



---

# Pandora-box

## P1

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

<i>Safety precautions</i> .....	1
<i>Directory</i> .....	0
<i>1 Product Discussion</i> .....	1
<i>2、Features</i> .....	错误! 未定义书签。
<i>3 Interface and hardware connection</i> .....	4
3.1 Panel description.....	5
3.2 Hardware connection.....	7
<i>4 Software Installation</i> .....	错误! 未定义书签。
<i>5 Software interface introduction</i> .....	8
<i>6 Screen configuration</i> .....	10
6.1 Wizard screen adjustment.....	10
6.1.1 Setup Wizard.....	11
6.1.2 Confirm the number of receiving cards.....	11
6.1.3 Select the module manufacturer and type:.....	12
6.1.4 Each receiving card is loaded.....	18
6.1.5 Big screen points.....	20
6.1.6 Receiving card serial connection.....	22
6.1.7 Advanced effects settings.....	26
6.1.8 Curing system parameters.....	27
6.2 Expert settings.....	28
6.2.1 Sending device.....	28
6.2.2 receive card.....	29
6.2.3 Display connection.....	35
6.2.4 Curing parameters.....	39
6.2.5 Other parameter processing.....	40
<i>7 Software operating environment monitoring</i> .....	44

# 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 1 Gigabit Ethernet port output, another network port copy output
- ③The whole machine is loaded with 65W points, the widest is 4064, the highest is 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

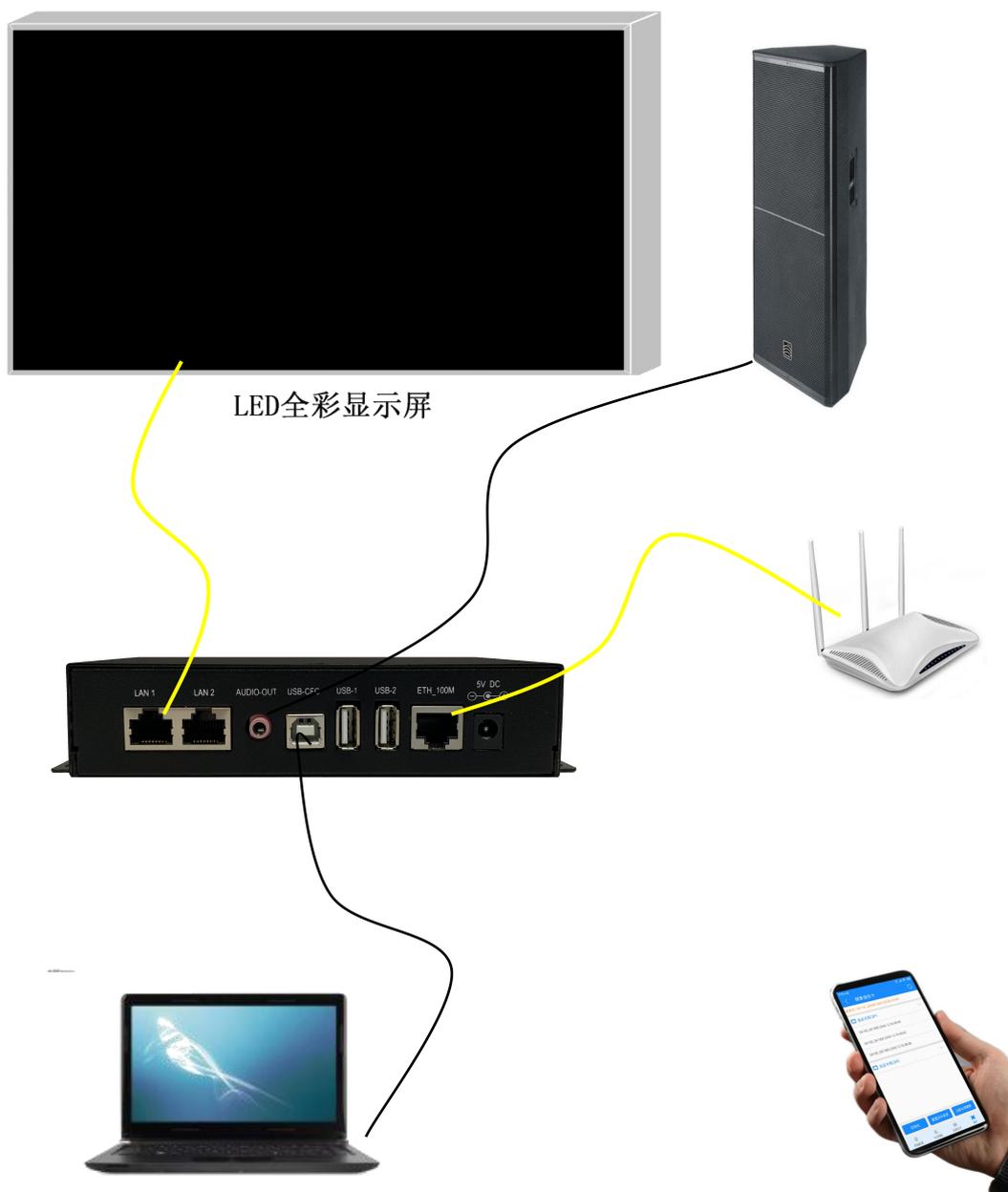
### 3.1Panel description





name	Function Description
SYS	<p>P2s running status indicator</p> <p>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.</p> <p>When the frequency flashes once per second, it means that the Android is running normally</p>
NET	<p>Connection status indicator</p> <p>When P2s is connected to the mobile phone, the NET light is on, otherwise it is not on;</p> <p>When the mobile phone transfers a large amount of data to P2s, NET flashes, 2 times per second;</p> <p>When the U disk uploads programs and upgrades, NET flashes quickly, 4 times per second</p>
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

## 3.2 Hardware connection



## 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.



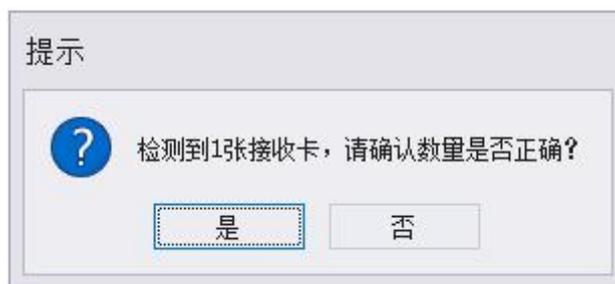
## 6.1.1 Setup Wizard

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

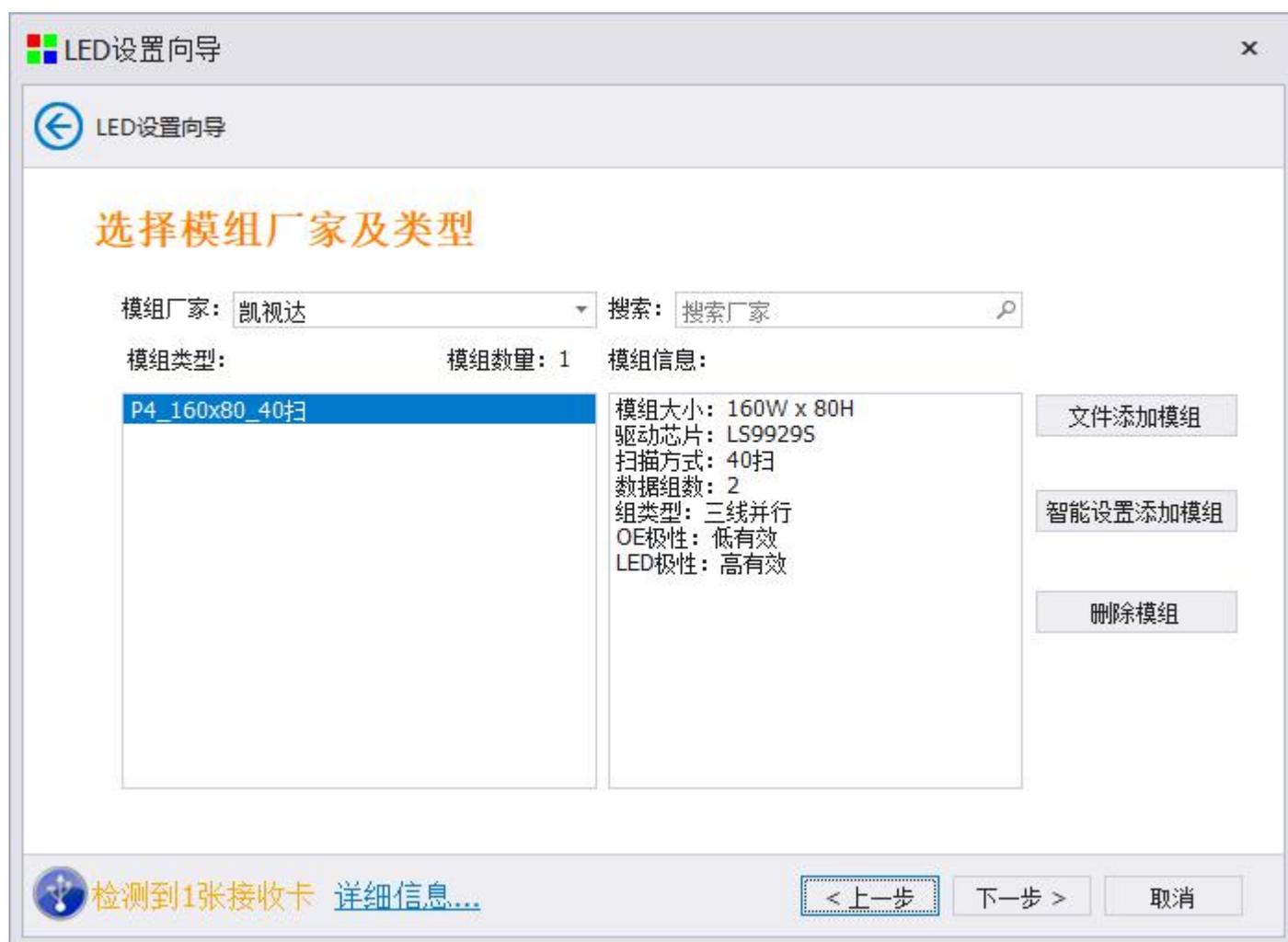


## 6.1.2 Confirm the number of receiving cards

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



智能走点参数配置

基本参数

模组宽度: 64

模组高度: 64

数据组数: 2

驱动芯片: 通用 ...

译码方式: 138译码 ...

分组方式: 三线并行

下一步 > 取消

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

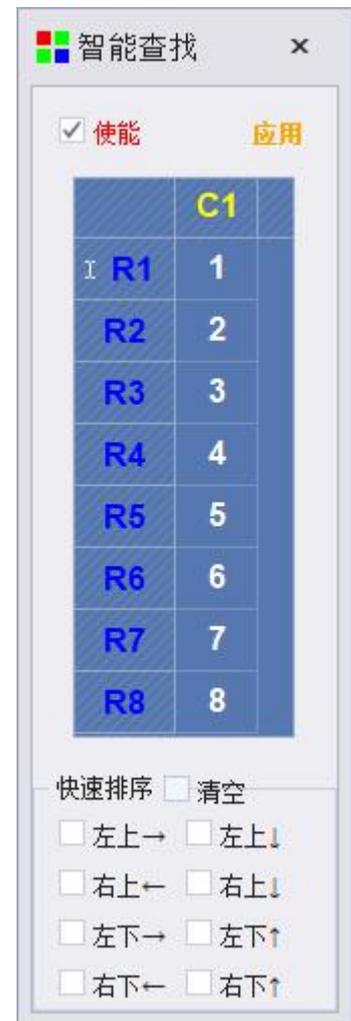
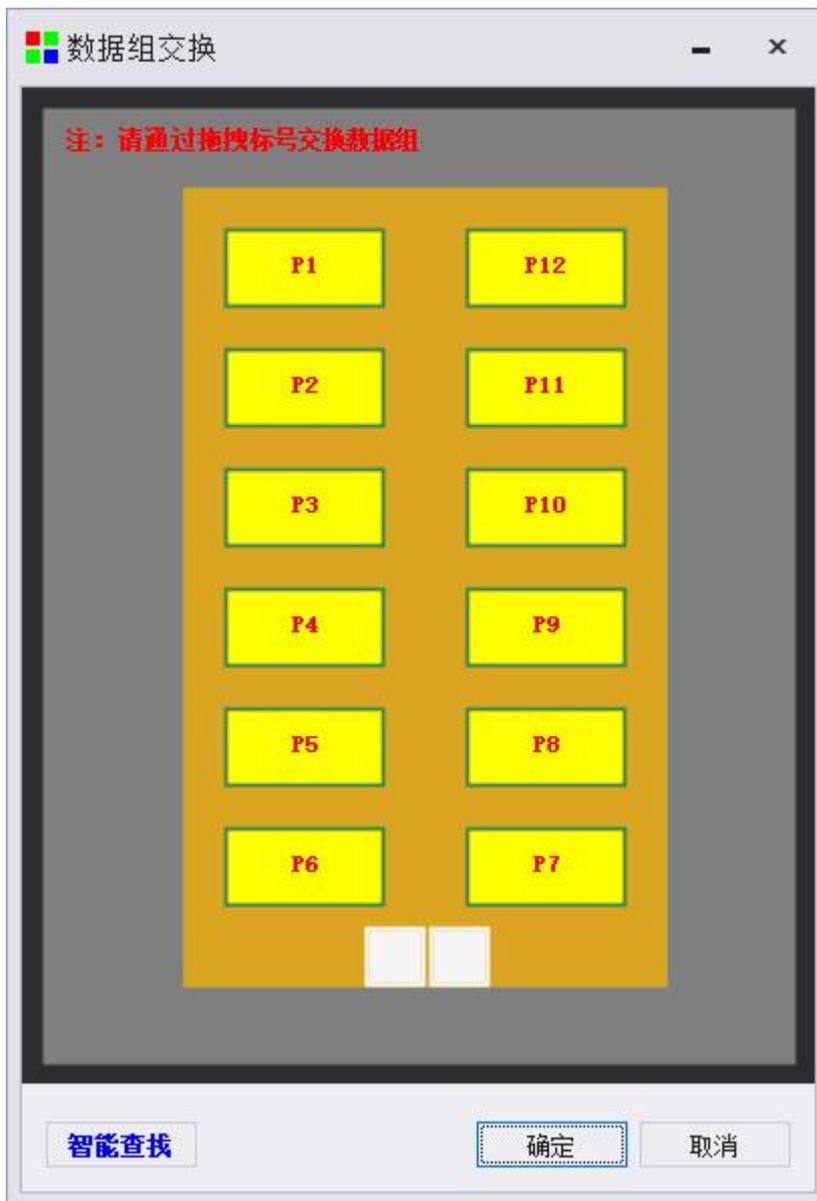
Load points: the load points of the receiving card under the current setting

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.

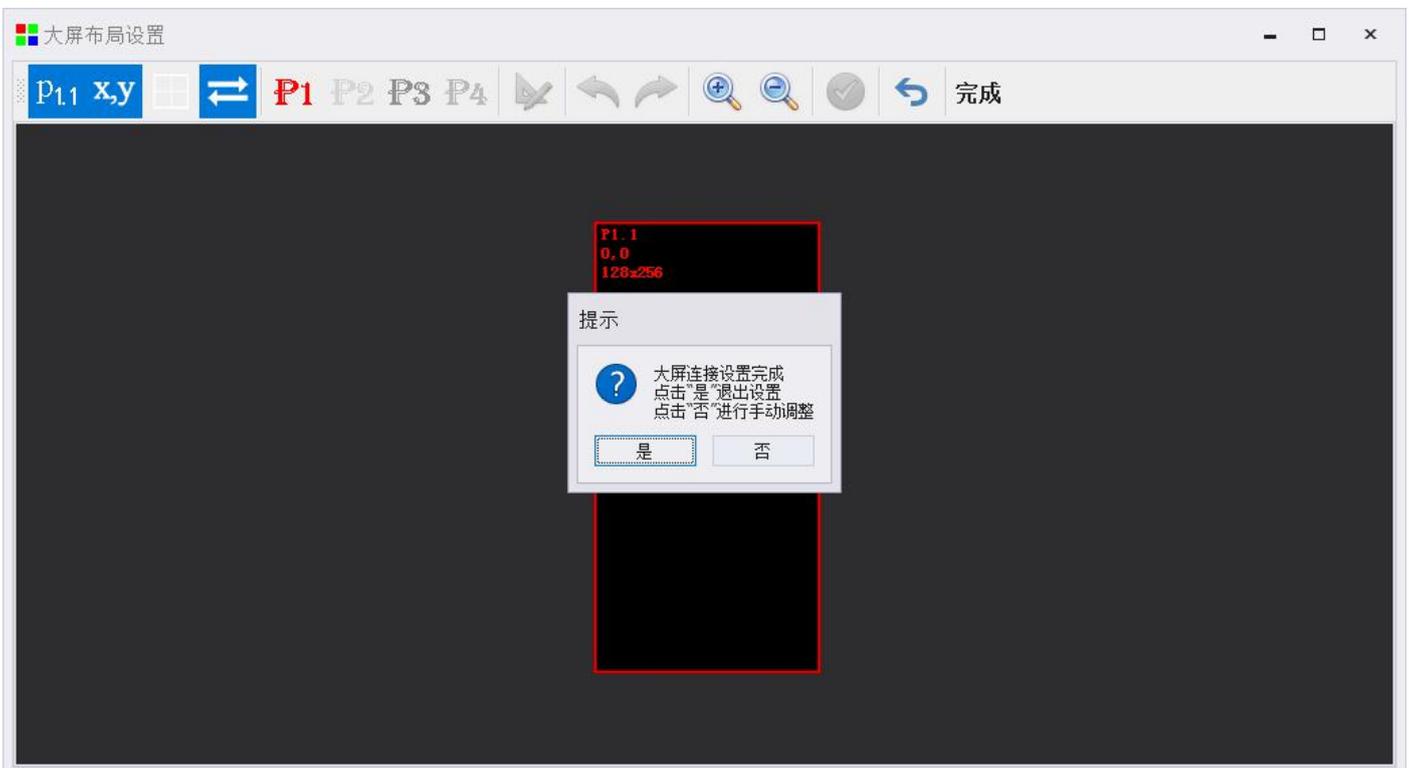
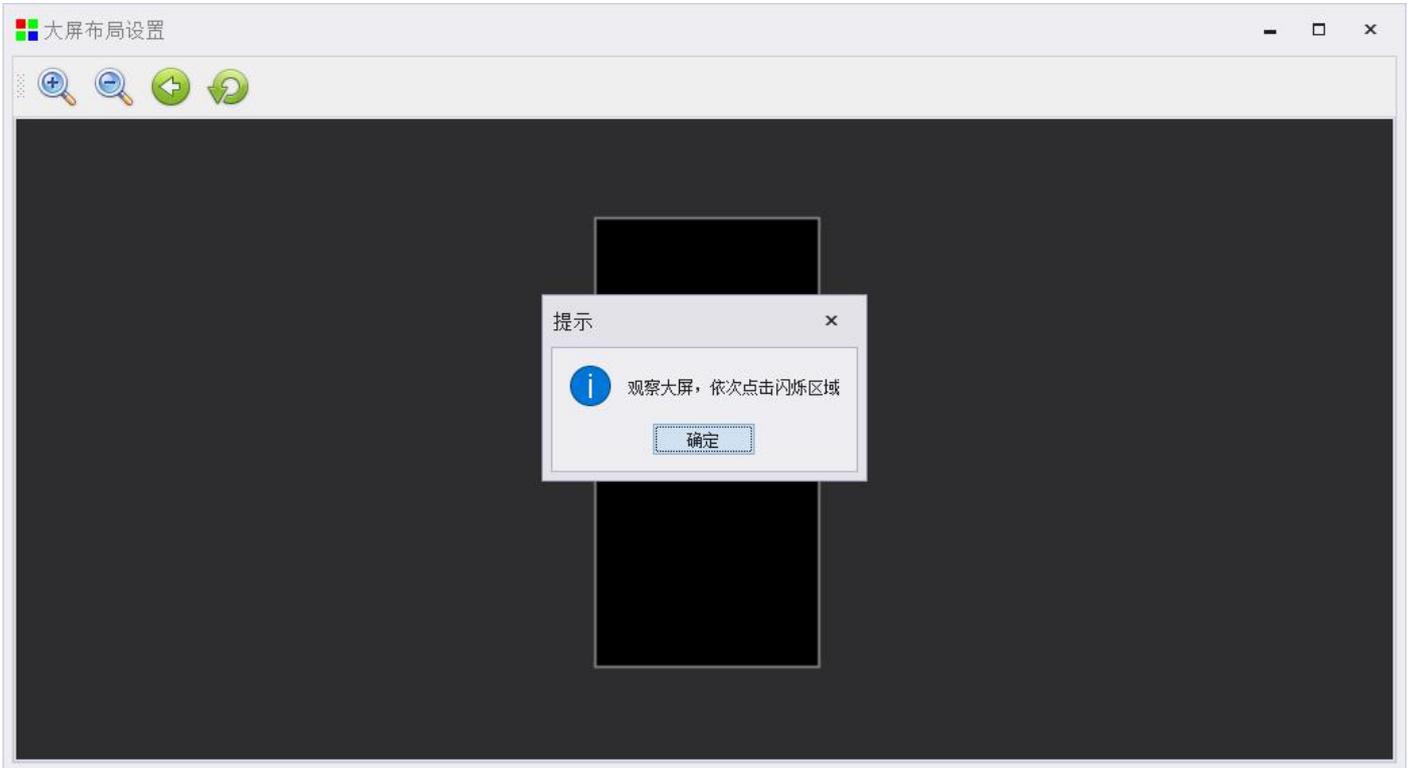
## 6.1.6 Receiving card serial connection

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



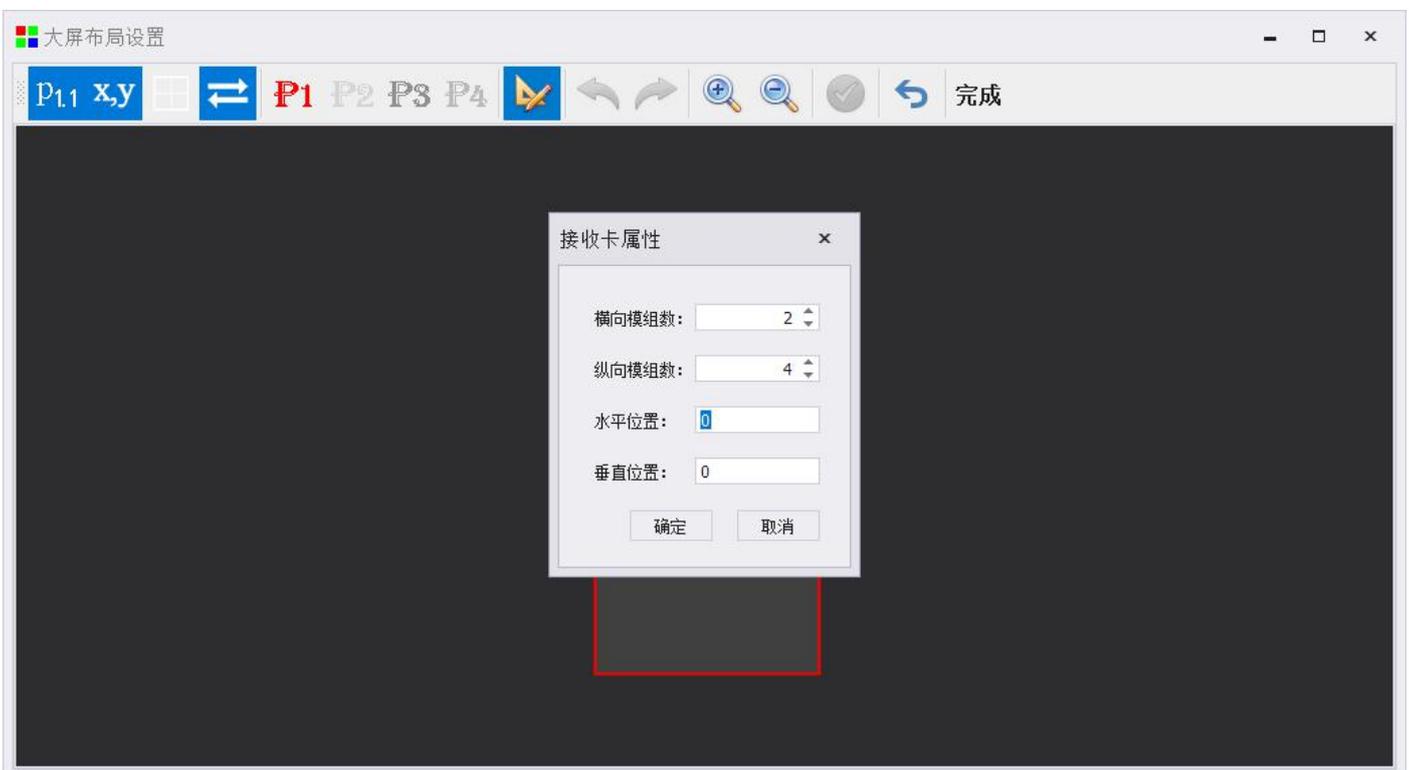
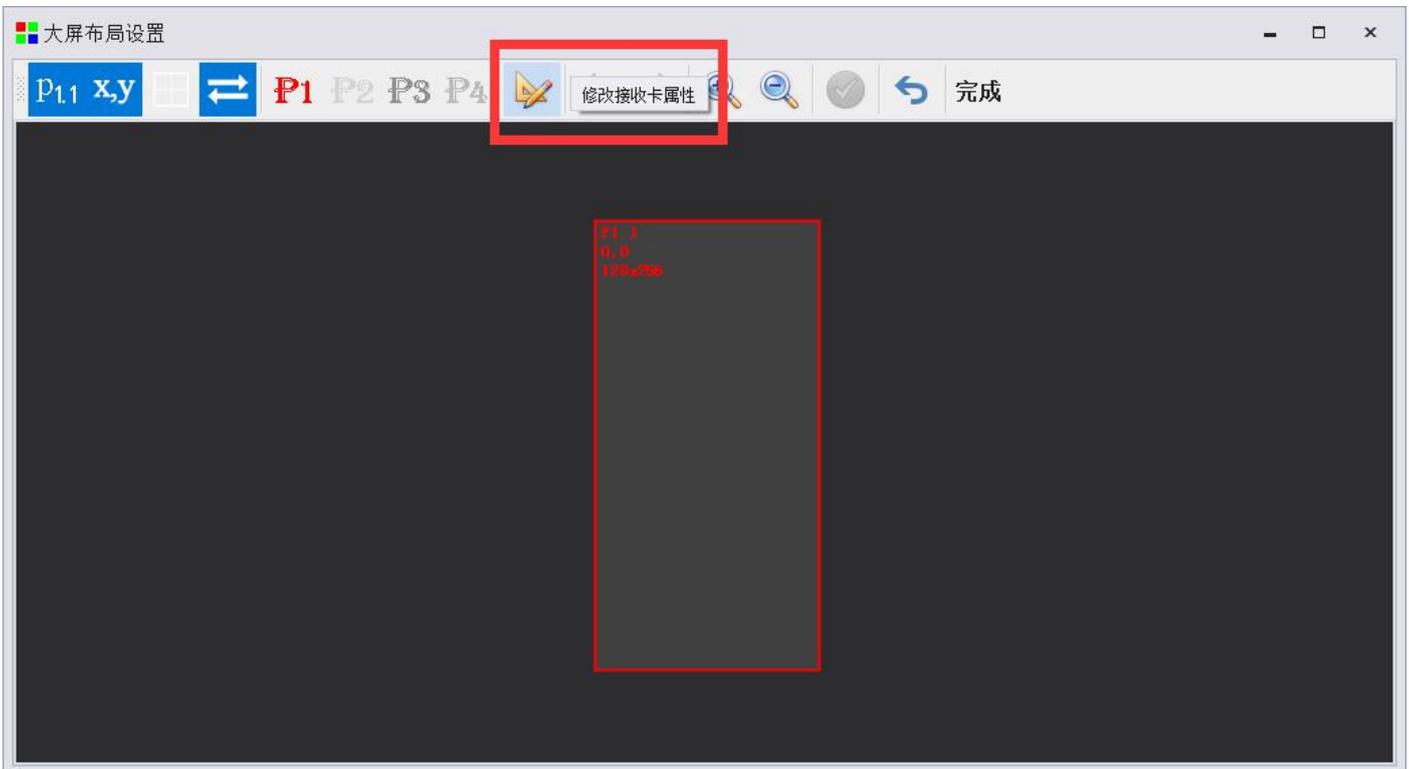
### 6.1.6.1 Smart string

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.

LED设置向导

LED设置向导

### 高级效果设置

刷新率:	600	高度有效率:	72.70%	应用	
输出灰度等级:	14	倍频数:	10倍频		
数据时钟频率:	15.63M	数据时钟相位:	50		
最小OE宽度:	16	实际值:16ns	占空比:	50	
换行时间:	1000	ns	换行位置:	500	ns
输入帧率:	60Hz				

色彩还原  一级起灰

检测到1张接收卡 [详细信息...](#)

< 上一步    下一步 >    取消

## 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
- ③ Device IP setting: the box chooses to automatically obtain or manually modify the IP
- ④ Time 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.

### 6.2.2.1 Module 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.

**Number 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



宽度	348	多开设置	双开	芯片245版本	A	<input type="checkbox"/> 旋转180°
高度	261	级联方向	从右到左			数据组交换

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.

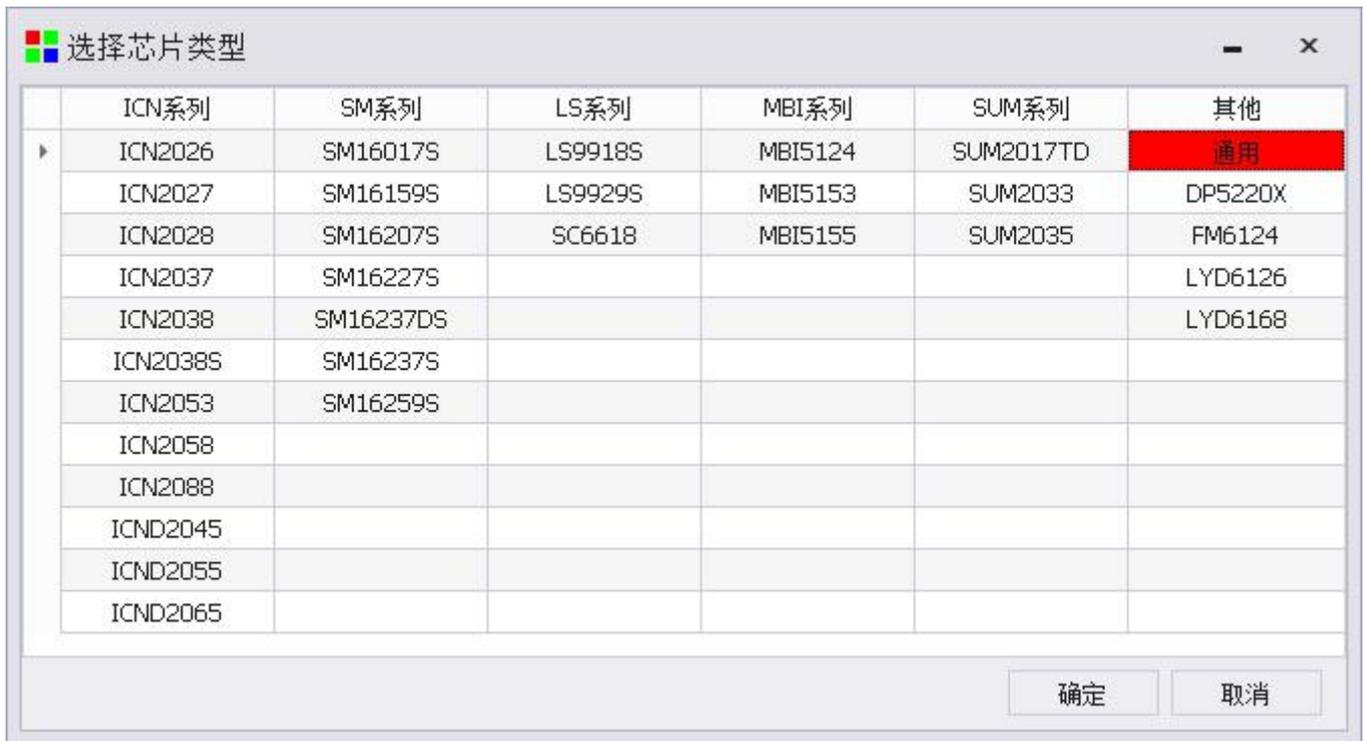


### 6.2.2.3 Effect debugging

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.



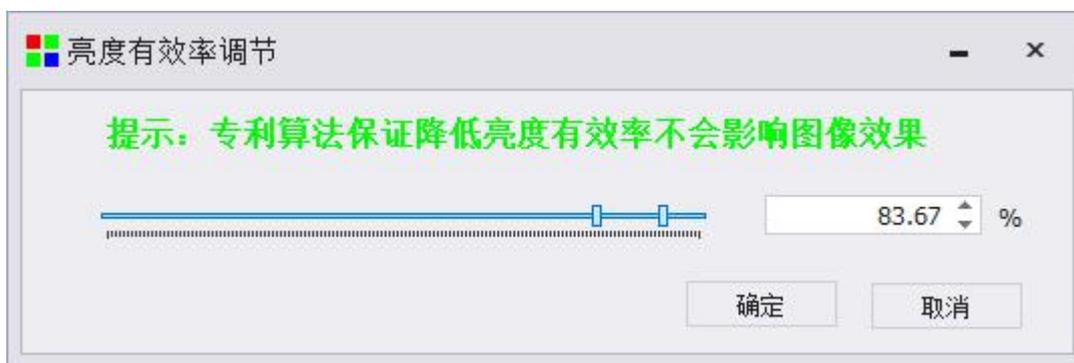
The third step is to click "Effect Settings", select effect settings 1, 2, 3, and 4, and then click "OK" to complete the application of preset effect settings, and select a state where the screen effect is relatively good.



**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

信号丢失后保留上一帧

信号丢失后黑屏

### 6.2.2.5 Receive card data transmission

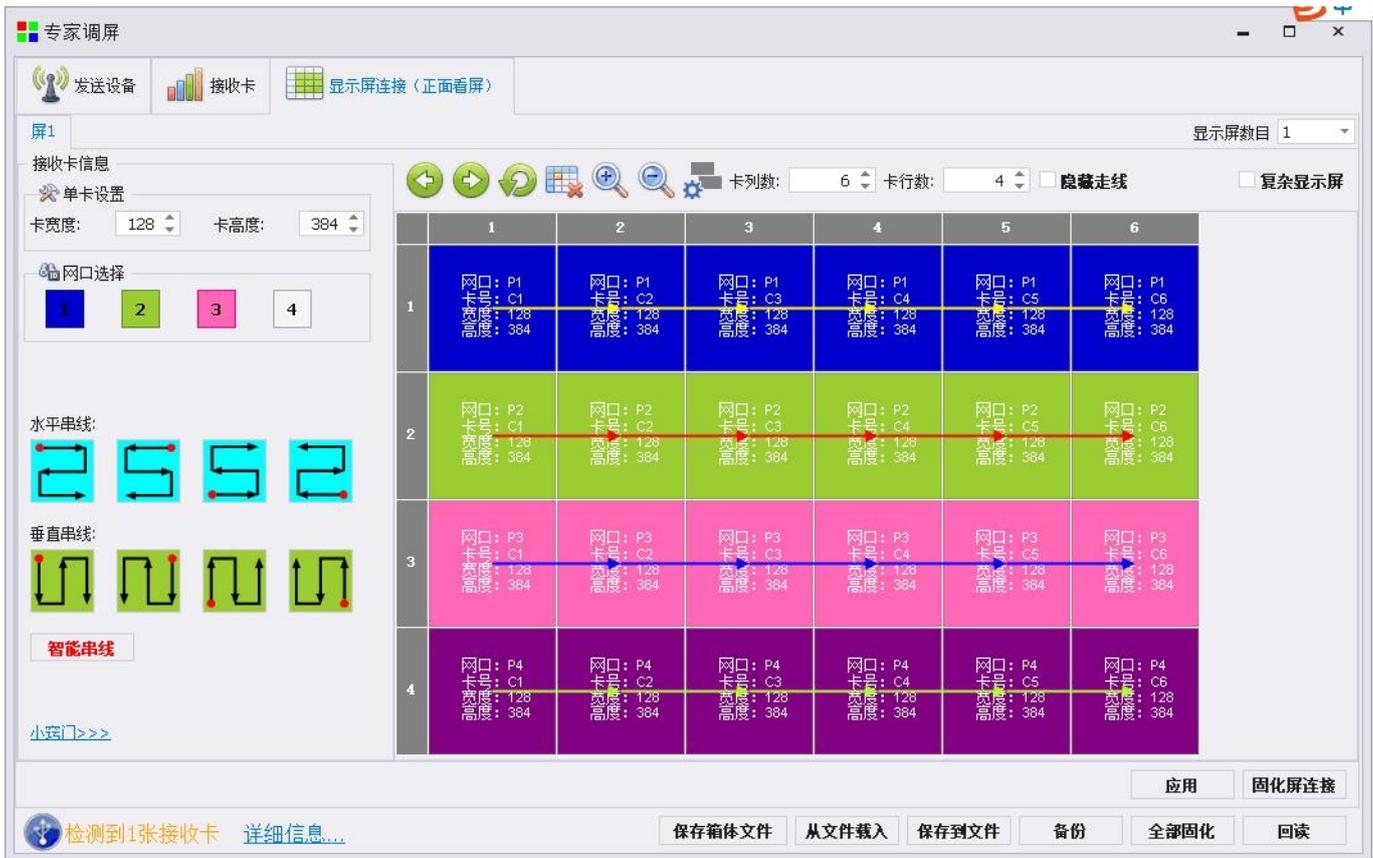
To receive the data from the receiving card, click Apply to complete the data application for all receiving cards. Right-click the "Apply" button to enter the detailed data sending page, as shown below.



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



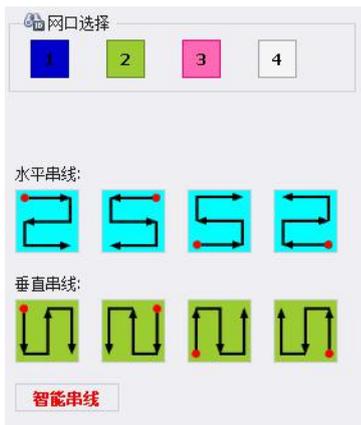
The connection of the display screen is used to connect the debugged single receiving card into a whole through a certain string, so as to achieve the effect of displaying a continuous picture on the entire screen.

### 6.2.3.1 Receive card information



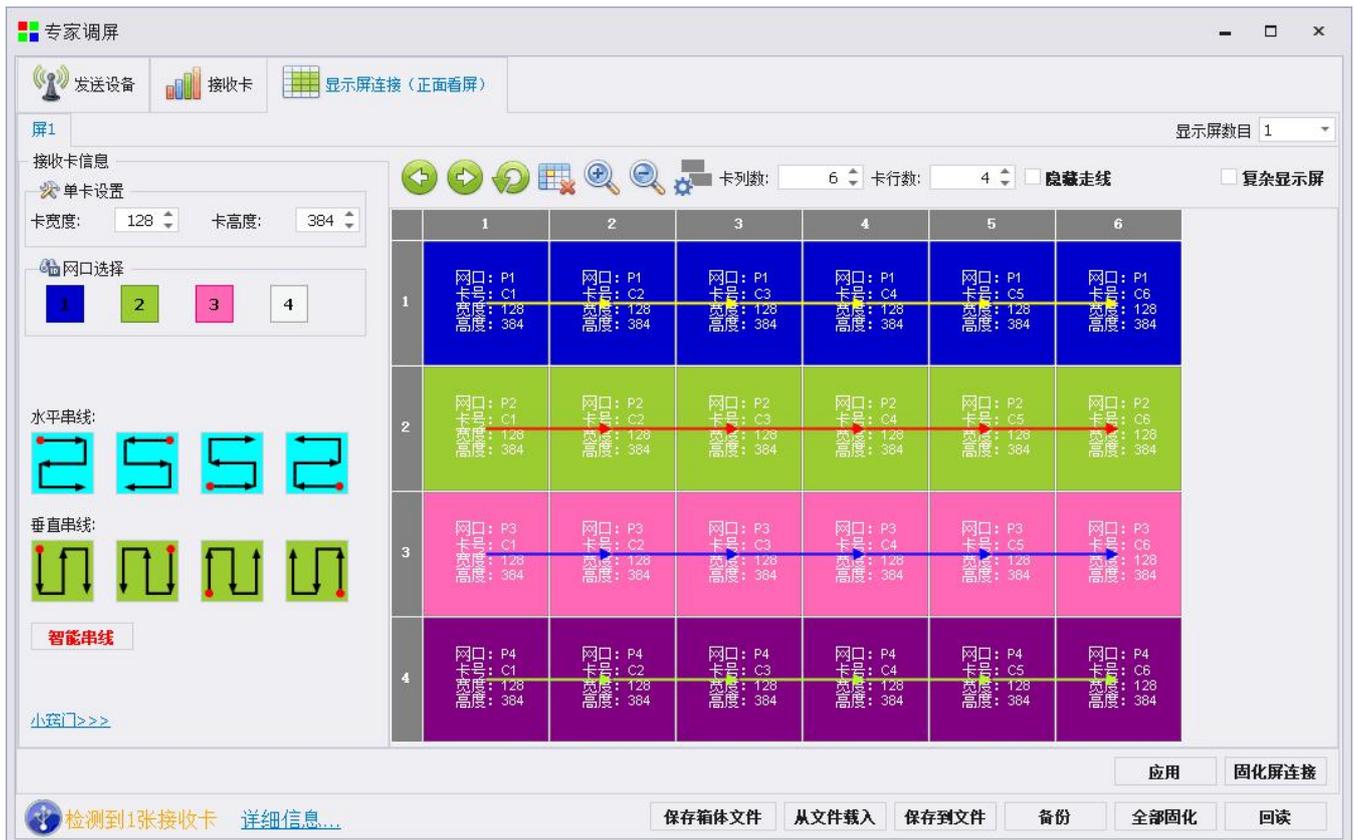
The receiving card information contains the loading information of the receiving card. This window is automatically consistent with the loading information of the receiving card page. After stringing the screen, if you need to change the receiving card loading, you can modify it at this location.

### 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.

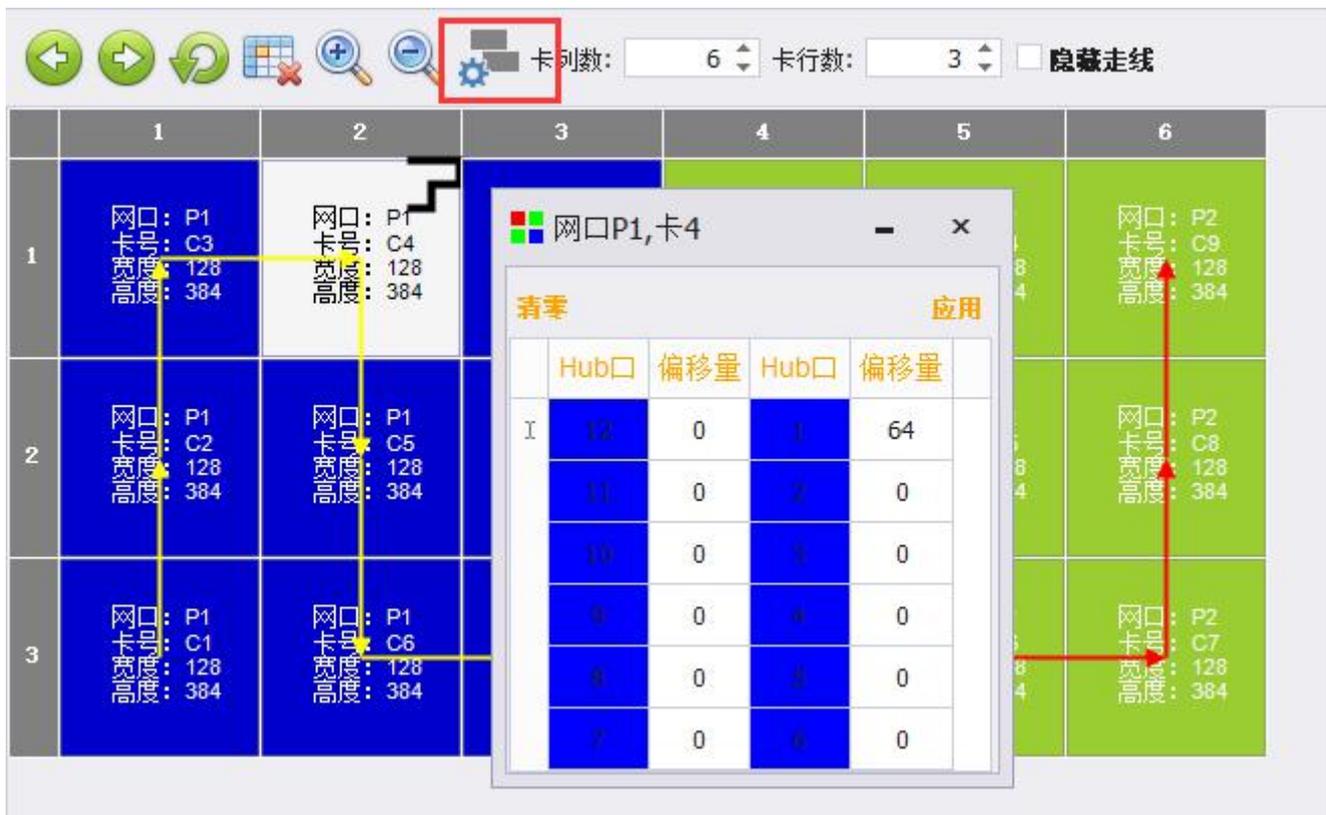
### 6.2.3.3 Standard display connection



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.



## 6.2.3.4 Complex 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.

The screenshot shows the 'Expert Display' (专家调屏) software interface. The main window displays a table for configuring receiving cards. The table has columns for 'Serial Number' (序号), 'Sending Card' (发送卡), 'Network Port' (网口), 'Card Number' (卡号), 'Column Start' (列起点), 'Row Start' (行起点), 'Width' (宽度), and 'Height' (高度). The 'Complex Display' (复杂显示屏) checkbox is checked. Below the table, there are buttons for 'Apply' (应用) and 'Solidify Display Connection' (固化屏连接). At the bottom, there are buttons for 'Save Profile File' (保存箱体文件), 'Load from File' (从文件载入), 'Save to File' (保存到文件), 'Backup' (备份), 'Solidify All' (全部固化), and 'Read Back' (回读). A status bar at the bottom left indicates 'Detected 1 receiving card' (检测到1张接收卡).

序号	发送卡	网口	卡号	列起点	行起点	宽度	高度
1	1	1	1	0	0	128	384
2	1	1	2	128	0	128	384
3	1	1	3	256	0	128	384
4	1	1	4	384	0	128	384
5	1	1	5	512	0	128	384
6	1	1	6	640	0	128	384
7	1	2	1	0	384	128	384
8	1	2	2	128	384	128	384
9	1	2	3	256	384	128	384
10	1	2	4	384	384	128	384
11	1	2	5	512	384	128	384
12	1	2	6	640	384	128	384
13	1	3	1	0	768	128	384
14	1	3	2	128	768	128	384
15	1	3	3	256	768	128	384
16	1	3	4	384	768	128	384
17	1	3	5	512	768	128	384
18	1	3	6	640	768	128	384
19	1	4	1	0	1152	128	384

## 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

The screenshot displays the 'Expert Screen Adjustment' (专家调屏) software interface. It features a top navigation bar with icons for 'Send Device' (发送设备), 'Receiver Card' (接收卡), and 'Display Connection (Front View)' (显示屏连接 (正面看屏)).

The main interface is divided into several sections:

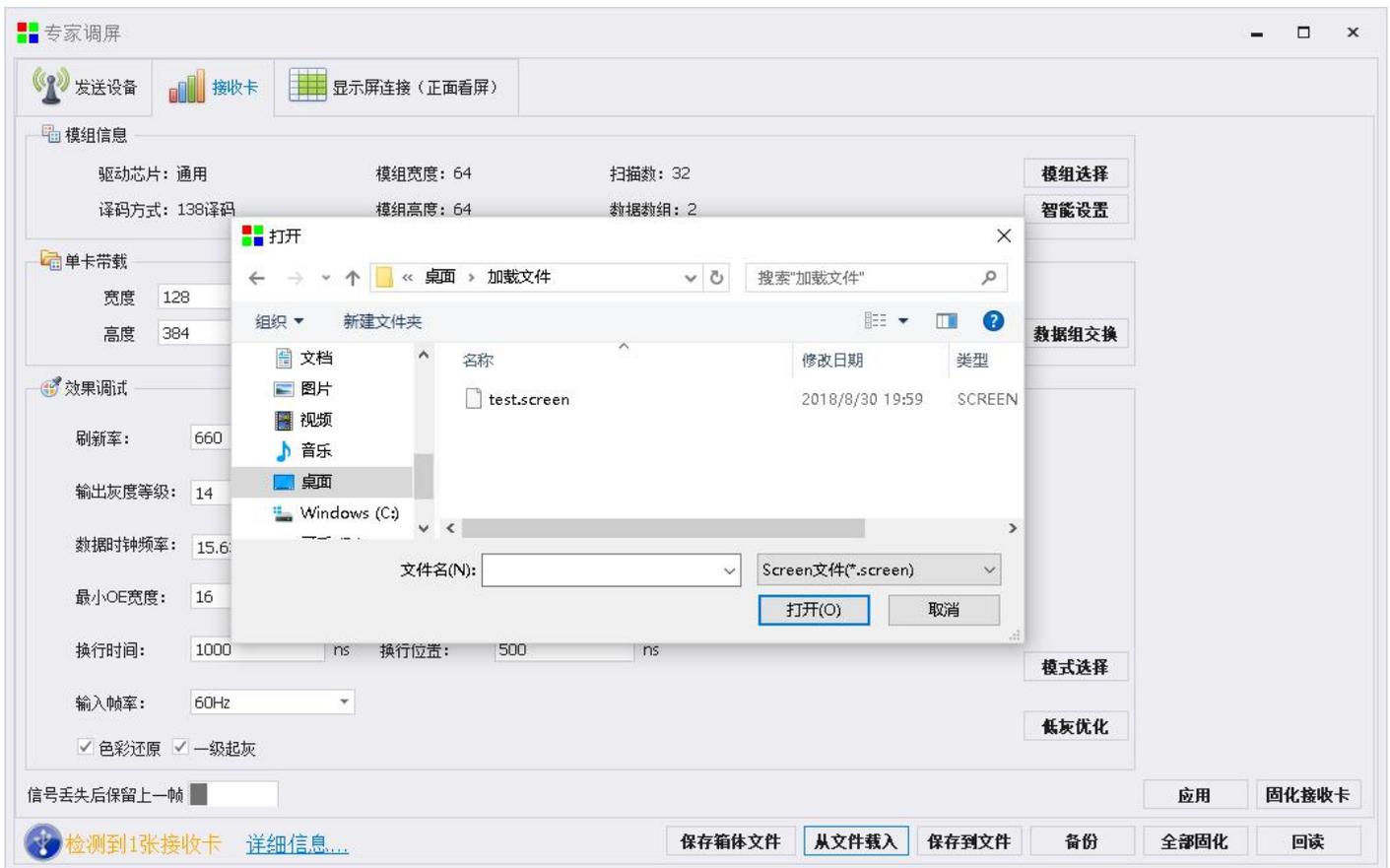
- Module Information (模组信息):** Includes fields for 'Driver Chip: General' (驱动芯片: 通用), 'Module Width: 64' (模组宽度: 64), 'Scan Lines: 32' (扫描数: 32), 'Decoding Method: 138 Decoding' (译码方式: 138译码), 'Module Height: 64' (模组高度: 64), and 'Data Array: 2' (数据数组: 2). Buttons for 'Module Selection' (模组选择) and 'Smart Settings' (智能设置) are present.
- Single Card Load (单卡带载):** Includes 'Width: 128' (宽度: 128), 'Height: 384' (高度: 384), 'Multi-open Setting: None' (多开设置: 无), and 'Cascading Direction: Right to Left' (级联方向: 从右到左). A 'Data Array Exchange' (数据组交换) button is located at the bottom right.
- Effect Debugging (效果调试):** Contains numerous adjustable parameters:
  - Refresh Rate: 660 (刷新率)
  - Height Efficiency: 79.98% (高度有效率)
  - Output Gray Level: 14 (输出灰度等级)
  - Frequency: 11x (倍频数)
  - Data Clock Frequency: 15.63M (数据时钟频率)
  - Data Clock Phase: 50 (数据时钟相位)
  - Minimum OE Width: 16 (实际值: 24ns) (最小OE宽度)
  - Duty Cycle: 50 (占空比)
  - Switching Time: 1000 ns (换行时间)
  - Switching Position: 500 ns (换行位置)
  - Input Frame Rate: 60Hz (输入帧率)Buttons for 'Mode Selection' (模式选择) and 'Low Gray Optimization' (低灰优化) are also present.

At the bottom, there is a status bar with a checkbox for 'Signal Loss Retention' (信号丢失后保留上一帧) and buttons for 'Apply' (应用) and 'Fix Receiver Card' (固化接收卡). A notification bar at the very bottom indicates 'Detected 1 Receiver Card' (检测到1张接收卡) with a 'Detailed Information' (详细信息) link.

A red box highlights a row of buttons at the bottom right: 'Save Box File' (保存箱体文件), 'Load from File' (从文件载入), 'Save to File' (保存到文件), 'Backup' (备份), 'Full Fixation' (全部固化), and 'Read Back' (回读).

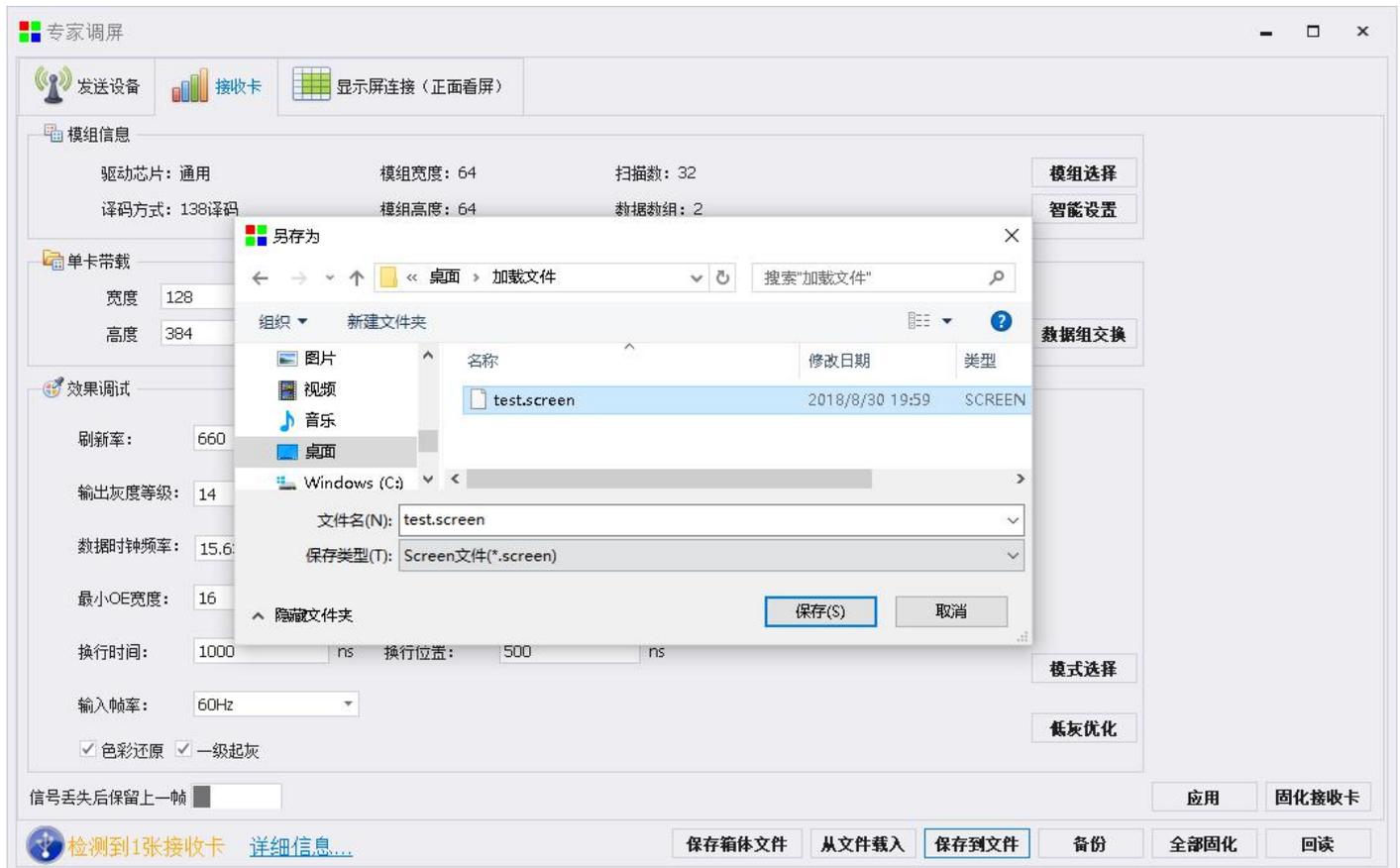
## 6.2.5.1 Load from file:

### 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.

o

## 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

For more service and support, please pay attention to Beijing kystar official Wechat!

