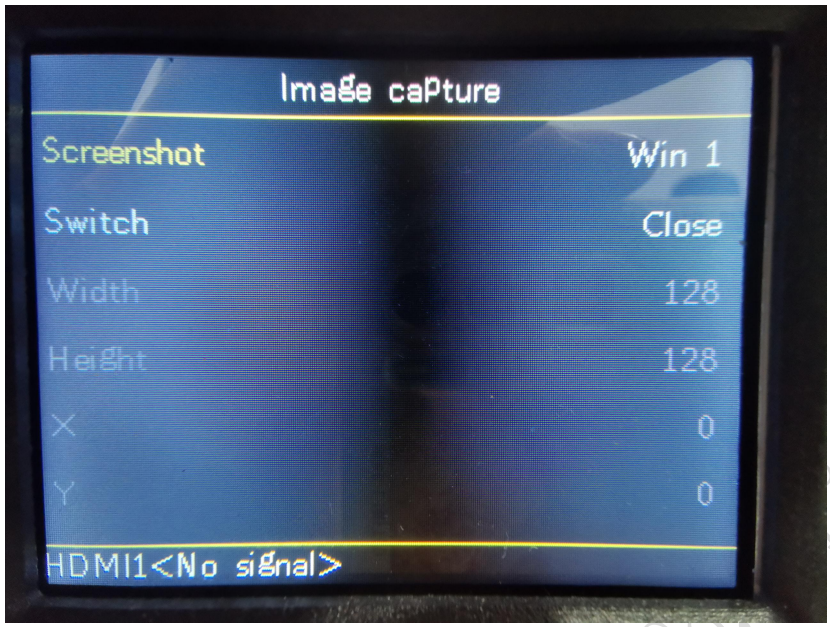
Sharpness: 0-10, default 5

Contrast: 0-100, default 100

Saturation: 0-100, default 50

Color temperature: warm, natural, cool, custom. Default is warm

4. Image capture is used to capture the screen input source. You can set the screen and coordinates to be captured after the input source enters .



When the capture switch is off, the knob cannot select the capture width, height, horizontal, or vertical start.

Intercept width: 128—the maximum width of the input source

Intercept height: 64—the maximum height of the input source

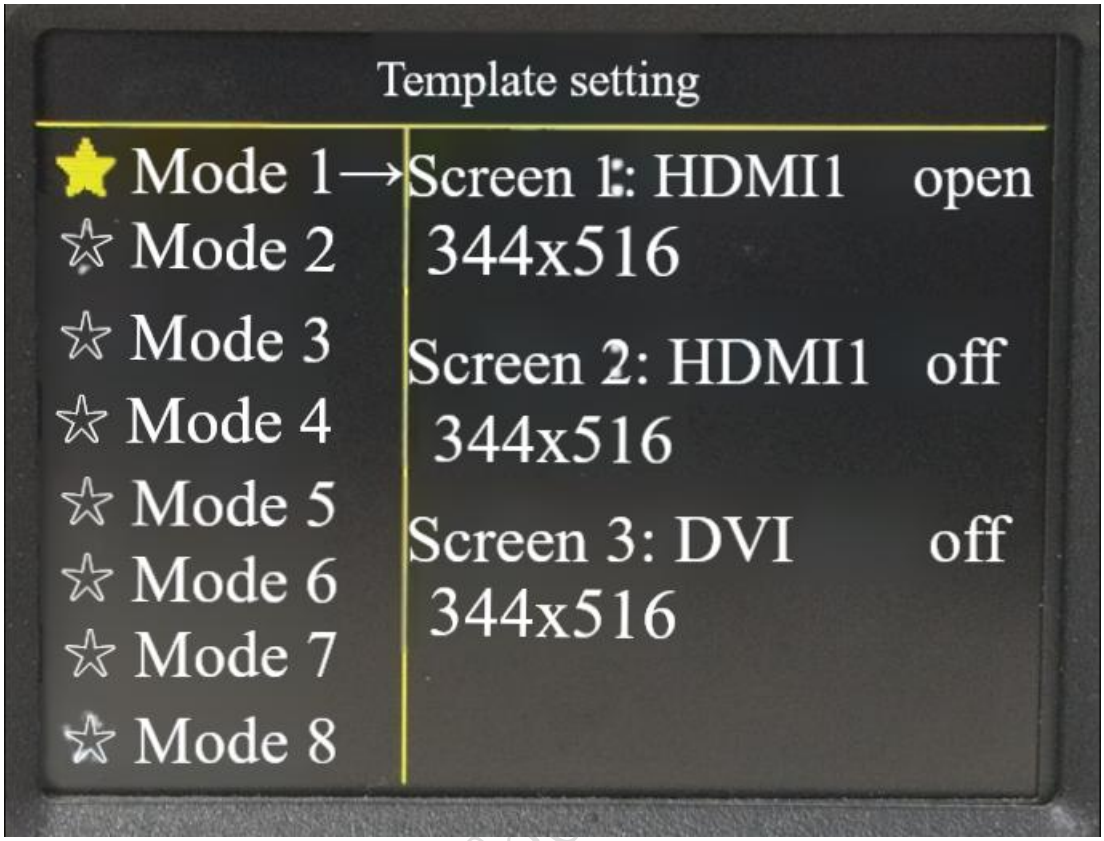
Horizontal start: Horizontal start value range = input source width - interception width

Vertical start: Vertical start value range = input source width - interception width

Note: If the size of the captured image is the same as the screen size, it is a point-to-point display. If the size of the captured image is different from the screen size, it is a zoom display.

5. Mode save is used to save the currently set parameters to form

a template file for quick subsequent settings.

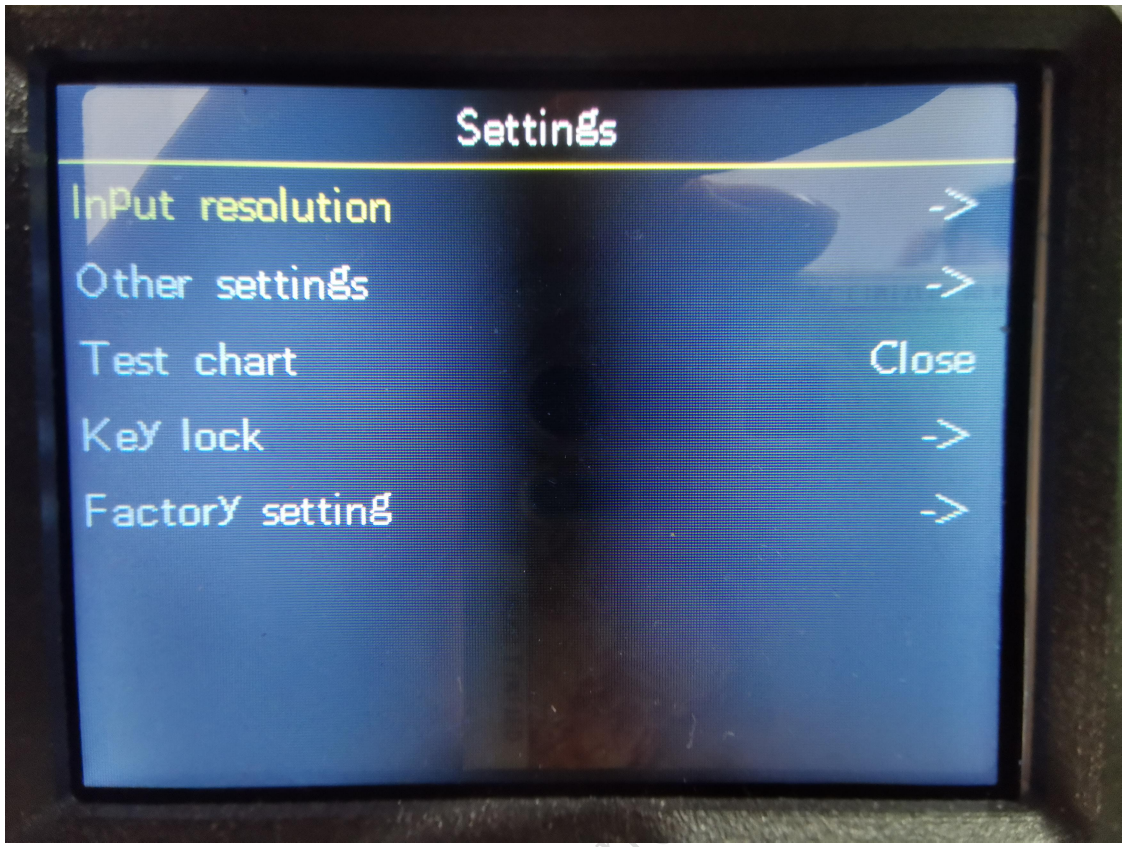


Existing templates can be replaced, deleted, and loaded

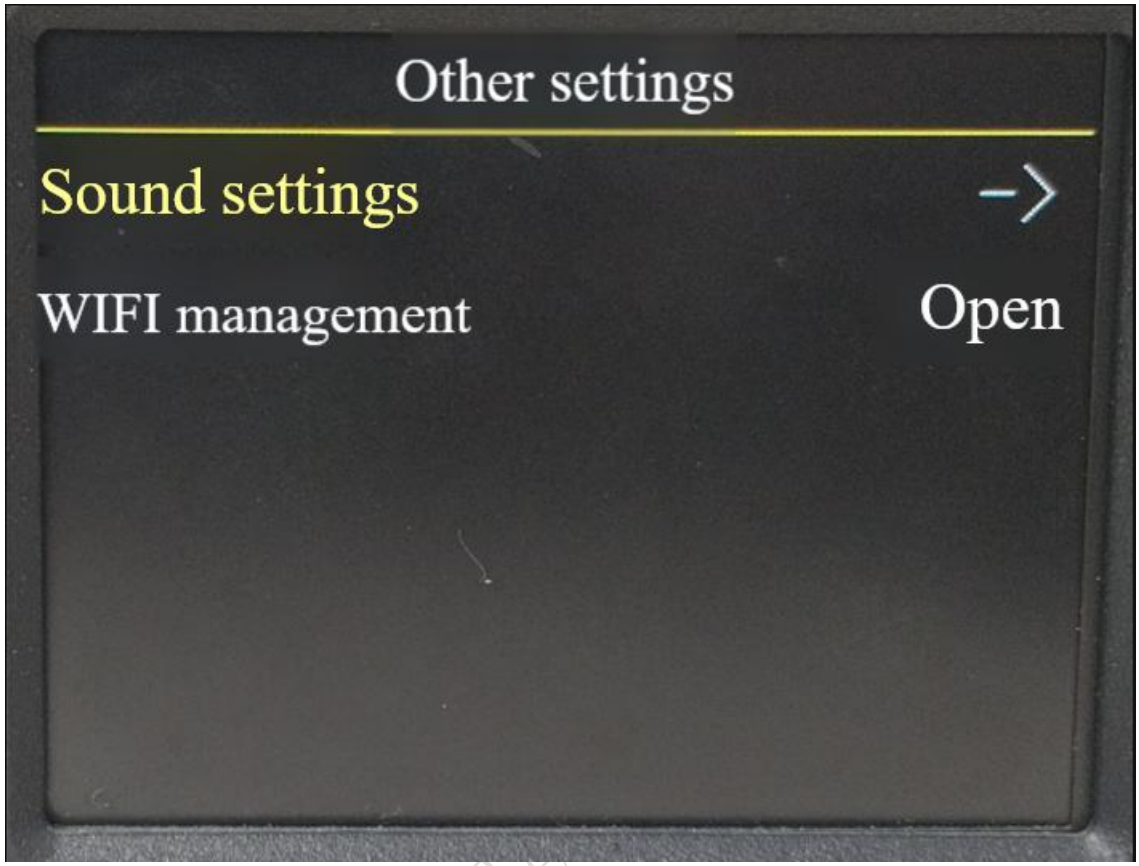
Template options that do not exist, support saving

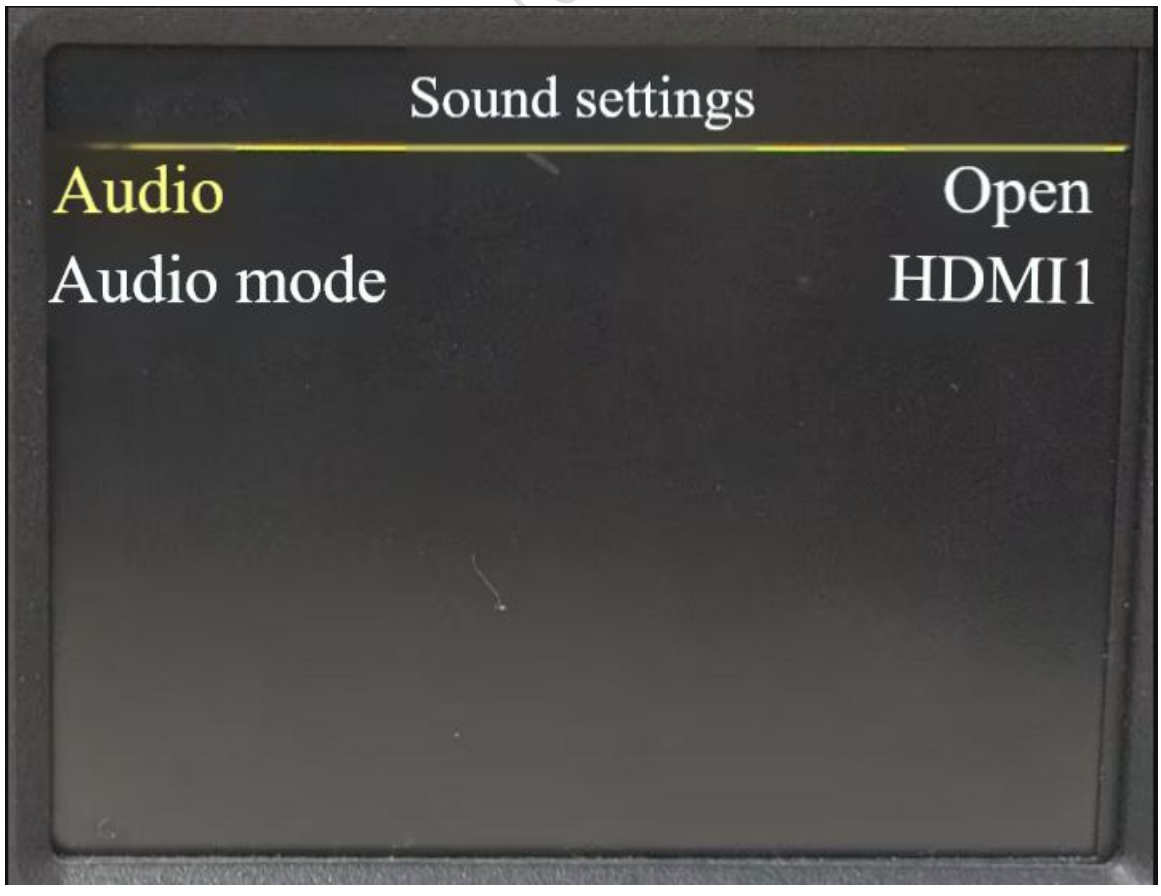
Supports up to 8 template files

6. Advanced settings are used to set input source resolution, restore factory settings, display firmware version, sound management, key lock settings, and language management.

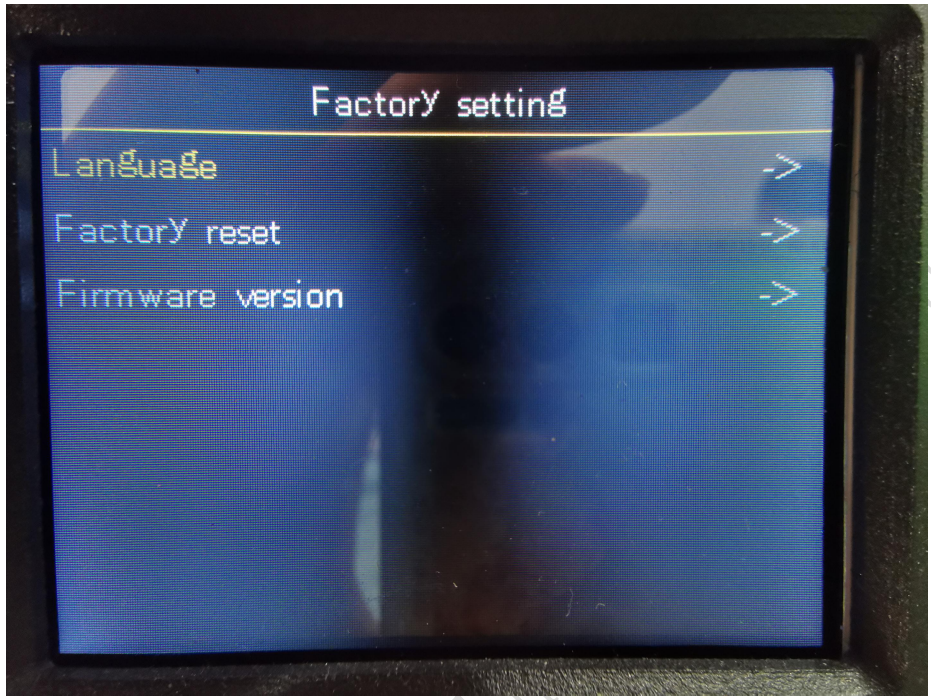

Settings
InPut resolution ->
Other settings ->
Test chart Close
KeY lock ->
FactorY setting ->
InPut resolution
Image Win 1
800 x 600@60Hz
1024 x 768@60Hz
1920 x 1080@60Hz
Customize ->
InPut resolution: supports three sets of common resolutions, and also

supports custom resolution settings. The default is 60Hz





Sound settings: Enable audio and audio mode



Factory settings: set language, factory reset and view firmware version

Digital function description:

When entering a situation where you need to enter numbers, such as setting the width and height of the screen, the keypad reuses related buttons. During the input of numbers, except for the reused buttons and ESC, the knob can be used, and other key functions are prohibited until you exit and can continue to use them. The key reuse is as follows:

Original button function	Function after reuse
DVI	1
HDMI	2
HDM 2	3
BLACK	4
FREEZE	5
SDI	6
EXT 1	7
EXT 2	8
BRIGHT	9

MODE	0

Button status light description

1. When the button is pressed, the light of the button will be lit, and it will go out if it is released without other needs.
2. If the input source of the current window is S DI/ DVI/HDMI 1 /HDMI 2 , if there is no input source signal, it will flash off at an interval of 125ms until an input source signal is detected and then it will be always on. If the input source signal is lost in the middle, it will continue to flash off.
3. When the BLACK button is pressed , all lights in the SOURCE area go out and the BLACK light stays on. When the BLACK button is pressed again, the BLACK light goes out and the light status of step 2 is performed according to the input source light of the current window.
4. After pressing the FREEZE button, the button light will be on and it will go out when pressed again.
5. LOCK: The light is always on when in LOCK state and goes out when unlocked.
6. REV, currently has no functionality and does not support light status.
7. WIN1, WIN2, WIN 3. The button light will be lit according to the window currently selected by the TV. To switch between different windows, the button light of the input source needs to be synchronized with the input source type of the current window.
8. after power off and restart : the input source type of the current window, the state of the BLACK light, the state of the FREEZE, and the selection states of win1, win2, and win 3 .

Entry/Exit Keypad Lock Description

1. Simply press and hold the LOCK key to enter the keypad lock.
2. A new keypad lock function is added to the menu, which can be set to on or off. If it is turned on, the internal timing of the microcontroller will lock the keypad after recording the set time. At the same time, the LOCK button light is on.
3. When in locked state, press the LOCK button to unlock directly. If the timing automatic lock button function is turned on, the timing will be restarted.