Two in One Controller

With 2 Network Port

（DG）

Manual

Safety precautions

Danger

- There is high voltage in the equipment. Non-professional maintenance personnel should not open the back cover to avoid danger.

Warning

- This equipment is not waterproof equipment, please do waterproof treatment in wet environment;
- This device is not allowed to get close to fire or high temperature environment;
- If the device emits strange noise, smoke or strange smells, unplug the power plug immediately and contact the dealer.
- **It is strictly forbidden to plug VGA, DVI and HDMI signal cables on line.**

Attention

1 Please read this manual carefully before use ,and keep it for future;

2 this equipment is not suitable for non-professionals to operate and debug,please use under the guidance of professionals;

3 this equipment is not suitable for non-professionals to operate and debug, please use under the guidance of professionals;

4 Do not insert anything into the vent hole of the device to avoid damage or accidents to the device;

5 It is not appropriate to place the device on a heat sink or other high-temperature place;

6 It is not suitable to place this equipment in near water or other damp places;

7 Please properly organize and place the power cord to prevent damage;

8 If the following conditions exist,the power plug of the device should be unplugged and commissioned for maintenance;

- When liquid splashes into the device
- When the device is dropped or the chassis is damaged
- When the device has obvious abnormality or performance is significantly deteriorated

catalog

I、Product discussion

II、 With the rapid development and application demand of LED display industry, various control requirements for large screen control system emerge as the times require. However, due to the limitations of the large screen control system in image processing, picture control and signal format conversion, there are some weak links in the large screen control system of LED, which can not meet the needs of users. The main problems are as follows:

1. The signal source access format of large LED screen control system is limited. At present, only digital DVI signal is commonly used. Many signal sources (such as VGA) can not be displayed directly on the large LED screen through the control system.

2. The image processing effect of traditional signal acquisition card is poor, which causes great loss to the clarity of the picture while converting the signal format.

3. The large LED screen control system can only capture the corresponding points of the large LED screen for display, while in some customer sites, it is necessary to display any size or complete computer desktop screen at will.

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In view of the above problems, our company independently developed a number of video processing products. The product adopts advanced control and image processing technology, which can not only realize switching between signals quickly and steadily, but also process multi-level pictures. In addition, the product can be controlled by keyboard and PC computer on the device, which makes the operation simple and convenient.

二、Product characteristics

1.Supports independent operation of the control panel, and the design of the knob and numeric keys makes the device easier to use;

2.Support PC software control to achieve visual and fast operation;

3.Support fade in and out perfect switching;

4.Support brightness, contrast, and enhance image display;

5.Supports arbitrary zooming of the screen size (the screen can be adjusted point by point, the minimum can be reduced to one pixel);

6.Support motion compensation, no smearing on the screen;

7.Support noise reduction processing to reduce noise and stains;

8.Support 5 channels of high definition SD video input, 2 channels of network port output (SV4 is 4 network port output);

9.Supports up to 1920×1080 input resolution, 1.3 million custom output resolution, up to 3840, up to 1536;

10.Support retransmission configuration and readback configuration function, no upper computer can achieve maintenance;

11.Support keyboard lock function to prevent misoperation of field personnel after construction and commissioning;

12.Supports saving and invoking of five scene modes;

13.Support navigation (smart settings) shortcut settings;

14.International 1.5U standard height, easy to carry and install;

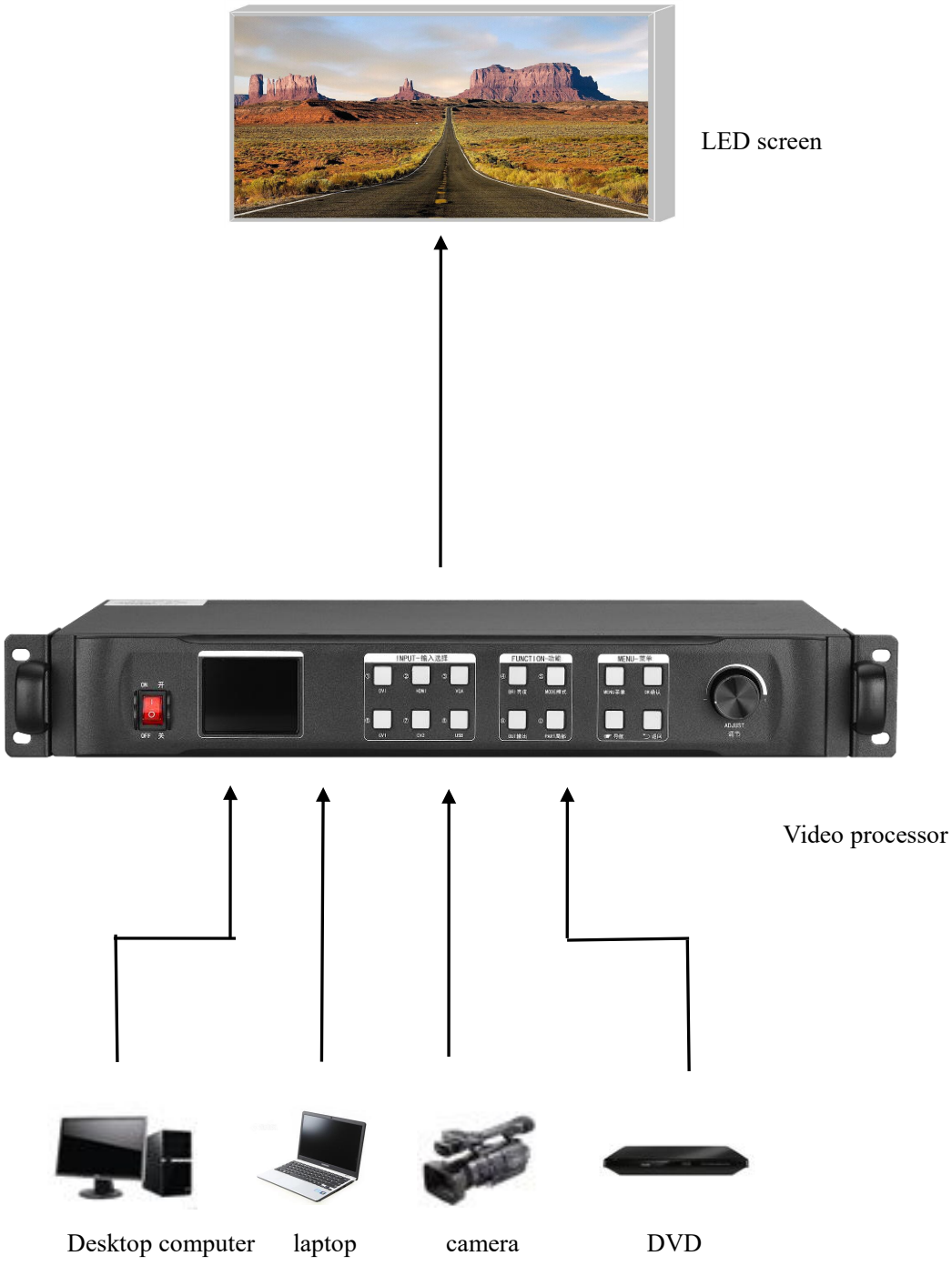
III、Technical indicators

The video processor adopts the latest patented video processing technology, and has the video conversion capability of any format input and corresponding format output. Video signals including CVBS (composite video), HDMI, VGA (RGB) and DVI-D can be processed and enhanced to meet customer application needs. The detailed specifications are as follows:

CVBS(BNCinput)	
Number of Inputs	2
Supported Standards	PAL/NTSC
Signal Level	1Vpp±3db (0.7V Video+0.3v Sync) 75 ohm
HDMI input	
Number of Input	1
Supported Standards	EDID/DDC2B
Signal Level	1Vpp±3dB (0.7V Video+0.3v Sync) 75 欧姆端结
VGA(DB15 input)	
Number of Inputs	1
Interface morphology	Standard DB15 socket
Supported Standards	VGA-UXGA
Signal Level	R、G、B、Hsync、Vsync:0 to1Vpp±3dB (0.7V Video+0.3v Sync) 75 ohm black level: 300mV Sync-tip: 0V

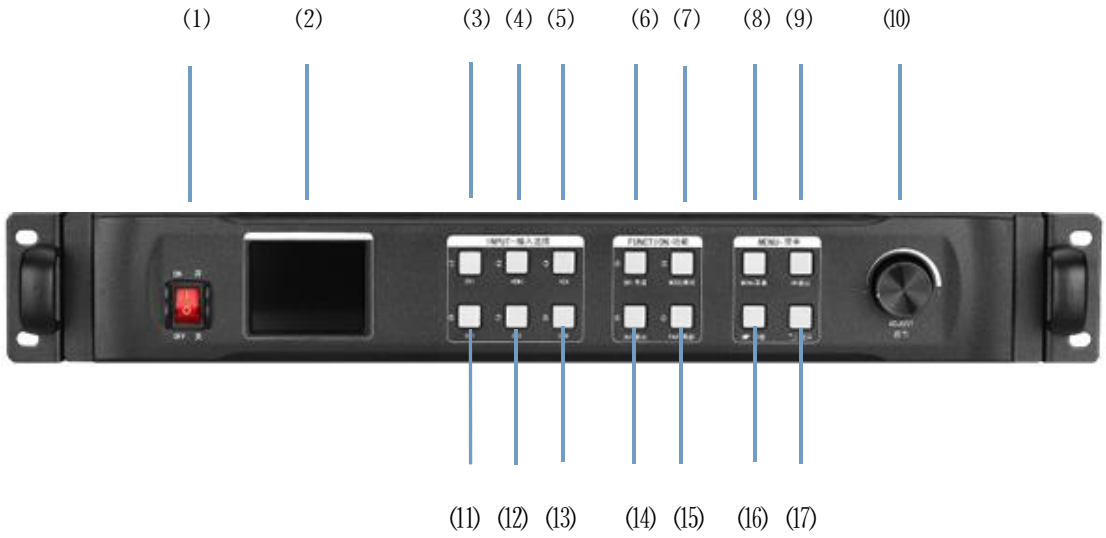
DVI input	
Number of Inputs	1
Connector	Standard DVI-D socket
Supporting resolution	SMPTE: 625/25 PAL, 525/29.97 NTSC, 625/50p PAL, 525/59.94p NTSC, 1080P60,1080i50, 1080i59.94/60, 720p50 和 720p59.94/60 VESA: 800×600@60Hz，1024×768@60Hz，1280×768@60Hz，1280×1024@60Hz，1600×1200@60Hz
signal level	TMDS level, single-pixel input, 165 MHz bandwidth
standard	DVI 1.1
USB input	
Number of Inputs	1
Supported Standards	U disk, SD card, etc.
Signal Level	1Vpp±3dB (0.7V Video+0.3v Sync) 75 ohm
Network Port Output	
Number of output	2
Interface morphology	Gigabit Network Port
subsidiary	
Certification Notes for CE Standard	BS EN 55013:2001+A1:2003+A2:2006 BS EN 61000-3-2:2006+A2:2009 BS EN 6100-3-3:2008 BS EN 55020:2007 BS EN 6006:2002+A1:2006+A11:2008
Computer and Central Control System Control	RS232
power supply	85-264V 2A IEC-3 power connector
working environment	0°C~45°C
Stored Environment	10% to 90%
Product Warranty	2-year limited warranty

IV、Working sketch



V、Panel Structure

Front panel



(1) POWER----------Device switch, OFF - power off, ON - power on

(2) LCD----------Text display, displaying menus, parameters, etc.

(3)DVI----------Digital signal channel key

(4) HDMI----------HD multimedia channel button

(5) VGA----------Analog signal channel key

(6) BRI----------Brightness setting

(7) MODE----------User mode call

(8) MENU----------menu

(9) OK--------Confirm button, click to enter the next interface when navigating mode

(10) ADJUST----------Knob increase the decrease button, press the OK button

(11) / (12) CV1~2----------Composite signal channel button

(13) USB----------USB signal channel button

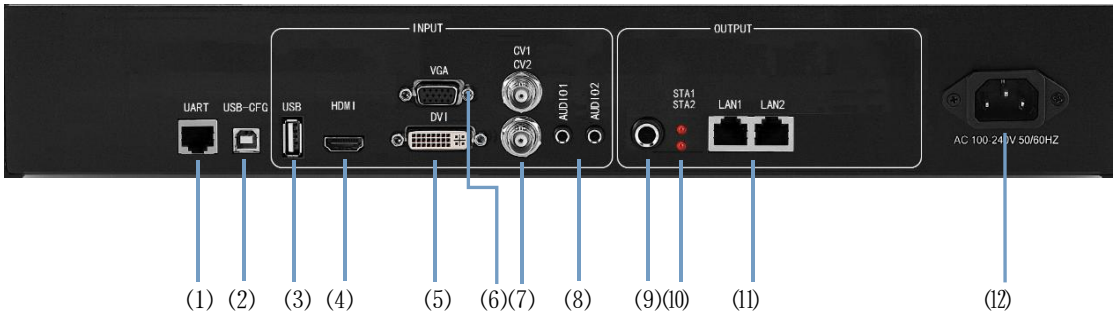
(14) OUT----------Switch between output black screen and normal; Note: Blue screen is switched with knob

(15) PART----------Do partial panorama switching

(16) Navigation key---User navigation mode, as a step value switch when adjusting the data size

(17) Arrow sign----------back key

Back panel



(1) UART----------Connect the host computer software through the 9-pin serial port to the RJ45 network port

(2) USB-CFG----------Connect the host computer software through the USB port

(3) USB----------Program upgrade port, USB source input interface

(4) HDMI----------Notebook, etc. HDMI signal input interface

(5) DVI----------DVI signal input interface such as desktop

(6) VGA----------Notebook and other VGA signal input interface

(7) CV-1/2----------Composite signal input interface such as camera

(8) AUDIO1/2----------Audio input interface

(9) AUDIO -OUT----------Audio output interface

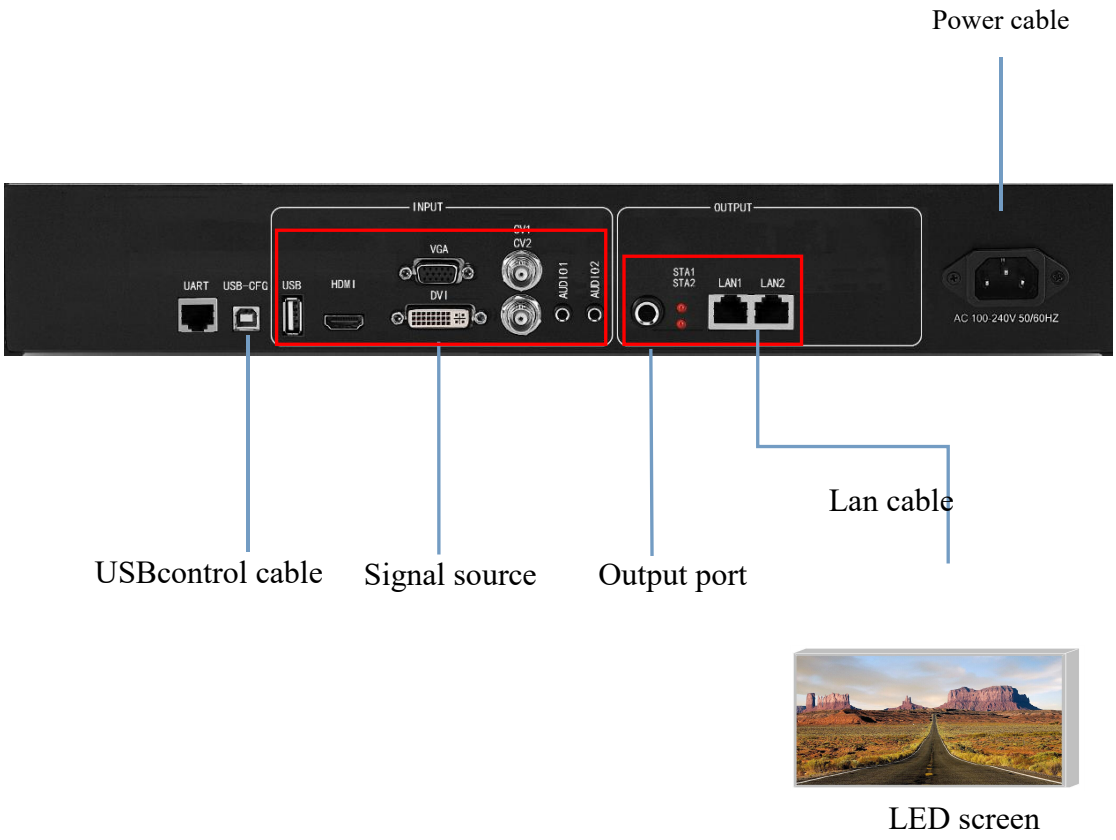
(10) SAT1/2----------Network port 1/2 signal indicator

(11)LAN1/2----------Network port output

(12)power port----------220V power

VI、Wiring and installation

Wiring diagram



LED screen

installation steps

1、Connect the DVI interface of the graphics card to the DVI-IN input port of the video processor as shown in the figure.

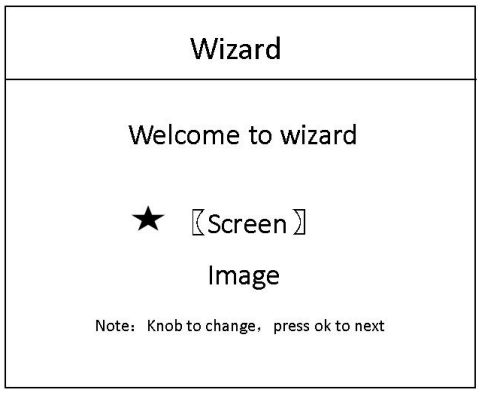
2、Then connect as shown in the figure, connect the DVI interface of the graphics card to the DVI-IN input port of the video processor, and connect the DVI-OUT output port of the processor to the sending card;

3、Make sure that the wiring is correct and power on to turn on the video processor.

VII、Equipment commissioning

Navigation mode

This Wizard is suitable for most cases. It is simple to set up. With the prompt, you can gradually debug it to achieve the desired display effect. The processor automatically enters the navigation mode when it is powered up.(or Click Enter Navigation Mode）：

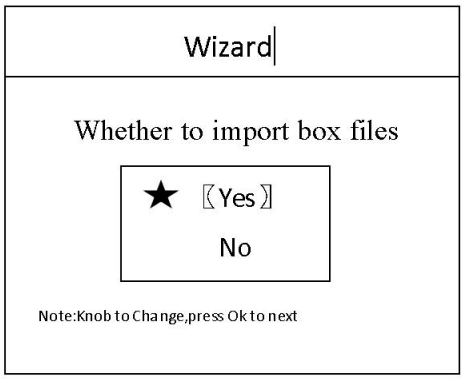


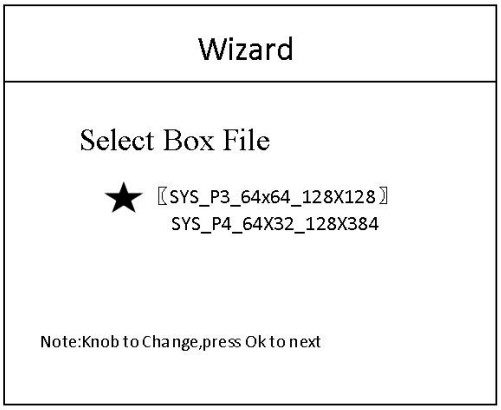
Note: Screen-adjusting navigation refers to debugging parameters of sending and receiving cards, which requires box files; image navigation refers to debugging parameters of large screen image and local display.

Click on "Screen-adjusting Wizard" and enter the password for setting the screen-adjusting:

Note: Set the password of "168", "666", "888" and "999" to adjust the screen.

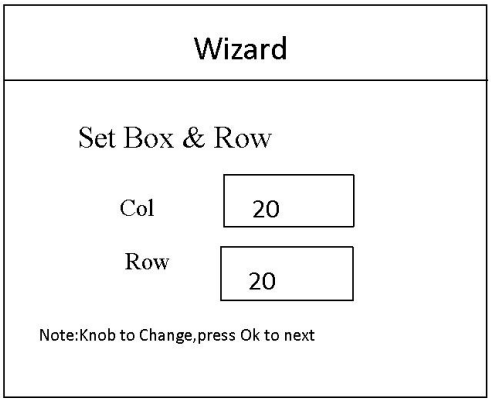
Select whether to import the box file:





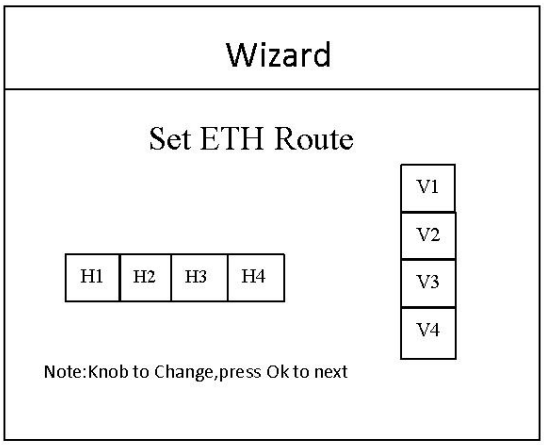
Note: The box files need to be imported into the equipment through the upper computer software. The box files here refer to the parameters of the receiving card.

Set the number of rows/columns in the box:



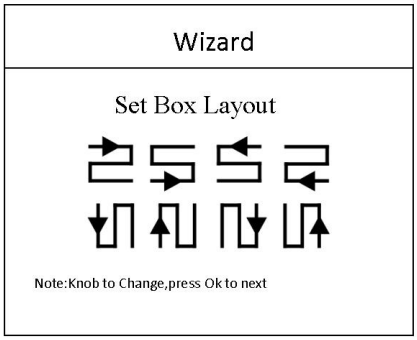
Note: Number of rows/columns in the box refers to the number of horizontal/vertical receiving cards used in the large screen.

Set the layout of keys according to the wire:

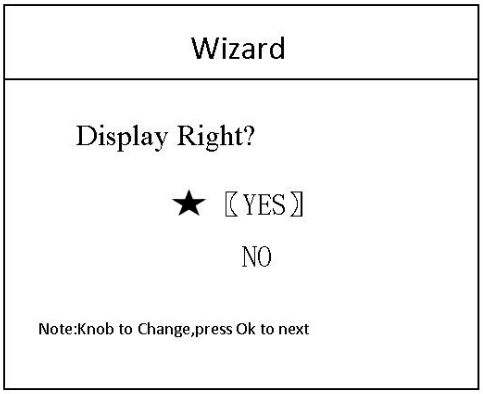


Note: Wire arrangement refers to the splicing mode between the wires.

Set up cabinet routing mode:

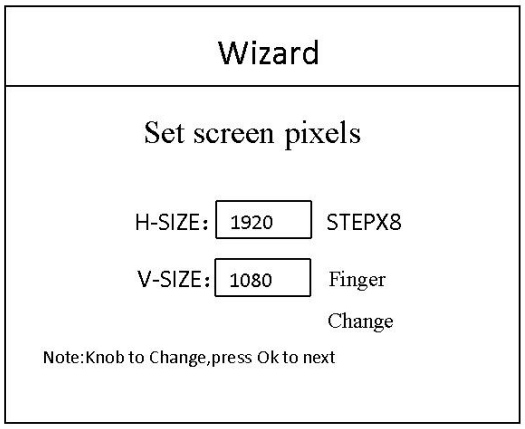


Note: Cabinet routing mode: Series mode between receiving cards should ensure that the direction of the two lines is the same. Display whether normal:



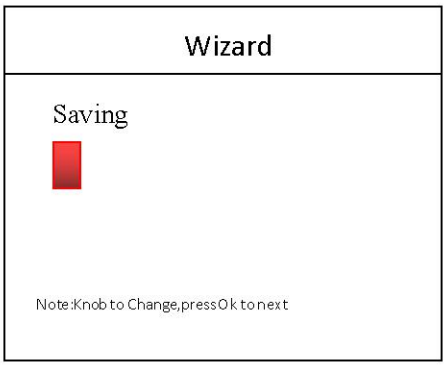
Note: Normal click is displayed on the large screen; if not, go back to select the box file and reset it.

Set the number of large screen points:



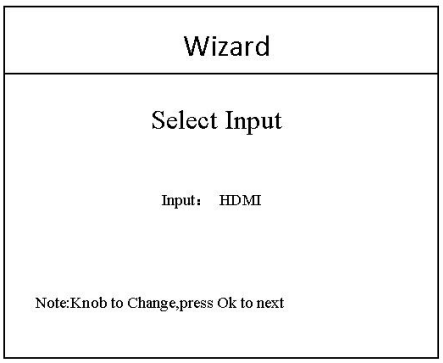
Note: Set the number of large screen points, the number of large screen points is the size of the whole screen.

Save settings:



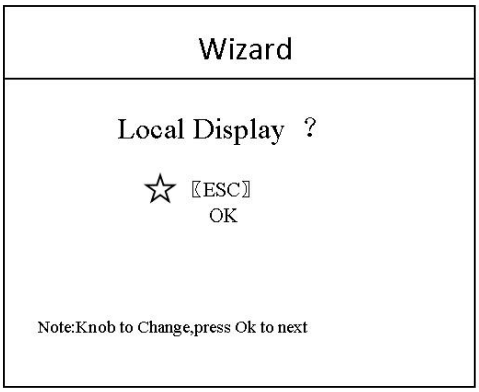
Note: Some parameters of the control system are saved here.

Select the input source:



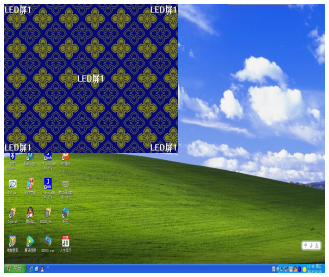
Note: Select the input signal source

Whether local display is needed:

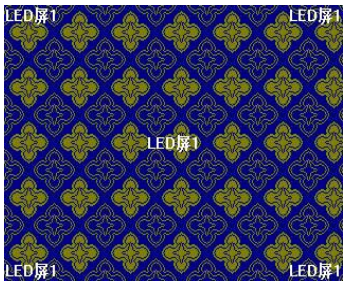


Note: This interface is to select whether it is necessary to intercept part of the image of the input signal source and display it on the LED screen.

Ps-The most common way to do "partial display" is to display the full screen of the playback window and switch to the panoramic display of the computer desktop at any time.



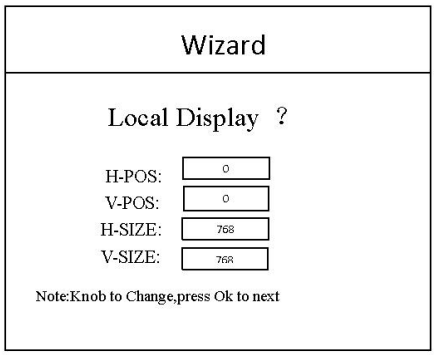
full mode



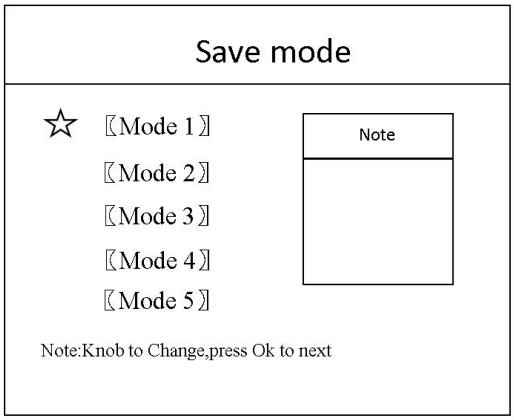
Part mode

Among them, "location" - where to start intercepting; "size" - how big to intercept. The interface is as follows:

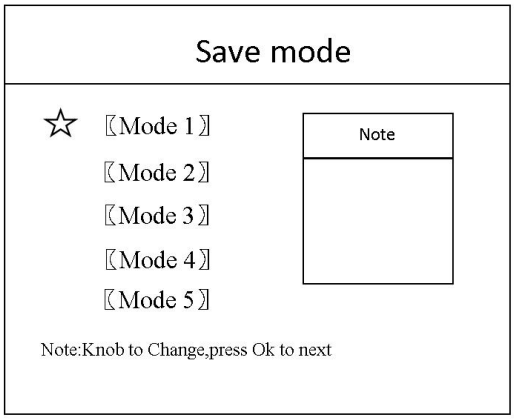
Local display settings:



Save settings:



Save settings:



The last step is to save the settings, in which mode one is automatically invoked after booting.

At this point, the setup of the processor is completed. In the process of using it, the signal can be switched directly with the front panel. When "local display" is needed,click PART 0 It can switch the "local/panoramic" of the current signal source. If multiple modes are saved,use MODE 5 call different mode

Thank you again for using our video processor. Please refer to the back section for other details.

VIII、Control menu

Main menu	Option	Defaults
（I）screen	Navigation mode	
（II）scaler parameters	Horizontal position	0
	Vertical position	0
	Horizontal size	1920
	Vertical size	1080
（III）part	Horizontal position	0
	Vertical position	0
	Horizontal size	0
	Vertical size	0
（IV）Save	Mode 1	
	Mode 2	
	Mode 3	
	Mode 4	
	Mode 5	
（V）Mode	Mode 1	
	Mode 2	
	Mode 3	
	Mode 4	
	Mode 5	

（六）MORE	（I）Language Settings	English	Chinese
		English	
	（II）factory	confirm	
		cancel	
	（III）support	Please contact the sales staff.	
	（IV）Planning tasks	On	
		Off	
	（V）switch	Cut	
		Effect	
	（六）VGA set	Horizontal position	Custom
		Vertical position	Custom
		Horizontal size	Custom
		Vertical size	Custom
	（VII）Picture Quality Settings	Contrast	128
		Red	128
		Green	128
		Blue	128

	（VIII）still	Still	
		Active	
	（IX） Brightness setting	brightness	128
		Red	128
		Green	128
		Blue	128
	（X）master	（I）Load hotkey	On
			Off
		（II）Key locked	On
			Off
		(III) Play type	Paly video
			Play picture
			Off
		（IV）Online upgrade	Confirm
			cancel
		（VI）Device Information	
		（VII）Sharpen settings	
		（VIII）Sound settings	Mute
			Output
			Audio source settings
		（IX）Retransmission configuration	
		（X）Readback configuration	

IX、frequently asked questions

Q1：DVI、HDMI、VGA、CV、USB 端口定义。

Q1：DVI、HDMI、VGA、CV、USB Port definition.

A：

DVI： Digital (HD) video signal is an interface standard introduced by DDWG (Digital Display Working Group) in 1999 by Silicon Image, Intel and other companies. It has been well optimized in speed, clarity and HDCP protocol. Signal sources are typically desktop computers, notebooks, etc.

HDMI： High Definition Multimedia Interface (HDMI) is a digital video/audio interface technology. It is a special digital interface suitable for image transmission. It can transmit audio and video signals at the same time. The maximum data transmission speed is 5 Gbps. Signal sources are usually cameras, notebooks, information dissemination systems, etc.

VGA： Analog Video Signal (Video Graphics Array) is a video transmission standard developed by IBM with PS/2 in 1987. It has many advantages, such as high resolution, fast display speed and rich color. It has been widely used in the field of color display. Signal sources are typically desktop computers, notebooks, song machines, matrices, etc.

CV：Composite video signal, also known as composite video signal, is a signal that packages all signals into a whole for transmission. Signal source is usually camera, DVD, TV box, song-ordering machine, video matrix and other equipment.

USB：Universal Serial Bus (USB), an external bus standard, is used to standardize the connection and communication between computers and external devices. It is an interface technology applied in the field of PC. USB was proposed jointly by Intel, Compaq, IBM, Microsoft and other companies in 1994. Signal source is usually U disk, SD card, etc.

Q2：Briefly describes the connection mode of video card, video processor, receiving card and large LED screen.

A: The video card's DVI (VGA) output port is connected to the DVI-IN (VGA-IN) input of the video processor. The output of the video processor's network port is connected to the terminal

receiving card behind the screen through the network cable. The receiving card connects and controls part of the screen and cascades the whole screen.

Q3：How to set the keyboard lock of the video processor? How to unlock?

A: A: Menu - Advanced Menu - Expert Settings - Keyboard Lock. Keyboard can be locked after opening. Keyboard can be unlocked even by pressing MENU key 10.

Q4：What is the password to enter the screen navigation?

A: “168” “666” “888” “999” Any one is OK.

Q5：What are the possible reasons why the upper computer can’t detect the equipment?

A: In order to control the video processor with a trial computer, it is necessary to connect its instruction transmission line. That is serial line.

Failure to connect may result from the following circumstances.

① The equipment is not powered on.

② The computer is not equipped with USB cable driver or the USB driver is damaged.

③ Serial line is not well connected or damaged.

If the above suggestions do not solve your problem, please contact our customer service staff in time. We will help you solve the problems in the first time.

Q6：The large screen of the video card directly connected with the sending card is displayed normally, and the screen will appear black screen when it is connected to the video processor.

A: Observe whether the sending card indicates that the green light flashes normally. If the signal is given by the processor's output port, the possible reasons are as follows:

① The problem of signal source. When connecting the computer graphics card, the copy mode of the graphics card should be set. If not, the DVI port of the graphics card has no data output. Setup steps: Turn off the power supply of video processor - reinsert the line from video card to video processor - ATI graphics card reads and replicates automatically. NVIDIA graphics

card needs to enter the graphics card control center and set up multiple display + double screen replicate mode.

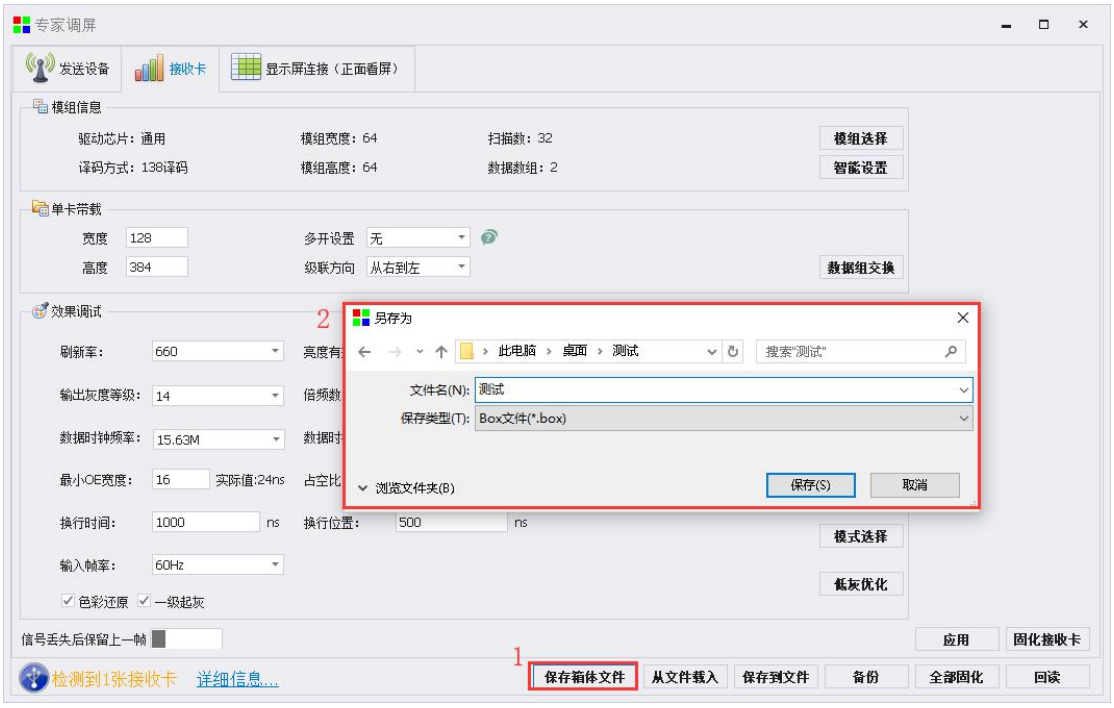
② Connection problems. When the signal line interface contacts badly or there is a problem inside the wire, the large screen will appear abnormal phenomena such as color stripes, flower screens and so on. Check carefully whether the pin in the signal line is broken or inclined and change the signal line.

If the above suggestions do not solve your problem, please contact our customer service staff in time. We will help you solve the problems in the first time.

X、Method of Importing Box Files

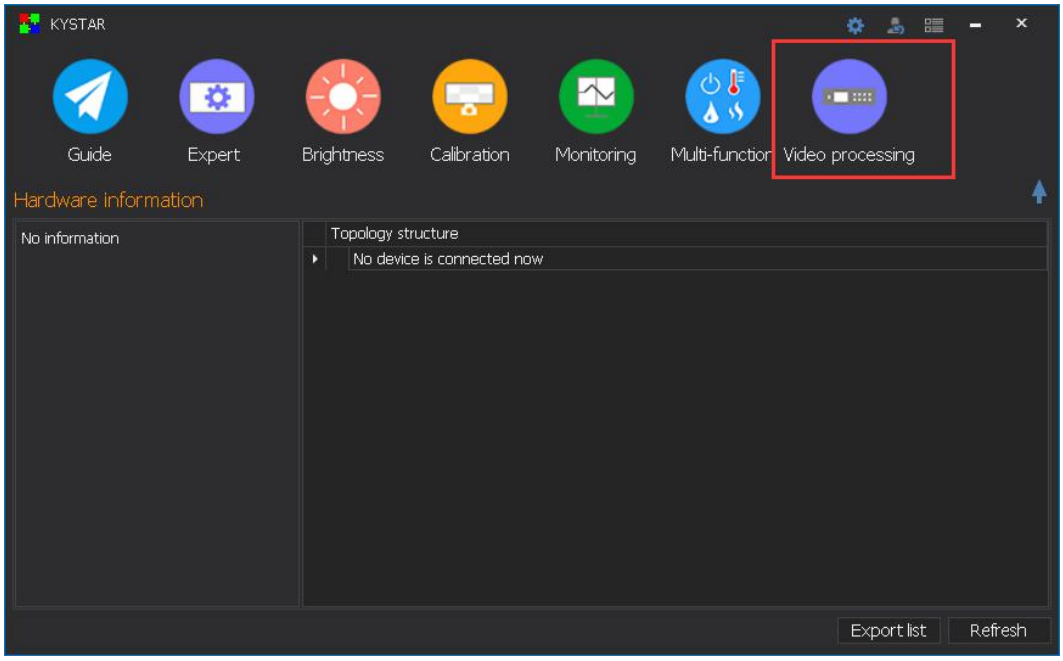
1. Save cabinet files

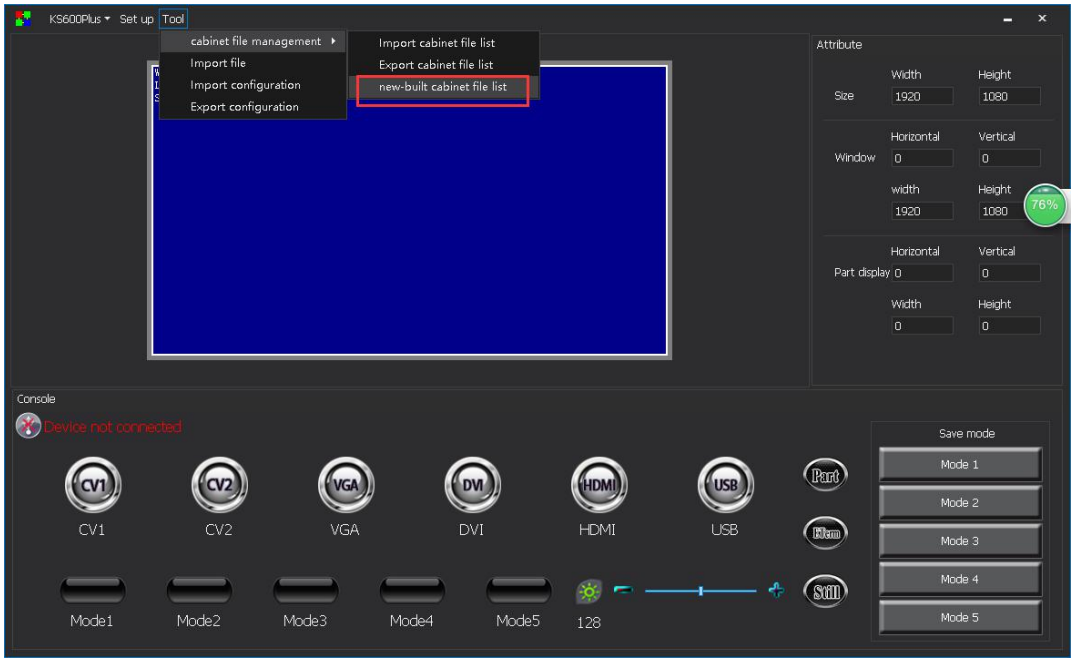
Expert screen adjustment interface has the option of saving box files:



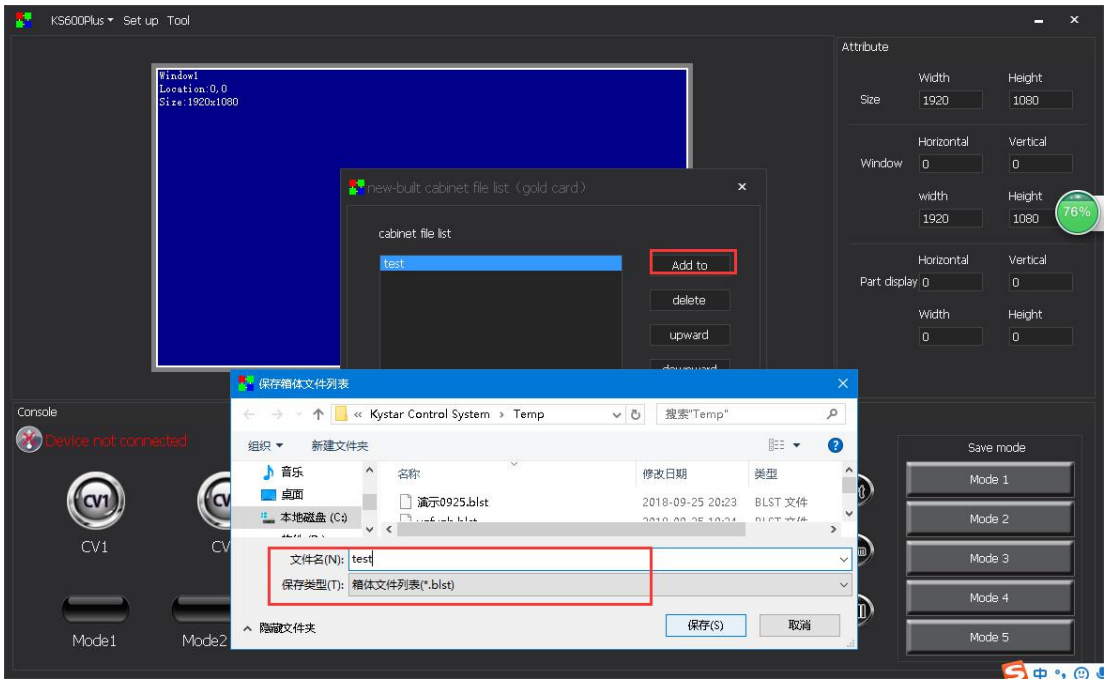
2、new cabinet file

Select the video processing option of the main menu of the software, and select the list of new box files from the tool menu inside:



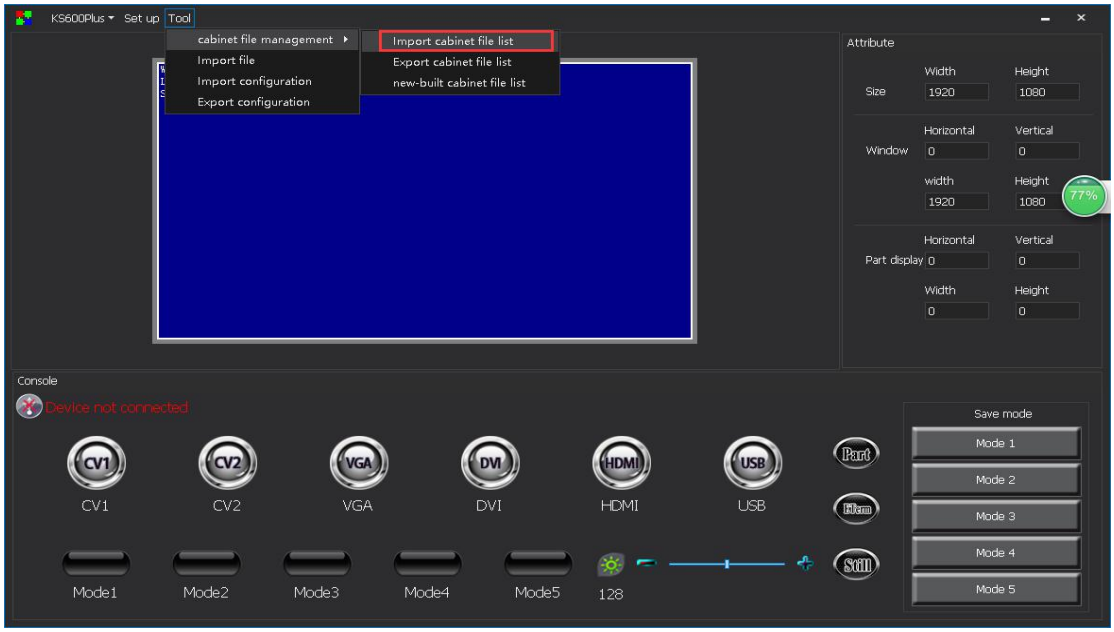


Select Add in the pop-up window, add the required box file to the list, and then save it as a blst file:



3、import cabinet file list

Select Add in the pop-up window, add the required box file to the list, and then save it as a blst file:


KS600Plus
Set up
Tool
cabinet file management
Import file
Import configuration
Export configuration
Import cabinet file list
Export cabinet file list
new-built cabinet file list
Attribute
Size
Width
Height
1920
1080
Window
Horizontal
Vertical
0
width
77%
Part display
Console
Device not connected
Save mode
Mode 1
Mode 2
Mode 3
Mode 4
Mode 5
CV1
CV2
VGA
DVI
HDMI
USB
Part
Effect
Still
Mode1
Mode2
Mode3
Mode4
Mode5
128


KS600Plus
Set up
Tool
Window1
Location:0,0
Size:1920x1080
Attribute
Size
Width
Height
1920
1080
Window
Horizontal
Vertical
0
width
78%
Part display
Import cabinet file list
Select cabinet file list:
C:\Program Files (x86)\KyStar\Ky
Write to 0%
import
选择保存好的 blst 文件导入到设备中
Console
Device not connected
Save mode
Mode 1
Mode 2
Mode 3
Mode 4
Mode 5
CV1
CV2
VGA
DVI
HDMI
USB
Part
Effect
Still
Mode1
Mode2
Mode3
Mode4
Mode5
128

After the software prompts that the data is successfully written, it can be debugged by the video processor. When the processor selects the box file, the imported file file will be displayed on the LCD screen.