Pandora-box

P2s

User manual

Beijing KYSTAR Technology Co.,LTD

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;

, the power plug of the device should be unplugged and commissioned for maintenance:

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

Directory

1.Product Discussion

With the rapid development of the LED display industry and the continuous expansion of application requirements, various control requirements for large-screen control systems came into being. However, due to the limitations of the large screen control system in image processing, picture control and signal format conversion, the LED large screen control system has some weak links that cannot meet the needs of users. The main problems are as follows:

1. The signal source access format of the LED large screen control system is limited. Currently, only digital DVI signals are used. Many signal sources (such as VGA, etc.) cannot be directly displayed on the LED large screen through the control system;

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

3. The LED large screen control system can only capture images corresponding to the points of the LED large screen for display, and at some customer sites, it is more casual to display any size or complete computer desktop screen;

4. With the continuous narrowing of the distance between the LED screens and the increasing number of screen points, the era of single-card loading and single-screen display of a single screen will soon cease to exist, and more application requirements and display requirements will be highlighted, LED large screen The control system needs to cooperate better with other peripheral equipment to fulfill the customer's needs.

In response to 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 fast and stable switching between signals, but also perform multi-level processing on the picture. In addition, the product can be controlled by the keyboard and PC on the device, and the operation is simple and convenient.

2.Features

①New Kommander PE program editing, drag and drop operation

② 2 Gigabit Ethernet port outputs, support horizontal and vertical splicing

③The whole machine is loaded with 130W points, with a width of 4064 and a maximum of 1536.

④ WIFI, 100M network port, USB direct connection multiple communication methods

⑤ Built-in 8GB (the system occupies 2.5G), U disk can be expanded to 128G

⑥3.5mm audio output, synchronous audio and video output

⑦Support multiple windows and multiple materials to play on the screen simultaneously

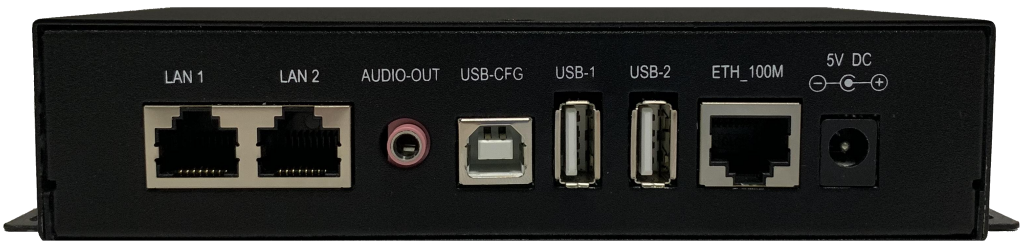
⑧Support wireless configuration screen through mobile phone and computer without USB cable

⑨Support low brightness and high gray

⑩Support DC 3.8~5.5V wide working voltage, stronger adaptability

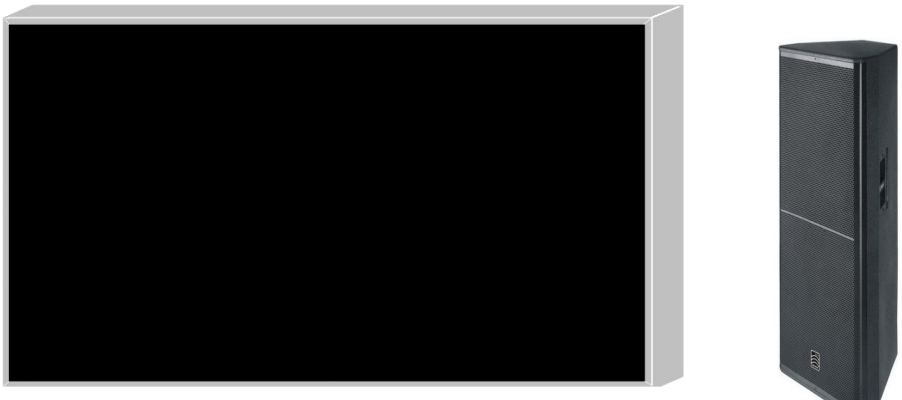
3.Interface and hardware connection

3.1Panel description

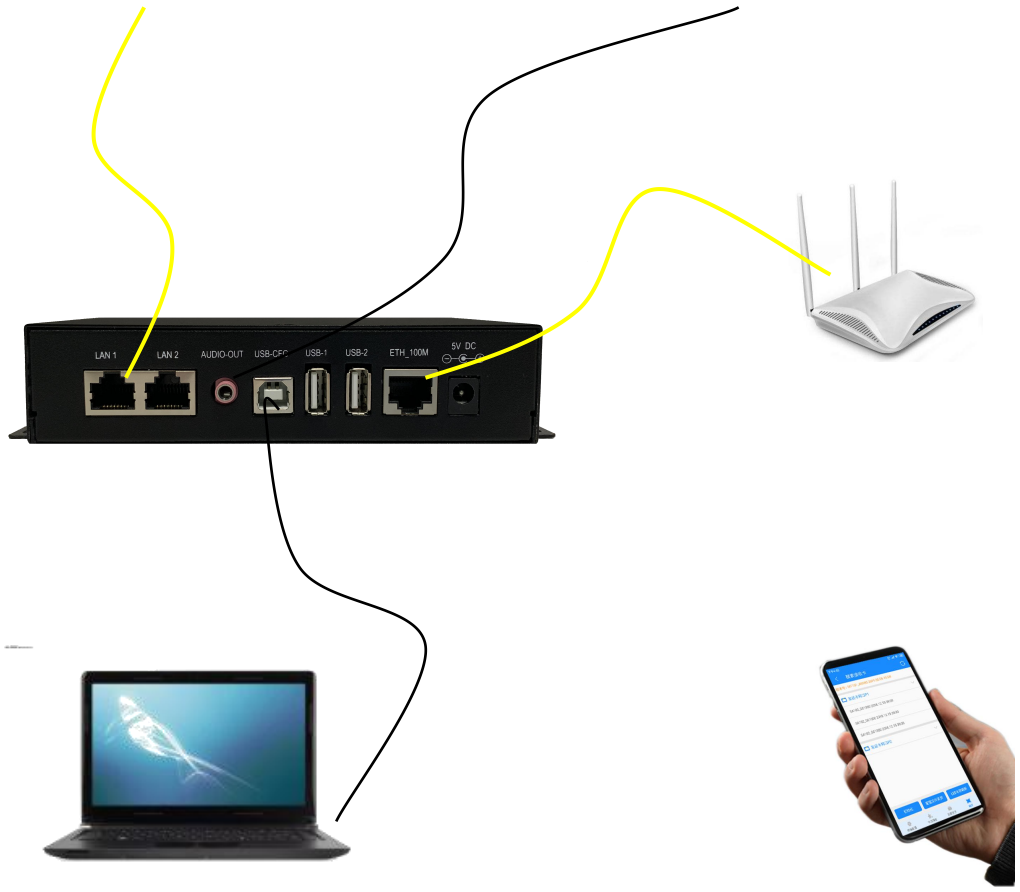


name	Function Description
SYS	P2s running status indicator When the FPGA starts, the SYS light flashes at a frequency of 2 times per second for 3 seconds, and then turns off, indicating that the FPGA starts normally. When the frequency flashes once per second, it means that the Android is running normally
NET	Connection status indicator When P2s is connected to the mobile phone, the NET light is on, otherwise it is not on; When the mobile phone transfers a large amount of data to P2s, NET flashes, 2 times per second; When the U disk uploads programs and upgrades, NET flashes quickly, 4 times per second
PWR	Power indicator, long light indicates normal power supply
WIFI	Wifi hotspot antenna interface,
LAN1-2	Two Gigabit output network ports, connected to all the receiving cards of Kystar
AUDIO-OUT	3.5mm Audio output
USB-CFG	Set screen parameters, transmit programs at high speed, and review screen information
USB	USB2.0*2, update program through U disk
ETH-100M	100M input network port, access to LAN, can be directly connected to the PC
5V DC	Provide 5V/2A power supply

3.2Hardware connection



LED全彩显示屏



4.Software Installation

Insert the accessory CD into the computer CD drive, or download the latest version of the gold card control software from the official website, double-click setup, install and open the software according to the prompts.

During the first installation process, you may encounter the installation of NET environment, Winpcap environment, and USB driver. Just install it directly. If you install it again, you may encounter the problem that Winpcap does not support overwrite installation. At this time, you can ignore it.

Use the supplied USB cable, one end is connected to the COM port of the sending card, and the other end is connected to the USB port of the PC. After communication, the device will automatically connect to the device. After opening the software, as shown in the figure:

5.Software interface introduction

After opening the software, after launching, the following main software interface appears.

Main functional area: The main functional area includes guide screen adjustment, expert screen adjustment, brightness control, camera calibration, screen monitoring, multi-function card, and video processing. There are 7 main function points.
Hardware information: The hardware information uses the sending card as a display unit to display the current sending card model and the receiving card model, and the number of receiving cards per network port of the sending card. The blue connection position can be used to display the connection status of the software and the sending card, and can also be used to switch multiple sending cards.

Topology diagram: The topology structure displays the program version information of the sending device, receiving card, multi-function card, and the ID number of the receiving card in a tree diagram. The "Export List" button can save the current topology information as an Excel file in the form of a topology map, which is convenient for viewing and saving. The "Refresh" button is used to refresh the topology information.

Other functional areas: Other functions in the upper right corner include test charts, skin changes, environmental monitoring, software version information, etc. The "" upward arrow can hide the hardware information and topology diagram, leaving a refreshing main function interface.

6.Screen configuration

The screen configuration includes thinking of wizard screen adjustment and expert screen adjustment.

6.1Wizard screen adjustment

Select the wizard to adjust the screen, you can enter the wizard to adjust the screen page, and quickly complete the screen debugging through the system's guidance.


KYSTAR
向导调屏
专家调屏
亮度控制
相机校正
屏体监控
多功能卡
视频处理
硬件信息
发送卡1
发送卡型号：P2
接收卡型号：12 Ports Card
接收卡总数量：2张
网口P1：2张
网口P2：0张
发送卡编号：N/A
备注:N/A
拓扑结构
发送卡设备1，版本信息：MF101_A0100 2019.05.06 15:00
发送卡1网口P1
接收卡1，版本信息：SB101_P0201 2018.09.18 14:00 ID号：N/A
接收卡2，版本信息：SB101_P0201 2018.09.18 14:00 ID号：N/A
发送卡1网口P2
Ver 1.1.55.1973
导出列表
刷新

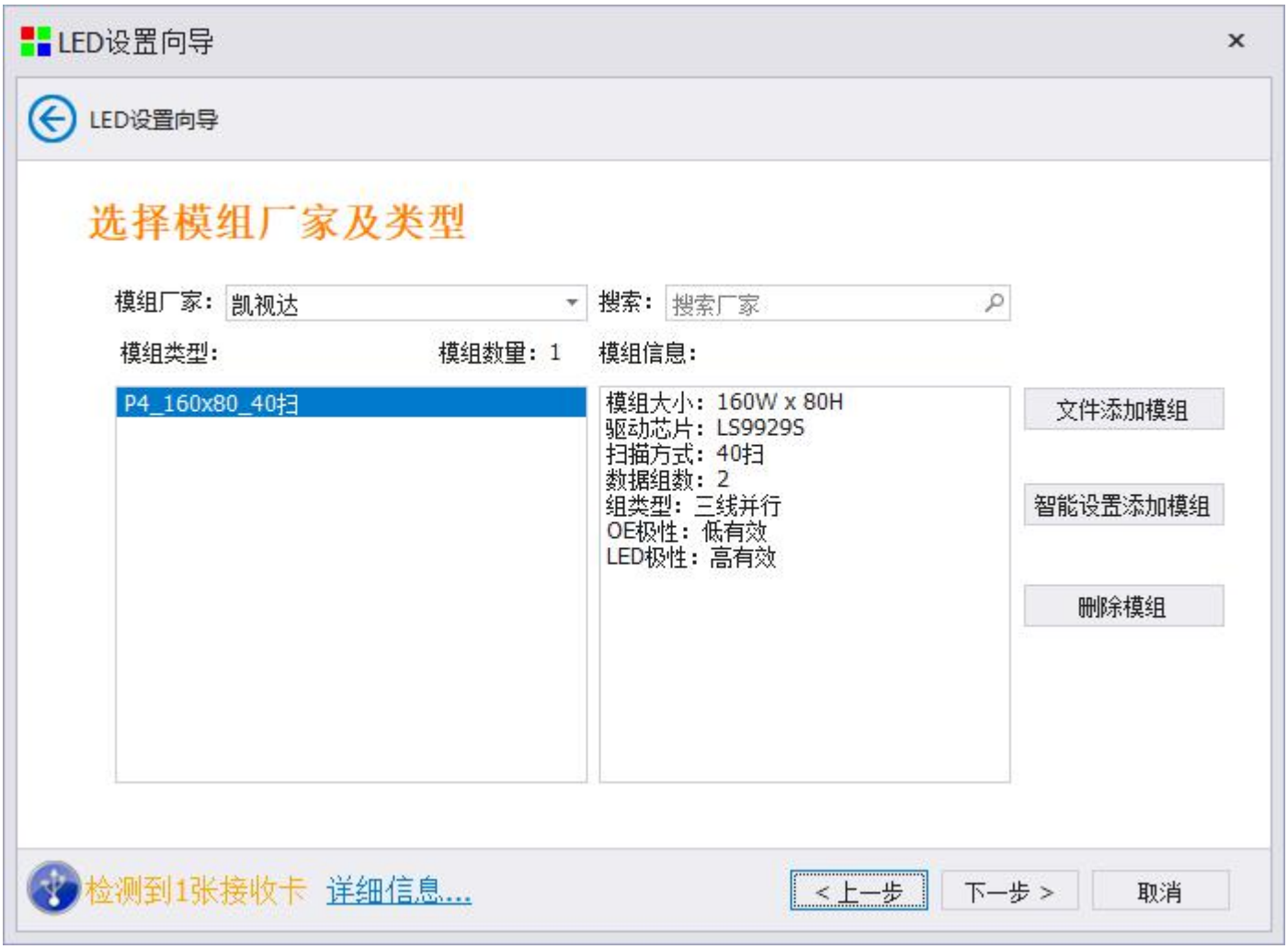
6.1.1 Setup Wizard

Click the wizard on the main interface to adjust the screen and enter the welcome interface of the LED setup wizard, click Next.

6.1.2 Confirm the number of receiving cards

After clicking the "Next" button, the system will prompt whether the detected number of receiving cards is correct. If the number is correct, click "Yes", if not, click "No", and check the network cable connection.

6.1.3 Select the module manufacturer and type:



The module library file contains the module lighting configuration files of mainstream manufacturers on the market. You can select the module manufacturer in the drop-down menu or search through the search box on the right.

After selecting the module manufacturer, you can see the currently included module configuration file in the lower list box. After selecting, you can view the detailed module information in the right box, including the module size, driver chip, and scanning method. , Data group number, group type, OE polarity, LED polarity and other information.

Select the module manufacturer and module type. If not, you can use the "Smart Settings Add Module" function button on the right to perform smart settings.

In addition, this interface can manually add module files or delete module files.

6.1.3.1 Smart setting add module

Click the "Smart Settings Add Module" function button for smart settings. Enter the first step of smart setting

According to the specific information of the module, fill in the corresponding information of the module in the first step of the intelligent setting of the software interface:

Module width: the actual width pixels of a single module.

Module height: the actual height pixels of a single module.

Number of data groups: The number of groups of data cables on the module (data import) containing RG/RGB (red, green and blue) data needs to be judged according to the definition of the HUB interface.

Driver chip: Check the driver chip of the module. Generally speaking, it is a 24-pin chip. The driver chip has general-purpose chips, double latches, and PWM chip types. Confirm with the module manufacturer in advance.

Decoding method: Observe whether the LED driver version has 4953 line tubes (8-pin small chips), if not, it is a static screen, and select direct output;

If there is 74HC138 or related decoding chip, choose 138 to decode.

6.1.3.2 Data polarity selection

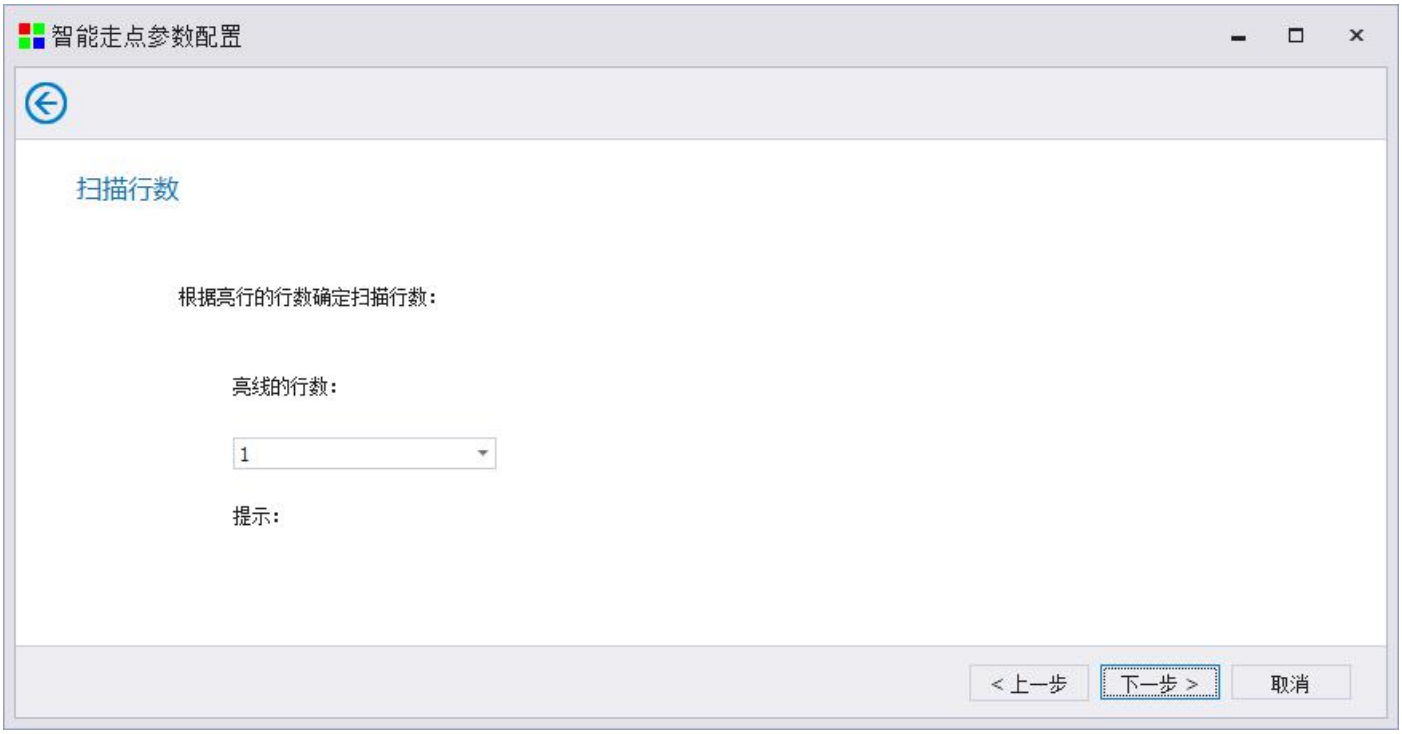
Select the data polarity of the module, tick the correct state according to the module performance status and prompt, and then click Next to select the OE polarity.

6.1.3.3 OE polarity selection

Select the brighter state according to the module state, and then click Next to determine the number of module scan lines.

6.1.3.4 Scanning lines

According to the number of lines between the bright lines of the module, select the number of lines and then click Next to select the color of the data line.

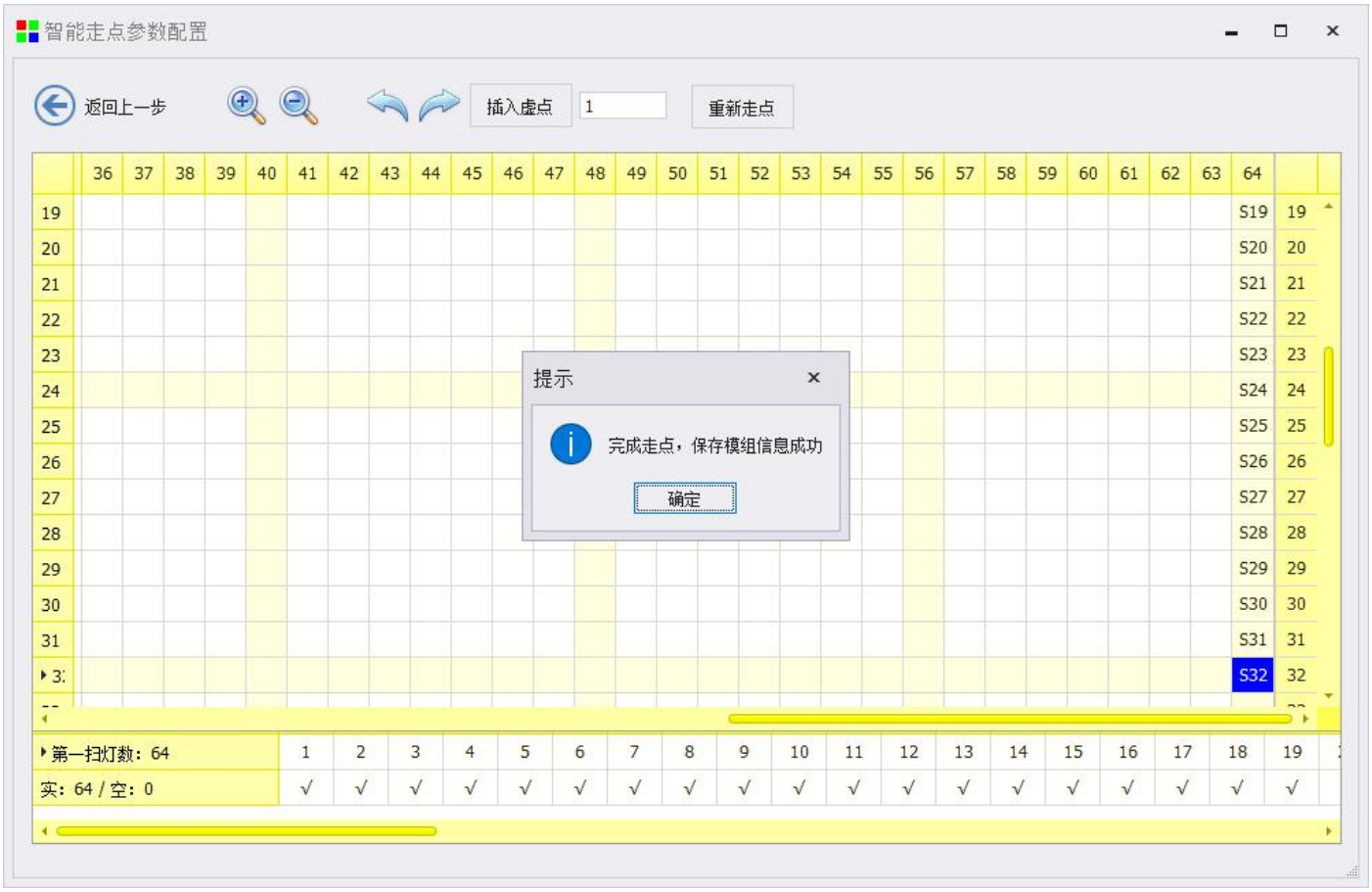


6.1.3.5 Data line color

Click on the 3 states in sequence, select according to the color displayed by the module, and then click Next

6.1.3.6 Smart tracing

After entering the tracing state, the software will automatically prompt whether to perform automatic tracing, click "Yes" to perform automatic tracing, and click "No" to perform manual tracing, according to the direction of the flashing position of the module



6.1.3.7 Add module

After completing the trace, proceed to the next step to add a module, enter the manufacturer name and module name, and save the module information file to the software system for use in the next debugging.

6.1.4 Each receiving card is loaded

According to the maximum load setting of receiving card

Number of horizontal modules: the number of horizontally loaded modules of a single receiving card

Number of longitudinal modules: the number of longitudinally loaded modules on a single receiving card

Module cascading method: module stringing method

Multi-open settings: optional multi-open and triple-open modes

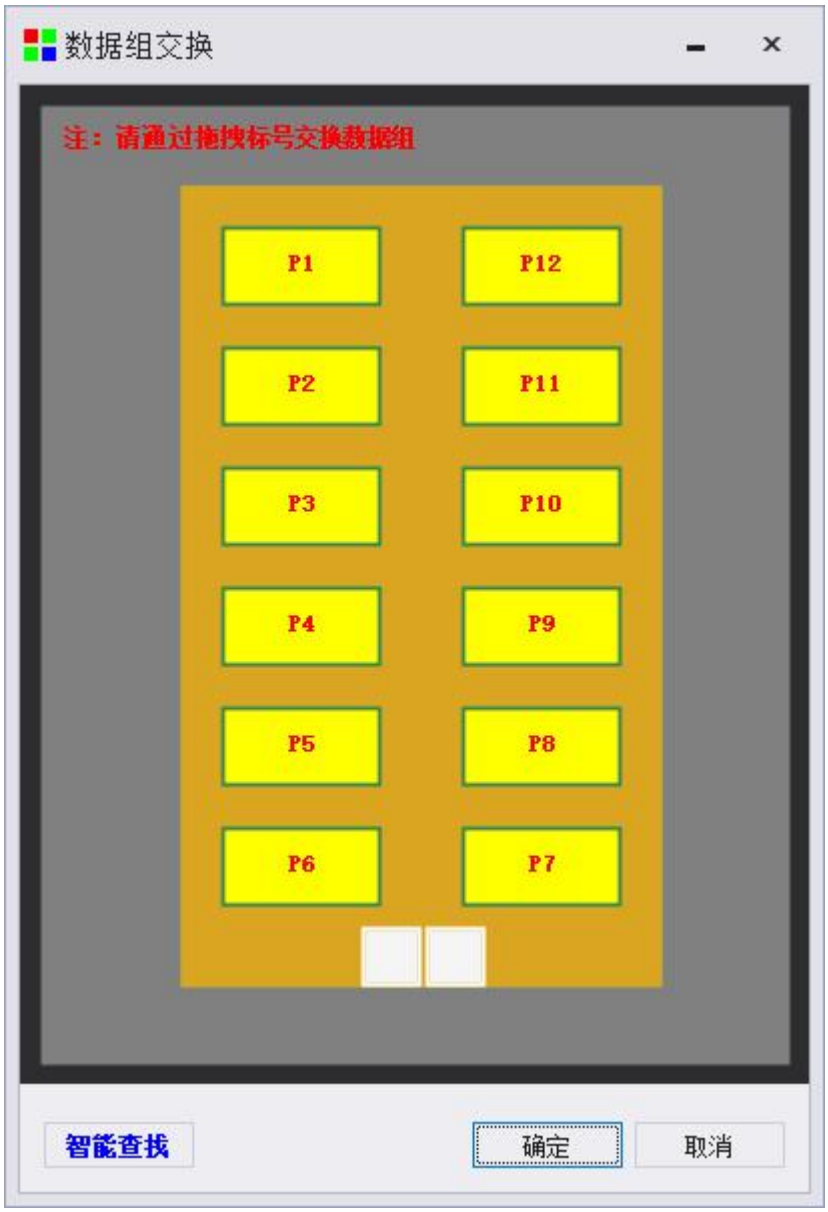
Load points: the load points of the receiving card under the current setting

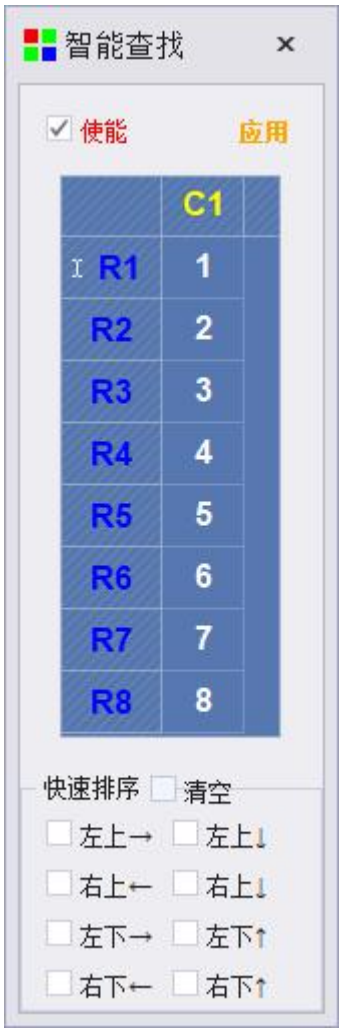
Maximum tape width: the current module, the maximum tape width supported by the system

Advanced: data group exchange is possible in the advanced interface

Icon: The icon on the right side of the interface can view the loading information of the receiving card. Each red box indicates a module, JP indicates the HUB interface of the receiving card, and the arrow indicates the direction of module cascading.

Data group exchange: Click the "Advanced" button to enter the data group exchange interface, drag and drop the yellow module to perform data group exchange, and then click the "OK" button to complete the data group exchange. If the data group is more complicated, you can enter Go to the "Smart Search" page to view the detailed data set.





Smart search page, you need to check "Enable" to take effect, C means column, R means row, according to the number displayed on the screen, correspondingly written into the software. Quick sorting refers to the entry order of 1, through the pre-selection of the upper left and upper right, you can quickly sort.

6.1.5 screen points

Choose according to the actual cascading mode of the module and click Next to set the large screen points (the actual pixels of the LED screen carried by the current sending card)

Large screen dots: It can be set according to the number of modules or according to the number of real pixels.

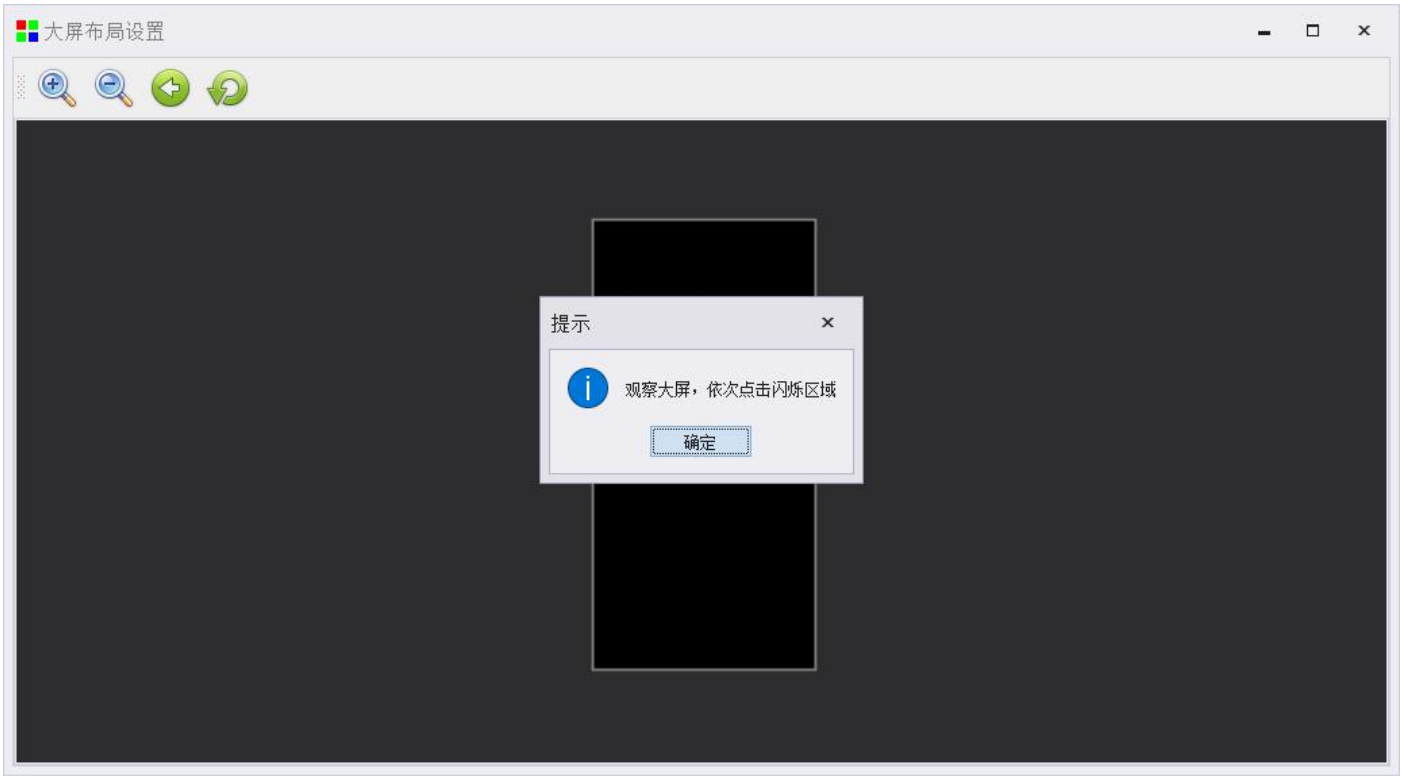
Large-screen offset: A single sending card offsets the coordinates to complete the splicing display of multiple sending cards.

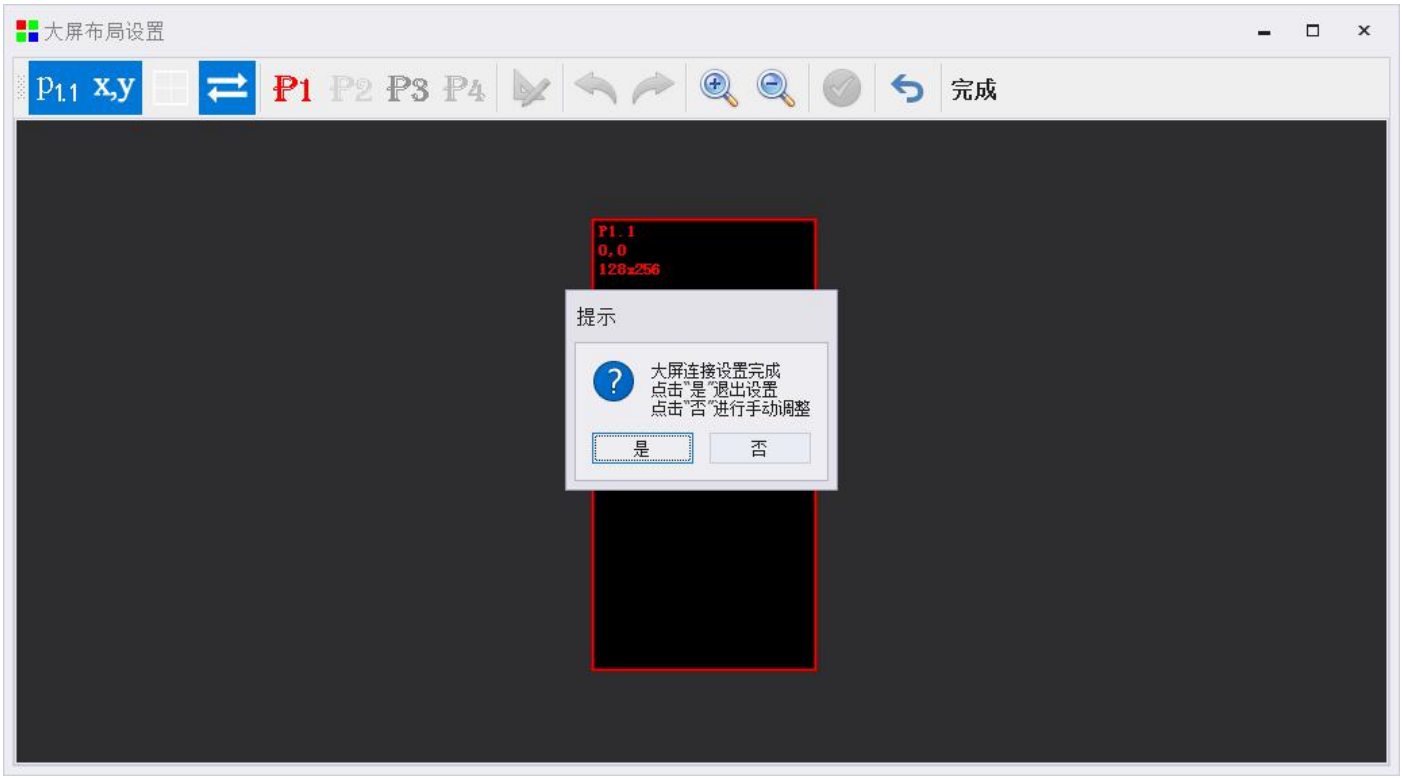
6.1.6 Receiving card serial connection

Fill in according to the actual points on the large screen and click Next to set the receiving card stringing method.

6.1.6.1 Smart string

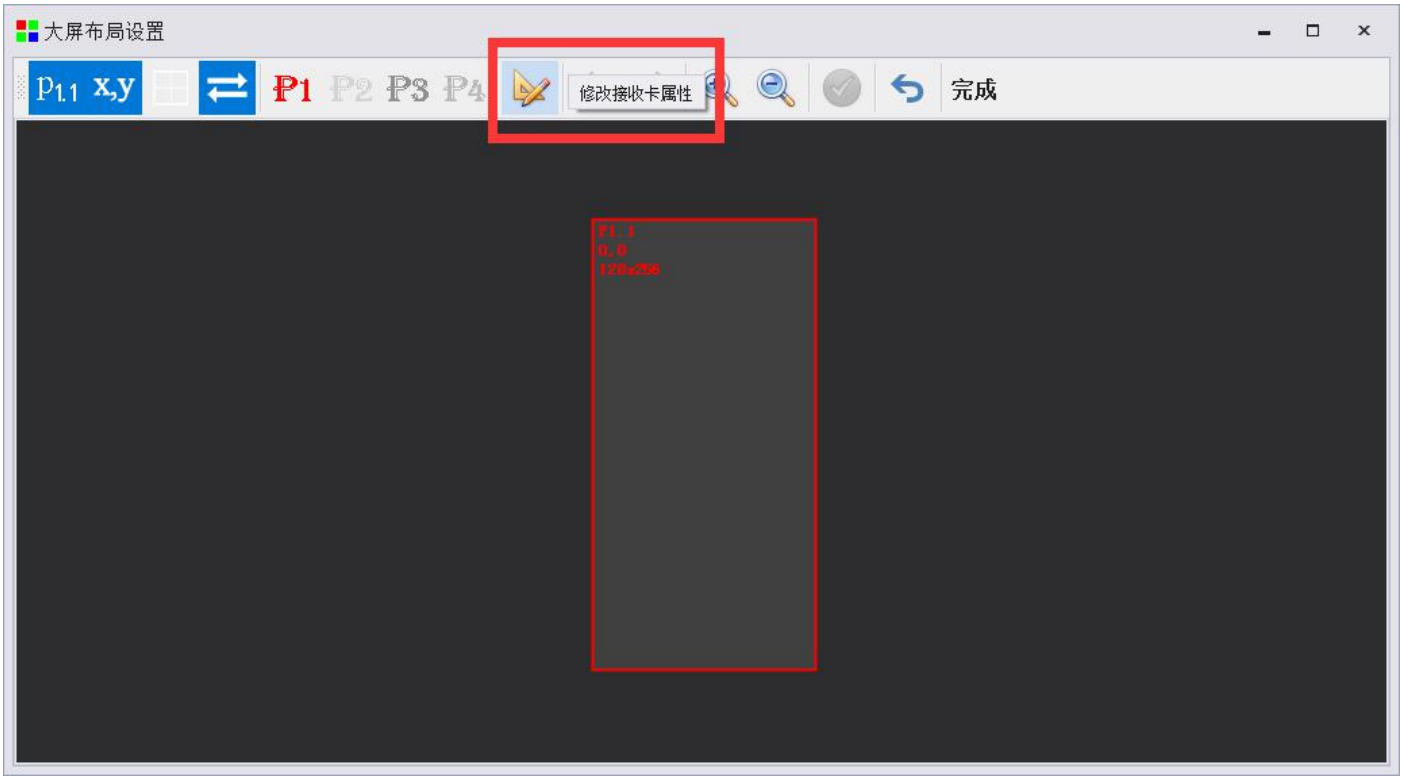
If the display of the conventional string line is not correct, you can select the smart string line and click according to the large screen flash

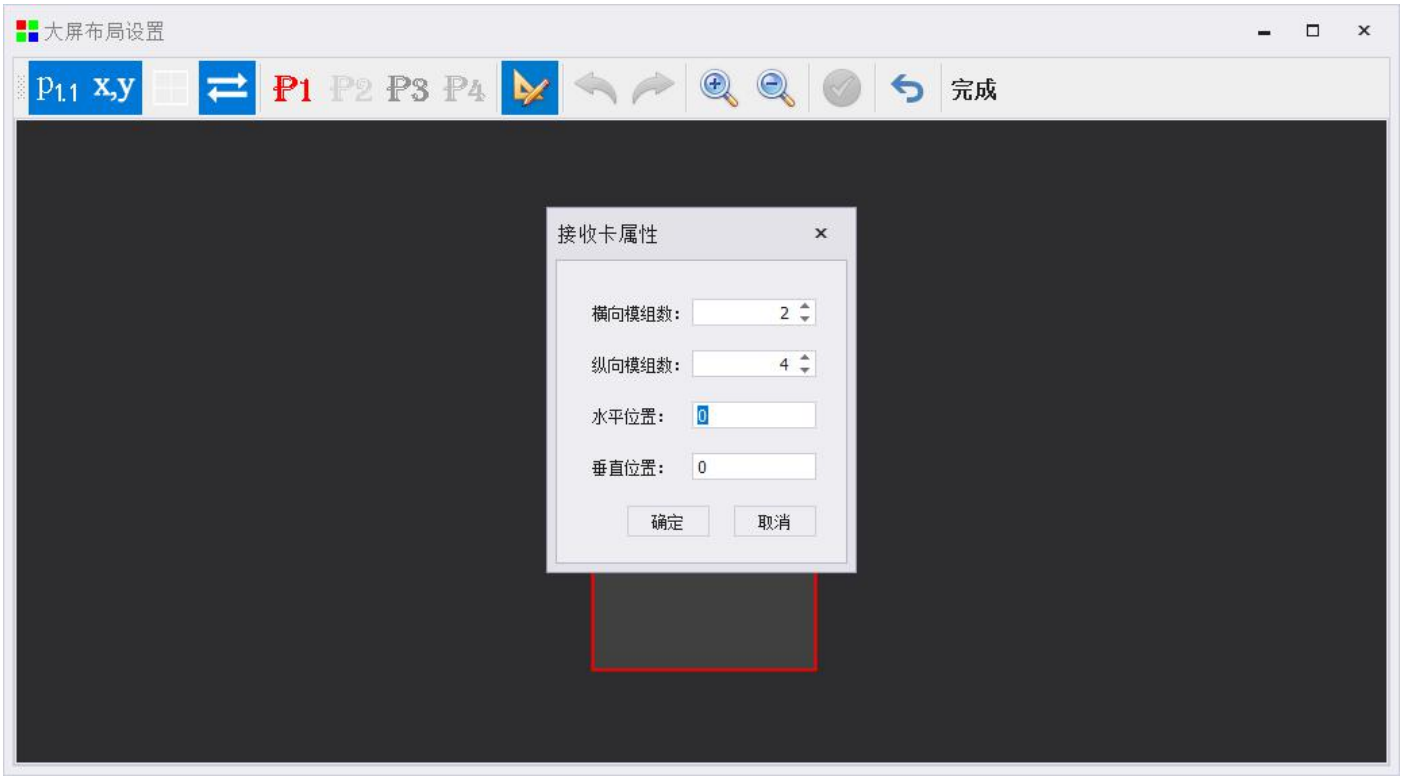




6.1.6.2 Modify receiving card properties

If the loading of the receiving card is different from top to bottom and left and right, you can use the "Modify" button to modify the loading of the receiving card.





6.1.6.3 Whether the display is satisfactory

Choose according to the actual string connection mode of the receiving card. After selection, make sure that the large screen display is normal, and then click Next

6.1.7 Advanced effects settings

If you are satisfied with the display effect, click "Yes"; if you are not satisfied, click "No" to enter the "Advanced Effect Settings" interface.

6.1.8 Curing system parameters

Click on the curing system parameters, the configuration information of the control system is solidified into the hardware.

Curing system parameters: curing system parameters to the hardware, and completing the hardware system backup operation, which facilitates the data backup work of one-key repair.

Back up the system parameters to the computer: save the screen file of the system configuration file to the computer to facilitate the file import and system maintenance again.

Click Finish to complete the wizard screen adjustment.

6.2 Expert settings

The expert screen adjustment is divided into three parts, sending equipment debugging, receiving card data debugging, and display screen connection. The basic sequence of commissioning is to receive card parameter settings, display screen connection settings, send card information confirmation, and solidify.

6.2.1 Sending device

Select Pandora box management: resolution setting; hotspot setting; device IP setting; time setting; factory setting

① Resolution setting: change the actual width and height of the box loaded

② Hotspot setting: modify the WIFI connected to the box

③Device IP setting: the box chooses to automatically obtain or manually modify the IP

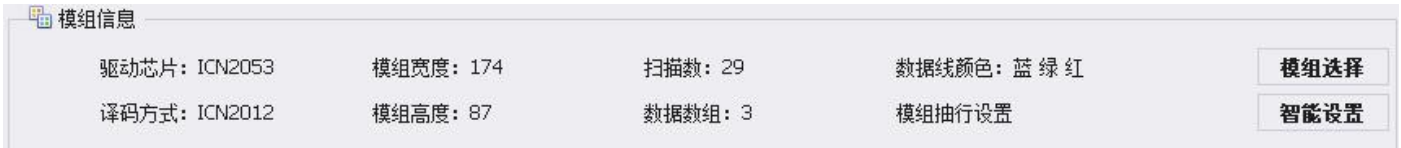
④Time setting: set play and pause time

⑤ Factory setting: box weight

6.2.2 receive card

The receiving card interface is used to debug the receiving card parameters, which can be quickly set through module selection, or add module configuration information through smart settings. If there is a previously saved configuration file, it can also be loaded on this page and sent to the receiving card parameter.

6.2.2.1Module information



Driver chip: The information of the driver chip of the current module is displayed.

Decoding method: Information display of the current module's decoding method.

Module width: the actual width pixels of a single module.

Module height: the actual height pixels of a single module.

Scanning number: the data scanning number of the current module.

N**umber of data groups:** information display of the number of data groups of the current module.

Data line color: display color

Module draw setting: Irregular module draw use

Module selection (refer to "4.1.3 Select Module Manufacturer and Type" for steps)

Smart setting (refer to "4.1.3.1 Smart Setting Add Module" for steps)

6.2.2.2 Single card load

The single-card load information section contains the single-card load information of the receiving card. This section can adjust the receive card load information, multi-open mode, module cascading direction, and data group exchange.

Data group exchange: (For steps refer to 4.1.4.1 Advanced settings)

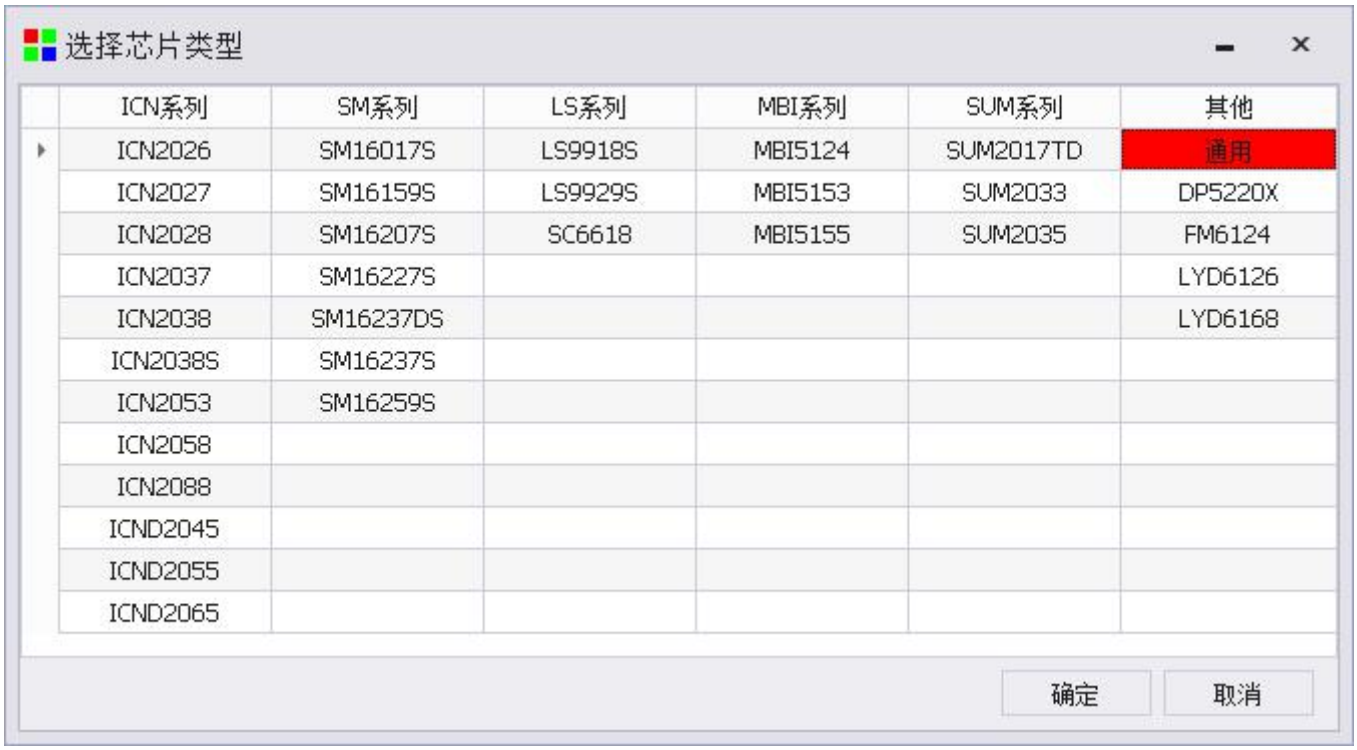
Cascade direction: modify the module data entry direction.

Multi-open setting: The help symbol on the right is displayed in the form of a graphic display to help users understand the wiring rules of the multi-open. As shown in the figure below, more open settings, front view of the screen, JP1 of the receiving card is connected to the upper right corner module, and JP12 is connected to the upper left corner module.

6.2.2.3 Effect debugging

Effect debugging is used to debug the overall screen display effect. The screen display effect can be adjusted by adjusting the output gray level, frequency multiplication, and data clock frequency.

Mode selection: The mode selection is used to display the screen effect using the recommended configuration, which is used for dual latch and PWM chips. The first step is to select the chip type.

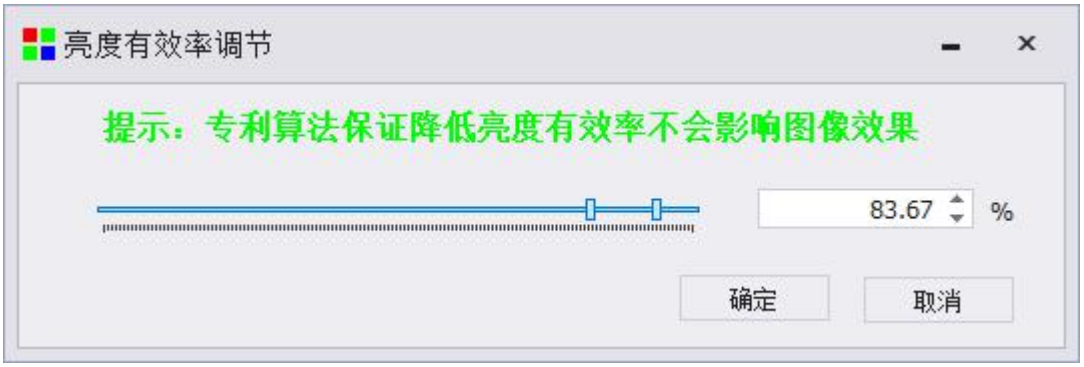


The second step is to adjust the register. Generally speaking, no adjustment is needed.

The third step is to click "Effect Settings", select effect settings 1, 2, 3, and 4, and then click "OK" to complete the application of preset effect settings, and select a state where the screen effect is relatively good.

Low gray optimization: used to optimize the low gray effect of the screen display, check enable, set the low gray brightness measurement level, click "calculate" and "apply" to complete the use of low gray optimization, this adjustment needs to be based on the site It is used in the actual situation, and no adjustment is needed in the normal mode.

Brightness adjustment: This function uses a patented algorithm to ensure that the effective reduction of screen brightness will not affect the image display effect. The left slider is the adjustment slider, which is used to effectively reduce the brightness of the system. There will be values on the right to follow the changes. The slider on the right is the maximum brightness and efficiency of the system. After adjustment, real-time display, click "OK" to complete.



Color restoration and first-level graying: adjust the display effect of the current screen, check it, and send it to the receiving card to take effect.

Color restoration can effectively eliminate the redness of human face and make skin color more real;

The first level is grayed to improve the low gray display effect, and the gray level is displayed from the first level of gray.

6.2.2.4 Keep the last frame

The factory default program of the receiving card keeps the last frame by default. If it is not needed, it can be adjusted

by sliding the slider to change the last frame or black screen when the receiving card has no signal

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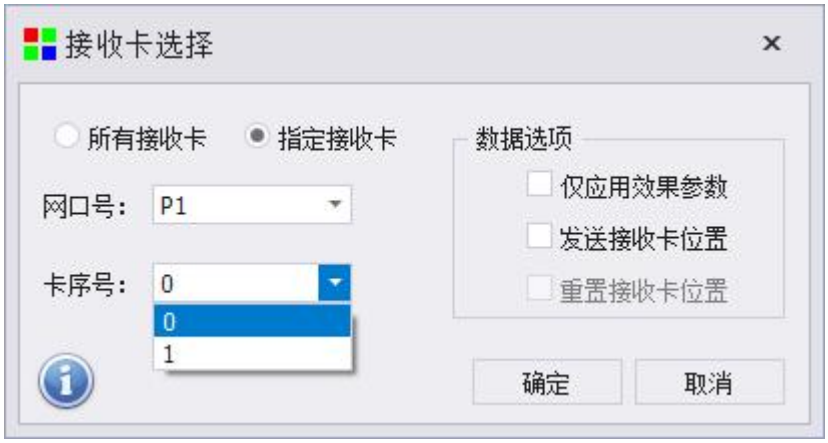
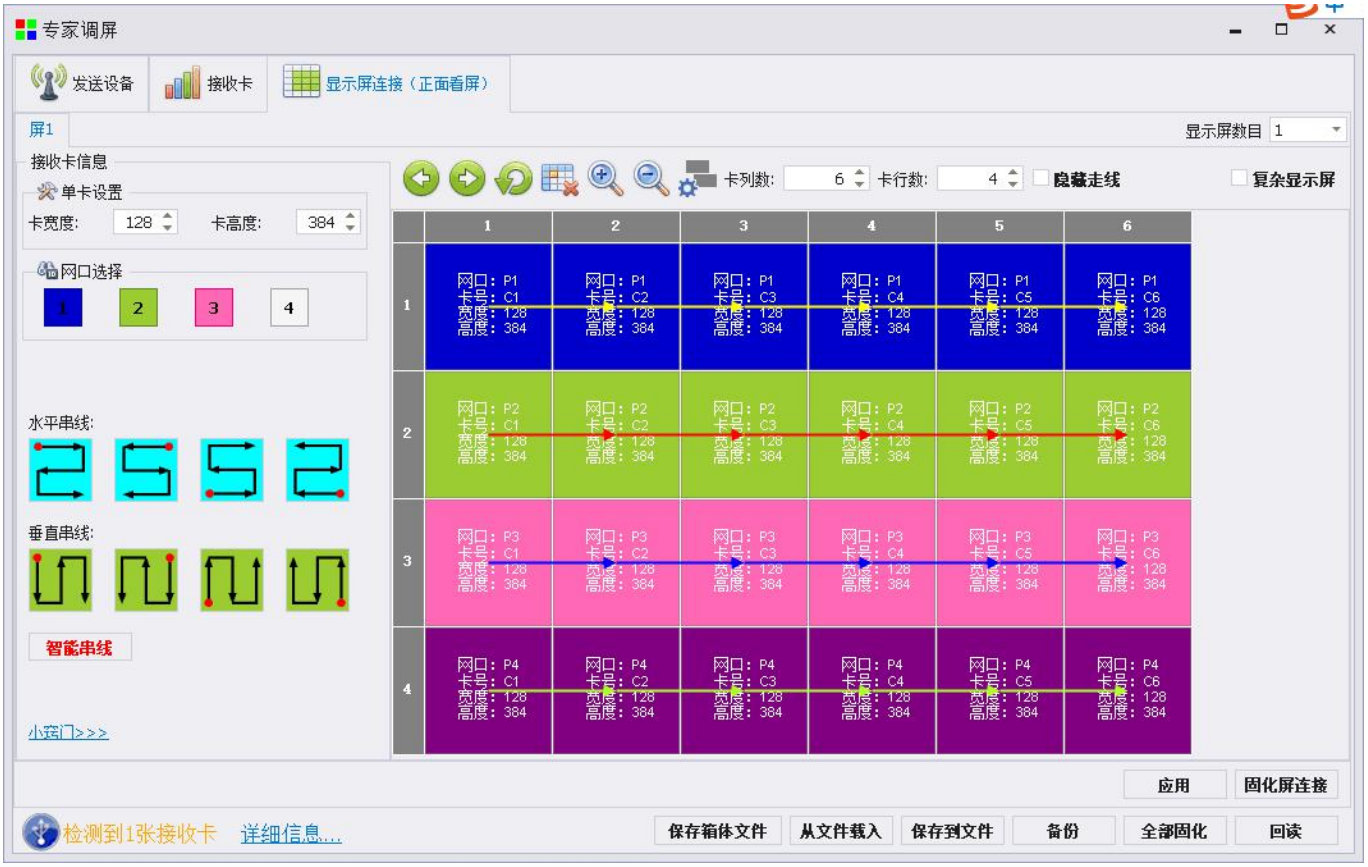
6.2.2.5Receive card data transmission

To receive the data from the receiving card, click Apply to complete the data application for all receiving cards. Right-click the "Apply" button to enter the detailed data sending page, as shown below.



Select all receiving cards or designated receiving cards, the network port number is identified by P1, P2, P3, P4, etc., and the card serial number is identified by 0, 1, 2, 3, etc. 0 identifies all receiving cards of the current network port, 1, 2 , 3 represents the specific receiving card serial number of the current network port, and the serial numbers are sorted according to the signal direction. The following picture is the prompt message.

6.2.3 Display connection

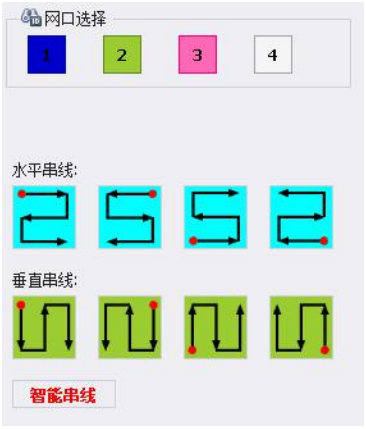


The connection of the display screen is used to connect the debugged single receiving card into a whole through a certain string, so as to achieve the effect of displaying a continuous picture on the entire screen.

6.2.3.1 Receive card information

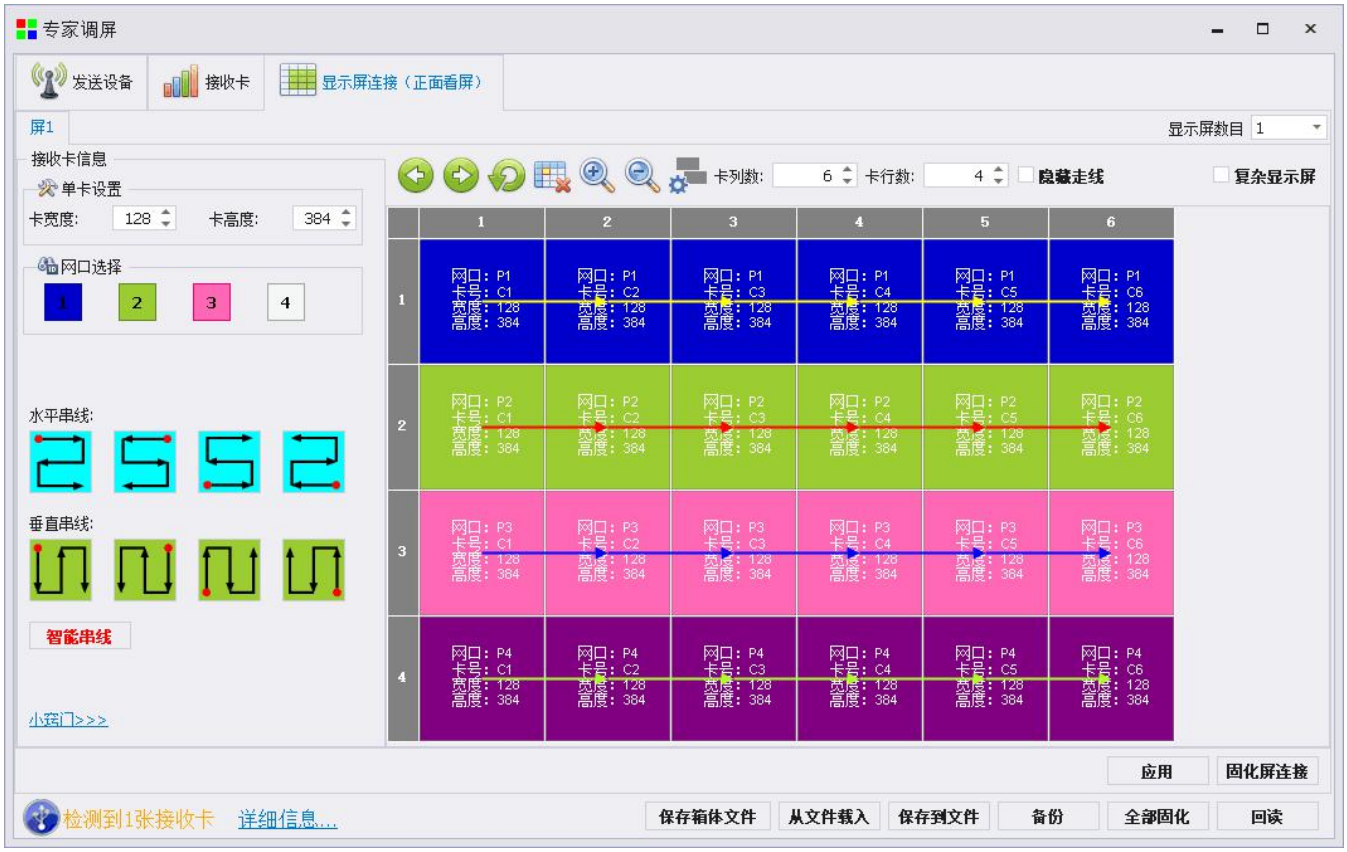
The receiving card information contains the loading information of the receiving card. This window is automatically consistent with the loading information of the receiving card page. After stringing the screen, if you need to change the receiving card loading, you can modify it at this location.

6.2.3.2 Fast string



Select the network port number, you can complete the fast string connection of all receiving cards on the screen by selecting the fast string connection method, and you can also use the smart string connection to complete the screen connection.

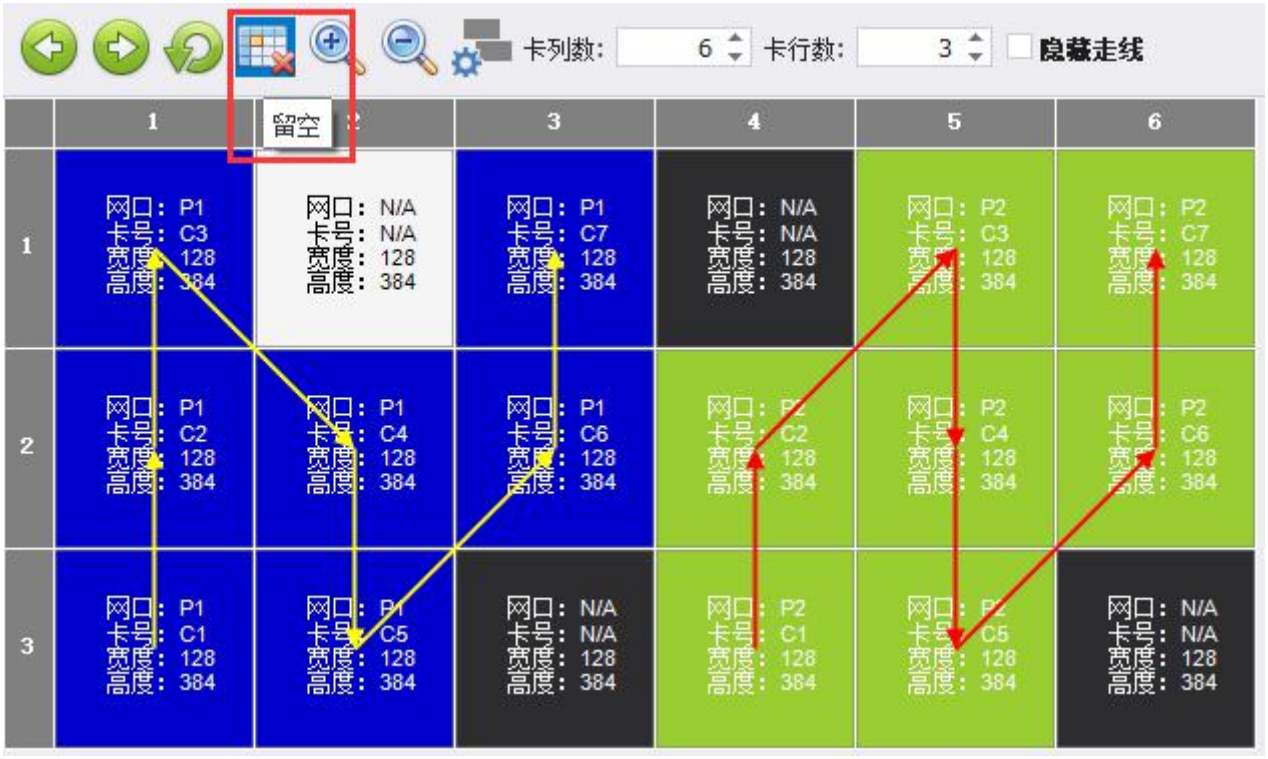
6.2.3.3 Standard display connection



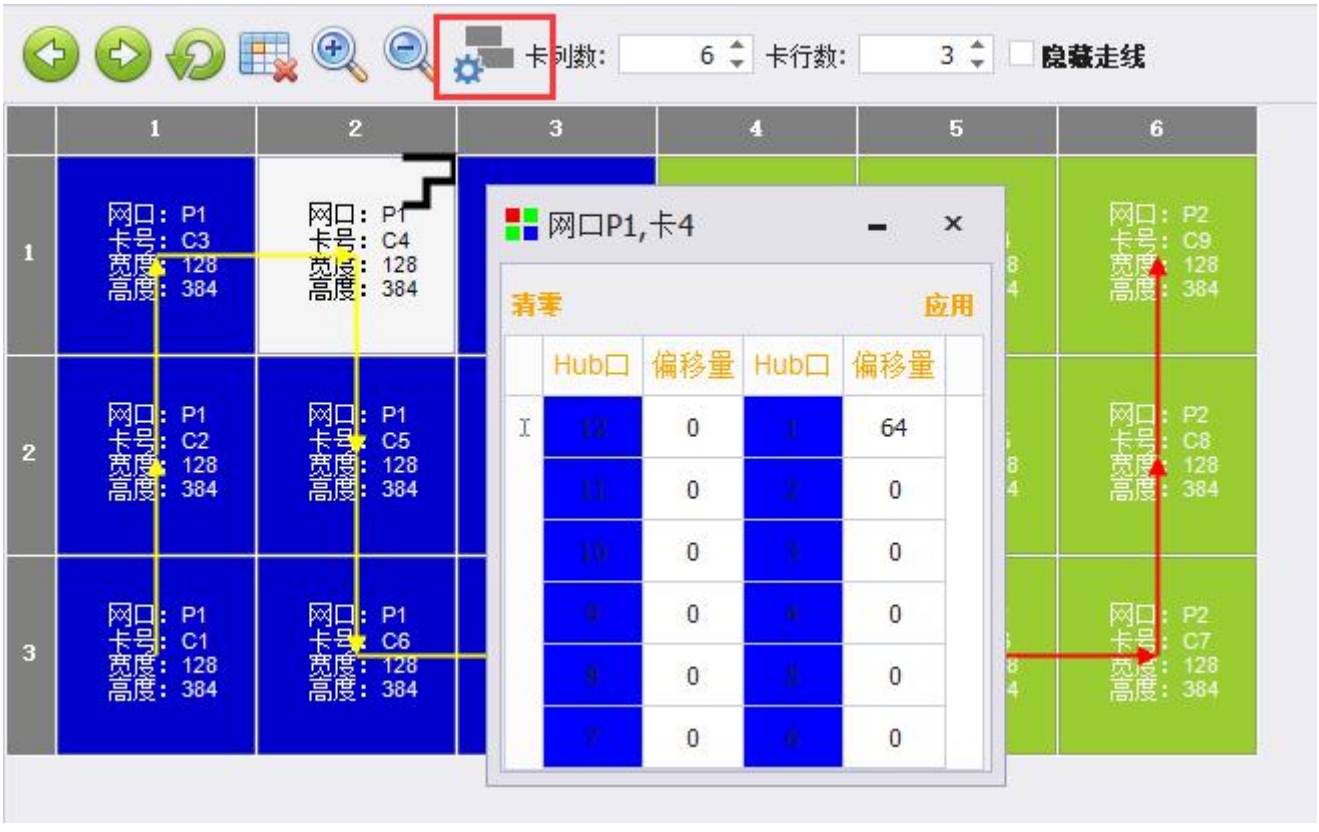
Set the number of rows and columns of the receiving card according to the actual situation of the screen, and then select the network port number to connect the string.

There are three methods for stringing: left-clicking with the mouse, stringing with the arrow keys, holding down the left button, and dragging the receiving card to complete the stringing.

Leave blank: After the normal string is connected, click the leave blank button, as shown in the red box in the figure below, to complete the blank setting.



HUB Offset: In the standard display connection, first select the receiving card that needs to be offset, and then click the HUB Offset button in the Tools menu, as shown in the red frame in the figure below, set the HUB port offset in the pop-up box After clicking "Apply", a polyline mark will appear on the original receiving card position. After "Clear" on the HUB offset interface, close the page and the polyline disappears.



6.2.3.4Complex display connection

Connect the page of the complex display screen, switch from the standard screen to the complex screen, the data will be automatically imported, by setting the number of receiving cards, and modifying the column starting point, row starting point, width and height of each receiving card, after setting, apply, click The connection of the solidified display screen can complete the data transmission of the complicated display screen connection.

6.2.4 Curing parameters

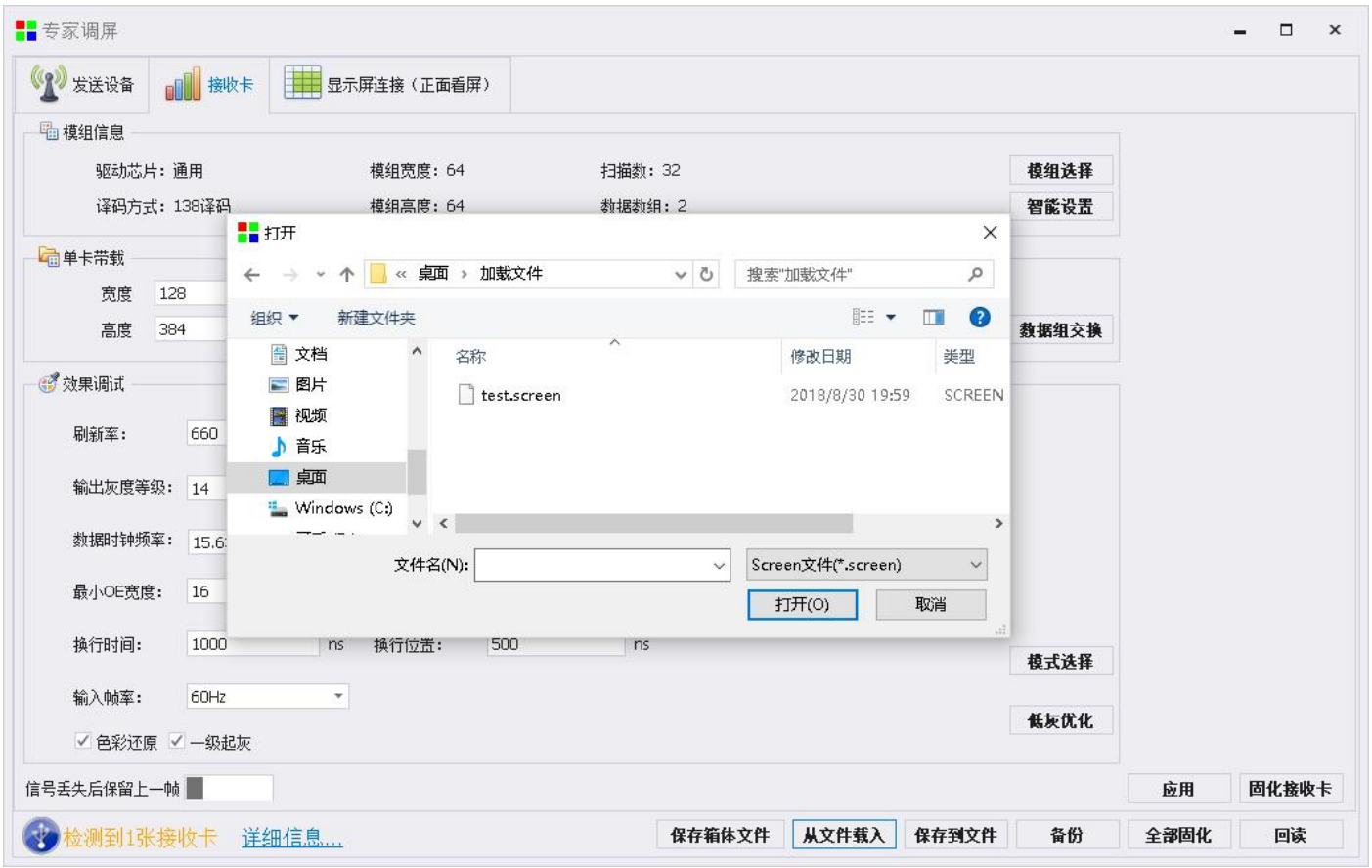
Single item curing: The connection settings of the sending card, receiving card and display screen are completed, and the corresponding parameters can be individually cured by clicking the curing button of each page.

All curing: Make sure that the sending card, receiving card, and display screen connection parameters are all sent correctly. Click all curing to quickly complete the curing of the control system.

6.2.5 Other parameter processing

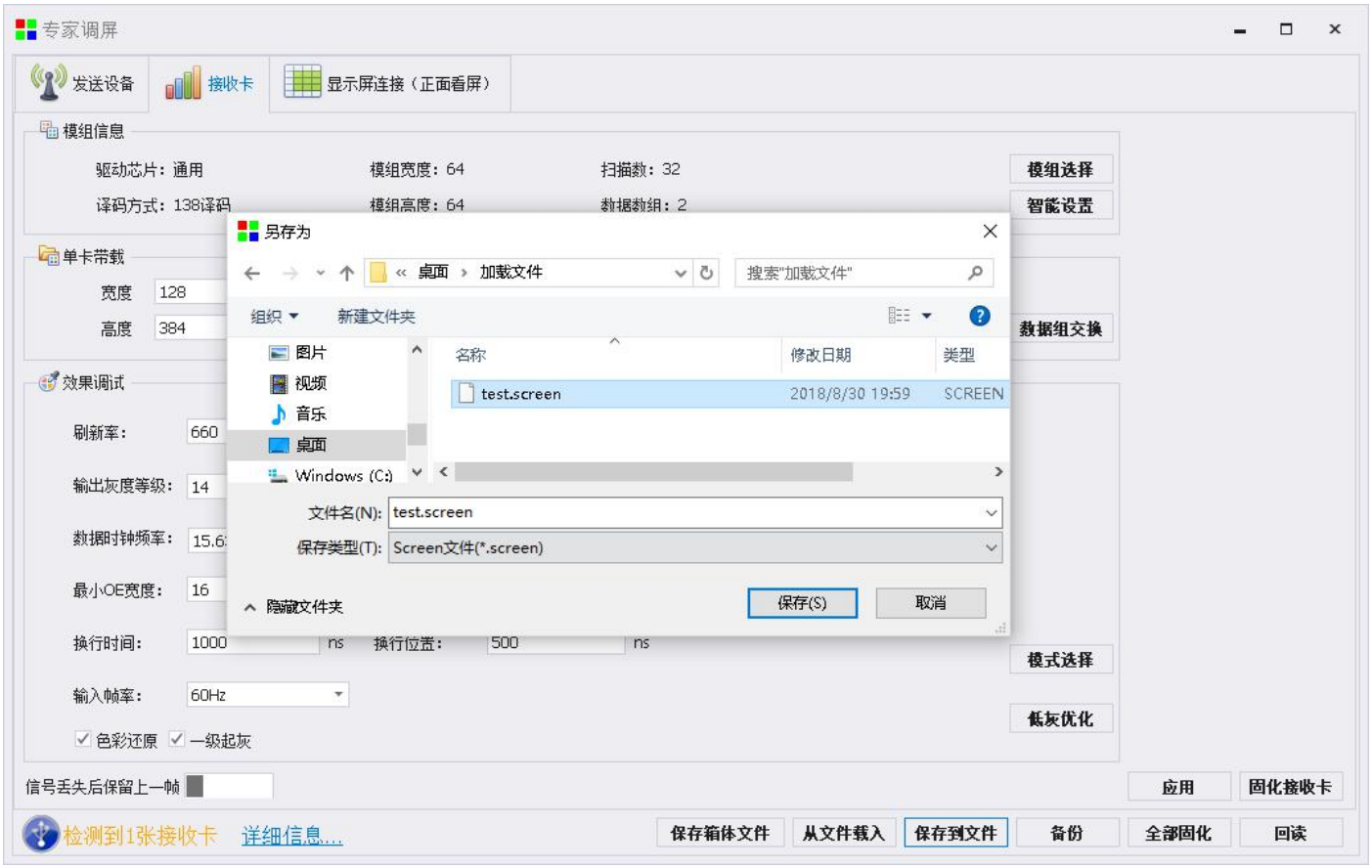
6.2.5.1Load from file:

Load the saved configuration file



6.2.5.2 Save to file

If you want to save the current receiving card/sending card/display connection wiring diagram, you can select "Save to File" to save it to the local computer, which is convenient for later maintenance and retrieval at any time.



6.2.5.3 Backup (provided that it has been cured):

Each receiving card has the parameters of the sending card/each receiving card; each sending card has the parameters of the sending card/each receiving card.

6.2.5.6 Read back

After the device is successfully connected, you can read back the connection parameters of the sending card/receiving card/display screen that was last cured

You can also read it back through the expert screen.

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7.Software operating environment monitoring

Software operating environment monitoring is used to monitor whether the current computer software operating environment is normal, whether the drivers have been installed normally, and whether the computer hardware configuration has reached the minimum standard for software use.

7.1 Detect new version

The function of detecting the new version is used for online upgrade of the debug software of the KTV control system.

The final version of the software update is consistent with the official website. At the same time, the latest KTV control system debugging software can also be obtained from the “download center” of the KTV official website.

8.Program upload

① The mobile phone and the box are connected to the same local area network and uploaded using the mobile phone APP

② PE export file, U disk upload

③ PE is directly connected to the local area network and network cable

④ Connect the mobile phone to the hotspot of the box and use the mobile APP to upload

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