灰度科技
HUIDU TECHNOLOGY

User Manual

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HD-VP1640

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Chapter 1 Interface connection

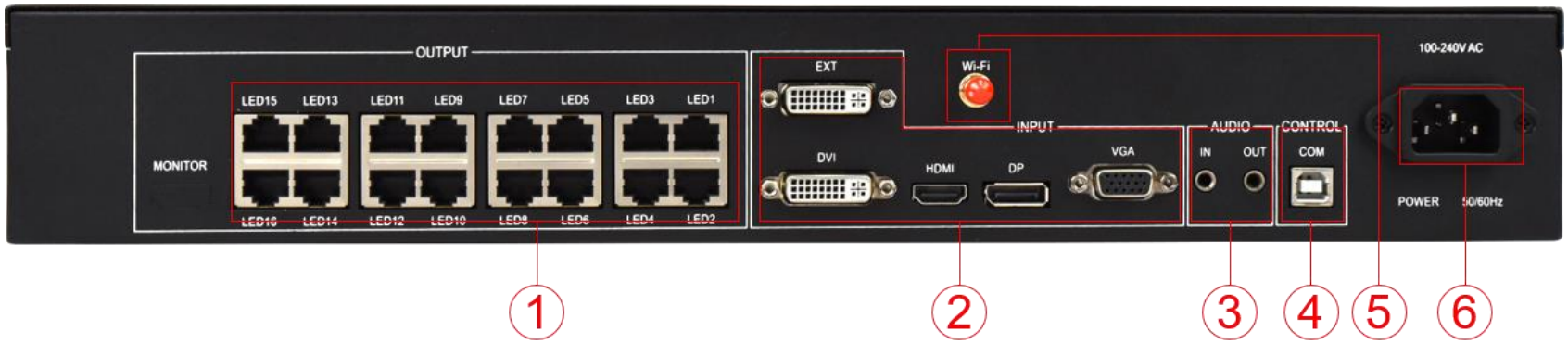
1.1 Front panel

Key Description		
No.	Key	Description
1	Switch	AC power input switch
2	LCD screen	Display menu, screen parameters and other information, used for debug device
3	SOURCE	Input Source Select keypad, 5 input source port selection buttons, corresponding to the input interface identification on the back panel. **BLACK**: when you press BLACK and its indicator will be on, the output screen will be in a black state.
4	FUNCTION	**Function keys,** the key multiplexing function is digital selection, generally used when setting the resolution. **BRIGHT**: Quickly swap out the shortcut keys of the brightness

		adjustment menu. **MODE**: Quickly pop up the preset mode call menu. **PXP**: Quickly enter the dual picture layout menu **FREEZE**: Shortcut key for screen freeze. **LOCK**: Quickly lock the keys to prevent miss operation. **Black**: One-touch black screen button.
5	WIN	**[WIN1]- [WIN4]** Button: You can press it to add 1~2 window display, and its indicator means the currently selected window.
6	MENU	Short press the knob [OK] key: it means to enter the main menu or input confirmation. Turn the knob clockwise to increase or the next option, counterclockwise to decrease or the previous option. **GUIDE**: can quickly switch out the "smart navigation" setting

		interface. Return key **ESC**: means to exit the current operation or option.

1.2 Rear Panel



Input interface			
No.	Name	quantity	Description
2	HDMI	1	HDMI input interface

			Interface form: HDMI-A Signal standard: HDMI 2.0 backward compatible Resolution: VESA standard, ≤1920x1080@60Hz
	DP	1	Interface form: DP Signal standard:DP1.2 backward compatible Resolution: VESA standard, ≤3840×2160@60Hz
	DVI	1	Interface form: DVI-I socket Signal standard: DVI1.0 Resolution: VESA standard, PC to 1920x1200, HD to 1080p
	EXT	1 DVI or SDI，Default standard DVI	Interface form: BNC Signal standard: SD-SDI,HD-SDI,3G-SDI Resolution: VESA standard, ≤1920x1080@60Hz

3	AUDIO IN	1	TRS 3.5mm audio input
6	Power	1	AC power interface 100-240V，50/60Hz

Output interface			
No.	Name	quantity	Description
1	LAN output	16	Gigabit Ethernet port Transmission speed 1Gbps, used for cascading receiving cards, transmitting RGB data stream. One Gigabit Ethernet port support loading capacity 655,360 pixels.
3	AUDIO OUT	1	TRS 3.5mm dual channel audio output port Connect audio power amplifier for high-power audio external amplifier

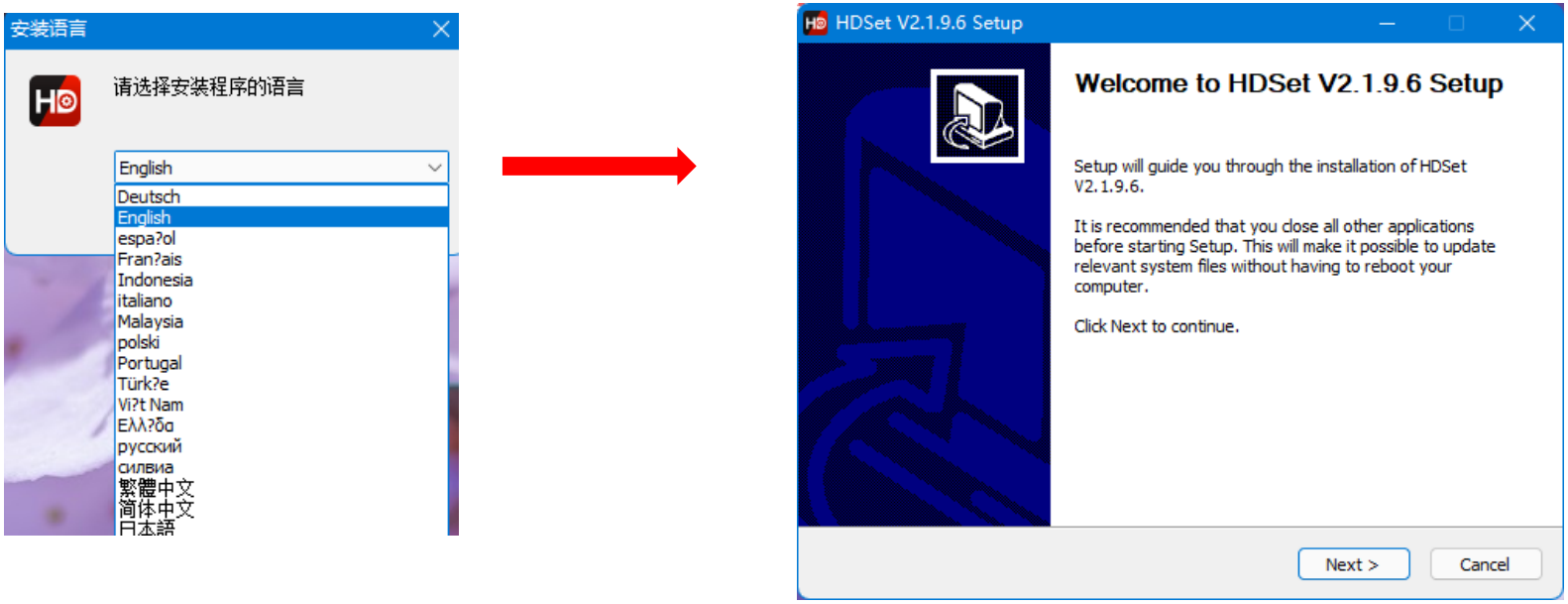
Control interface			
No.	Name	quantity	Description
4	USB-B	1	Connect to the PC, used for debug LED controller
	RS232	1	The integrated control host (i.e. central control) can be connected through RS232.
5	Wi-Fi	1	Connect to Wi-Fi antenna to enhance wireless signal, mobile APP wireless operation

1.3 Hardware connection

Chapter 2 HDSet installation

Please download the installation package of HDSet software from Huidu's official website www.huidu.cn, and complete the installation according to the diagrams below:

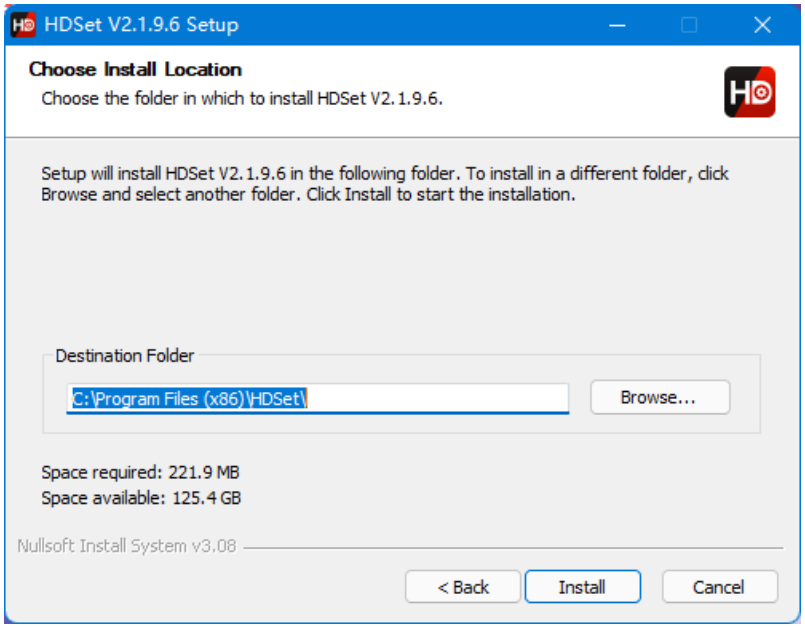
1.Run the software package,then select language for installer. Click [OK] to go on.

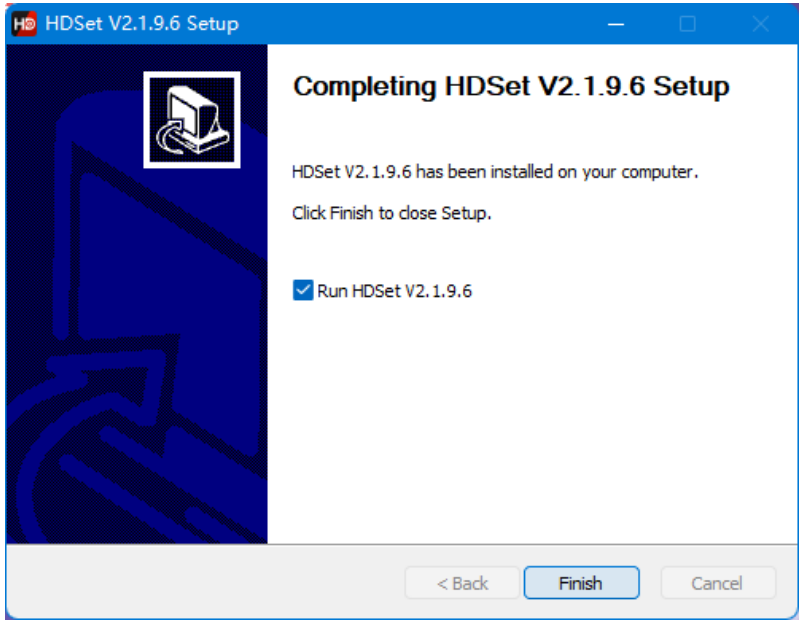


2.After selecting a language, an installation wizard like below will appear.Click [Next].

Choose the installation location, click [Browse] to change the default target location,then click [Install] after completing;

After the installation is complete,you are ready to use HDSet.





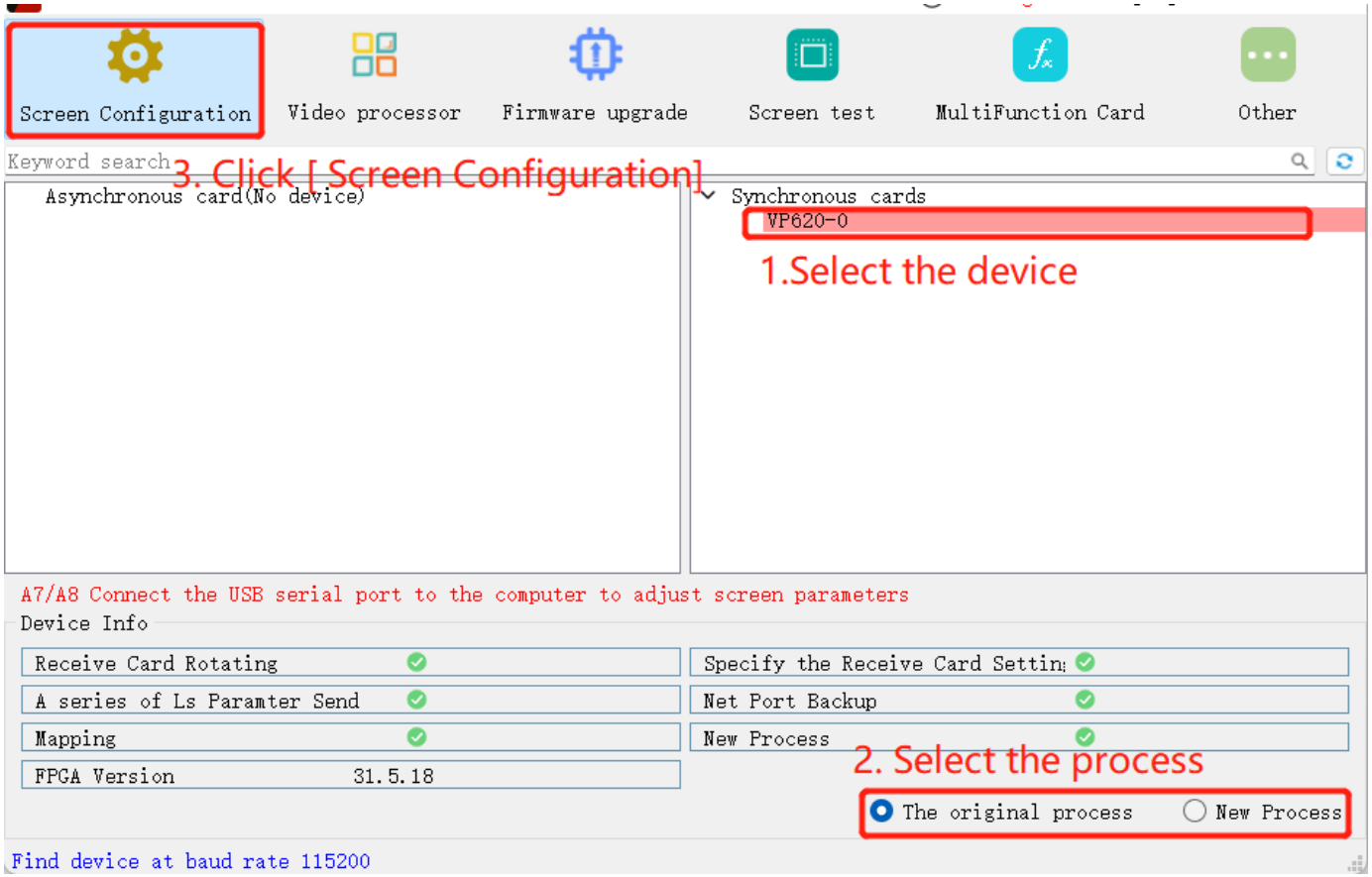
Chapter 3 HD-VP1640 Parameter settings

3.1 Connection

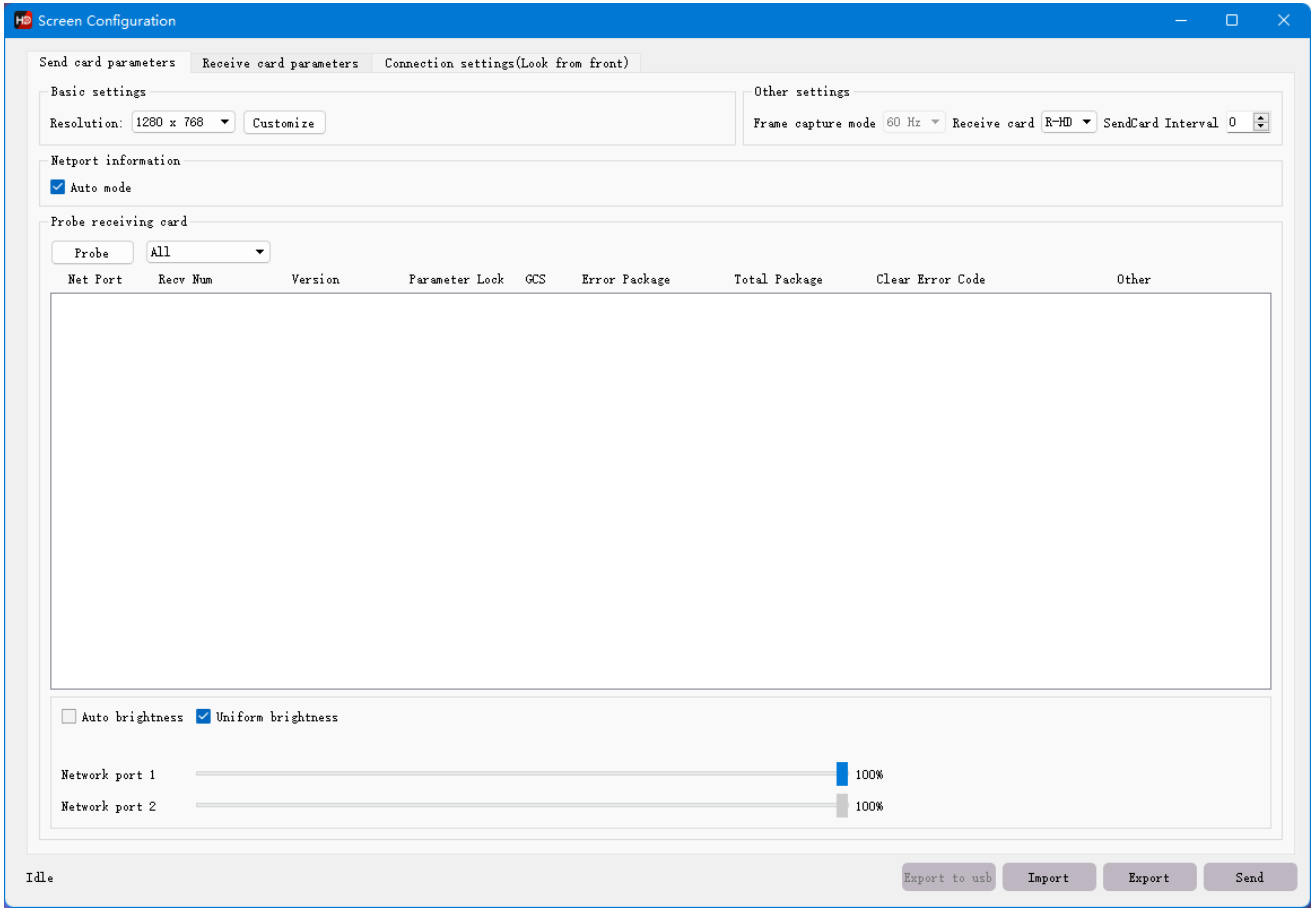
Connect the VP1640 to the computer by USB-B type cable.

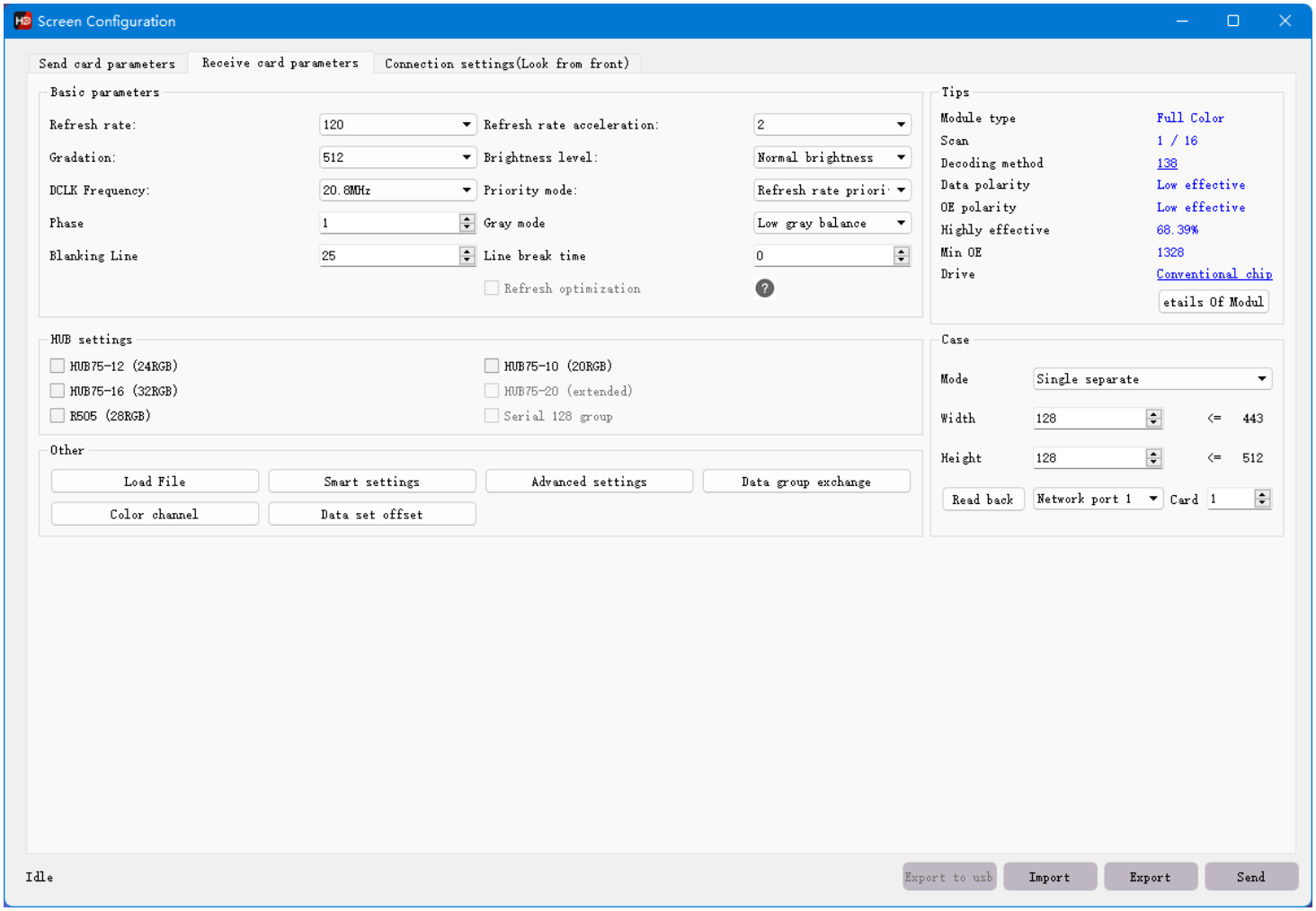
3.2 Screen Configuration

1. Run HDset software,then select device and process, click [Screen Configuration].



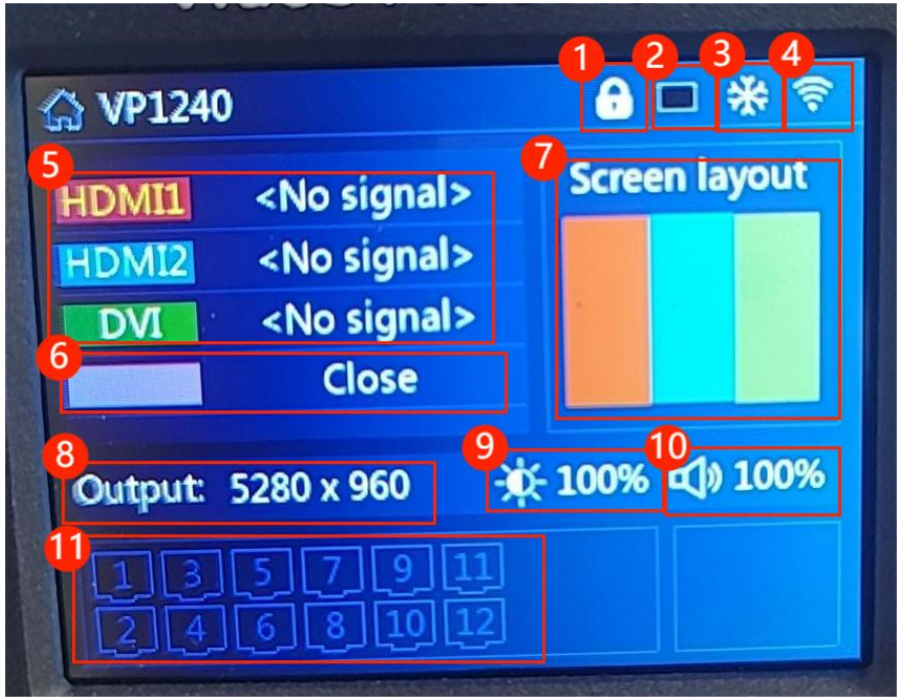
2. you can debug receiving cards.




Screen Configuration
Send card parameters
Receive card parameters
Connection settings(Look from front)
Basic parameters
Refresh rate:
120
Refresh rate acceleration:
2
Gradation:
512
Brightness level:
Normal brightness
DCLK Frequency:
20.8MHz
Priority mode:
Refresh rate priori
Phase
1
Gray mode
Low gray balance
Blanking Line
25
Line break time
0
Refresh optimization
Tips
Module type
Full Color
Scan
1 / 16
Decoding method
138
Data polarity
Low effective
OE polarity
Low effective
Highly effective
68.39%
Min OE
1328
Drive
Conventional chip
etails Of Modul
HUB settings
HUB75-12 (24RGB)
HUB75-10 (20RGB)
HUB75-16 (32RGB)
HUB75-20 (extended)
R505 (28RGB)
Serial 128 group
Case
Mode
Single separate
Width
128
<= 443
Height
128
<= 512
Other
Load File
Smart settings
Advanced settings
Data group exchange
Color channel
Data set offset
Read back
Network port 1
Card
1
Idle
Export to usb
Import
Export
Send

Chapter 4 HD-VP1640 Product Operation

4.1 Interface Description

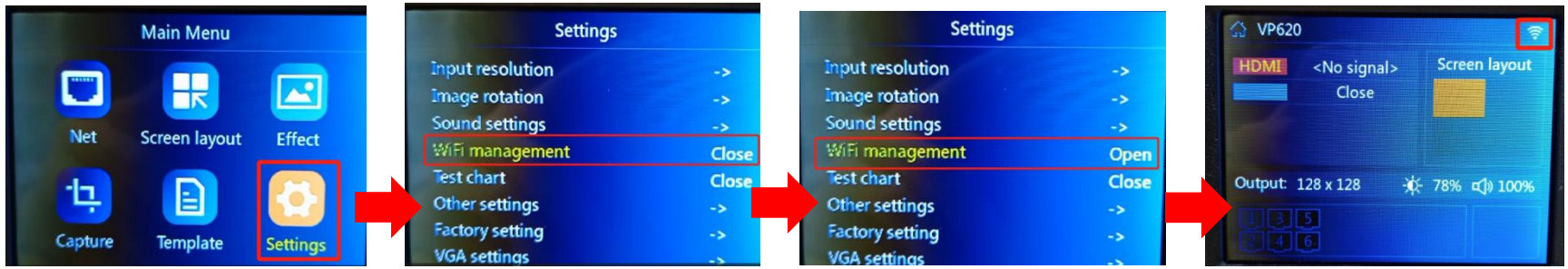


1. Button lock, Lock the button by pressing ‘LOCK’.

2. Black screen,turn off screen by pressing ‘BLACK’

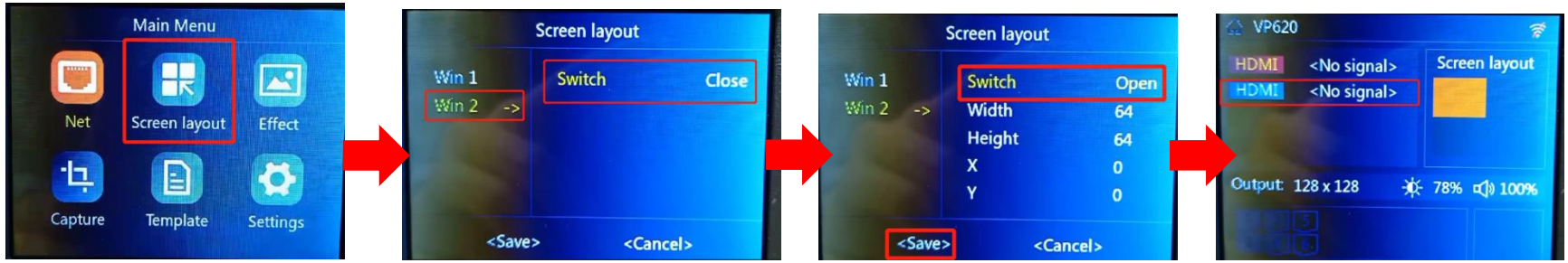
3. Freeze, screen freeze by pressing ‘FREEZE’.

4. Wi-Fi, you can follow the steps below to turn on and off WiFi.



5. Input source for Win 1-3， input resolution and refresh rate.

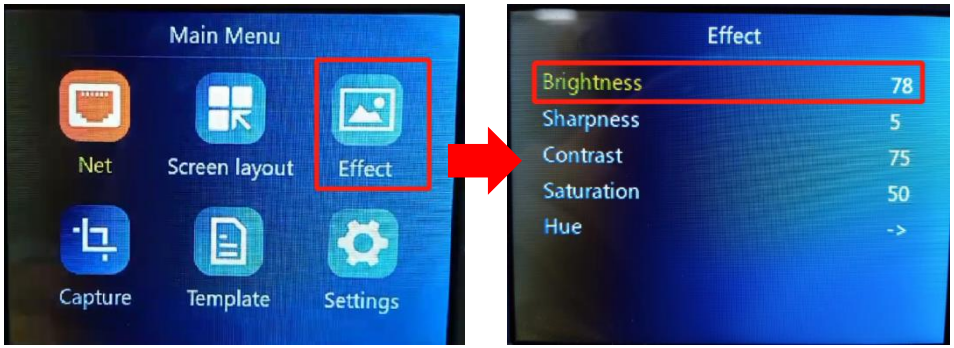
6. Input source for Win 4, you can follow the steps to open Win4.



7. Screen layout, show the screen layout of the current window.

8. Output resolution, output to screen resolution.

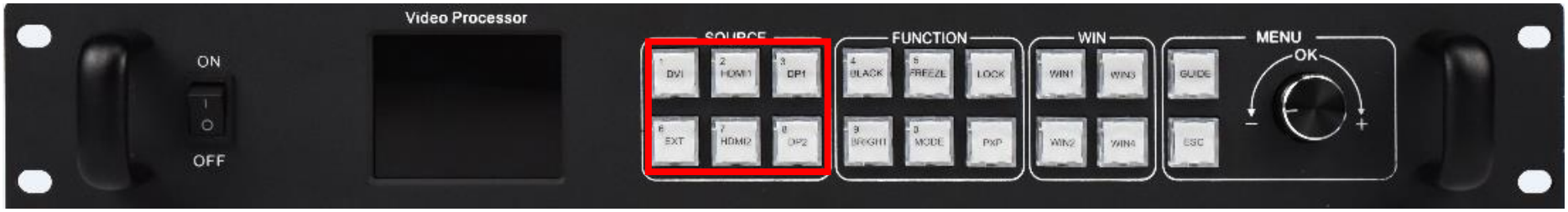
9. Brightness, the screen brightness, you can adjust the brightness by the following steps.



10. Sound, you can adjust the volume by the following steps.

11. LED Network port, display the number of network ports currently in use.

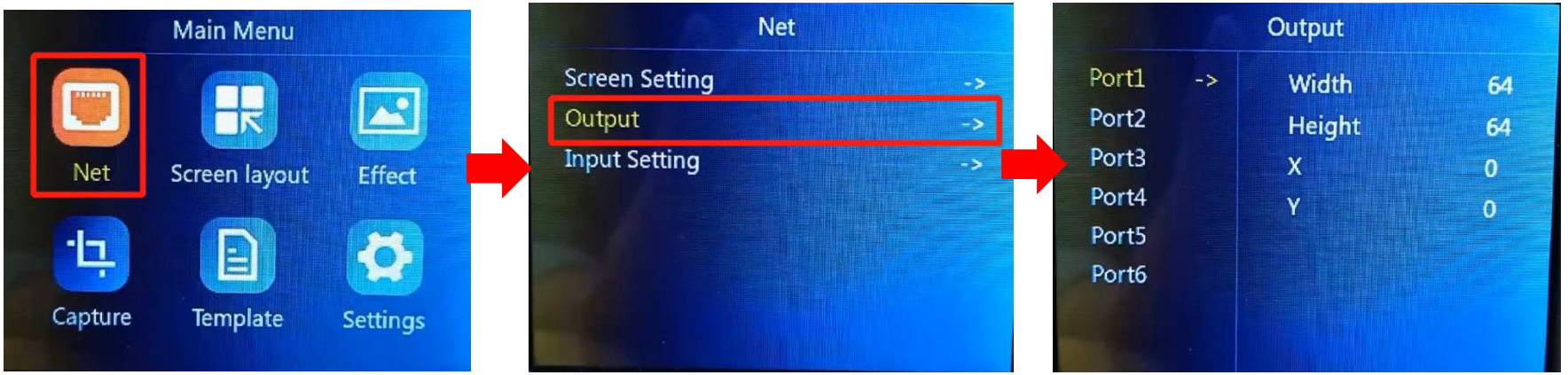
4.2 Input source switching



The HD-VP1640 supports simultaneous access to five signal sources, and can switch to the input source that needs to be played at any time as required. You can quickly switch by pressing the key in the "SOURCE" area of the front panel.

4.3 Net

4.3.1 Output



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

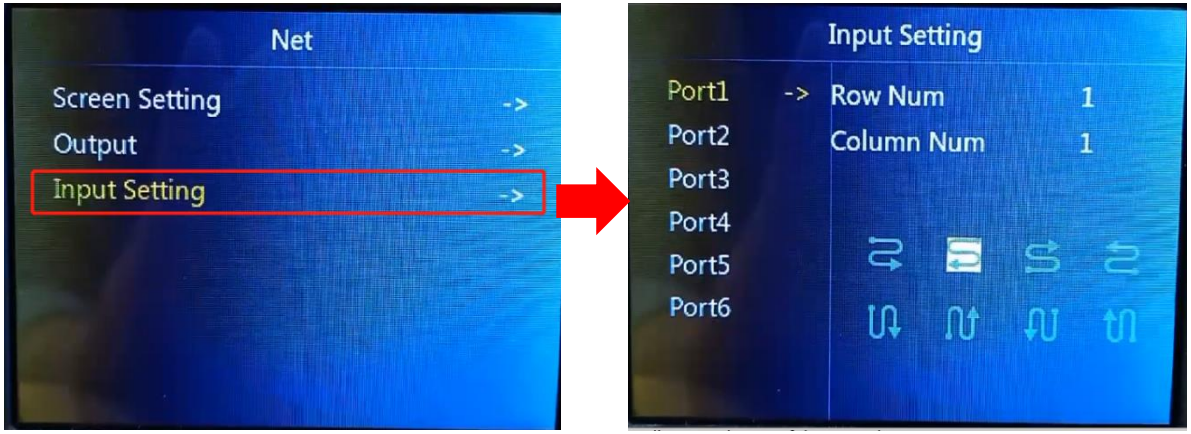
Horizontal width: 64—the width of the LED screen;

Vertical height: 64—the height of the LED screen;

X: Horizontal start: setting parameter range = LED screen width-horizontal width;

Y: Vertical start: setting parameter range = LED screen height-vertical height;

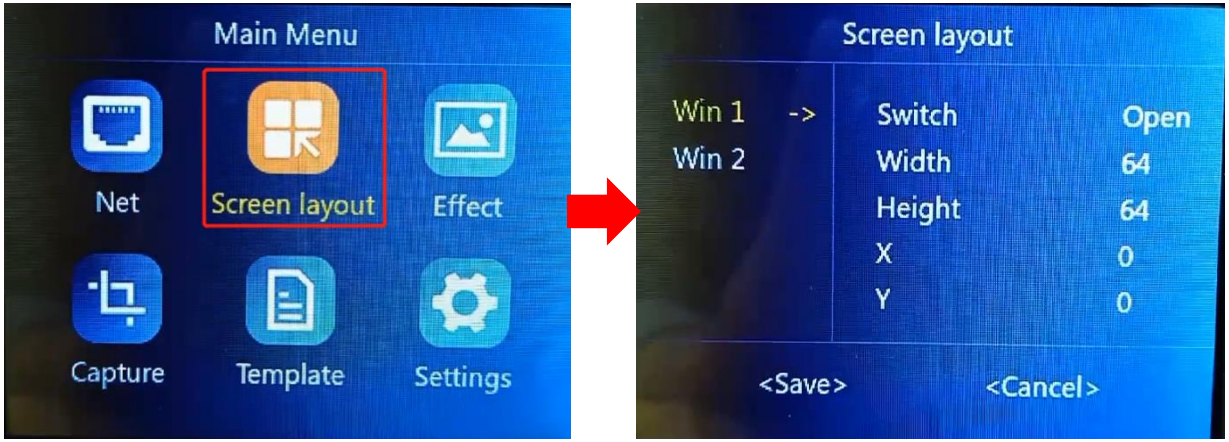
4.3.2 Input seting



The connection relationship is set as the connection relationship processing of the receiving card. Currently,

only standard general mode is supported, and complex connection relationships are not supported.

4.4 Screen layout

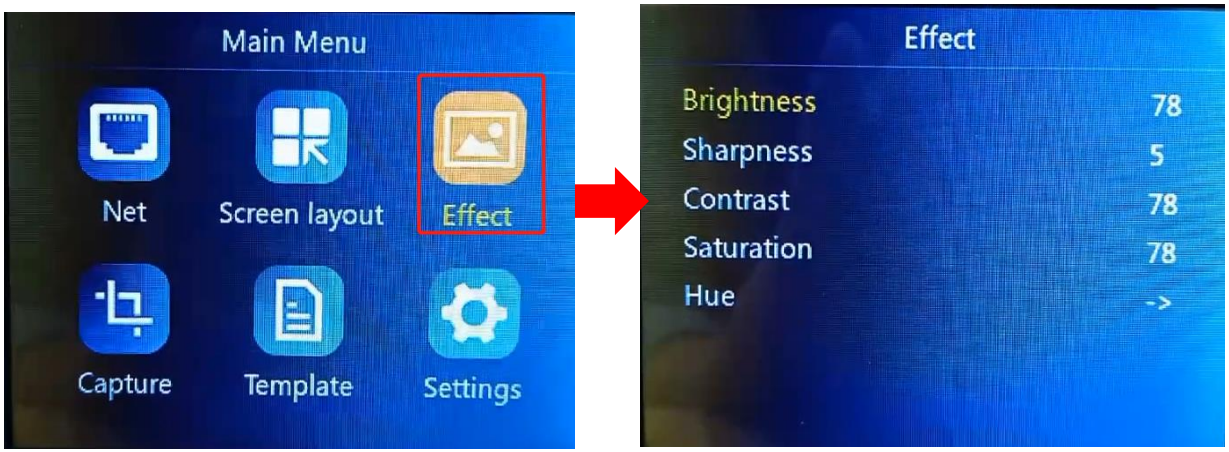


The screen switch setting of screen 1 cannot be set to off.

Horizontal starting value + horizontal width cannot exceed the width of the LED screen.

The vertical starting value + vertical width cannot exceed the height of the LED screen.

4.5 Effect


Main Menu
Net
Screen layout
Effect
Capture
Template
Settings
Effect
Brightness 78
Sharpness 5
Contrast 78
Saturation 78
Hue ->
Brightness: 0-100 default 50
Sharpness: 0-10, default 5
Contrast: 0-100, default 100
Saturation: 0-100, default 50
Color temperature: warmer, natural, colder, customize. Default: Warmer

4.6 Capture

When the intercept switch is off, the knob cannot select the intercept width, height, horizontal, and vertical start.

Intercept width: 10808—Maximum width of input source

Intercept height:640—Maximum height of input source

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

Y: Vertical start: vertical start value range = input source width-interception width.

Note: If the size of the captured screen is the same as the screen size, it will be displayed point-to-point. If

the size of the captured screen is different from the screen size, it will be displayed by zooming.

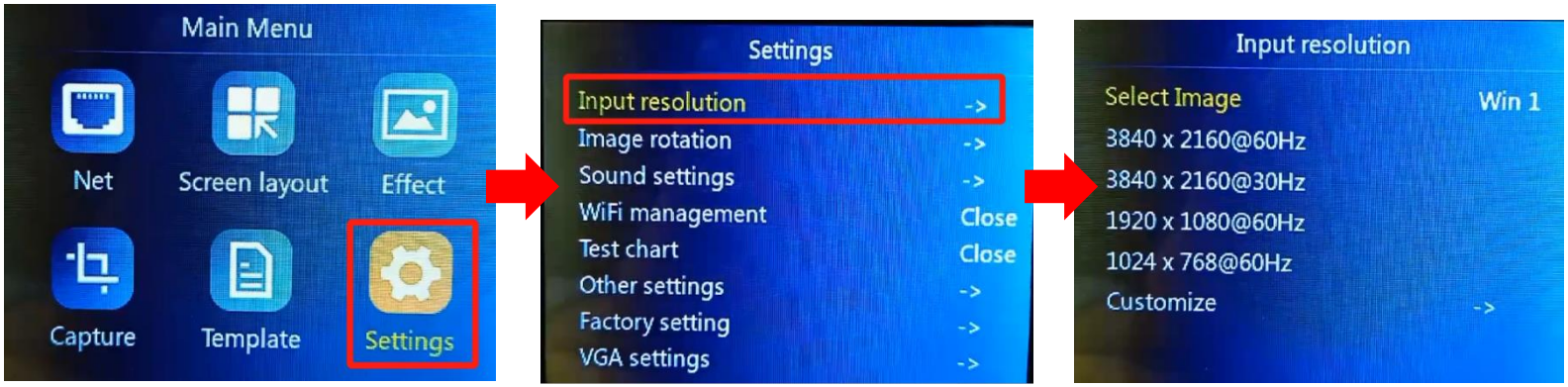
4.7 Template setting

You can save up to 8 templates. '★' mean this teamplate is already occupied.

Existing templates support replacement, deletion, and loading non-existent template option, supports saving up to 8 template files

4.8 Settings

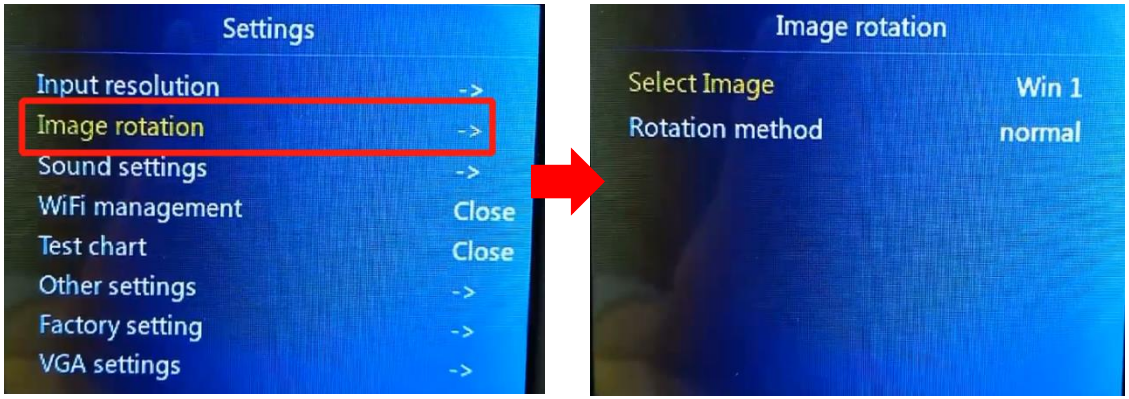
4.8.1 Input resolution



Supports three sets of general resolutions and supports custom resolution settings.

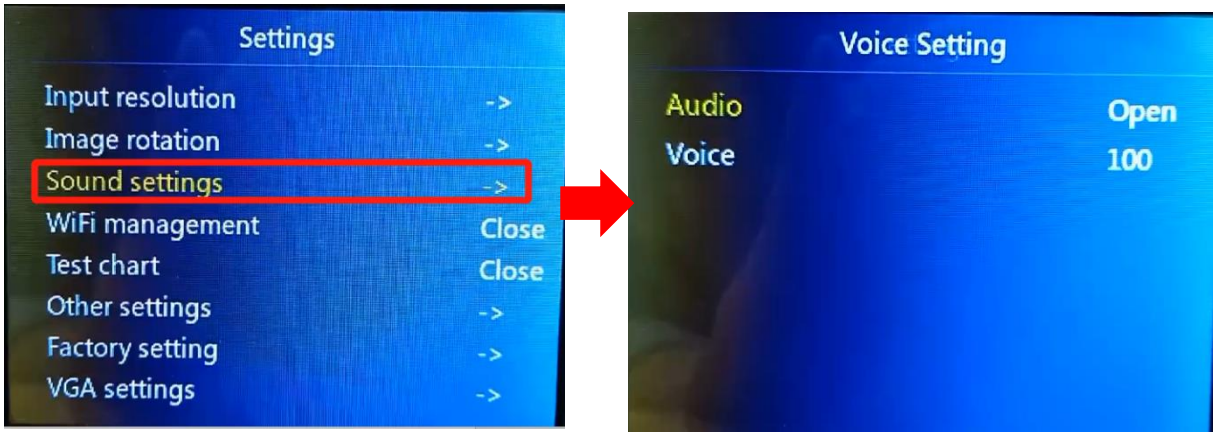
The default is 60Hz.

4.8.2 Image rotation



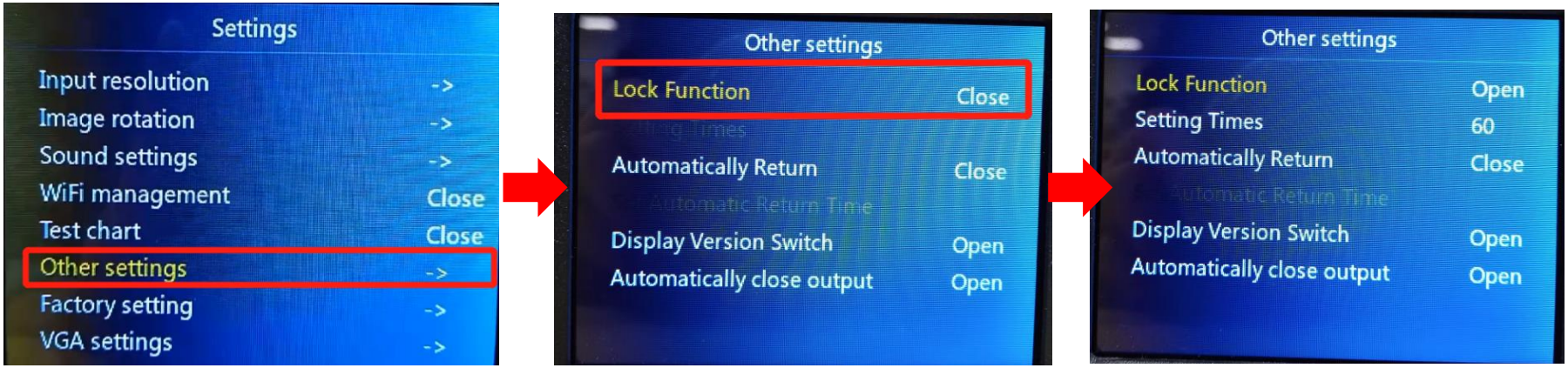
Select the window that needs to be rotated, support normal,Horizontal mirror, Vertical mirror, HV mirror.

4.8.3 Soud settings



Support turning on and off the sound, and volume adjustment

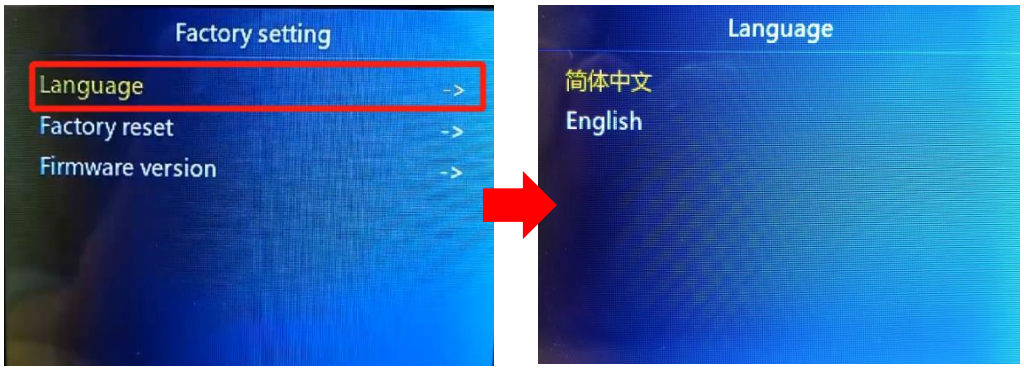
4.8.4 Other settings



The key lock, the maximum support time is 3600 seconds, the key lock is automatically locked after the set time, except that the key lock button functions normally, other buttons are locked, and the function does not work, the button of “LOCK” will light up, you can press the “LOCK” button to unlock.

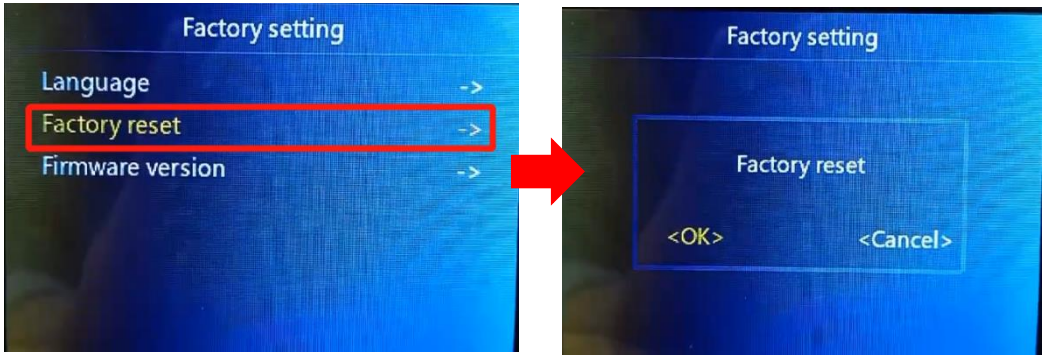
4.8.5 Factory setting

1. Language



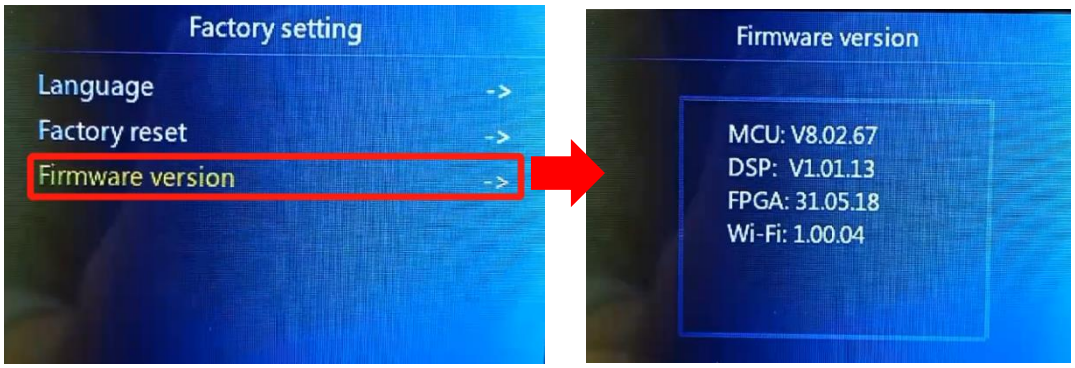
Language selection: support English, Chinese.

2. Factory reset



Restore the device to factory settings.

3. Firmware version



Check the device's MCU, DSP ,FPGA and Wi-Fi version.