



# KYSTAR control system

Instructions

VERSION: V2.1

Beijing Kystar Technology Co.,Ltd | 24-HOUR SERVICE HOTLINE 400-0000-267

# Attention



## 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.



## Attention

- 1、 Please read this manual carefully before use ,and keep it for future;  
this equipment is not suitable for non-professionals to operate and debug, please use under the guidance of professionals;
- 2、 this equipment is not suitable for non-professionals to operate and debug,please use under the guidance of professionals;
- 3、 Do not insert anything into the vent hole of the device to avoid damage or accidents to the device;
- 4、 It is not appropriate to place the device on a heat sink or other high-temperature place;
- 5、 It is not suitable to place this equipment in near water or other damp places;
- 6、 Please properly organize and place the power cord to prevent damage;  
, the power plug of the device should be unplugged and commissioned for maintenance:
- 7、 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

# Version Change Record

version number	time	Version change details
V1.0	2018-1-1	1.Complete control Card Settings
V1.1	2018-5-20	1.Adding MFC-related Settings Software to Build Interface
V2.0	2018-10-1	1.Remove green card related settings: 2.New Brightness Control Gamma Adjustment 3.Adjust the interface of MF630
V2.1	2018-12-12	1、 Added advanced settings page content. 2、 New method of splicing light and dark wires

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# 1 Software introduction

KYSTAR control system software is customized for the debugging and control of the main control system. It supports the debugging of a class of video control equipment, sending card, receiving card and multi-function card.

Unique wizard adjusting screen mode, convenient and fast debugging in a set environment, brings unprecedented pleasant debugging experience to users; at the same time, highly professional expert adjusting screen, including sending equipment, receiving card, display screen connection three major professional screen lighting, at the same time with debugging control for environmental monitoring multi-function card function. In addition, the video processing part with visual picture control is also included. This interface covers all functions, intuitive, concise and atmospheric.

The default skin of the system is technically black, and the professionalism of the colleagues also has a sense of mystery. In addition, there are two types of skin can be selected, one is pure white, better looking skin continues to increase...

# 2 Software installation

Put the attached CD-ROM into the computer CD-ROM, 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 prompt.

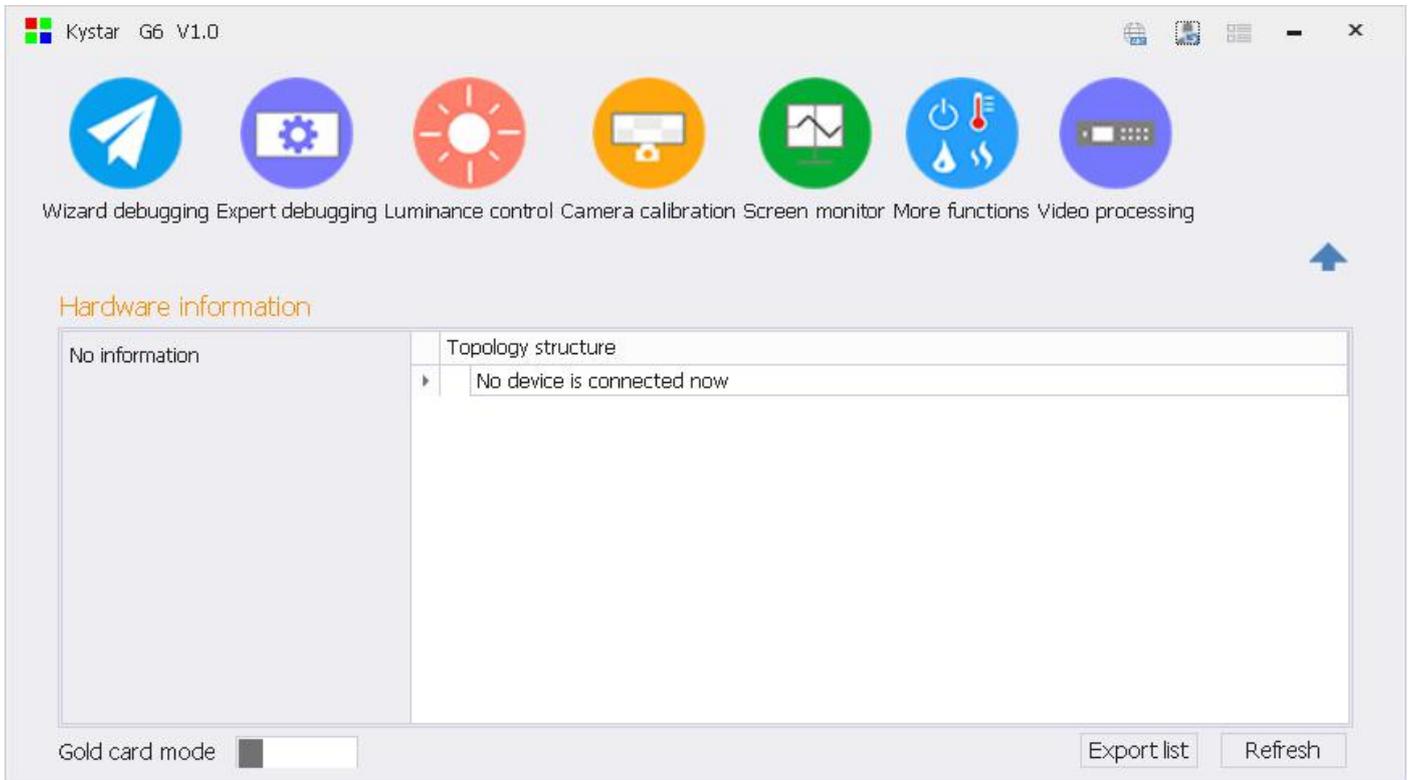
The first installation process may encounter the installation of NET environment, Winpcap environment and USB driver. It can be installed directly. The second installation may encounter the problem that Winpcap does not support overlay installation. At this time, choose to ignore it.

With random distribution of USB connection line, 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 opening the software, the device will automatically connect to the device as follows:



### 3 Introduction of Software Interface

Open the software, after booting, the following software main interface appears.



**Main function area:** The main function area includes seven main function points: guide screen adjustment, expert screen adjustment, brightness control, camera calibration, screen monitoring, multi-function card, video processing.

**Hardware information:** The hardware information is that the sending card is a display unit, showing the current type of sending card and the type of receiving card, and the number of receiving cards per network port of the sending card. Blue connection position can be used to display the connection status between software and sending card, and can also be used to switch multiple sending cards.

**Topology diagram:** Topology structure shows program version information of sending device, receiving card, multi-function card and ID number of receiving card by tree diagram. The "Export List" button can save the current topology information as Excel file in the form of topology graphics for easy viewing and saving. The refresh button is used to refresh the topology information.

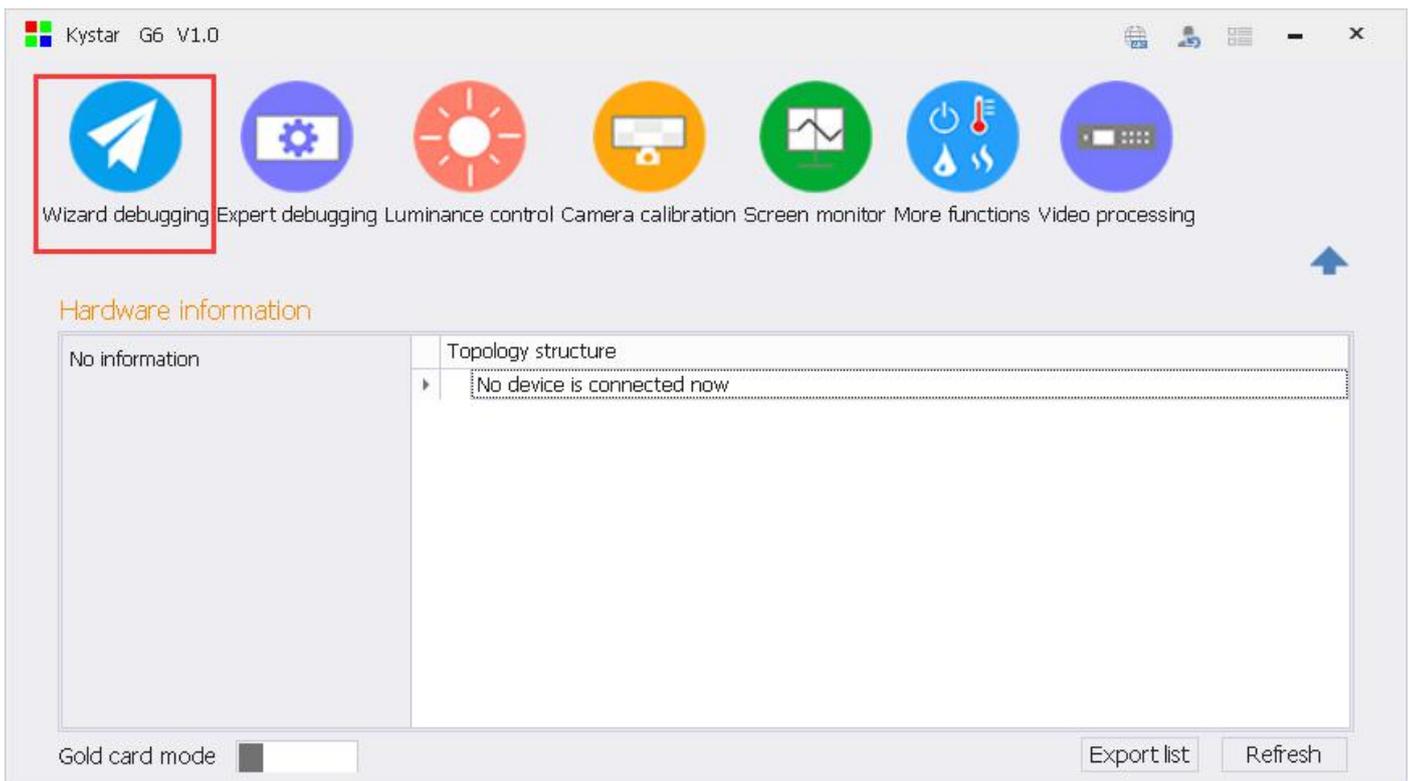
**Other functional areas:** The other functions in the upper right corner include test charts, skin change, environmental monitoring, software version information, etc. “▲” The upward arrow can hide the hardware information and the topology map, leaving a refreshing main function interface.

# 4 Screen configuration

Screen configuration includes wizard screen adjustment and expert screen adjustment.

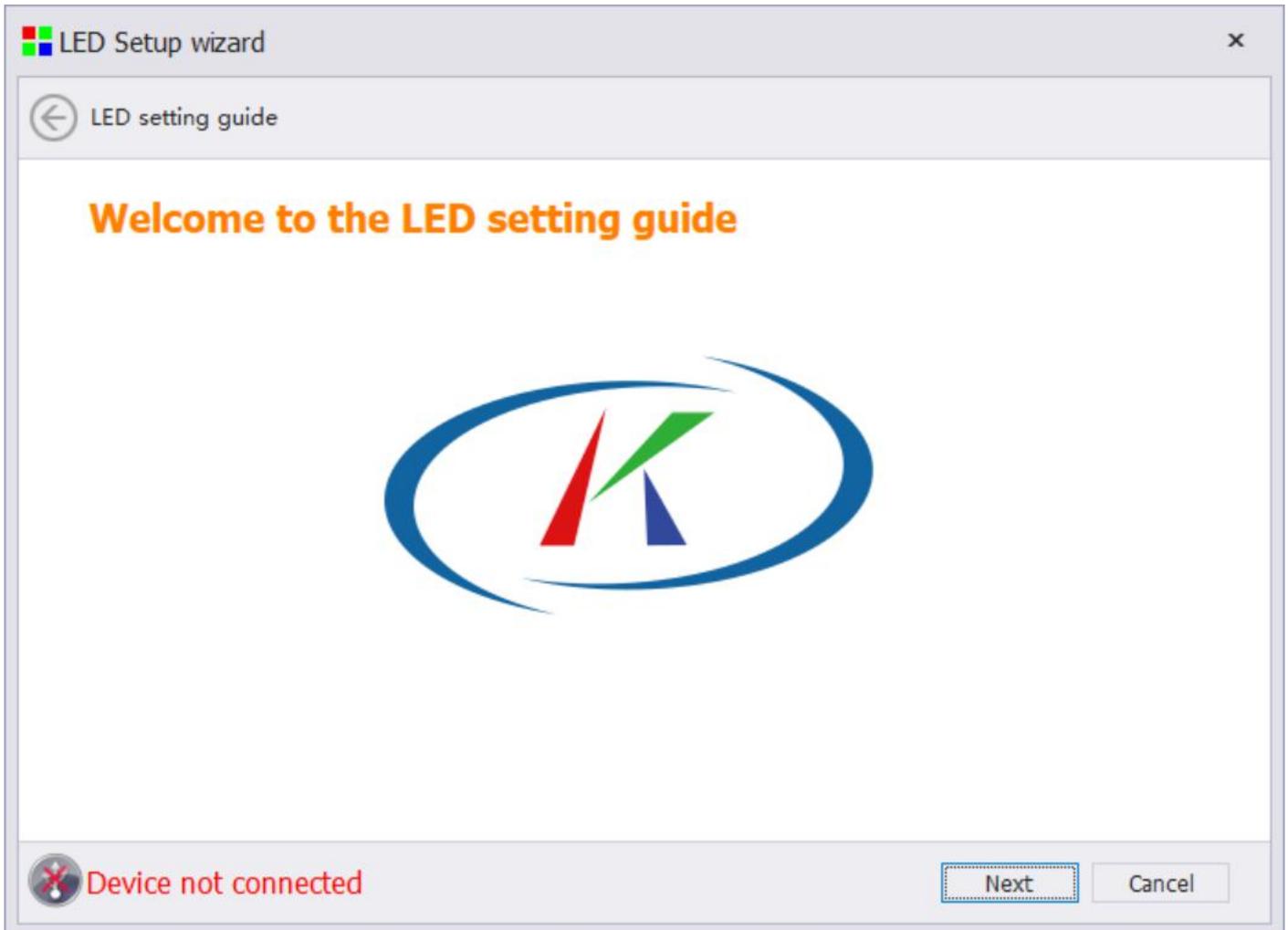
## 4.1 wizard screen adjustment

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



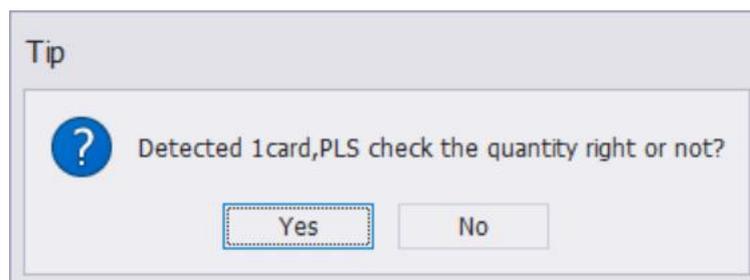
## 4.1.1 setup wizard

Click the wizard of the main interface to adjust the screen and enter the LED Setup Wizard Welcome Interface. Click Next.

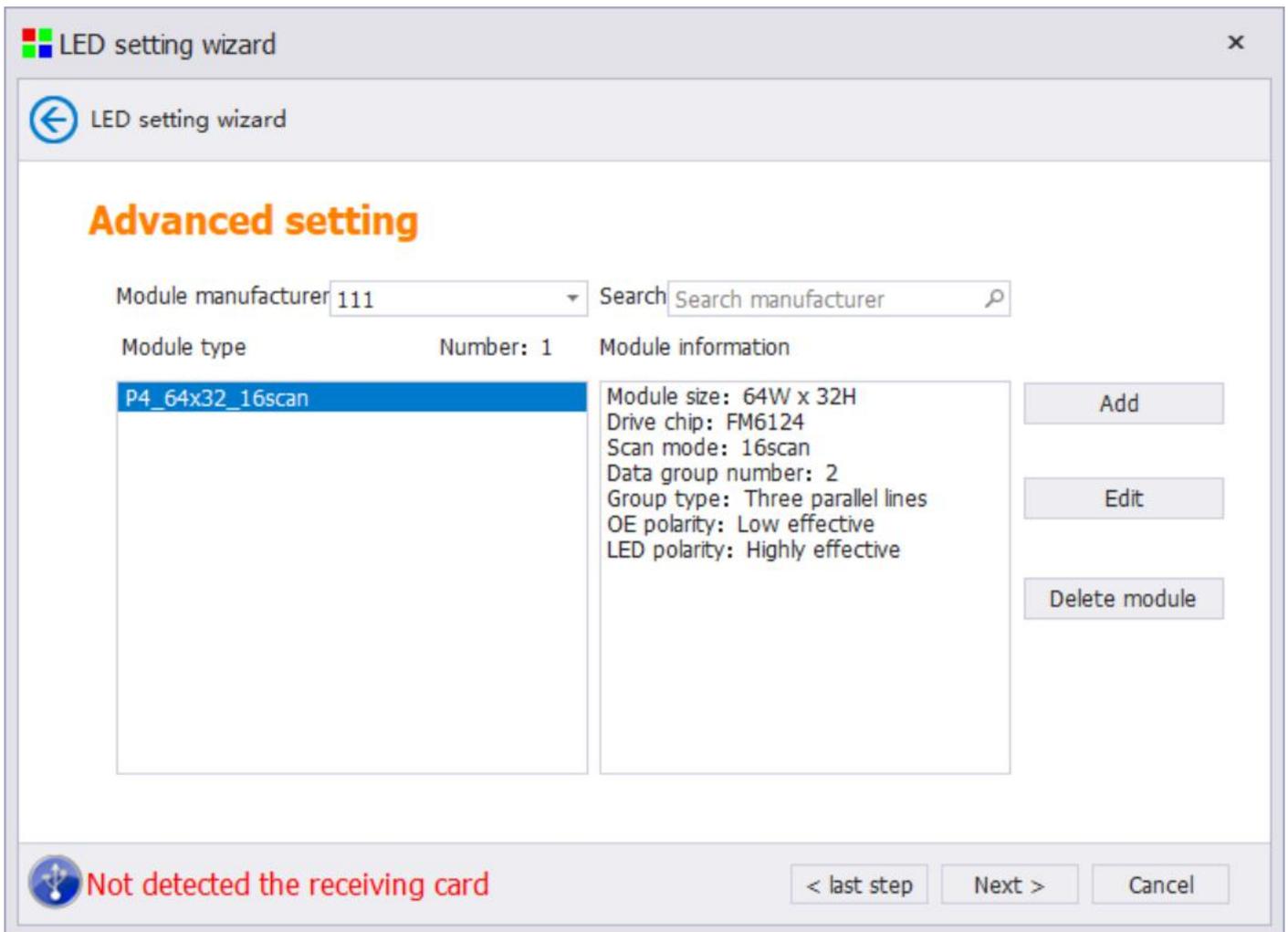


## 4.1.2 Confirm the number of receiving cards

After clicking the "Next" button, the system will prompt whether the number of received cards detected is correct, the correct number of received cards clicked "Yes", incorrect, click "No", and check the network connection.



### 4.1.3 Select module manufacturer and type:



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

After choosing the module manufacturer, you can see the current included module configuration file in the list box below. When selected, you can see the detailed module information in the right box, including module size, driver chip, scanning mode, data array, array type, OE polarity, LED polarity and other information.

Select the module manufacturer and module type, if not, you can use the right "Intelligent Settings Add Modules" function button for intelligent settings.

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

### 4.1.3.1 Intelligent Settings Add Module

Click on the "Edit Add Module" button for intelligent settings. Step 1 into Intelligent Settings

Smart point parameter configuration

Basic parameter

Module width: 40

Module height: 20

Number of data sets: 2

Driver chip: ICN2038S

Decoding mode: SM5266P

Grouping: 三线并行

Next Cancel

Fill in the module corresponding information correctly:

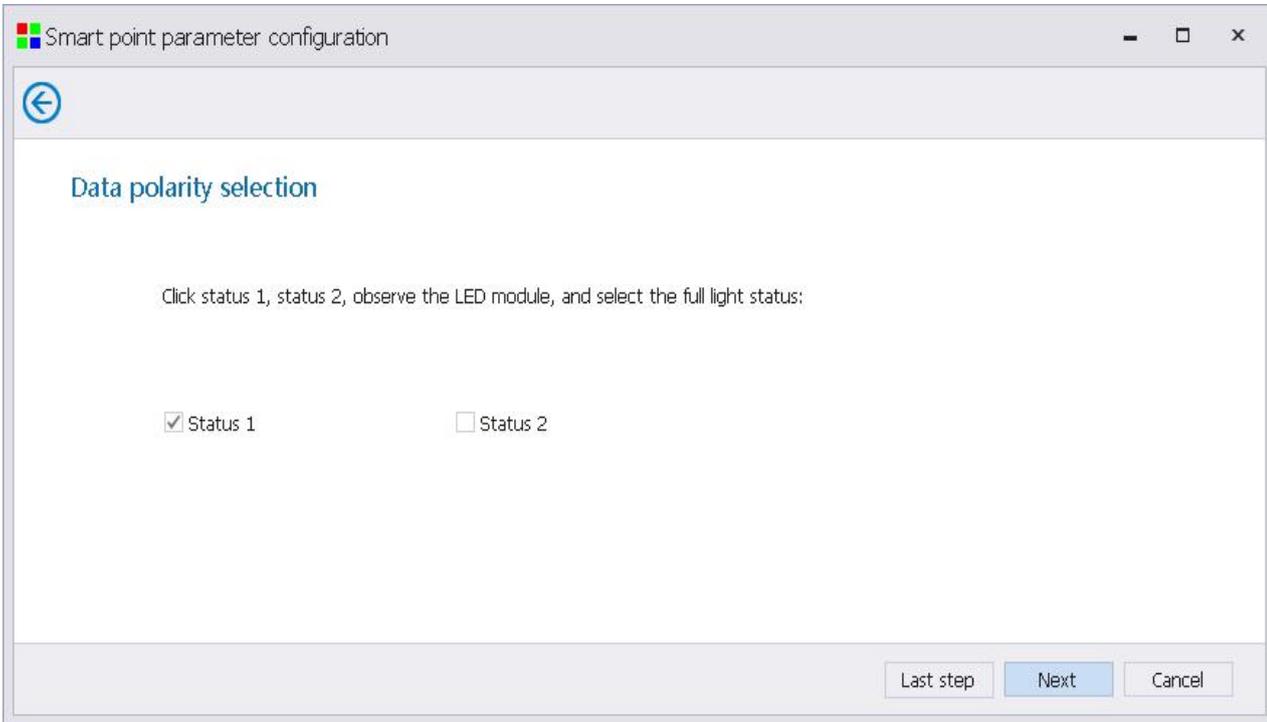
- ◆ The module width: refers to the actual width of each module
- ◆ The module height: refers to the actual height of each module.
- ◆ The number of data group: each wire interface (data interface) contains several groups of RG/RGB (red green blue) data
- ◆ Driver chip: look at the LED driver chip on the cell board, the general MB15024,74HC595 and other chips are similar or alternative to the use of general chip, such as PWM (pulse width modulation) chip please contact us
- ◆ The way of decoding is to see if there are 4953 rows of LED drivers (8 pins of small chips). If not, the static screen will be selected for direct output.

If there are 4953 rows of tubes (1), see if there are 74HC138 or related decoding chips. If not, then choose the direct drive line with OE or direct drive line without OE option.

If there are 74HC138 or related decoding chips, 138 decode will be selected. (the general decoding chip is 74HC138).

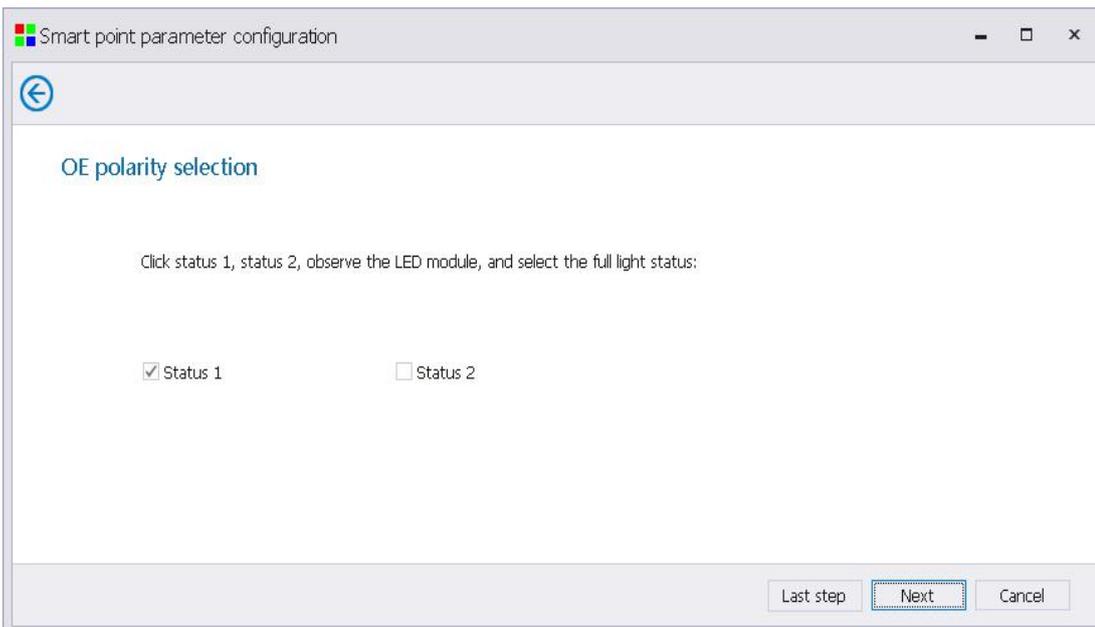
### 4.1.3.2 data polarity selection

According to the template response status and prompt in the right state, then click on the next step to do OE polarity selection.



### 4.1.3.3 OE polarity selection

Select the brighter state according to the template state and click next to determine the number of rows.



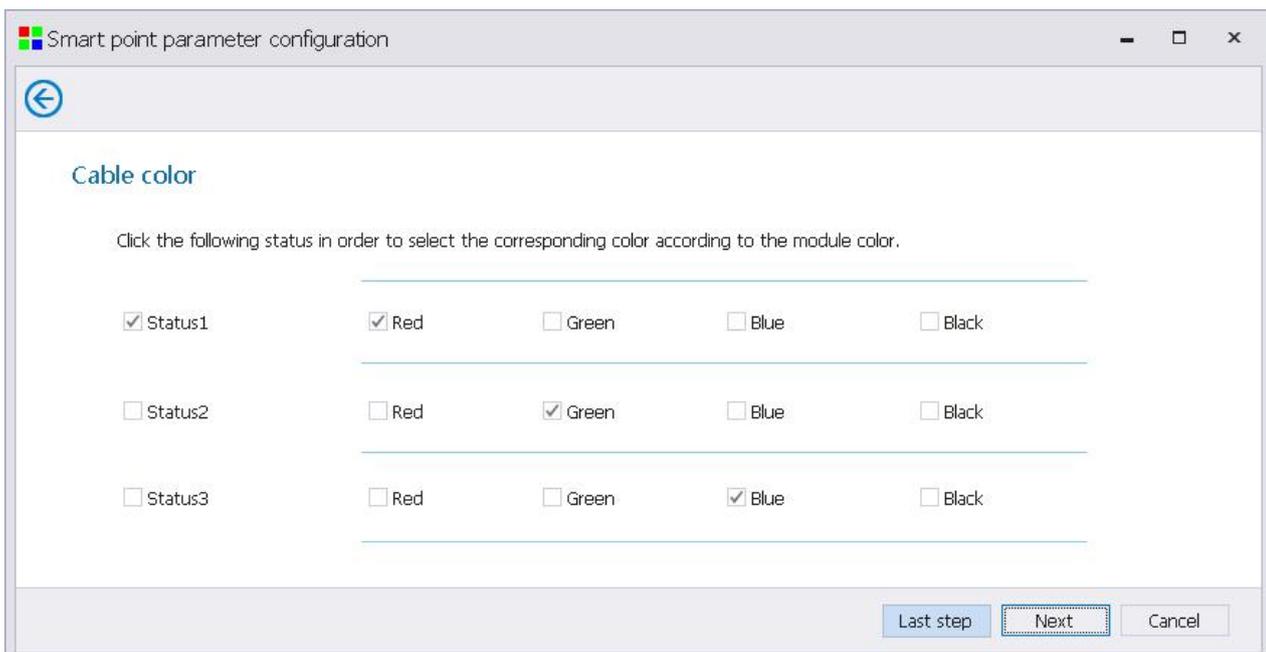
### 4.1.3.4 scan line number

According to the number of rows between the lines of the module, select the number of rows, then click the next step to choose the color of the data line.



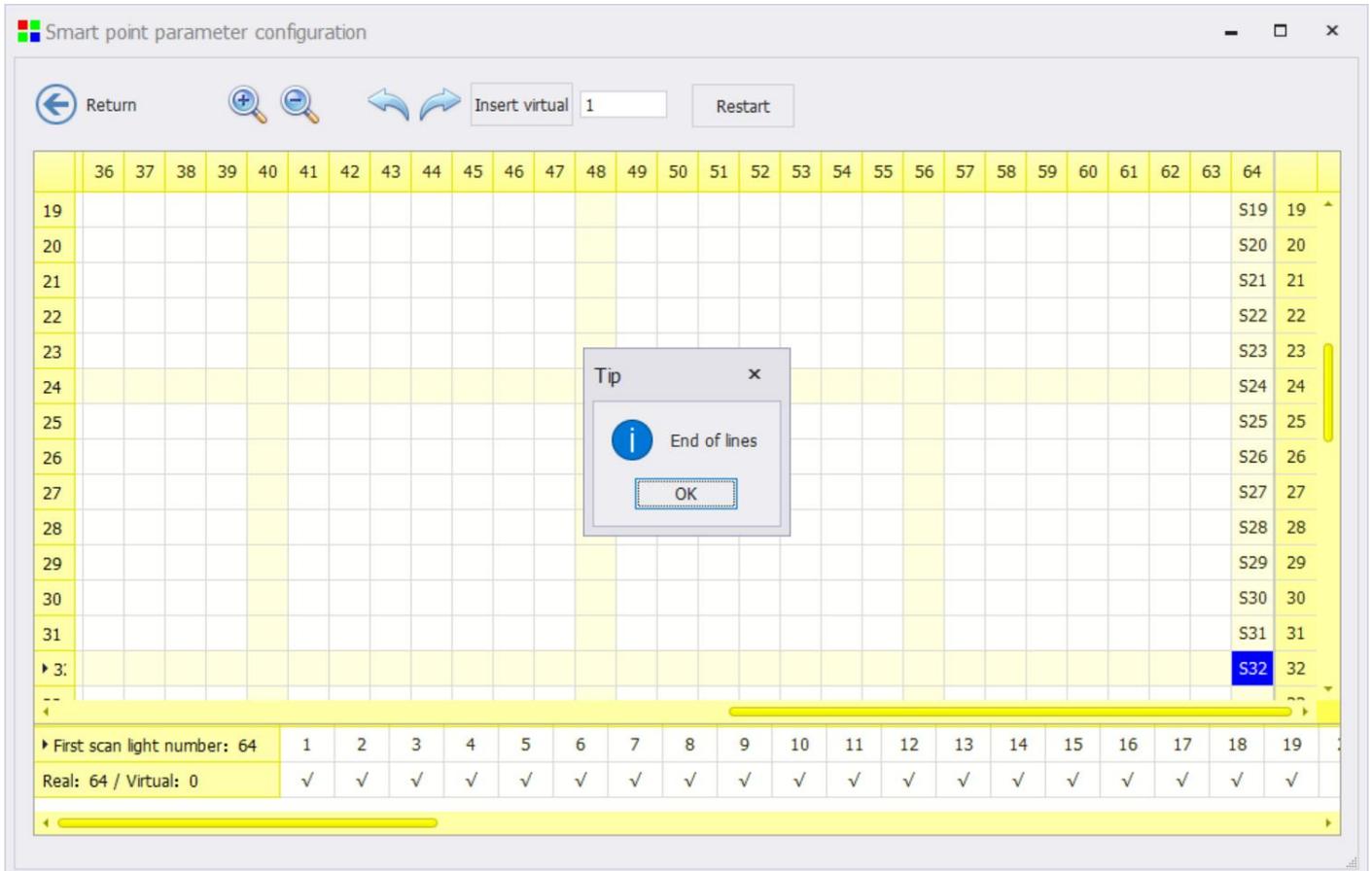
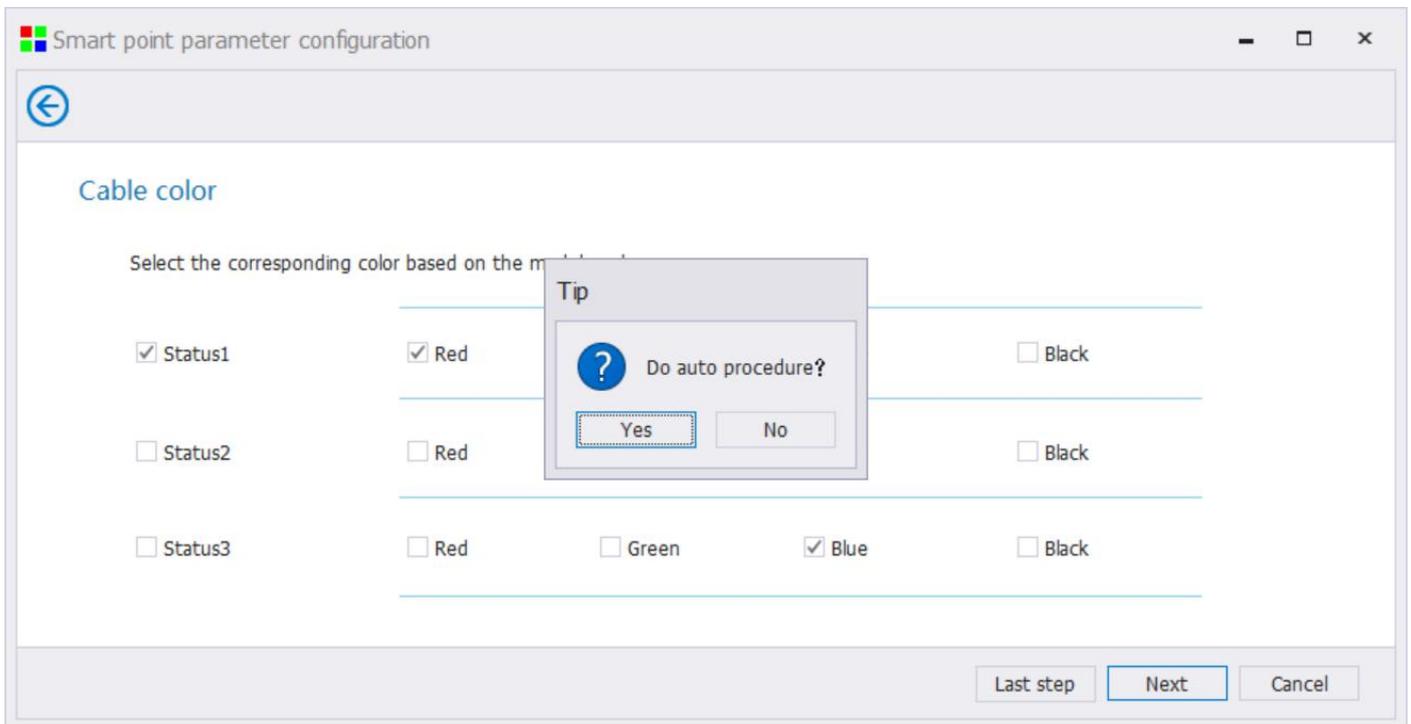
### 4.1.3.5 RGB color

Click on the 3 state in turn, select the color according to the display of the module, and click next to trace.



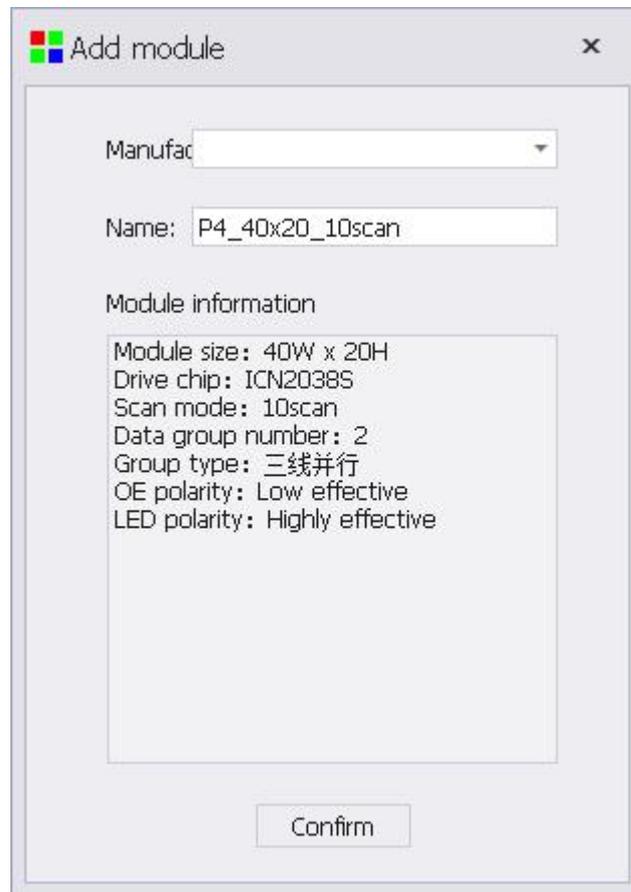
### 4.1.3.6 intelligent tracing point

Starting from the point where the module starts to blink, we mark the point according to the location of the location of the module flash. We will give the following prompts as we finish the drawing point.



### 4.1.3.7 Add module

Click finish, add the module next, and enter the name of the manufacturer so that the next module can be called.



Manufac

Name: P4\_40x20\_10scan

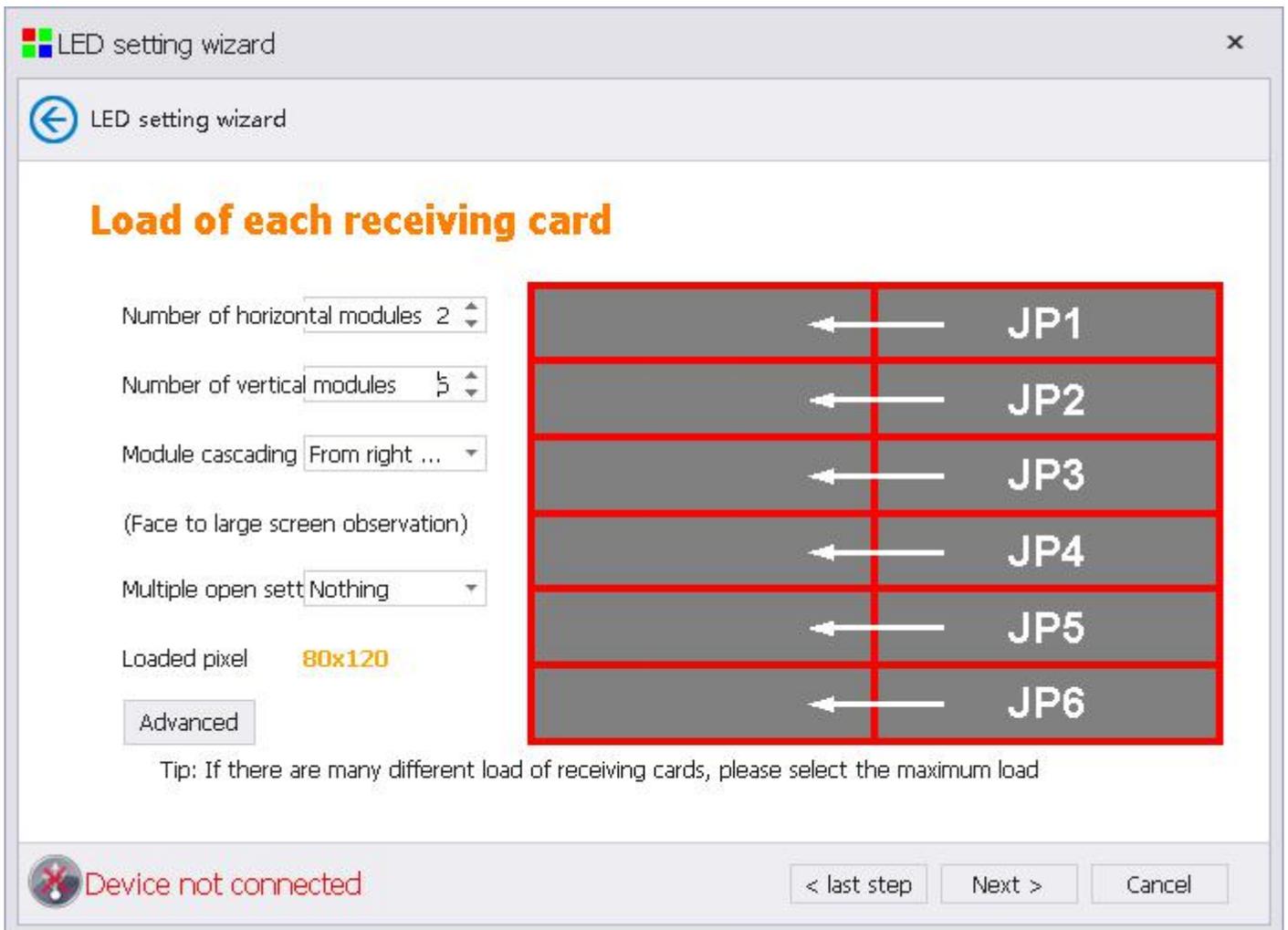
Module information

Module size: 40W x 20H  
Drive chip: ICN2038S  
Scan mode: 10scan  
Data group number: 2  
Group type: 三线并行  
OE polarity: Low effective  
LED polarity: Highly effective

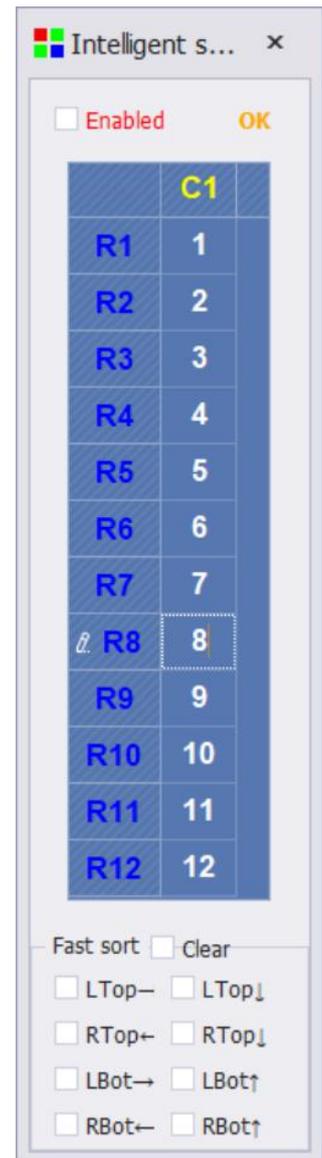
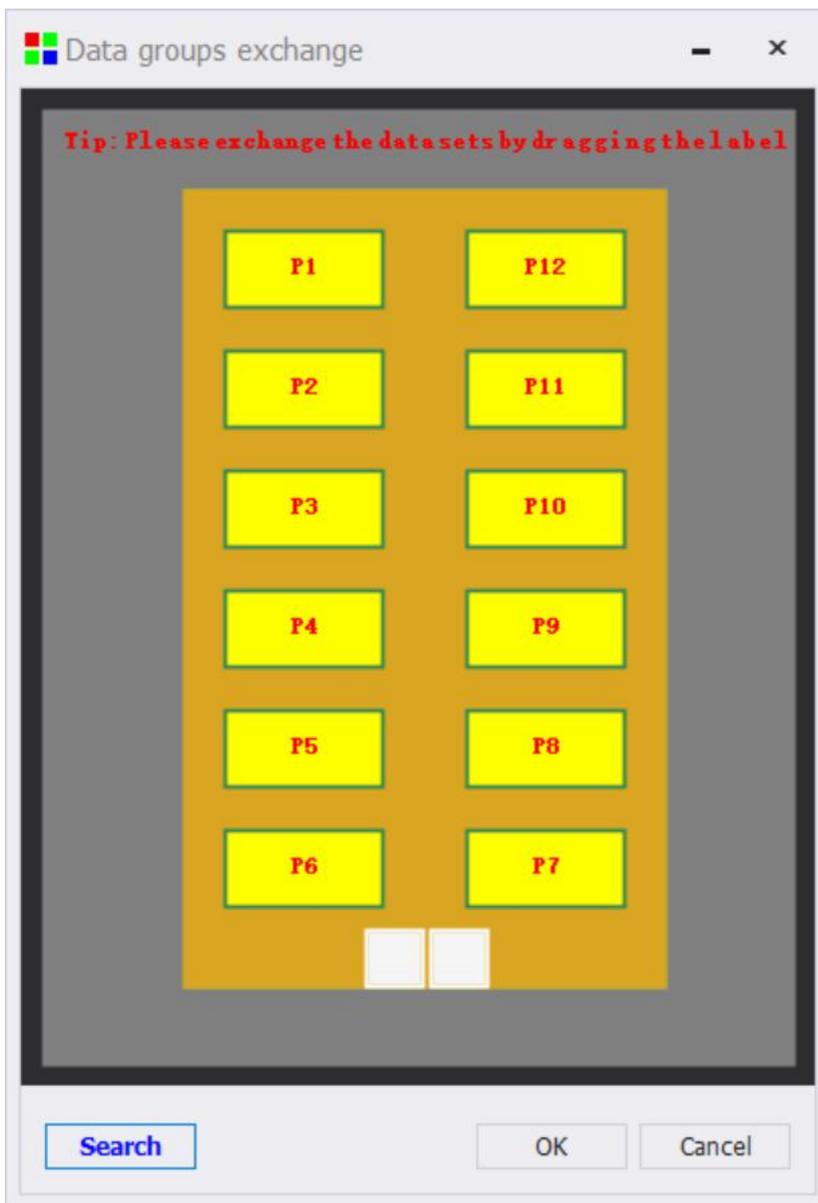
Confirm

## 4.1.4 Load of each receiving card

According to the maximum load setting of the receiving card



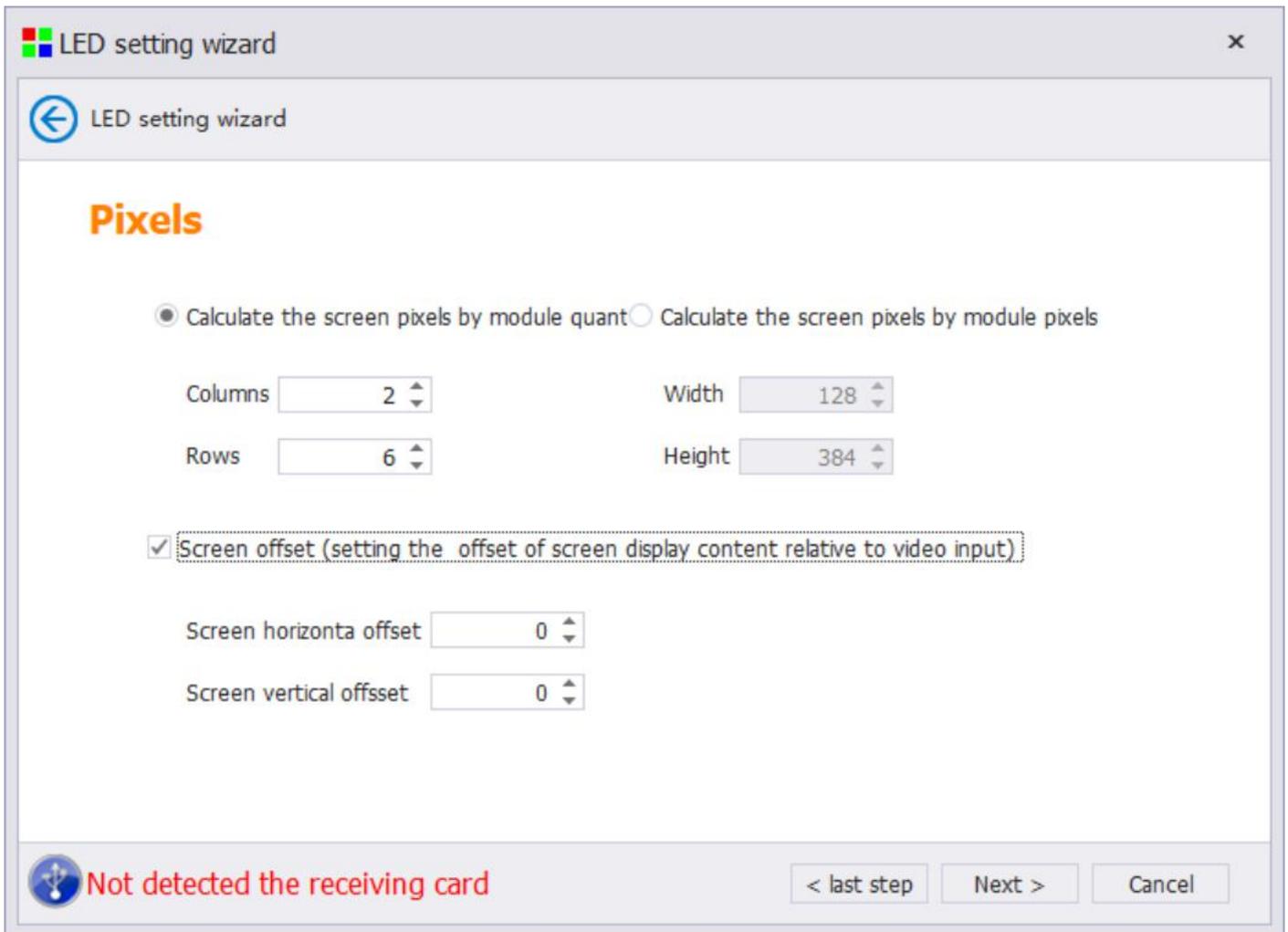
Data Group Exchange: Click on the "Advanced" button to enter the data group exchange interface, drag and drop the Yellow module for data group exchange, and then click the "OK" button to complete the data group exchange. If the data group is more complex, you can enter the "Intelligent Search" page to view the detailed data group.



Intelligent search page, you need to check "enabled" before it can take effect, C represents columns, R represents rows, according to the number displayed on the screen, corresponding to write into the software. Quick sorting refers to the entry order of 1, which can be sorted quickly by preselecting the upper left and upper right below.

### 4.1.5 screen pixel

Select according to the actual cascading mode of the module, then click next to set the number of big screen points (the actual size of the LED screen on the current sending card).

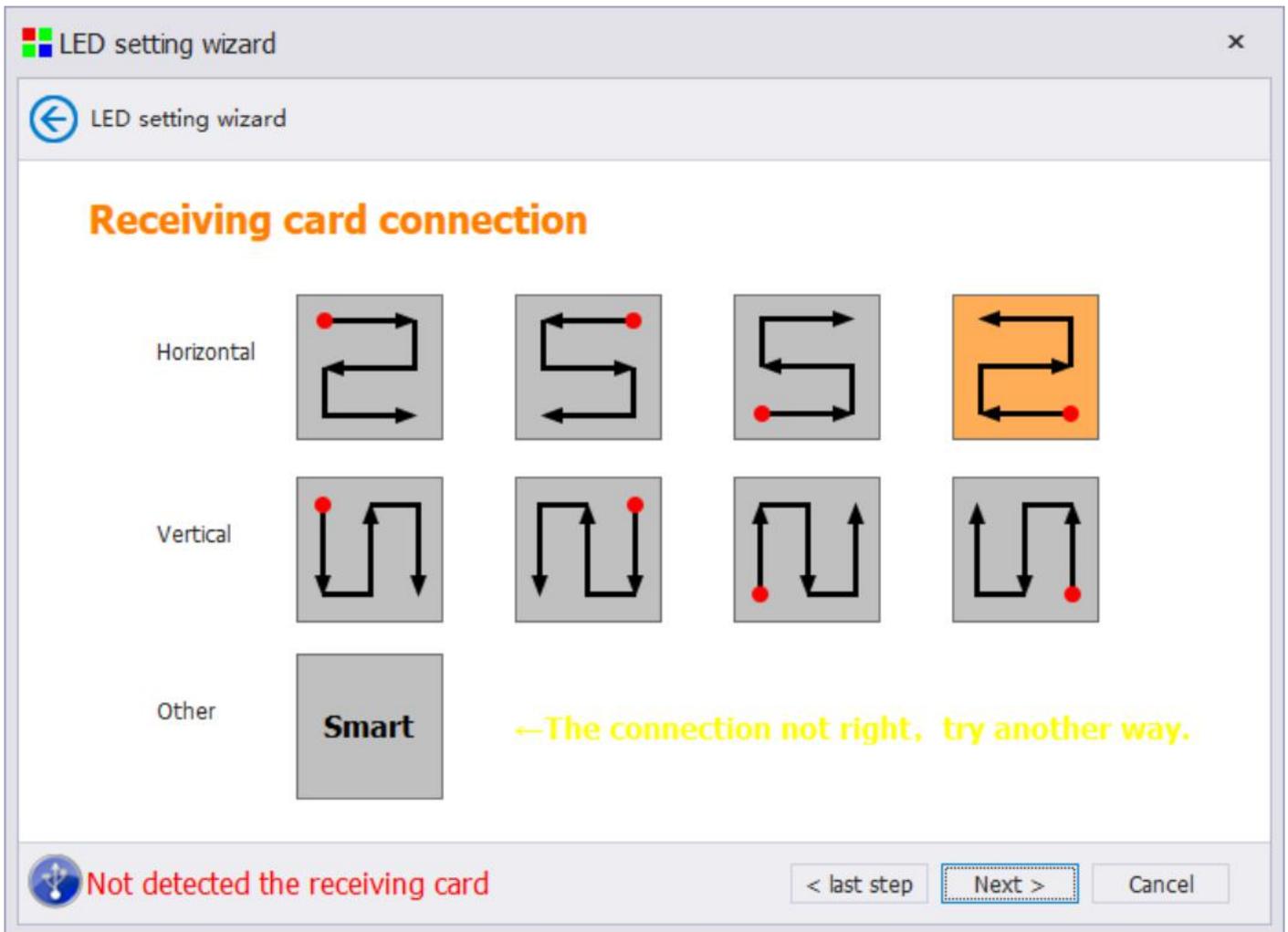


Screen points: can be set according to the number of modules, can also be set according to the number of real pixels.

Sarge screen offset: A single sending card is used to offset the coordinates, thus completing the mosaic display of multiple sending cards.

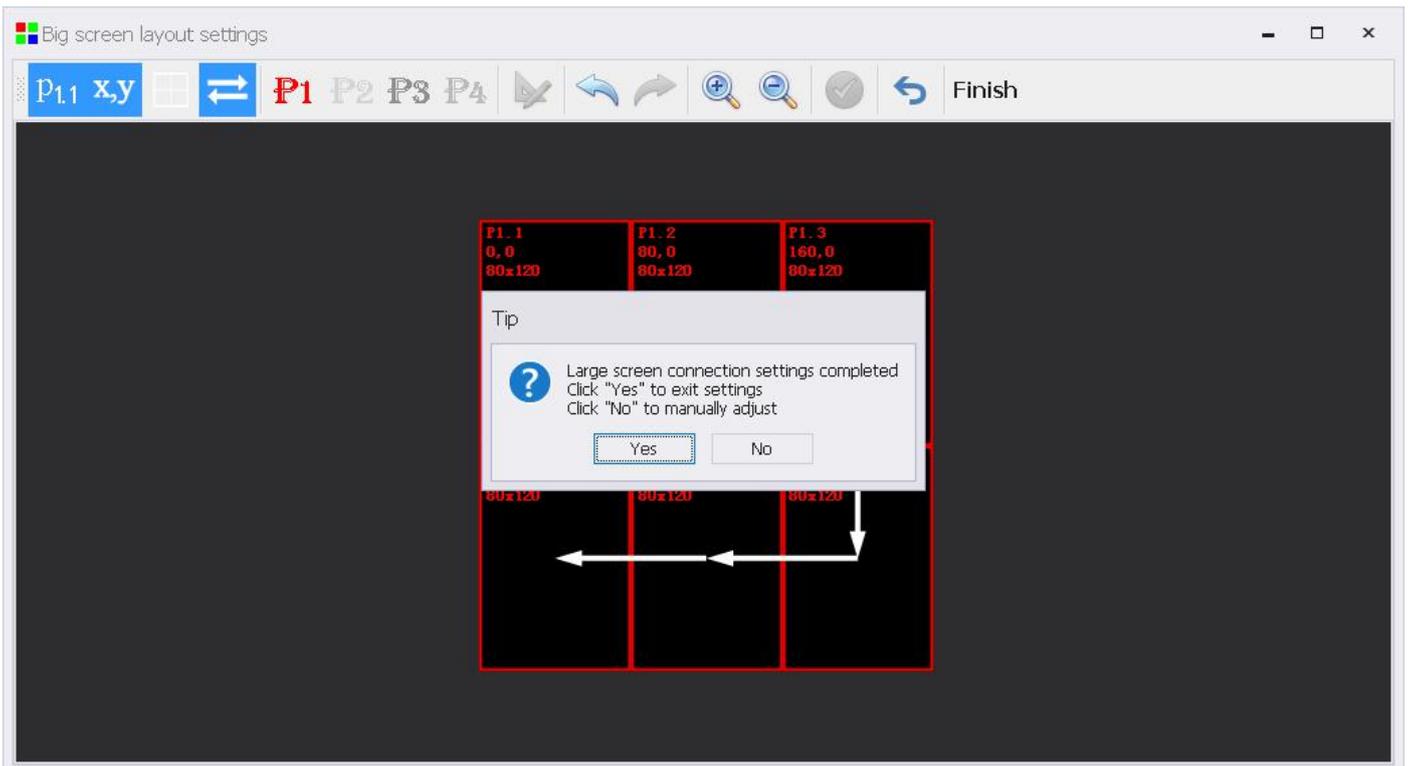
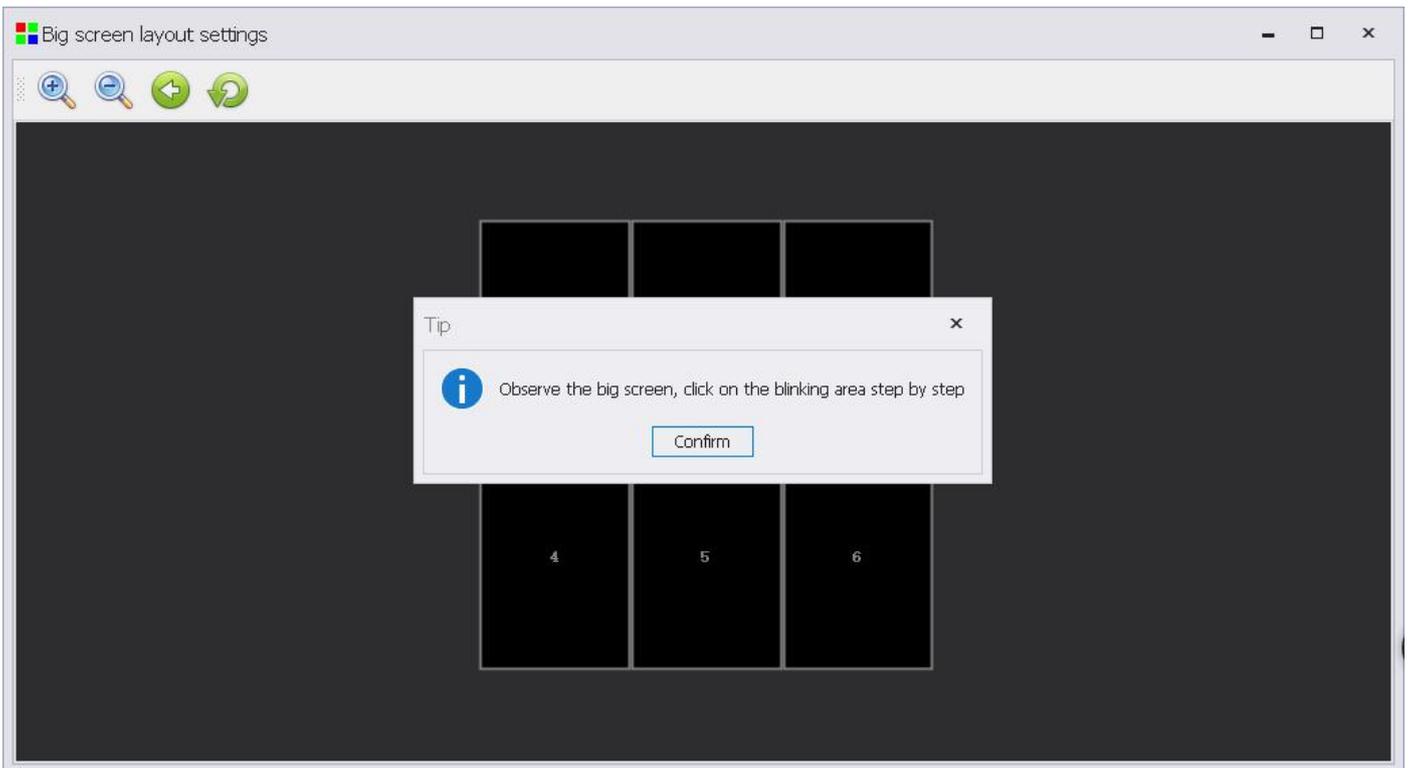
### 4.1.6 Receiving card string method

According to the actual number of large screen to fill in, then click on the next step, set the receiving card string mode.



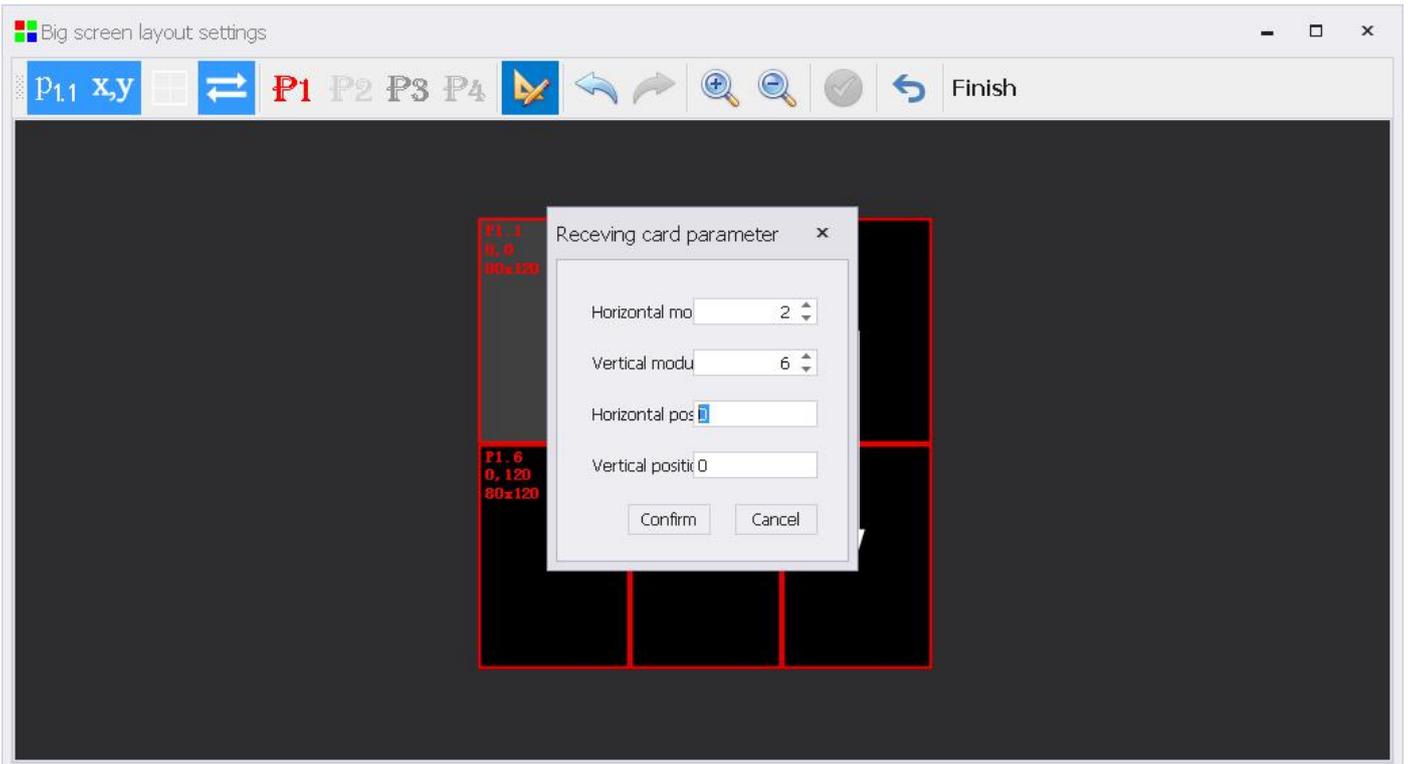
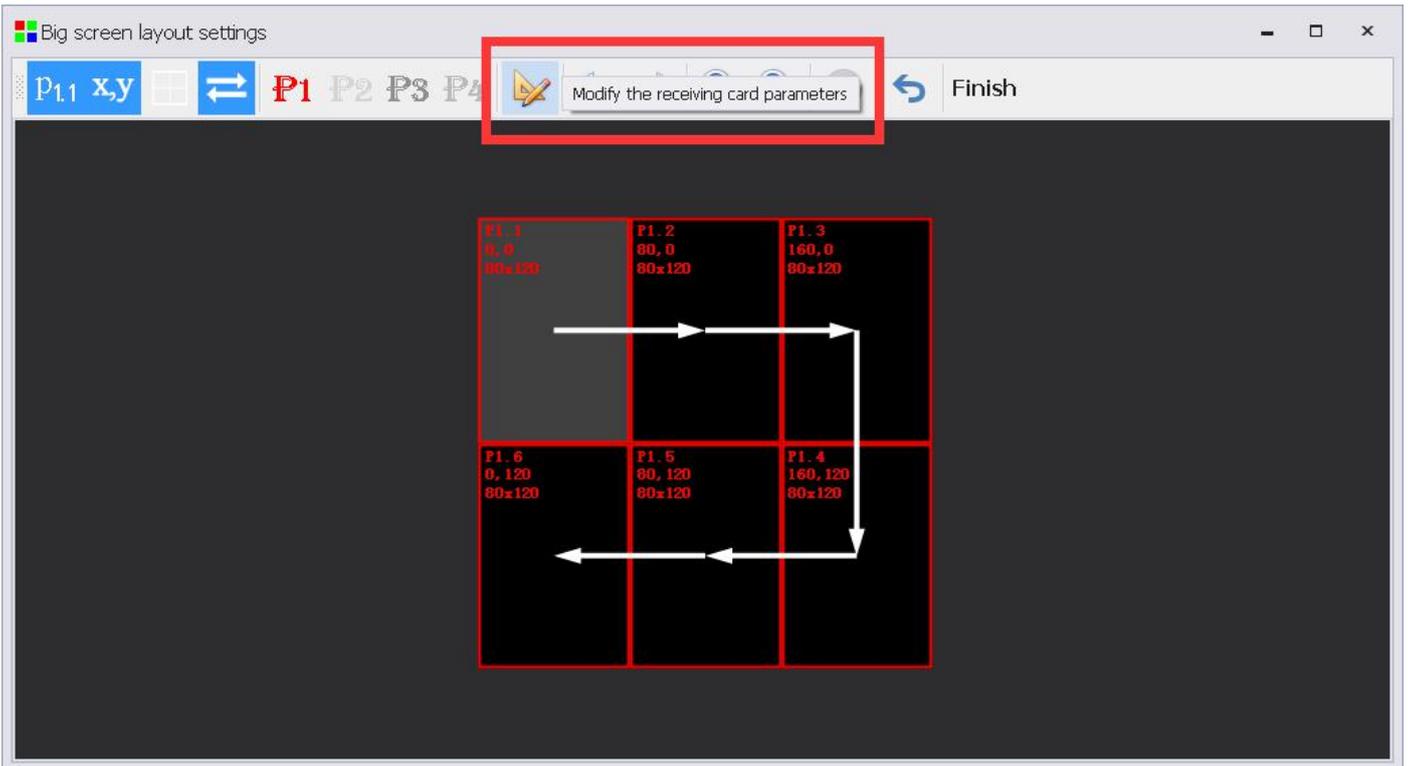
#### 4.1.6.1 intelligent connect receiving card

If the conventional string display is incorrect, you can choose the smart string and click on the big screen flashing.



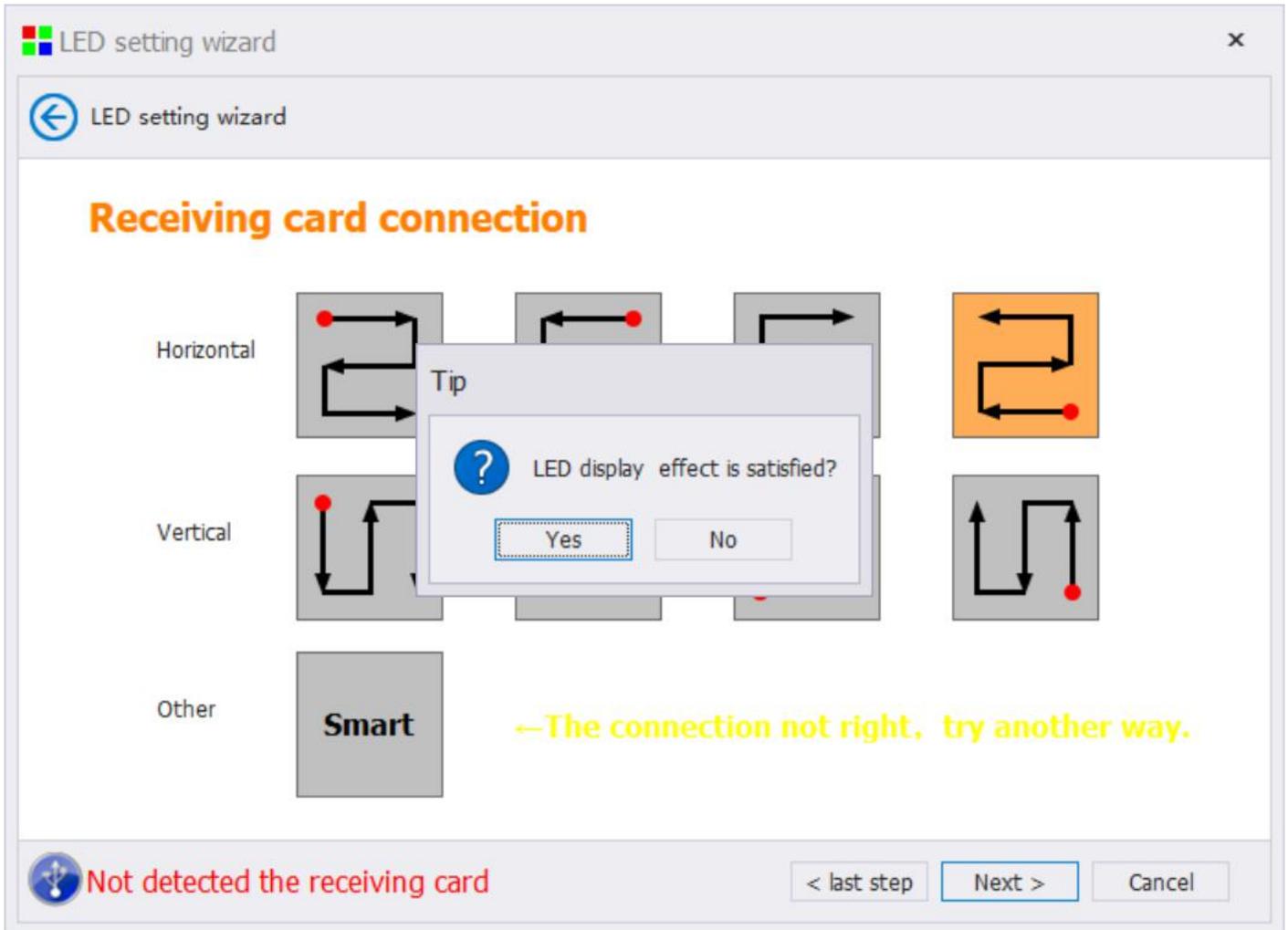
#### 4.1.6.2 modifies the receiving card properties

If the receiving load and so on cassette in different words, you can use the "Edit" button to modify the load receiving cassette.



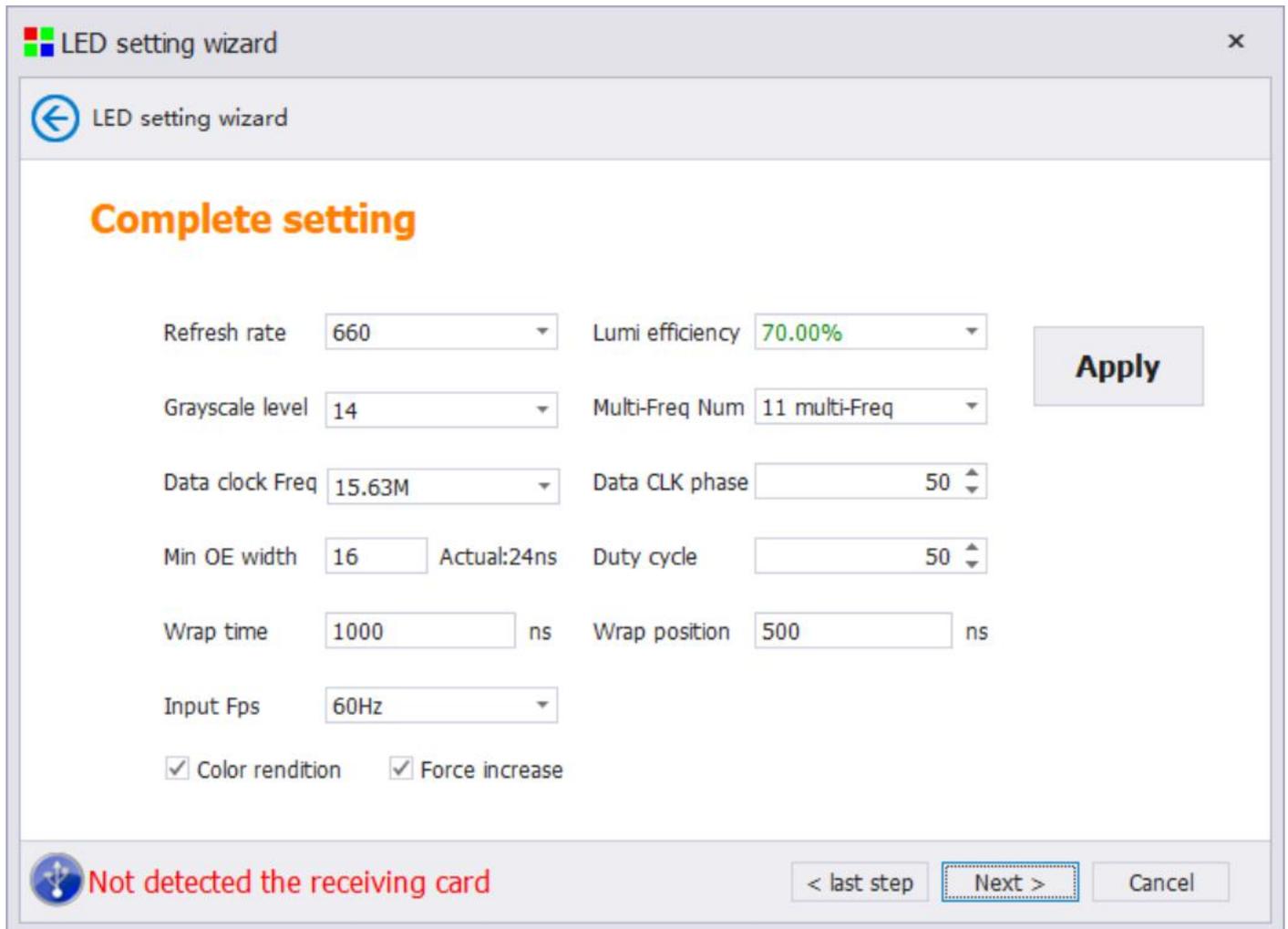
### 4.1.6.3 observed whether the effect of LED screen was satisfactory

According to the actual line selection mode of the receiving card, select the big screen after normal display, then click the next step.



## 4.1.7 Advanced effect setting

If you are satisfied with the display effect, point "yes"; if you are not satisfied, point "no" into the "Advanced Effect Settings" interface.



The screenshot shows the "LED setting wizard" window. The title bar includes a close button (X) and the text "LED setting wizard". Below the title bar is a navigation bar with a back arrow and the text "LED setting wizard". The main content area is titled "Complete setting" in orange. It contains several configuration options:

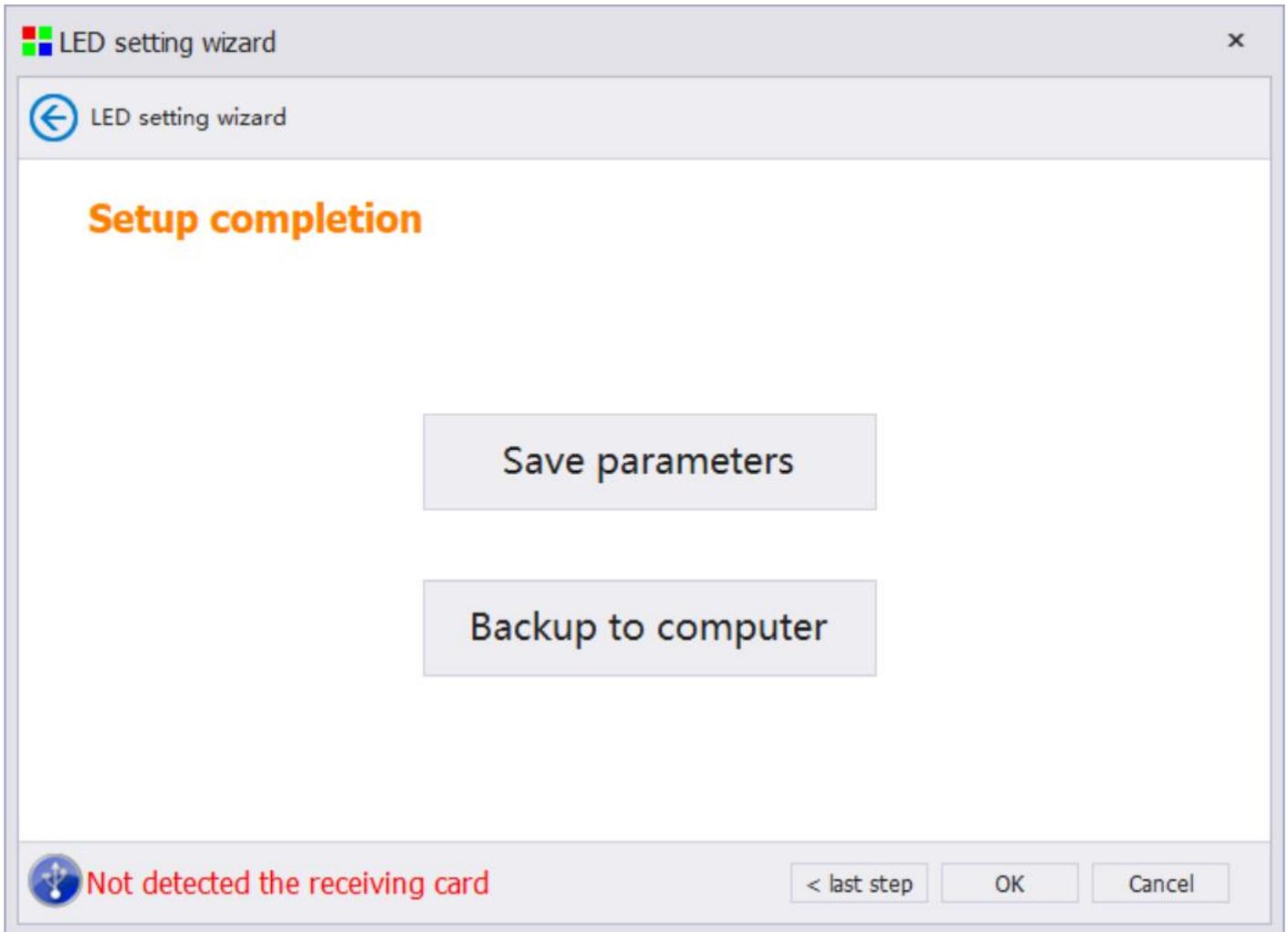
- Refresh rate: 660 (dropdown)
- Lumi efficiency: 70.00% (dropdown)
- Grayscale level: 14 (dropdown)
- Multi-Freq Num: 11 multi-Freq (dropdown)
- Data clock Freq: 15.63M (dropdown)
- Data CLK phase: 50 (spin box)
- Min OE width: 16 (input) Actual:24ns
- Duty cycle: 50 (spin box)
- Wrap time: 1000 (input) ns
- Wrap position: 500 (input) ns
- Input Fps: 60Hz (dropdown)

At the bottom of the main area, there are two checked checkboxes: "Color rendition" and "Force increase". To the right of these settings is a large "Apply" button.

The bottom status bar contains a USB icon, the text "Not detected the receiving card" in red, and three buttons: "< last step", "Next >" (highlighted with a dashed border), and "Cancel".

## 4.1.8 Curing system parameters

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



Solidification system parameters: Solidification system parameters to hardware, and complete the operation of hardware system backup, easy to achieve a key repair data backup.

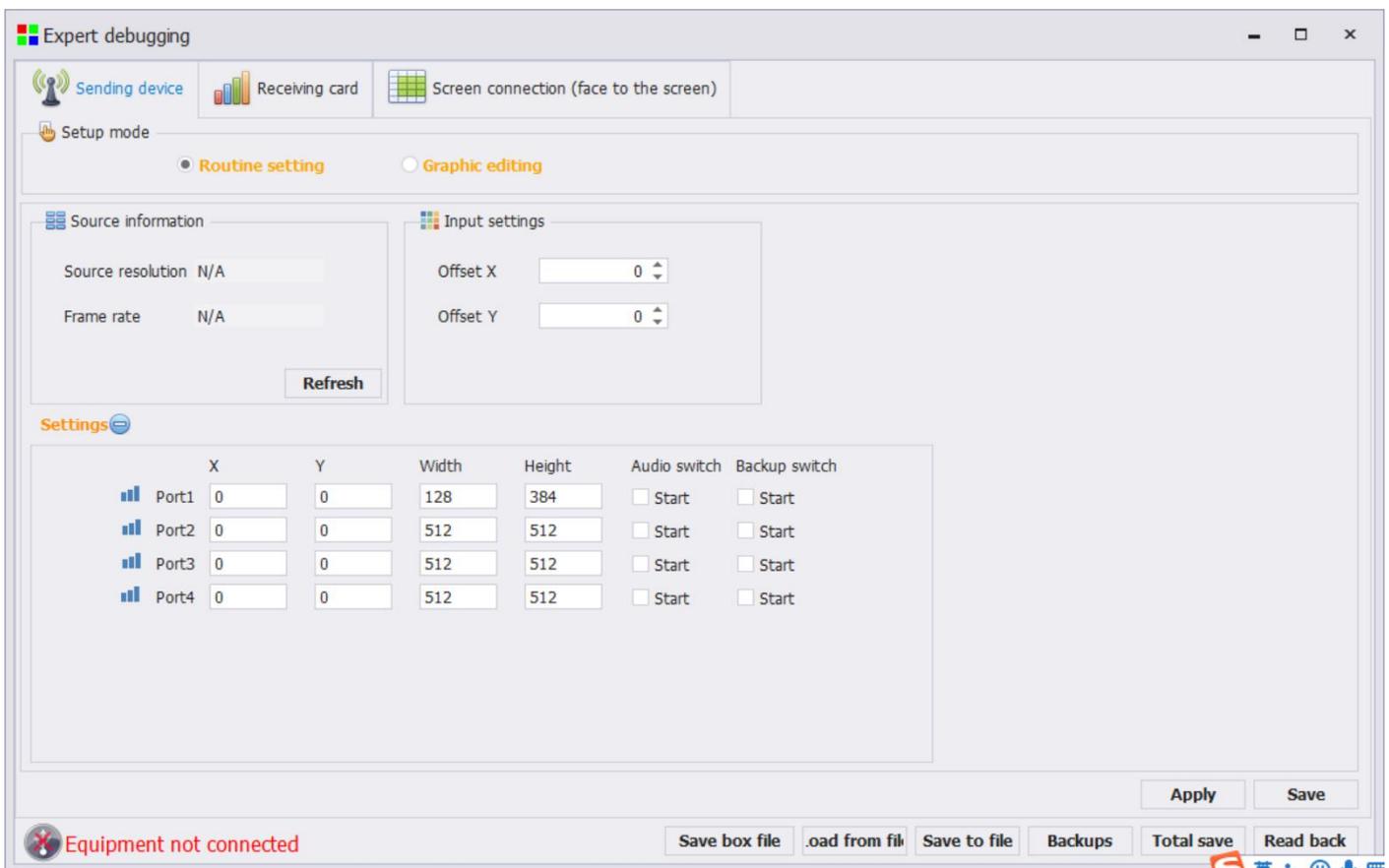
Backup system parameters to the computer: save the system configuration file screen file to the computer for easy re-import and system maintenance.

Click Finish to complete the wizard screen adjustment.

## 4.2 expert setting

Expert screen adjustment is divided into three parts, sending device debugging, receiving card data debugging, and display screen connection. The basic order of debugging is setting the parameters of receiving card, setting the connection of display screen, confirming the information of sending card and solidifying it.

### 4.2.1 Sending device



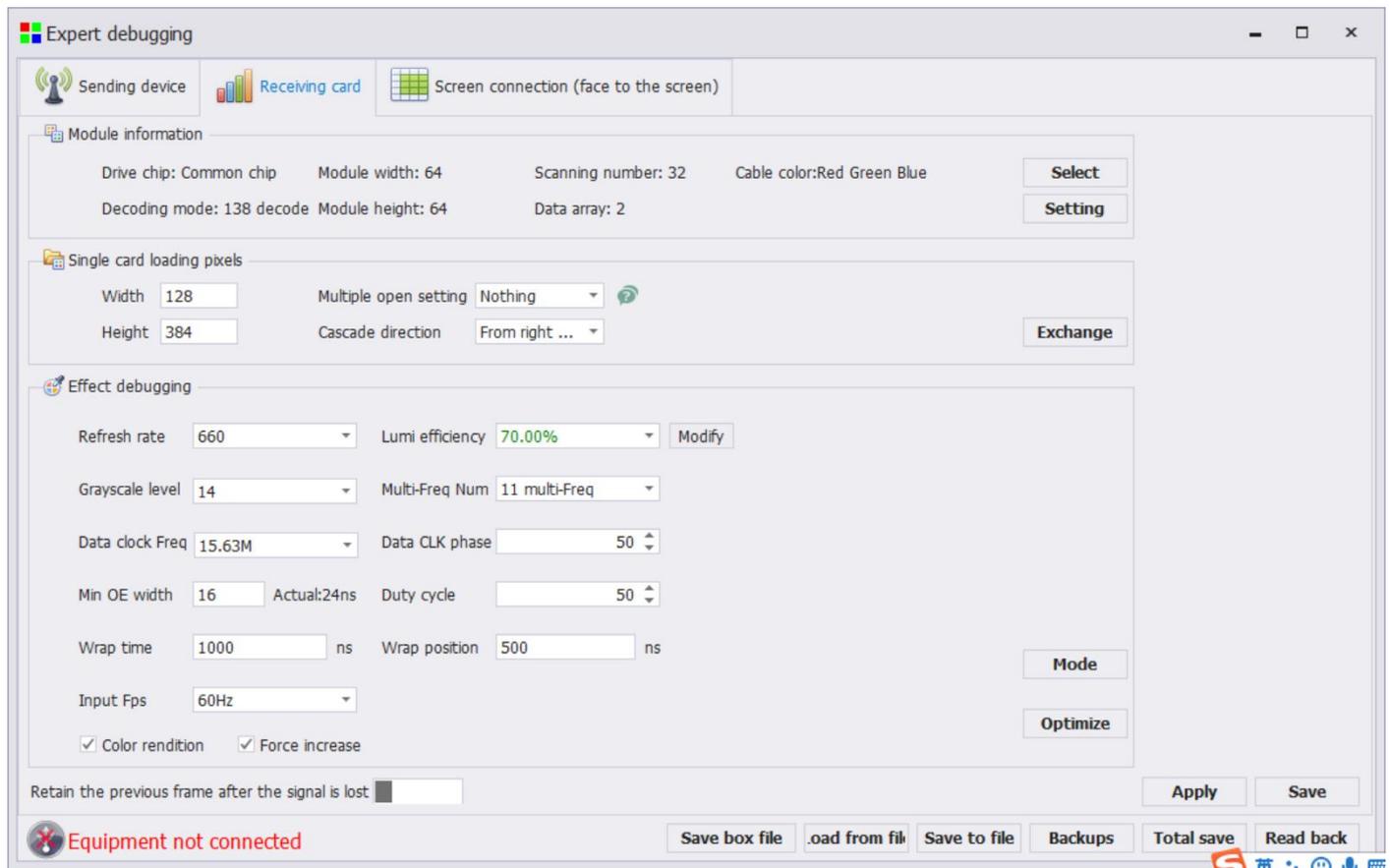
Device selection: The sending device has two parts: the sending card and the network card. A series of two-in-one devices only have screen parameter settings.

Source information: The resolution and frame rate of the current input signal source can be displayed by clicking "refresh".

Input Settings: Position offset for the current signal source.

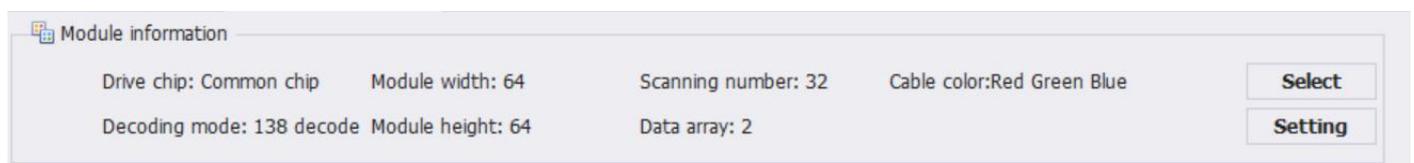
Advanced settings: a single location offset/width, height change for a certain network port of the sending card, each way can be checked for audio and backup switch.

## 4.2.2 receiving card



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

### 4.2.2.1 Module information



**Module width:** The actual width of a single module pixels.

**Module height:** The actual height of a single module.

**Number of data groups:** Information display of the number of data groups of the current module.

**Driver chip:** The information display of the driver chip of the current module.

**Decoding mode:** Information display of current module decoding mode.

**Scan Number:** The number of data scans for the current module.

**Module selection** ( Step Refer to "4.1.3 Selection of Module Manufacturers and Types" )

**Intelligent settings** ( Step refer to "4.1.3.1 Intelligent Settings Add Module" )

### 4.2.2.2 Single card loading

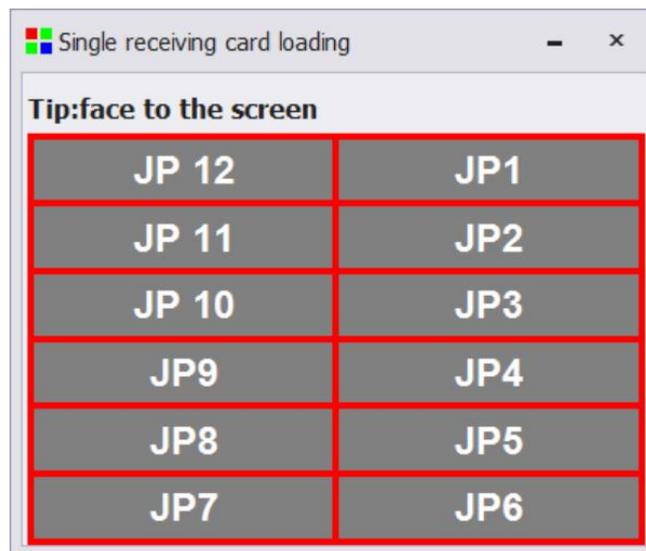


The single card information part contains the single card information of the receiving card. It can adjust the information of the receiving card, multi-open mode, module cascade direction and data group exchange through this part.

**Data Group Exchange:** (Step Reference 4.1.4.1 Advanced Settings)

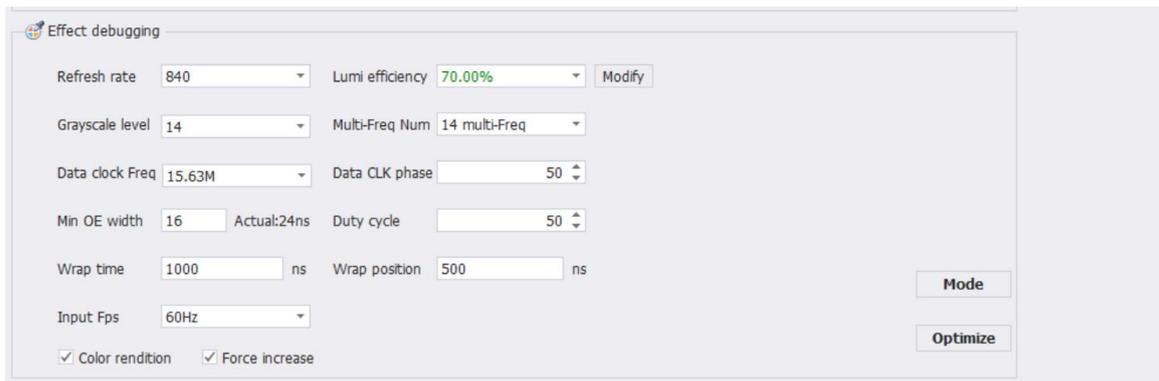
**Cascade direction:** Modify the direction of module data entry。

**Multiple open setting:**The right help sign is displayed graphically to help users understand the multiple wiring rules. As shown in the following figure, more devices are set up, the front view screen is set up, the JP1 of the receiving card is connected to the upper right corner module, and the JP12 is connected to the upper left corner module.

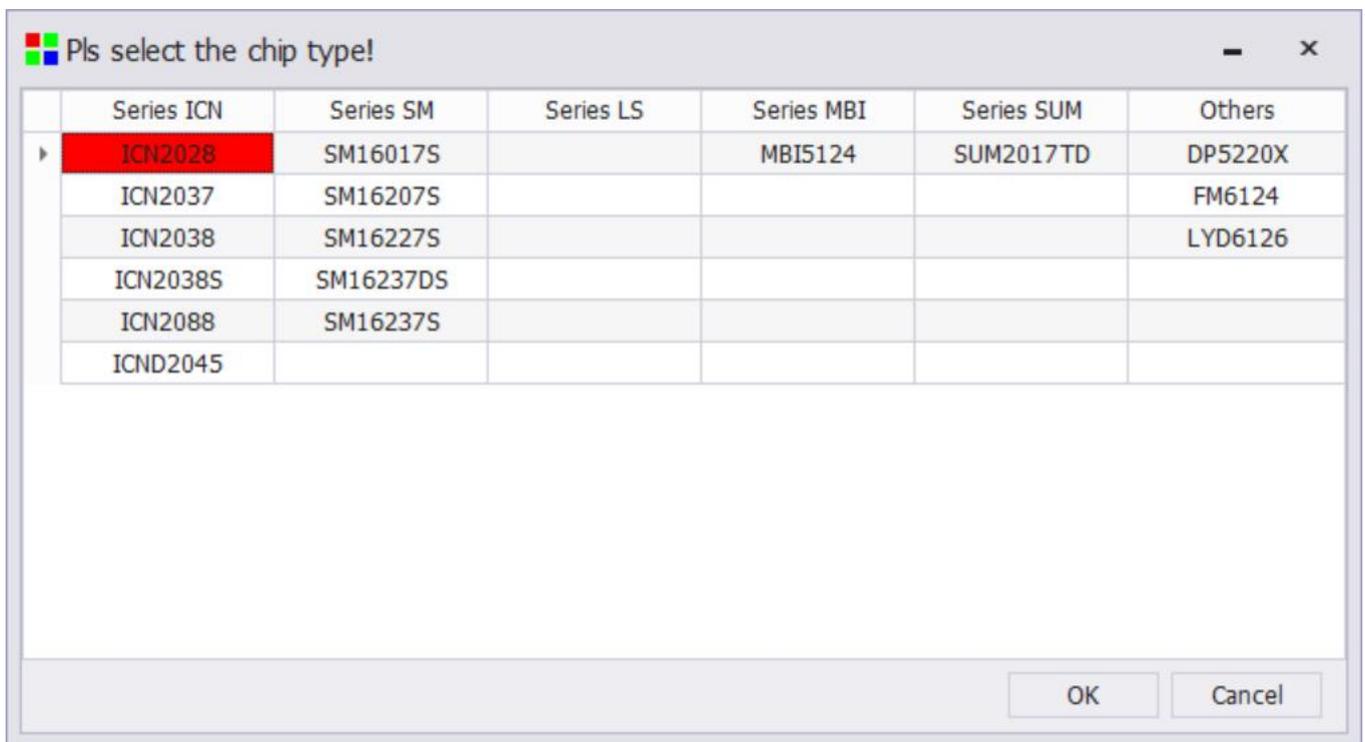


### 4.2.2.3Effect debugging

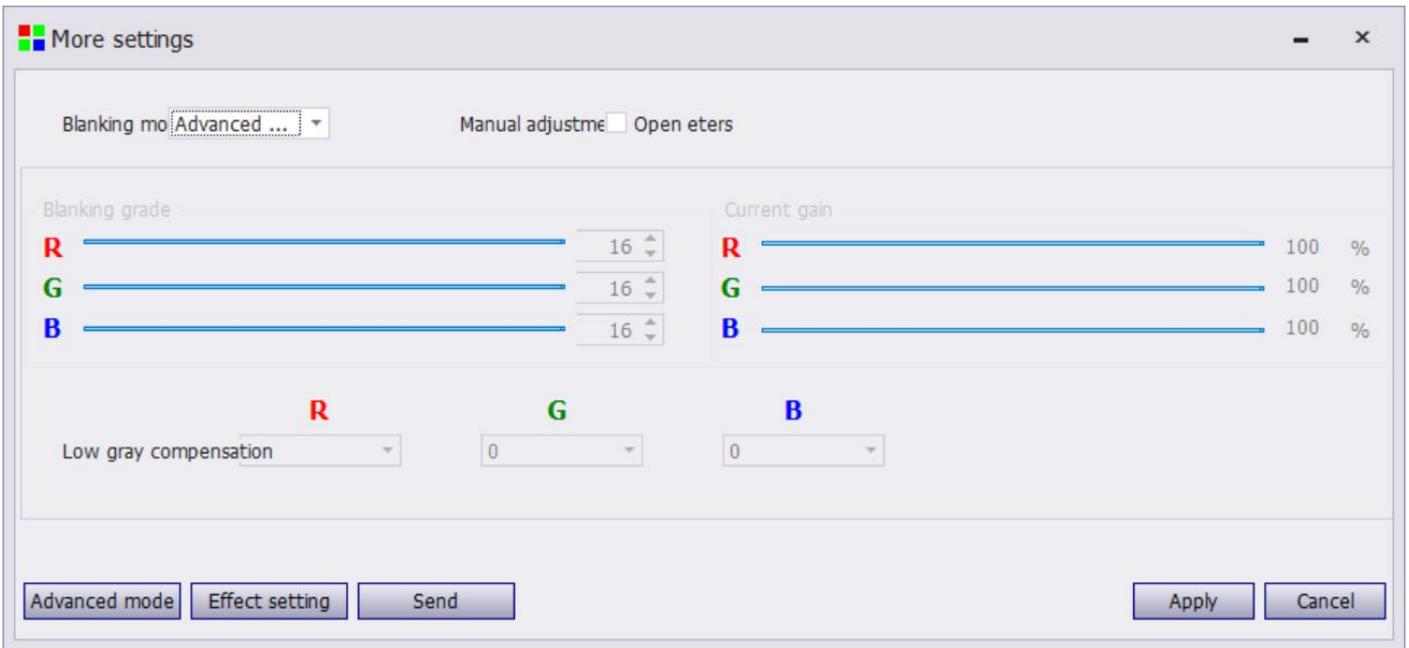
Effect debugging is used to debug the overall screen display effect. The screen display effect can be adjusted by adjusting output gray level, frequency doubling and data clock frequency.



**Mode Selection:** Mode selection is used to display screen effects using recommended configurations for dual latches and PWM chips. The first step is to select the chip type.



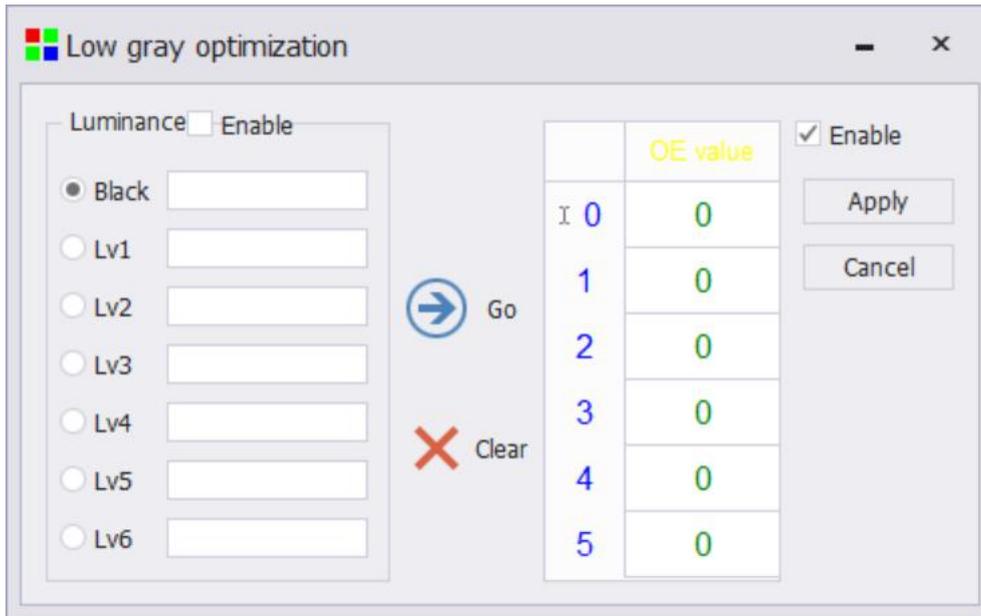
The second step is to adjust the registers. Generally speaking, there is no need to adjust them.



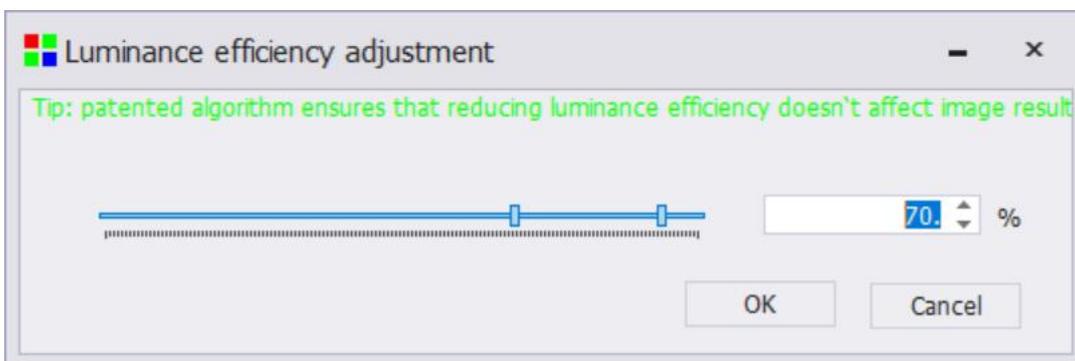
The third step is to click on "Effect Settings", select the effect settings 1, 2, 3, 4, and then click "Determine" to complete the application of the preset effect settings, and select the better state of the screen effect.



**Low-gray optimization:** Used to optimize the low-gray effect of screen display, check the enablement, set the level of low-gray brightness measurement, click on "calculation" and "application" to complete the use of low-gray optimization. This adjustment needs to be used according to the actual situation of the site, and does not need to be adjusted under the conventional mode.

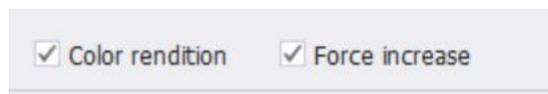


**Brightness adjustment:** This function uses a patent algorithm to ensure that reducing the screen brightness efficiency will not affect the image display effect. The left slider is the adjustment slider, which is used to reduce the system brightness efficiency adjustment, and the right side will have numerical changes. The right slider is the maximum luminance efficiency of the system, following the change of system configuration parameters. After adjustment, real-time display, click "OK" to complete.



**Color Restoration and Primary Ashing:** Adjust the display effect of the current screen, check it and send it to the receiving card.

Color restoration can effectively eliminate reddish facial appearance and make skin color more real. First-level gray, improve the effect of low-gray display, from the first-level gray start gray display.



#### 4.2.2.4 Keep the last frame

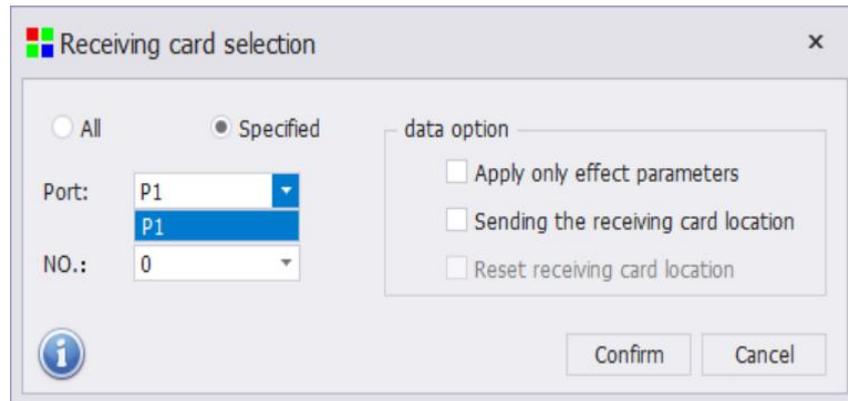
The final frame is reserved by default in the receiving card manufacturer program. If it is not needed, it can be adjusted by slider. The last frame or black screen can be reserved when the receiving card has no signal.

Retain the previous frame after the signal is lost

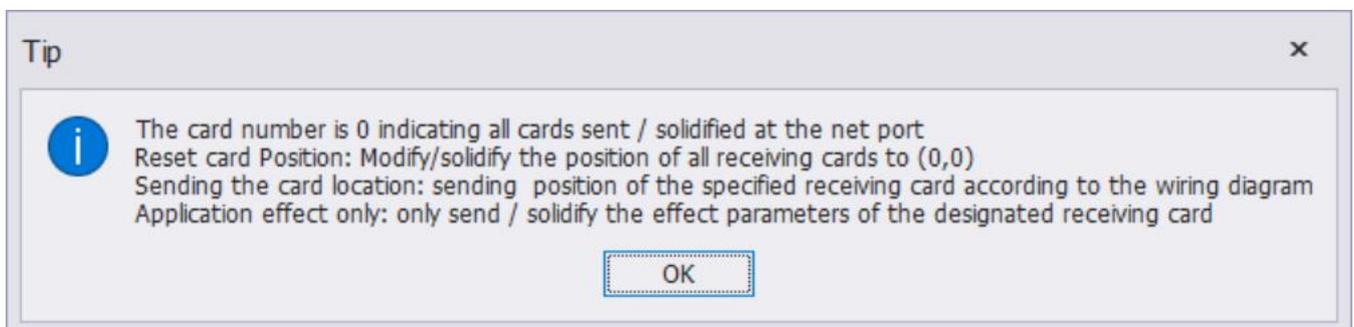
Blank screen if no signal

### 4.2.2.5 Receiving Card Data Sending

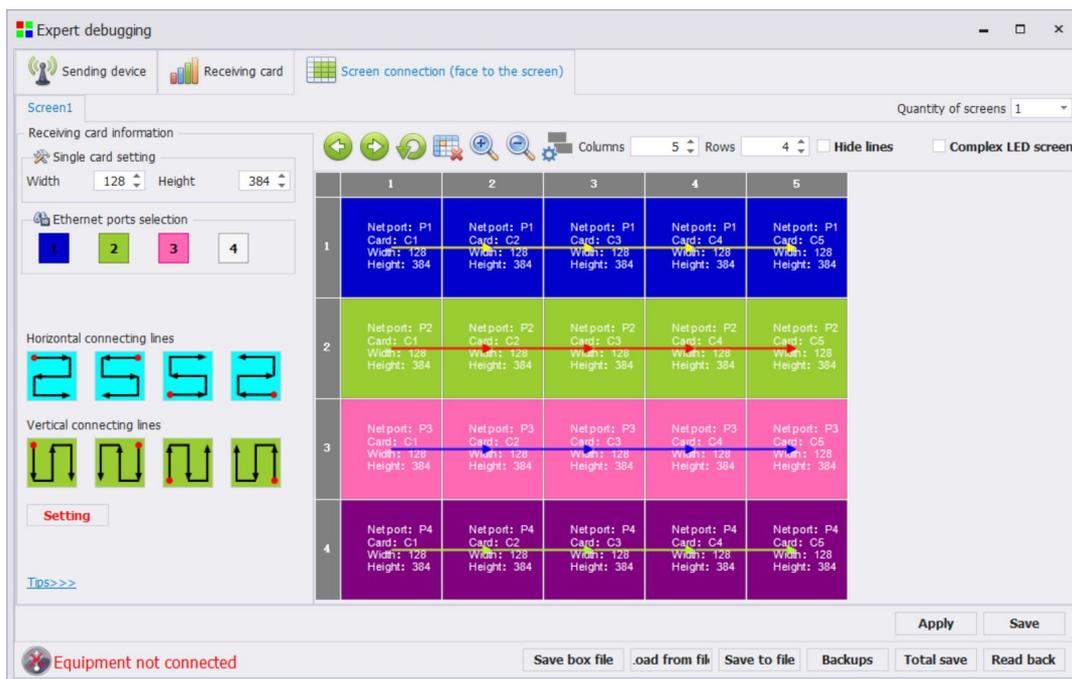
Receiving card data transmission, click on the application, you can complete all the data application of receiving card, right-click on the "application" button, you can enter the detailed sending data page, as shown below.



Select all receiving cards or designated receiving cards, network slogans are identified by P1, P2, P3, P4, 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 number is sorted according to the direction of the signal. The following picture is a reminder.



## 4.2.3 Screen connection



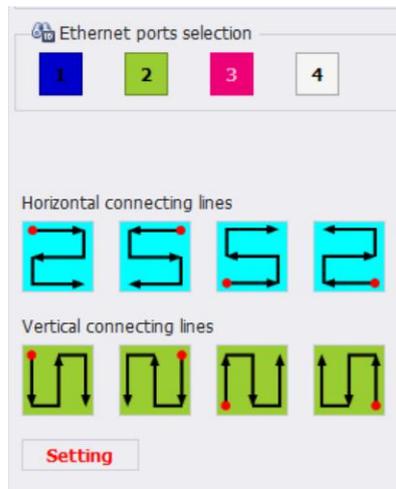
Display screen connection is used to connect the debugged single receiving card into a whole through a certain series of lines, so as to achieve the effect of continuous screen display.

### 4.2.3.1 Receiving Card Information



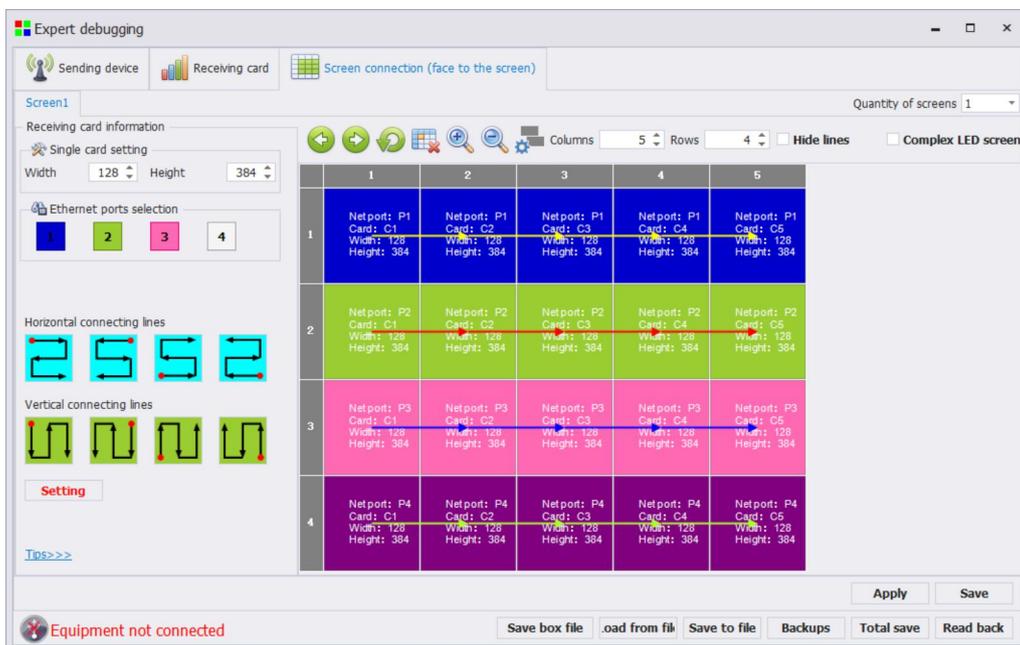
Receiving card information includes receiving card load information, and this window is automatically consistent with receiving card page load. After the screen is wired, if you need to change the receiving card load, you can modify it at this location.

### 4.2.3.2 Quick connection



By choosing the network slogan, the fast serial connection of all the receiving cards on the screen can be completed by choosing the fast serial mode. At the same time, the intelligent serial connection can be used to complete the screen connection.

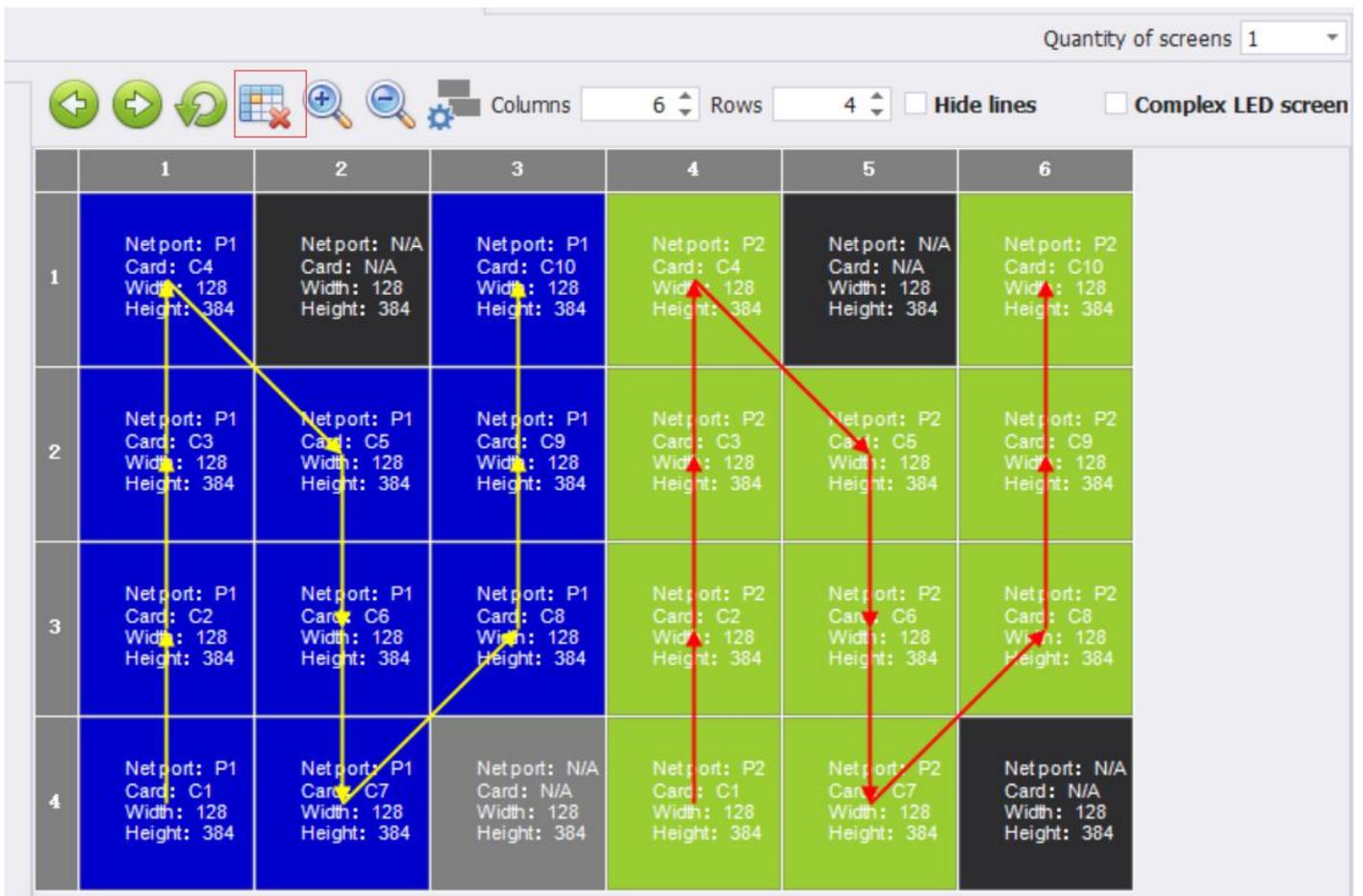
### 4.2.3.3 Standard Screen Connection



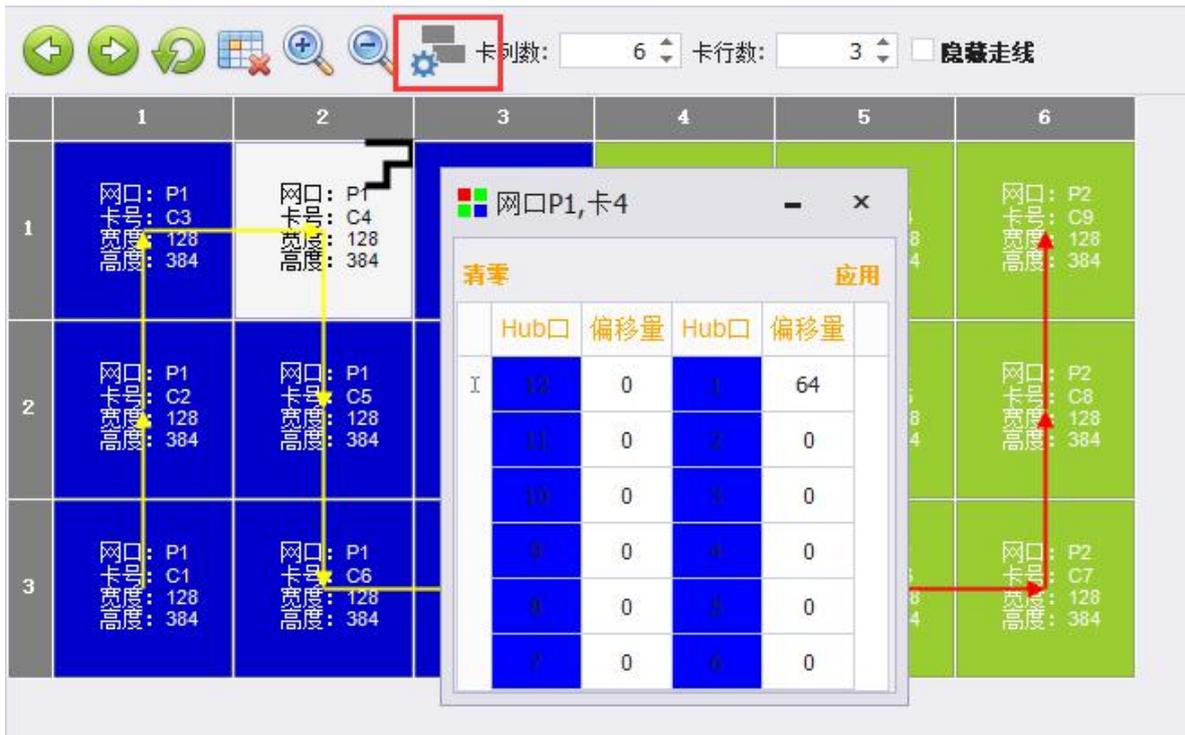
According to the actual situation of the screen, the number of rows and columns of the receiving card is set, and then the network slogan is selected for the serial connection.

There are three ways of string: click the left mouse button, string the direction key, hold the left mouse button and drag the receiving card to complete the string.

**Leave space:**After the normal string, click the blank button, the button in the red box below, you can complete the blank setting.

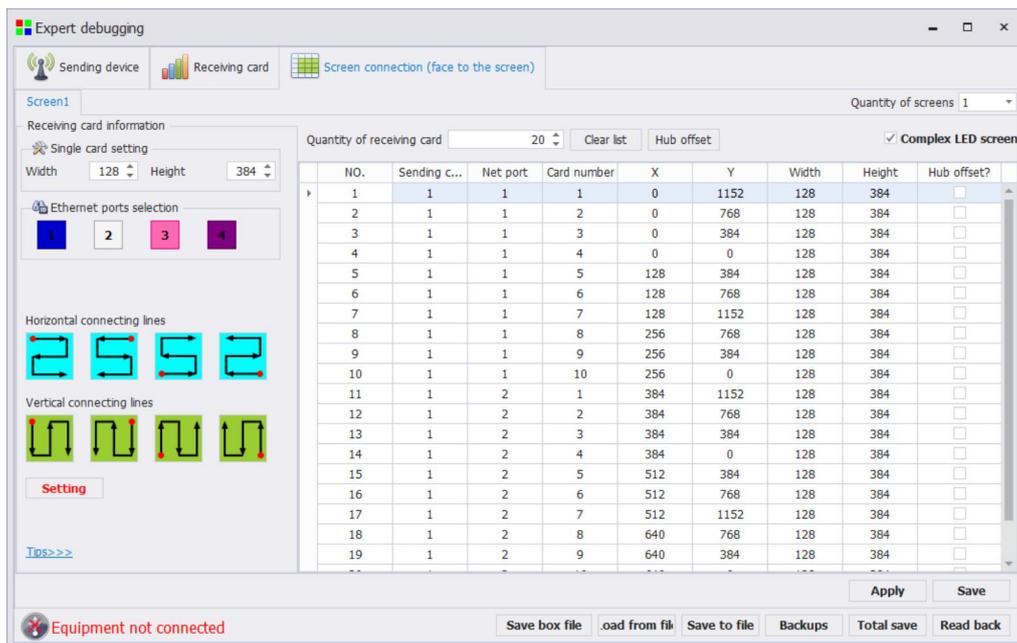


**HUB offset:** In the connection of the standard display screen, first select the receiving card that needs position offset, then click on the HUB offset button of the tool menu. In the red box position in the following figure, set the HUB port offset in the pop-up box. After clicking on "Application", the original receiving card position appears a broken line mark. After the HUB offset interface "clears zero", the page is closed and the broken line disappears.



#### 4.2.3.4 Complex Display Screen Connection

Complex screen connection page, switch from standard screen to complex screen, data will be imported automatically. By setting the number of receiving cards, and modifying the column starting point, row starting point, width, height of each receiving card, after setting, application, click on the solidified screen connection to complete the data transmission of complex screen connection.

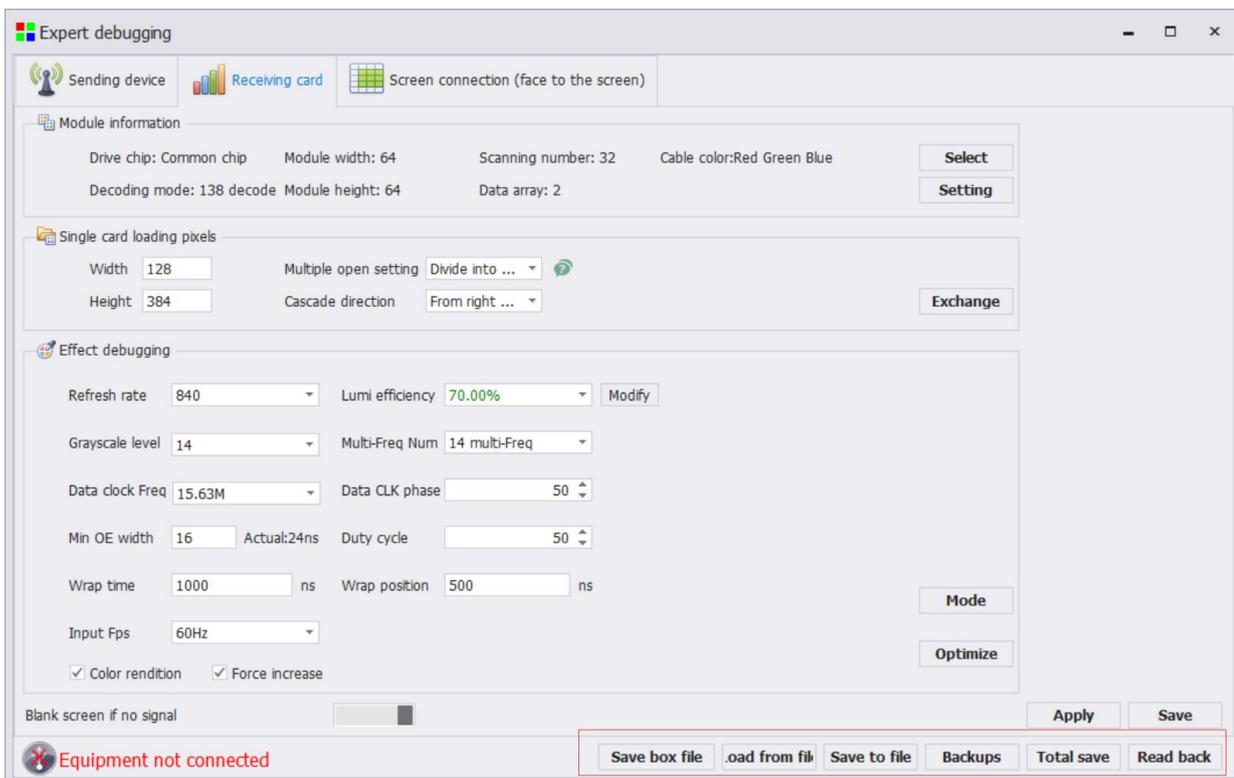


## 4.2.4 Curing parameter

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

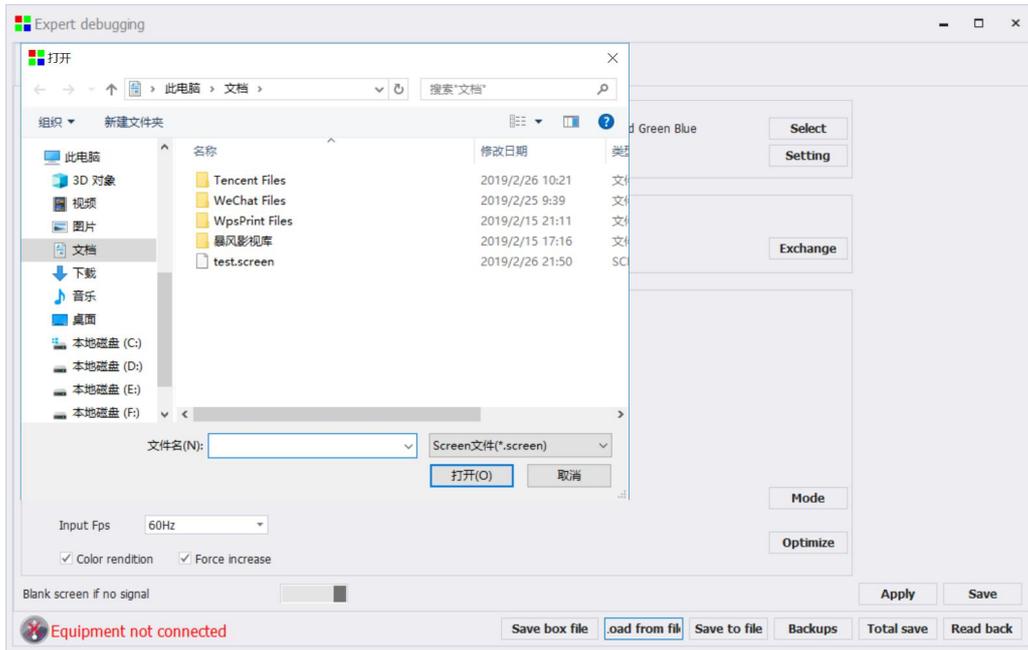
Full solidification: Ensure that the connection parameters of sending card, receiving card and display screen are sent correctly, click on all solidification, and the solidification of control system can be completed quickly.

## 4.2.5 Other parameter processing



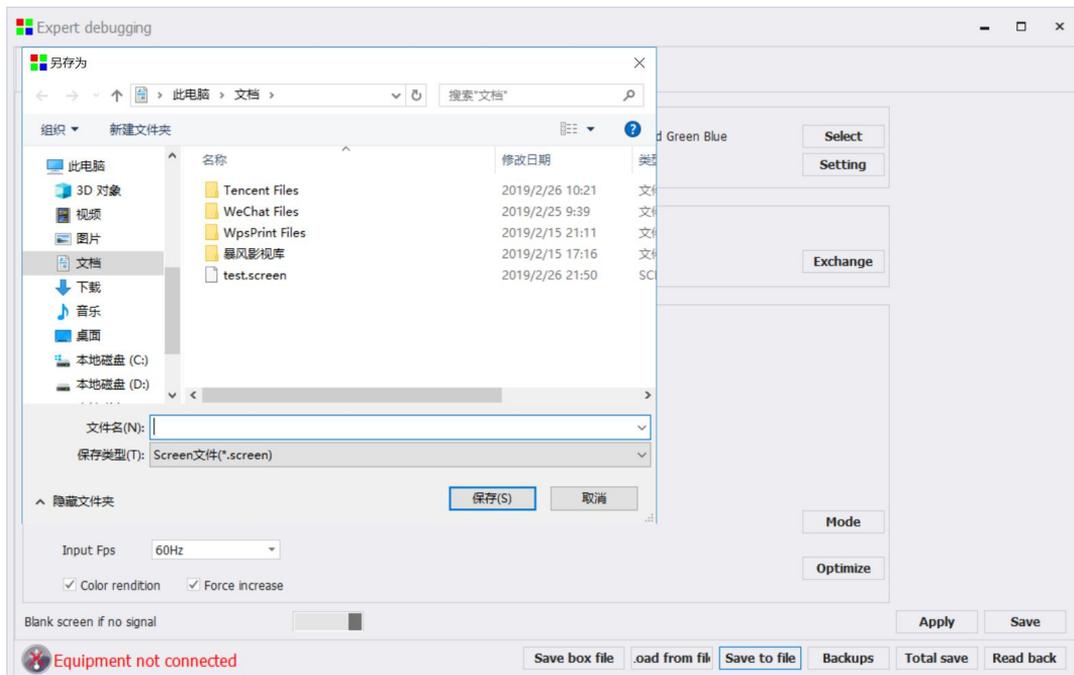
### 4.2.5.1 From file load:

Load saved configuration files



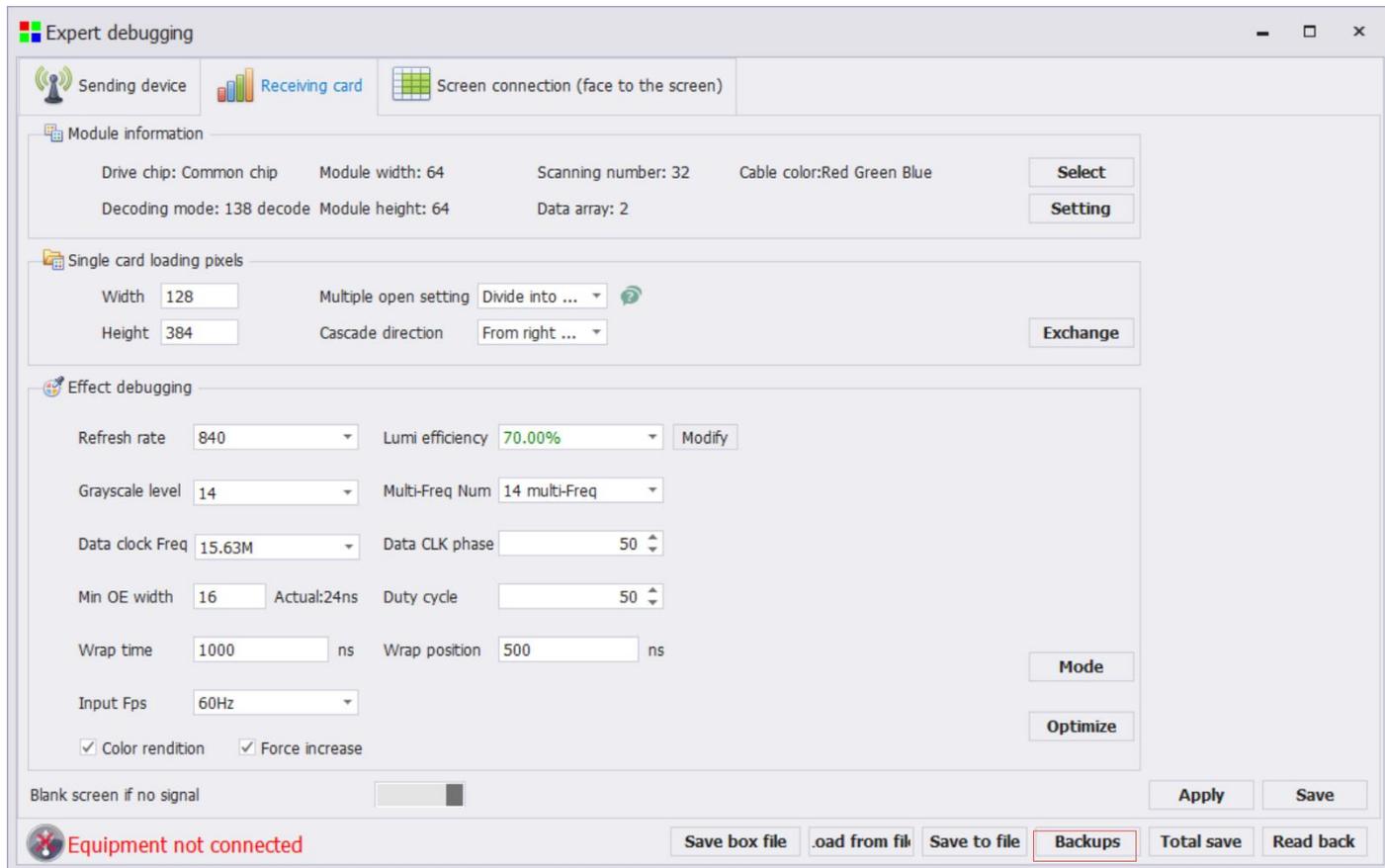
### 4.2.5.2 Save to file

If you want to save the current receiving card/sending card/display connection wiring diagram, you can choose "save to file" to save to the local computer, convenient for later maintenance at any time call.



### 4.2.5.3 Backup (provided it is solidified):

Each receiving card has parameters of sending card/receiving card, and each sending card has parameters of sending card/receiving card.



### 4.2.5.6 Read back

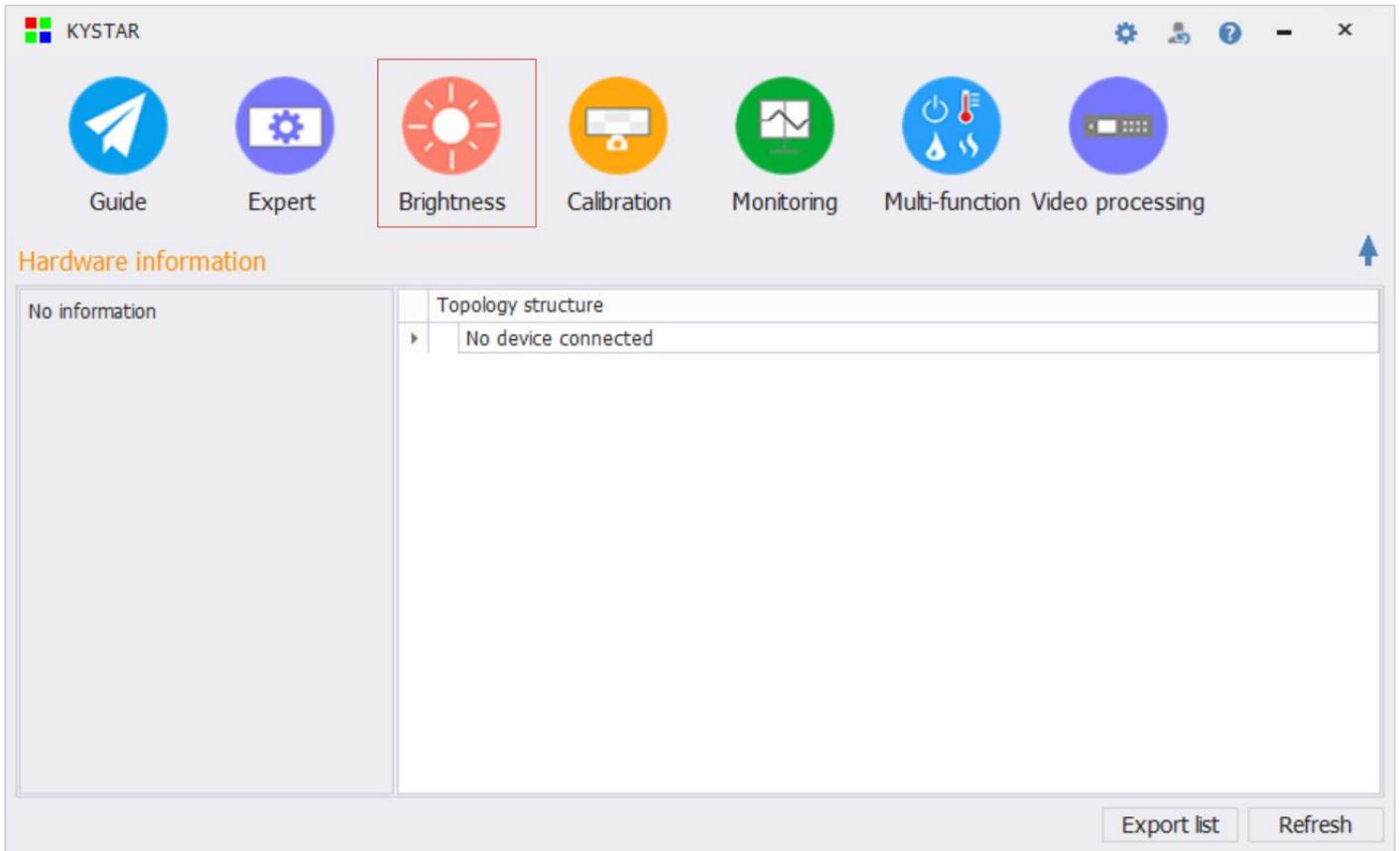
After successfully connecting the device, you can read back the connection parameters of the last solidified sending/receiving card/display screen.

It can also be read back through the expert screen adjustment page.

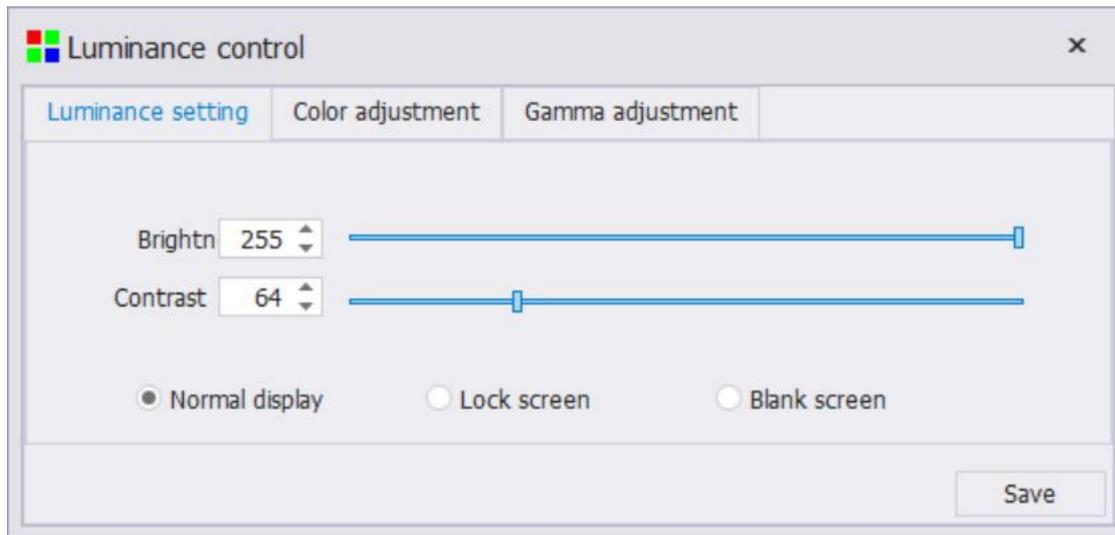
## 5 Brightness control:

The brightness control page contains brightness settings, color temperature adjustments and Gamma adjustments.

Click on the brightness control in the main interface to enter the detailed settings page of brightness control.



## 5.1 Brightness setting



The brightness setting includes brightness setting, contrast adjustment and screen display.

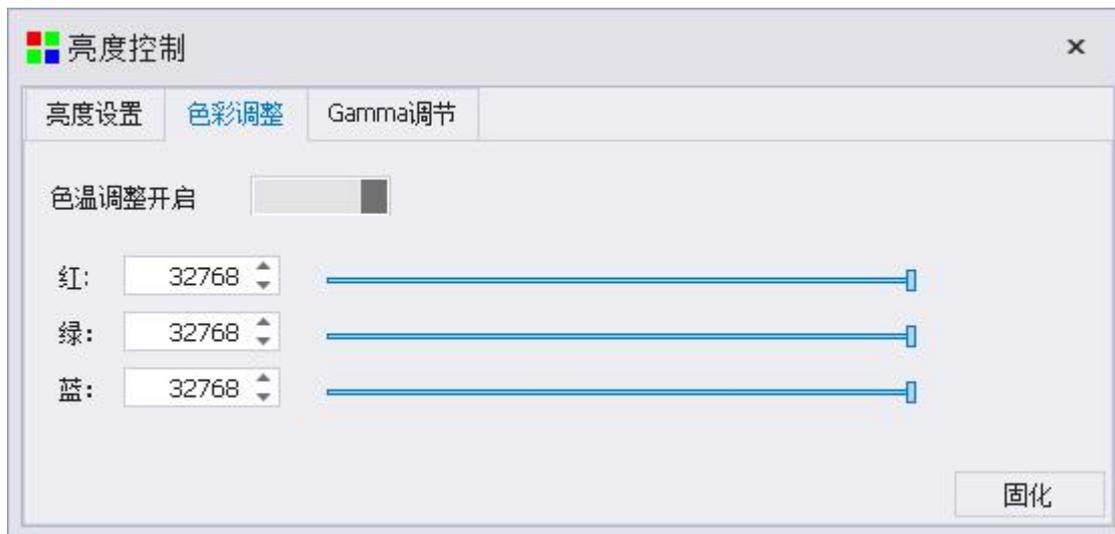
The range of brightness adjustment is from 0 to 255, and the default value is 255.

Contrast adjustments range from 1 to 255, with a default value of 64.

The screen display includes normal display, lock screen and black screen.

Note: After setting the brightness or contrast, you need to click "curing".

## 5.2 Color temperature regulation



The color temperature regulation can be divided into three separate adjustments: red, green and blue.

The adjusting range is from 0 to 32768, and the default value is 32768.

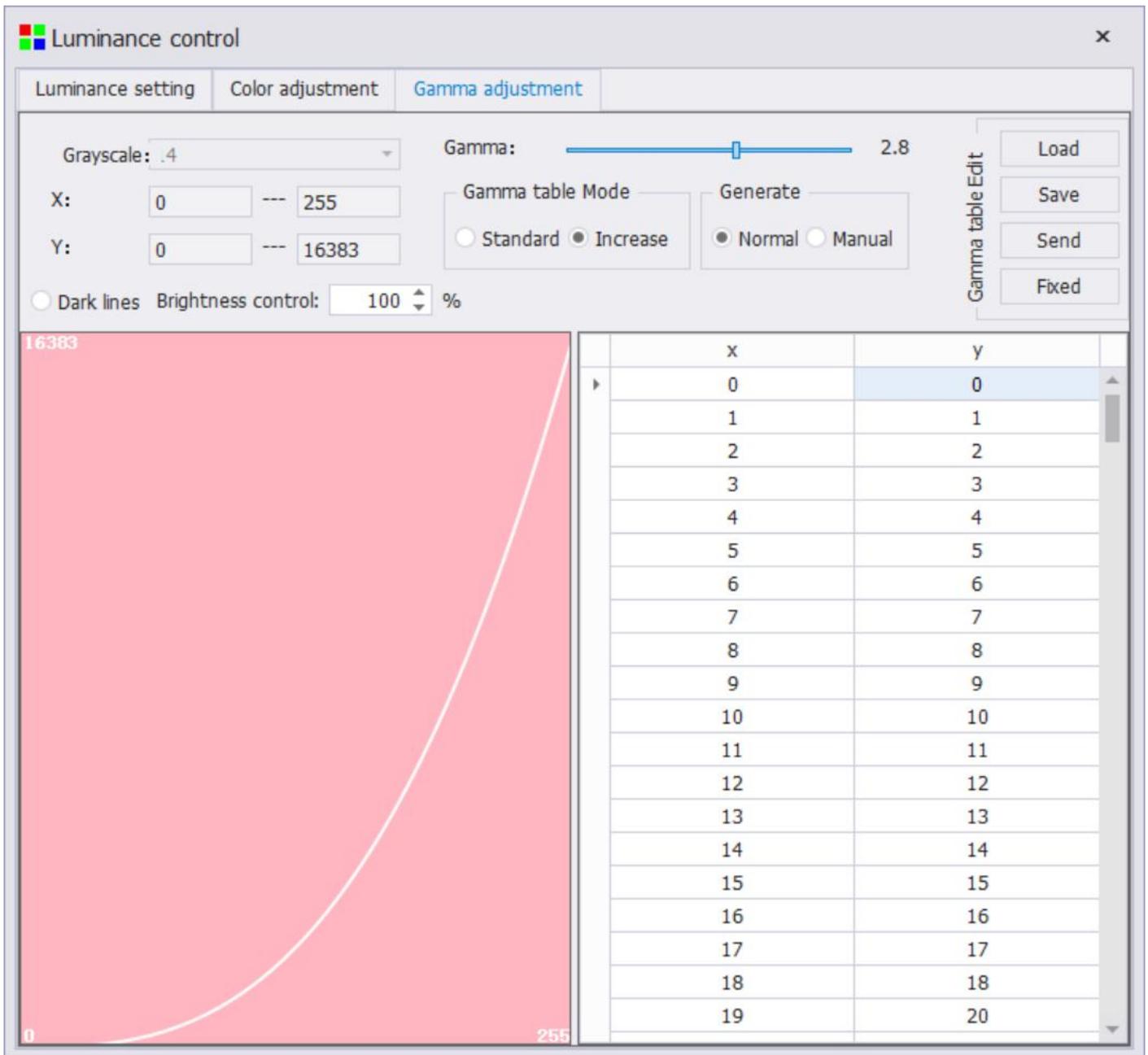
Note: Color temperature regulation is effective.

## 5.3 Gamma adjust

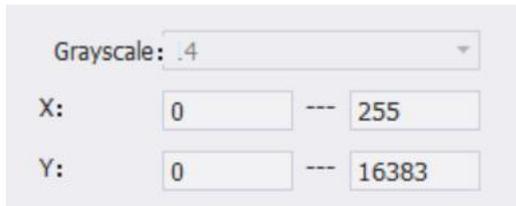
Gamma regulation mainly includes two parts: Gamma value and Gamma curve.

Modifying some values in gamma value table can improve the uniformity of gray level of screen display.

1、 First click on the brightness control to select gamma adjustment. The following picture will appear.

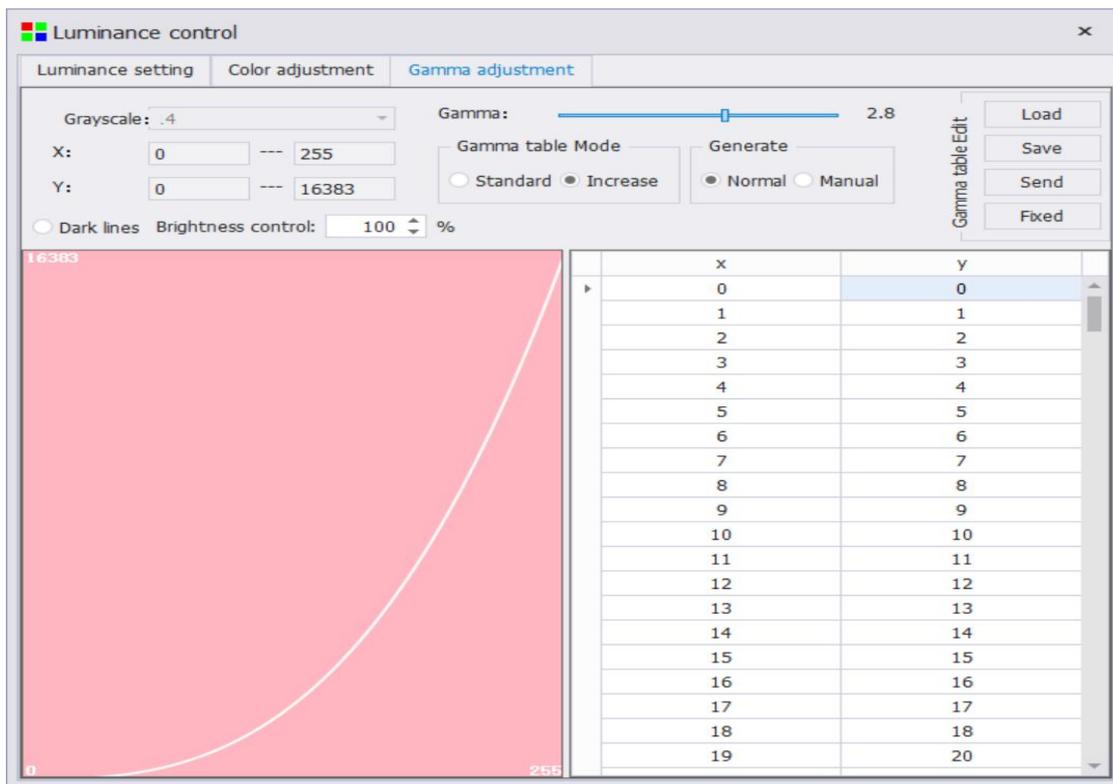


2、 The X-axis represents 256 brightness values of the signal source (optional, not necessarily 256), and the Y-axis represents the PWM gray value of the LED. Generally, the X-axis ranges from 0 to 255, while the Y-axis ranges from 0 to 65535 (the specific number depends on the gray level in the debugging of the receiving card). As shown below, the gray level is 14, ranging from 0 to 16383.



### 3、 Gamma table adjustment

Modifying the gray value of Y region can adjust the gray value of signal source brightness corresponding to display. Adjust the "Send" button, and then solidify the Gamma value will be adjusted to apply to the screen display.



### 5、 Loading and saving

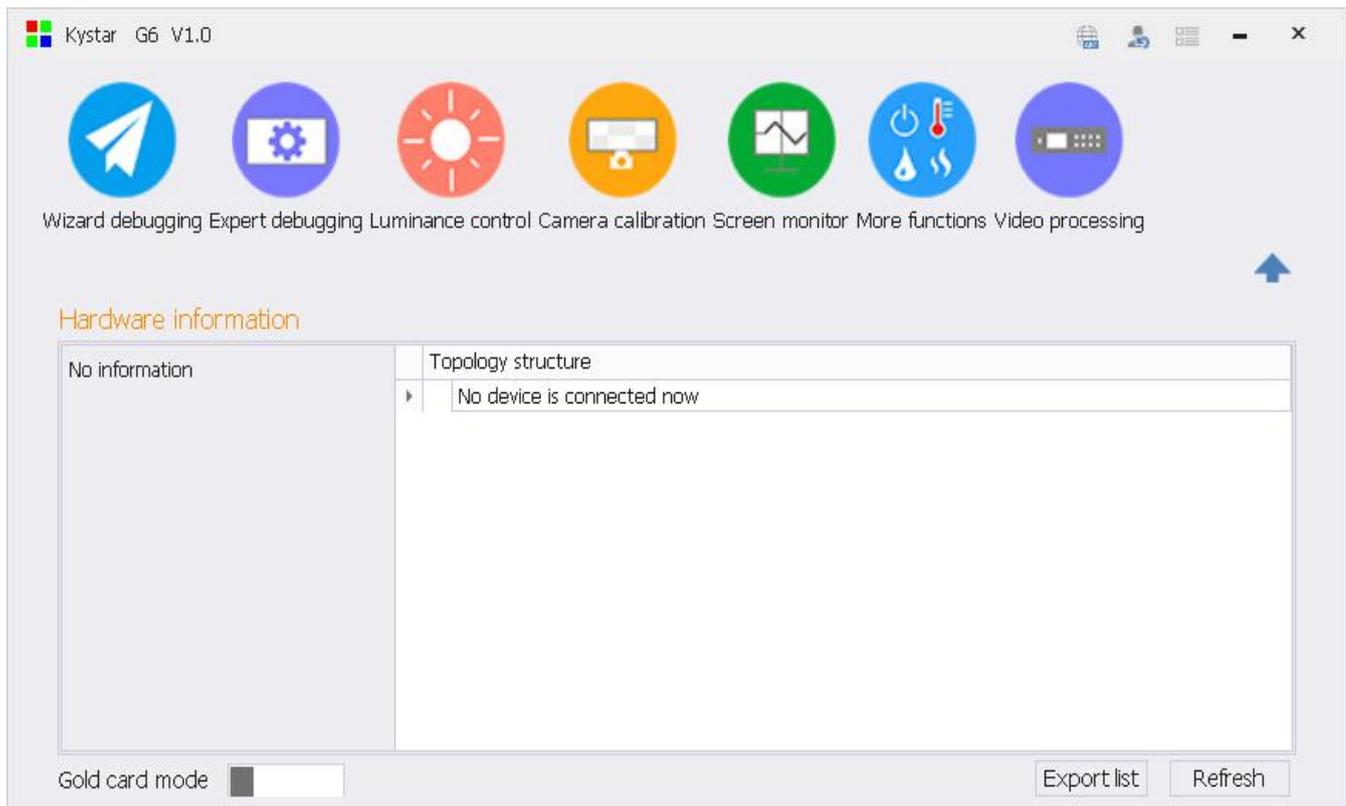
The revised Gamma table values can be saved as files, and the previously saved files can also be loaded into the software for use.

# 4.6 multi-function card

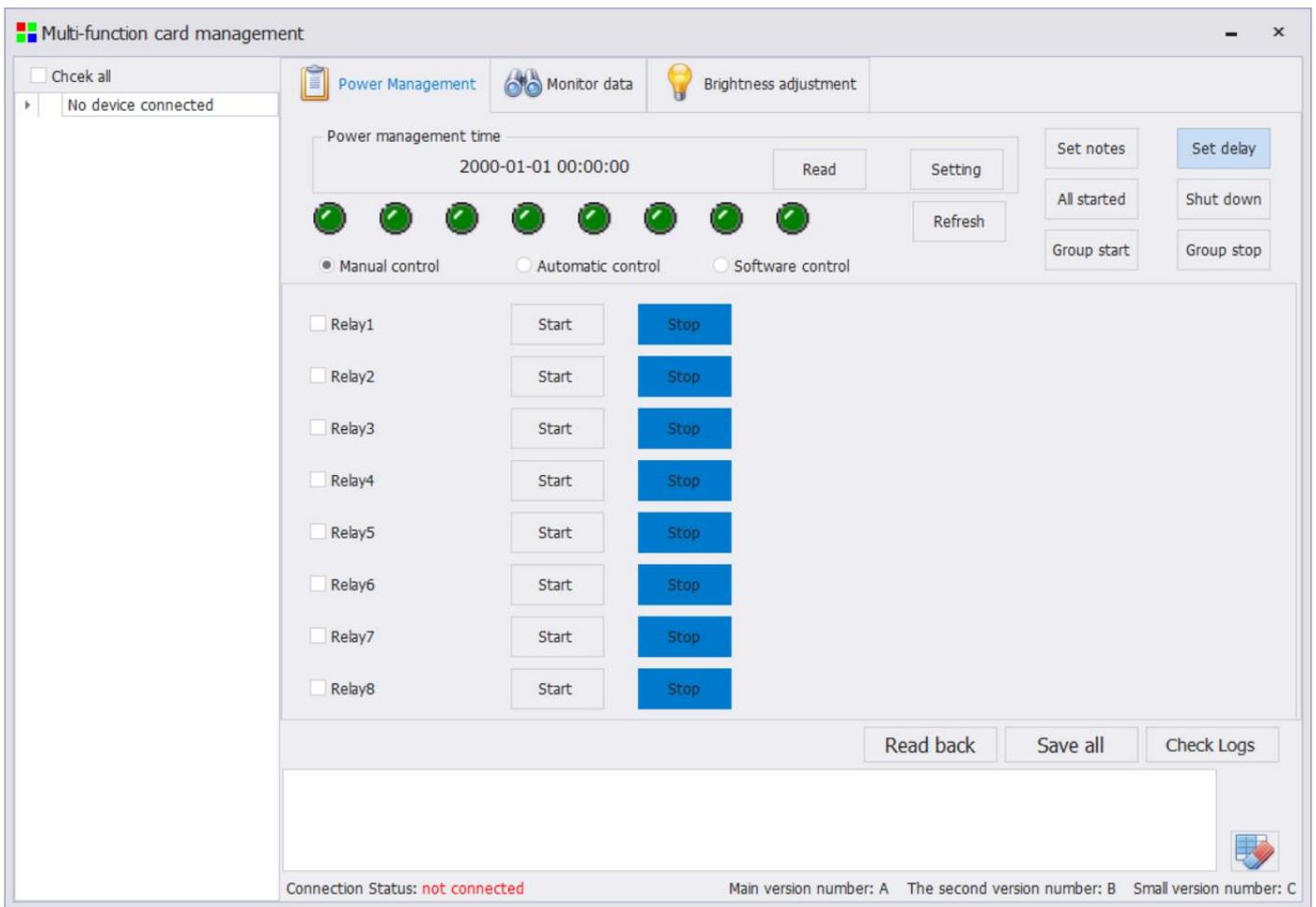
## 6.1 brief introduction

The multi-function card can realize power management, data monitoring and brightness control.

Click on the "multi-function card" in the main interface to enter the multi-function card settings page. If the multi-function card is not detected, the system will pop up the window prompt.



## 6.2 Power management



In this interface, the eight-way relay of multi-function card can be controlled manually, automatically and by software.

**Setting and reading:**Click the "Settings" button to write the local time of the computer to the multi-function card FPGA.

Click the "Read" button to read back the time in the multi-function card, more precise timing switch

**Set Notes:**The name of each relay can be labeled. For example, the first relay is "large screen power supply" and the second relay is "fan", which facilitates the management and control of the power supply.

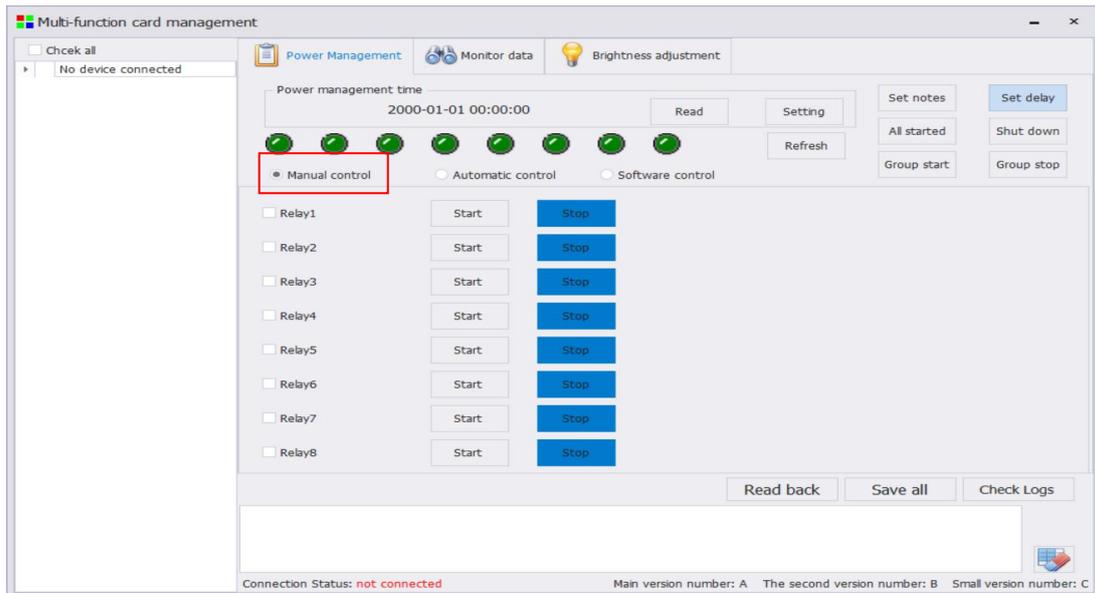
**Start-up delay:**Set the delay of starting time of relay by default of 1 second. The delay can be modified by oneself, so that there is a certain time interval between click-on and relay connection.

**All start-up:**All 8-way relays are placed in the open state, so the relay switch can be controlled uniformly, which is convenient and fast.

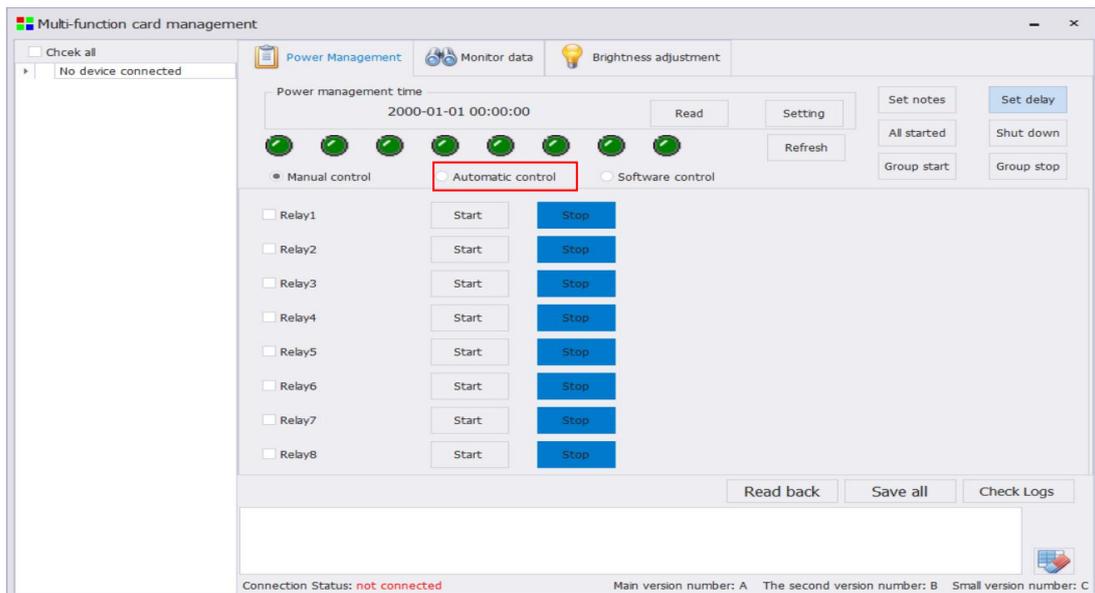
**Urgent cessation:**Close 8-way relay at the same time with one key to deal with emergencies easily.

**Manual control:**8-way relay has corresponding "start" and "stop" buttons, which can control each relay

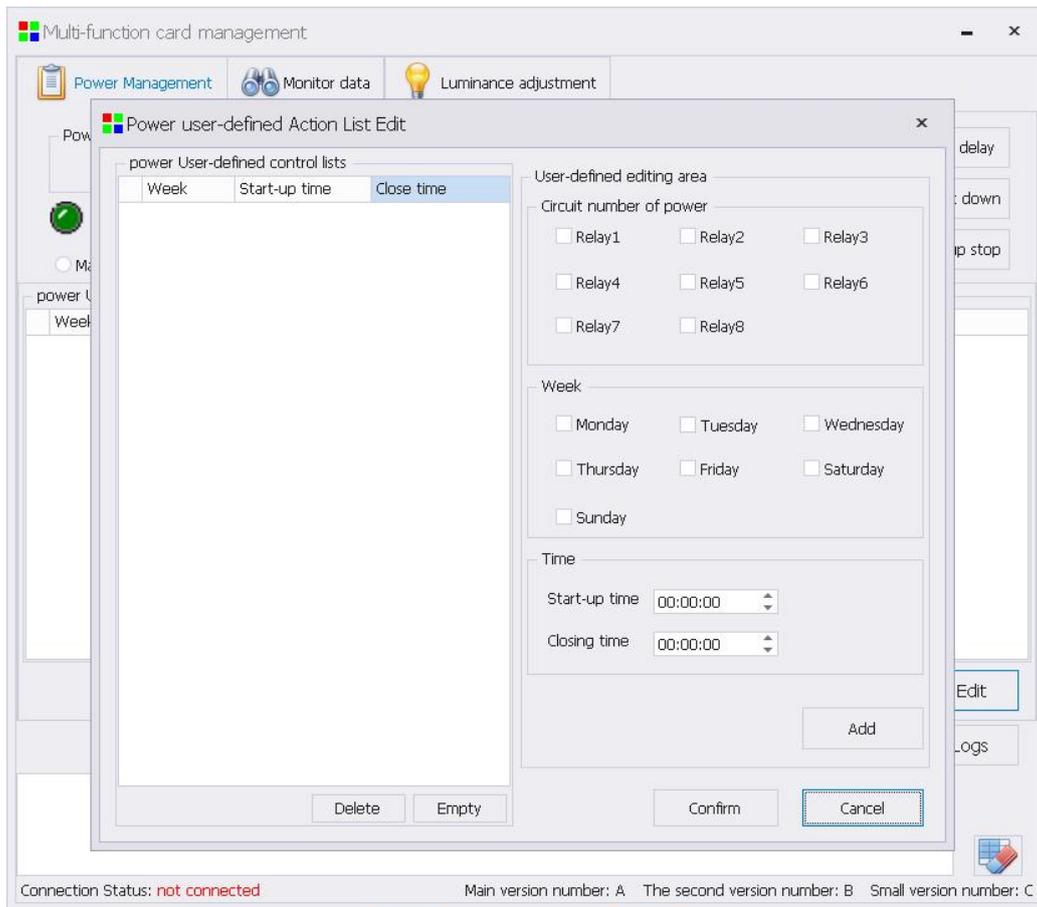
individually and conveniently.



**Auto-Control:** Under the power automatic control interface, the start and stop time can be set for each relay, which is valid on the same day. Click the send button and send it to the multi-function card to realize offline control.



**Software control:** Click Edit to pop up the dialog box "Power Custom Operation List Edit"



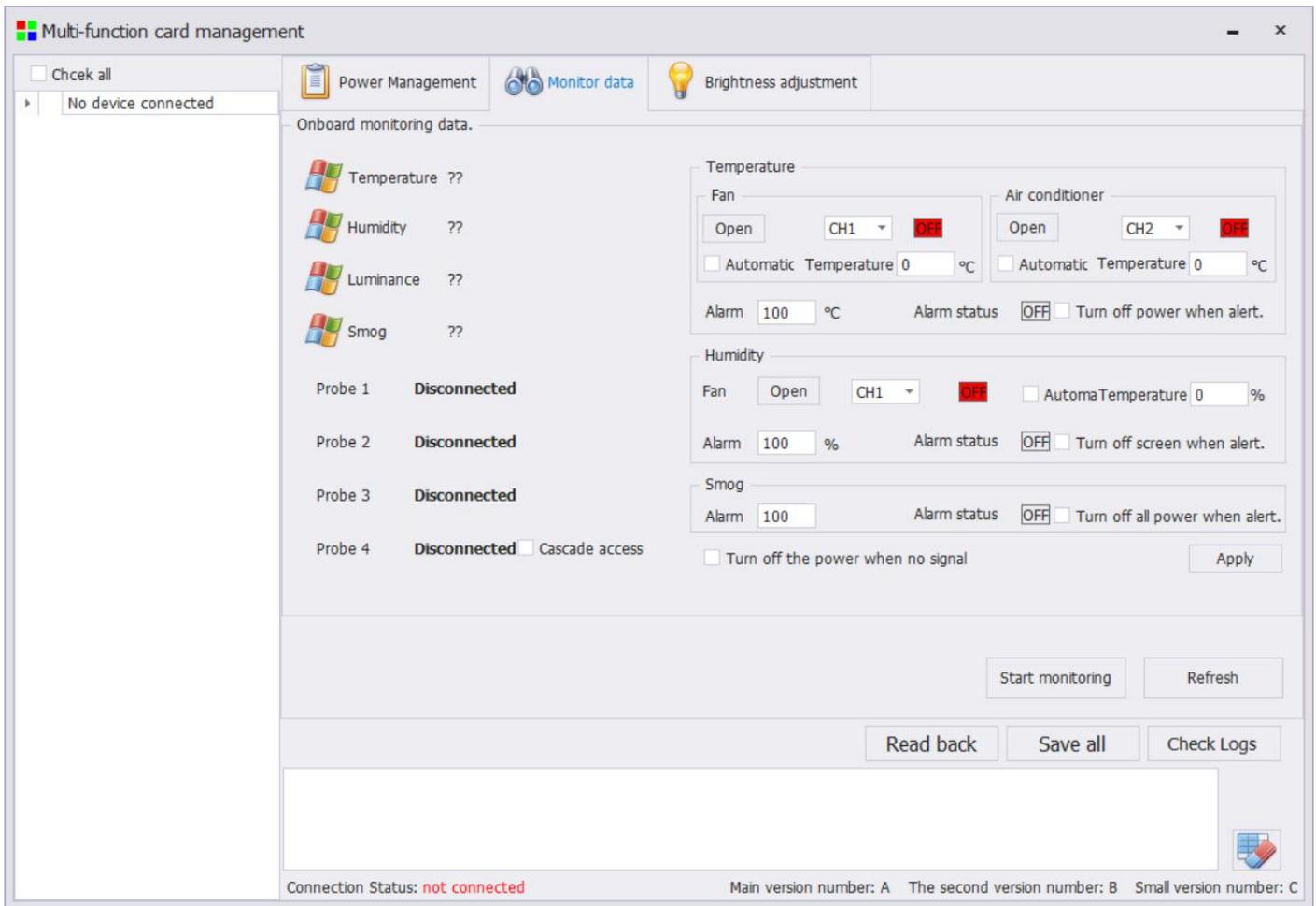
### "Custom Editorial Area"

- 1、 "Power Circuit Number" chooses to control the number of power supply routes, which can be checked by single or multiple routes.
- 2、 "Week" is a cycle of seven days a week. Check the opening and closing days of the week (seven days a day).
- 3、 "Time" sets a specific time for the power supply to turn on and off.

After editing, click Add and the specific information will be displayed in the left "Power Custom Control List". The "Delete" and "Clean" buttons below can operate on the added information.

Click "OK" to complete software control editing

## 6.3 Monitoring data



"On-board monitoring data" can monitor the temperature, humidity, brightness and smoke of the environment in real time.

The four-way probe is an adaptive identification probe interface.

Check to enable the cascade port to realize the unified use of multi-card cascade.

Fan - Select the relay corresponding to the control fan, such as CH1; click the button "Open" to manually open the switch of relay 1, ON/OFF indicates the state of the relay on/off. Check the automatic control and set the opening temperature. The fan switch can be automatically controlled by the temperature sensor reading back.

Air conditioning - select the relay that controls the air conditioning, such as CH2; click the button to "turn on" to manually turn on the switch of relay 2. ON/OFF indicates the state of relay opening/closing. Check the automatic control, and set the opening temperature, through the temperature sensor read back the temperature automatic control air conditioning switch for cooling.

Set the temperature alarm value, and check "turn off the large screen power supply when the alarm value is reached", when the temperature reaches the alarm value, automatically turn off the large screen power supply, the software pops up the alarm dialog box and emits sound.

Humidity - Select the relay corresponding to the control fan, such as CH1; click the button "Open" to manually open the switch of relay 1, ON/OFF indicates the state of the relay on/off. Check the automatic control and set the opening humidity. The humidity can be automatically controlled by the fan switch read back by the humidity sensor to remove the humidity. Set the humidity alarm value, and check "Turn off the large screen power supply when the alarm value is reached". When the humidity reaches the alarm value, turn off the large screen power automatically. The software pops up the alarm dialog box and makes a sound.

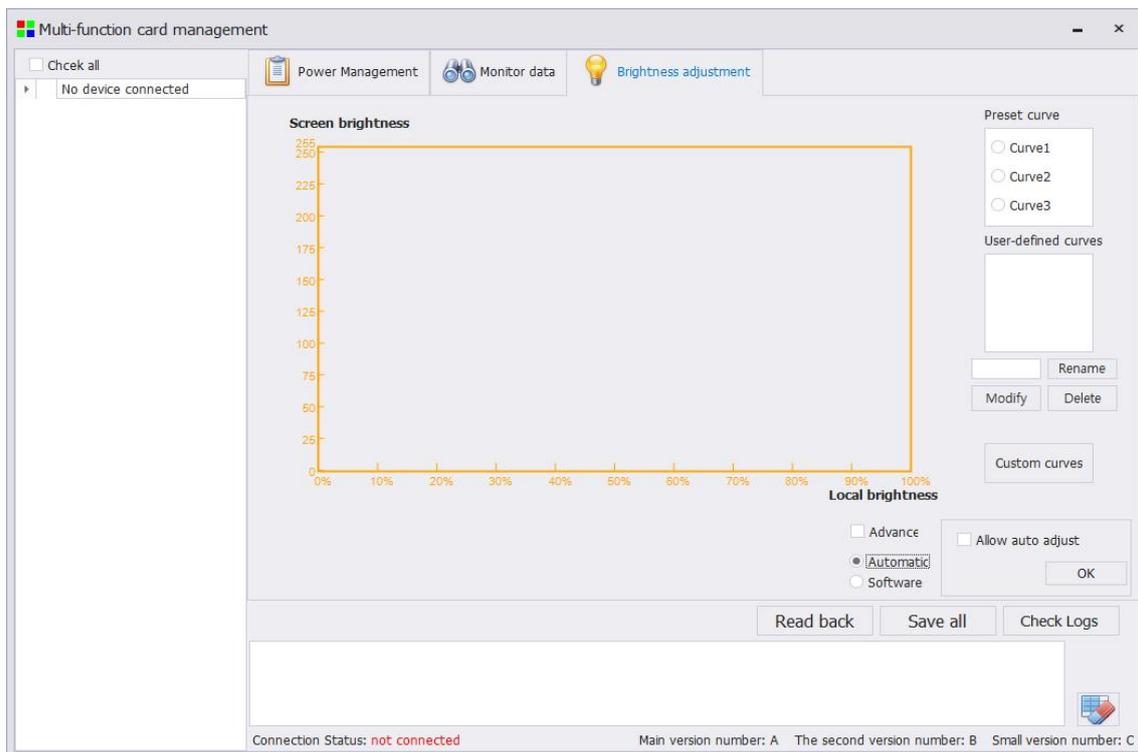
Humidity - Select the relay corresponding to the control fan, such as CH1; Click on Smoke to set the humidity alarm value, and check "Turn off all power supply when alarm" to automatically turn off all power supply when humidity reaches the alarm value. The software pops up the alarm dialog box and emits sound.

Turn off the power when there is no signal - check the option. When there is no signal source, the multi-function card will automatically power off; when the signal is restored, the multi-function card will automatically power on.

After editing, click the application button to monitor the alarm settings.

## 6.4 Brightness adjustment

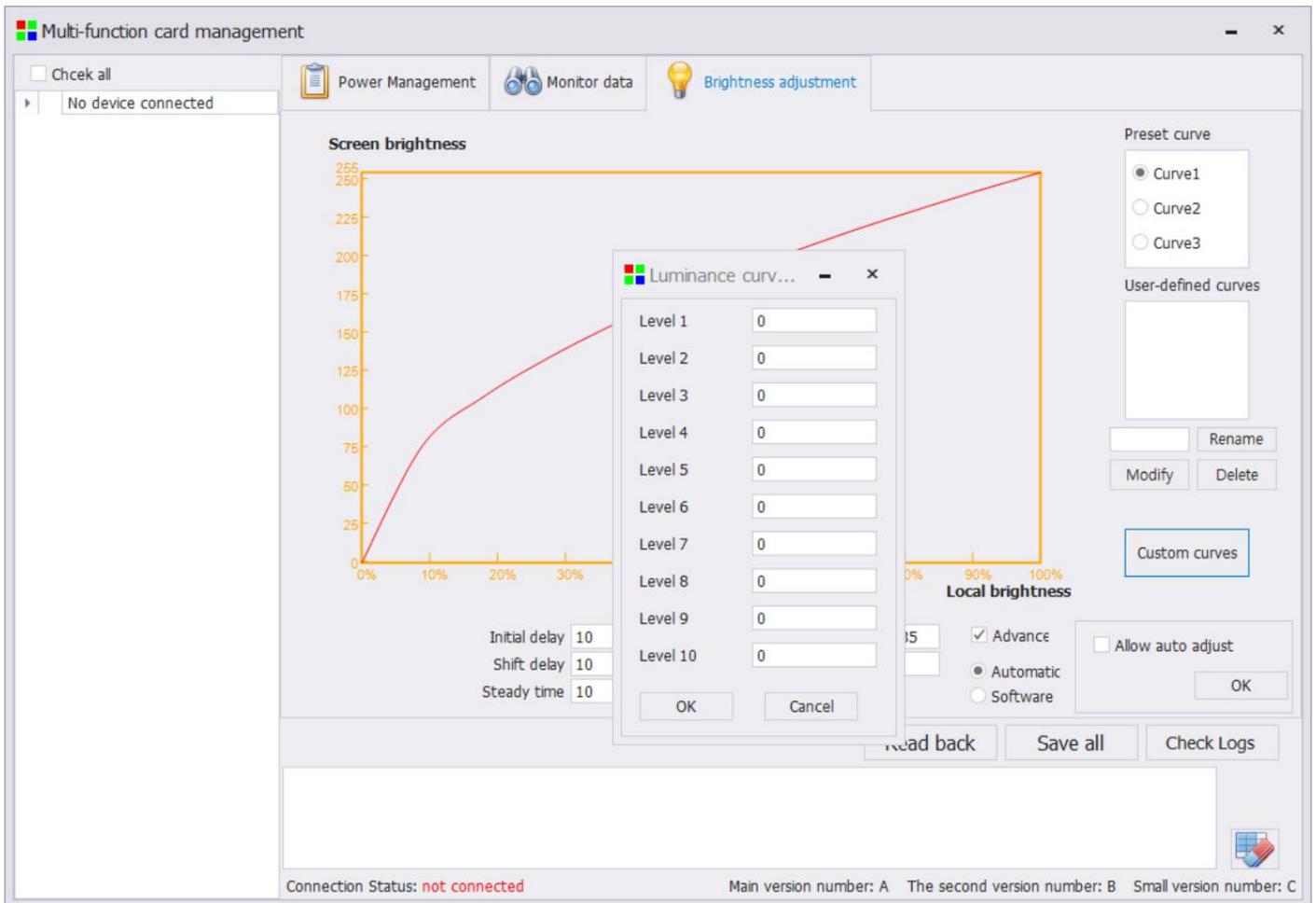
### Switching to Brightness Adjustment in Multifunction Card Management Interface



Through the external light sensor, the curve can be set at the brightness adjustment interface (the abscissa is the brightness of the large screen, the ordinate is the environmental brightness), and the brightness of the large screen can be adjusted according to the environmental brightness detected by the light probe.

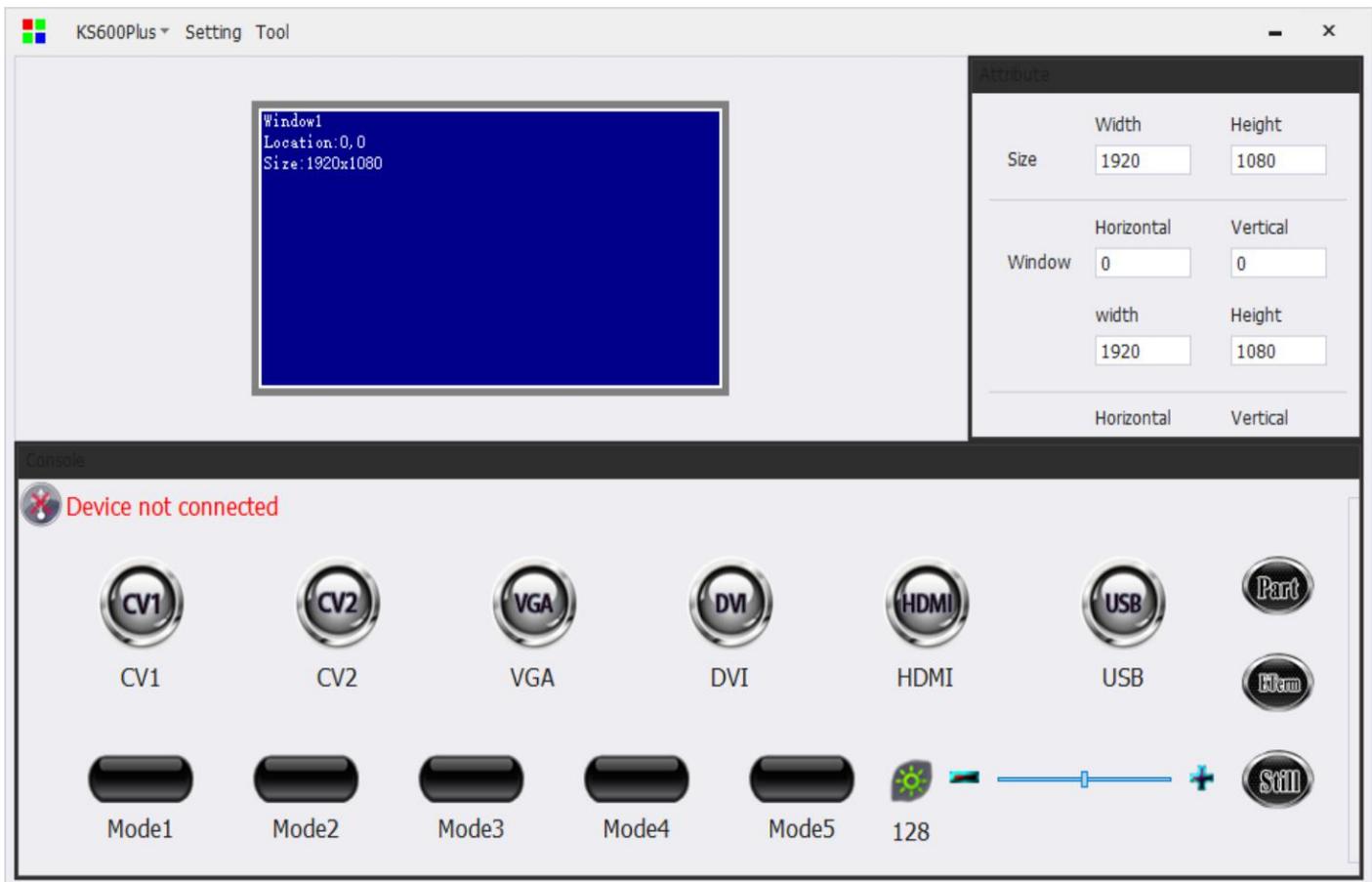
There are three curves in the software, which can be selected directly. According to the actual situation,

the curve can be set manually and the brightness curve can be set by clicking. In the dialog box, the screen brightness corresponding to 11 levels of A-K can be filled in (the screen brightness is expressed by 0-255 numerical value).

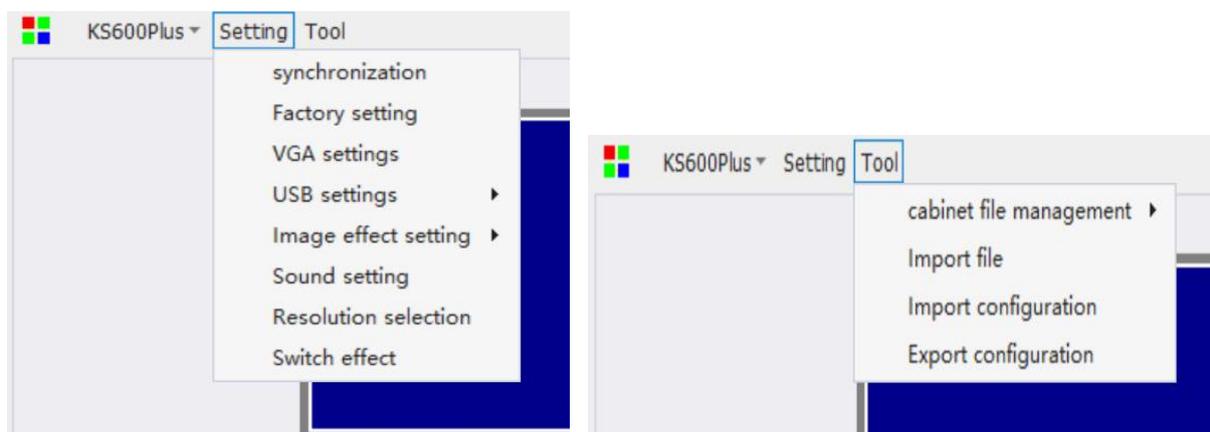


After filling in, click OK, go back to the brightness adjustment interface, tick "Allow automatic adjustment", click OK, and the automatic brightness control is set up.

# 7 Video Processing



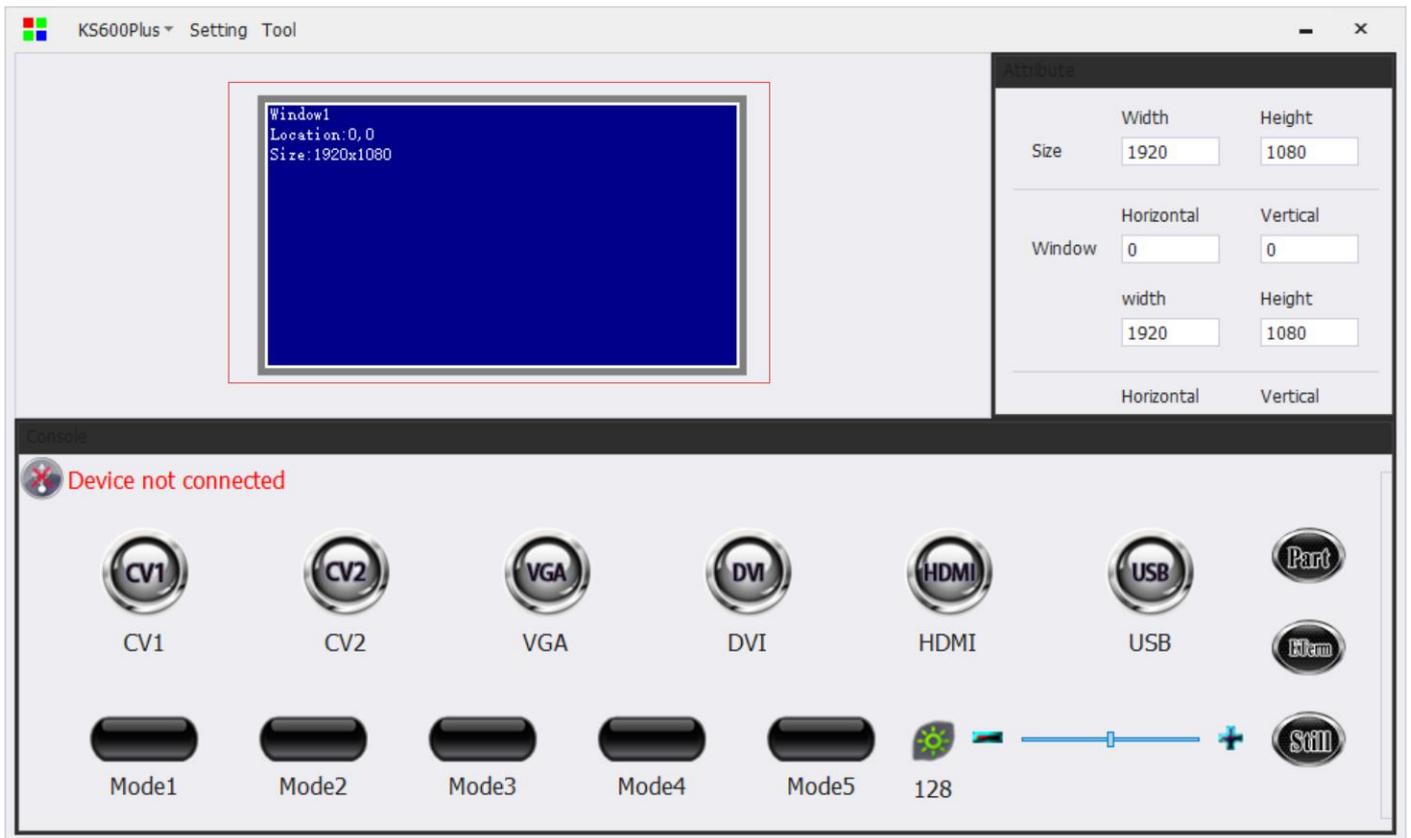
## 7.1 Settings and Tools Menu



Settings: including synchronization, factory settings, VGA adjustment, USB settings, image effects settings, sound settings, switching effects and other functions.

Tools: Contains box file management, import font library, import configuration, export configuration functions.

## 7.2 Simulation display area



The analog operation area can display the information of the window number, position and size of the screen, and support the dragging and pulling of the screen in the range of the number of points on the screen.

## 7.3 Property parameter setting

Attribute		
	Width	Height
Size	<input type="text" value="1920"/>	<input type="text" value="1080"/>
<hr/>		
	Horizontal	Vertical
Window	<input type="text" value="0"/>	<input type="text" value="0"/>
	width	Height
	<input type="text" value="1920"/>	<input type="text" value="1080"/>
<hr/>		
	Horizontal	Vertical
Part display	<input type="text" value="0"/>	<input type="text" value="0"/>
	Width	Height
	<input type="text" value="0"/>	<input type="text" value="0"/>

Property parameters include screen number settings, window size and location settings, local display size and location settings, and a backup button for system data backup.

After modifying the value, the current value will become Bold Italic number, click on the green coupler below, and the application will take effect. Click Back, cancel the current modification, and restore to the previous state.

## 7.4 Console operation



Device Connection State: Blue Connection State indicates that the upper computer software and hardware equipment are connected normally; Grey Connection State indicates that the upper computer software and hardware equipment are connected abnormally.

Signal source switching: support the switching of CV1, CV2, VGA, DVI, HDMI, USB signal source, red flicker indicates abnormal signal connection, green long light indicates normal signal access.

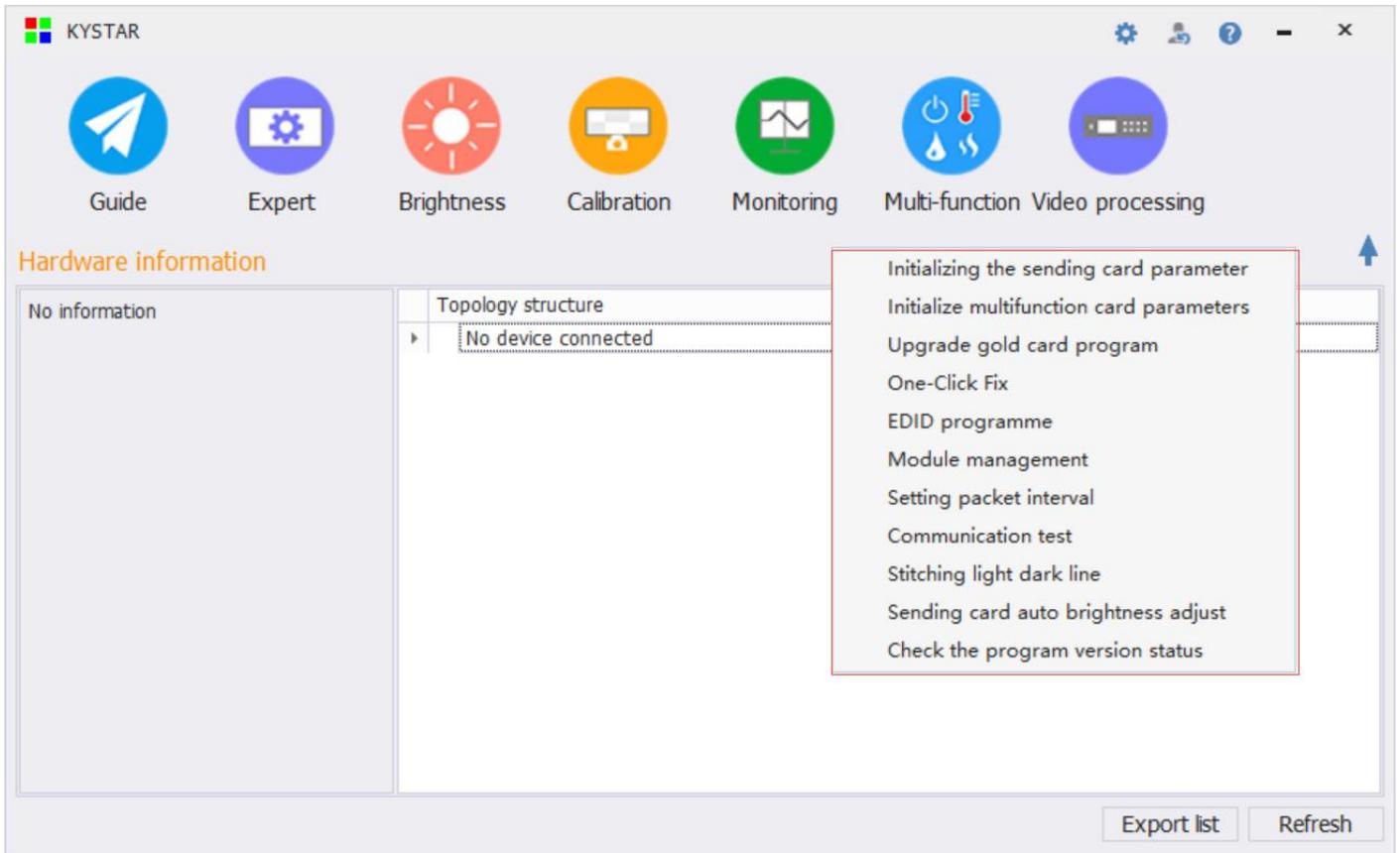
Mode invocation: supports five modes of invocation.

Preservation mode: supports five modes of preservation.

Other functions: brightness adjustment, panoramic local, black screen, static.

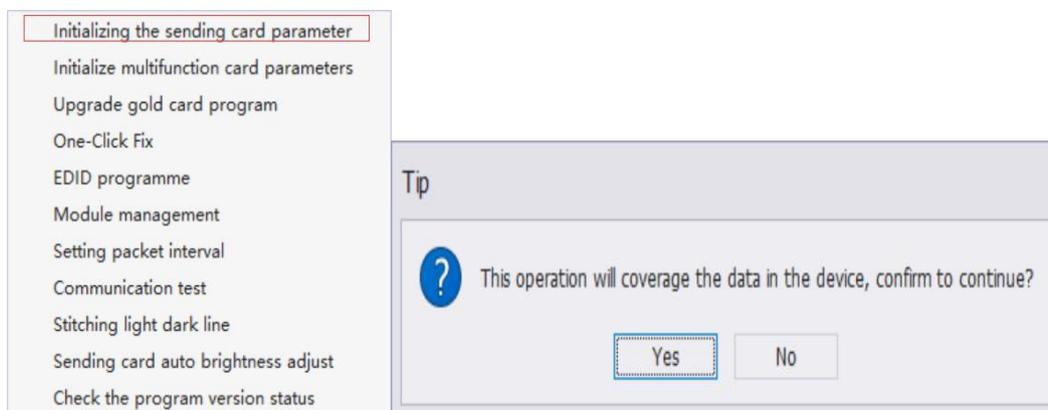
# 8 Advanced setting

Blindly tap 666888 on the main interface to enter the Advanced menu interface. The specific use of each function is described in turn below.



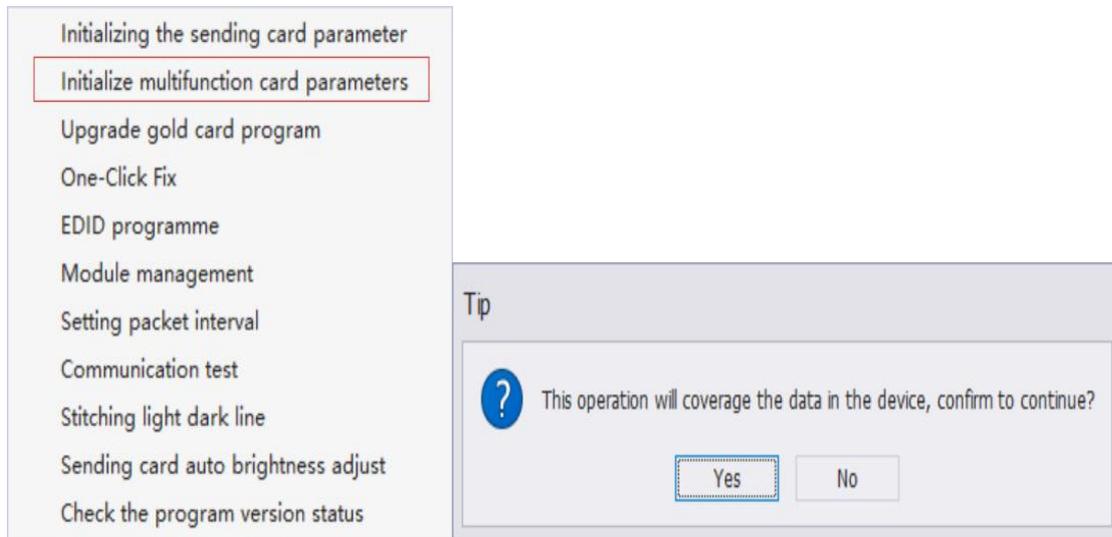
## 8.1 Initialize send card parameters

Restore the configuration parameters of the current sending card to the program loaded by default. It can quickly restore the abnormal display status of the sending card.



## 8.2 Initialization of multifunction card parameters

Restore the configuration parameters of the current multifunction card to the program loaded by default. It can quickly restore the abnormal state of multi-function card.



## 8.3 Upgrade Gold Card Program

Upgrading gold card program includes upgrading receiving card program, sending card program and multi-function card program. Upgrade operation should be cautious, consult our technical staff before use.

## Upgrade Receive Card Information:

The screenshot shows the 'Upgrade' software interface. The window title is 'Upgrade'. It has three tabs: 'Upgrade the receiving card program' (selected), 'Upgrade the sending card program', and 'Upgrade th...'. Under 'Program mode', 'Common chip' is selected. Under 'Upgrade mode', 'Upgrade via a sending card' is selected. On the left, there are fields for 'Port: All' and 'Card: No Card', with a 'Check card' button below. On the right, there is a 'File:' field with a path 'C:\Program Files (x86)\BEDJING KYSTAR\ ...', a 'Mode:' section with 'Erase' and 'Write' checked and 'Read' unchecked, and buttons for 'Clear Data', 'Reboot', and 'Download'. A yellow link 'Update default program>>>' is also visible.

Upgrade Receiver Card Program: Select the type of upgrade program, universal, PWM.

Upgrade mode: Upgrade by sending card or network card.

Receiving Card Upgrade Range: By changing the network interface and the serial number of the receiving card, designate the upgrading of the receiving card; Detecting the receiving card can check whether the number of receiving cards detected by the current system is correct.

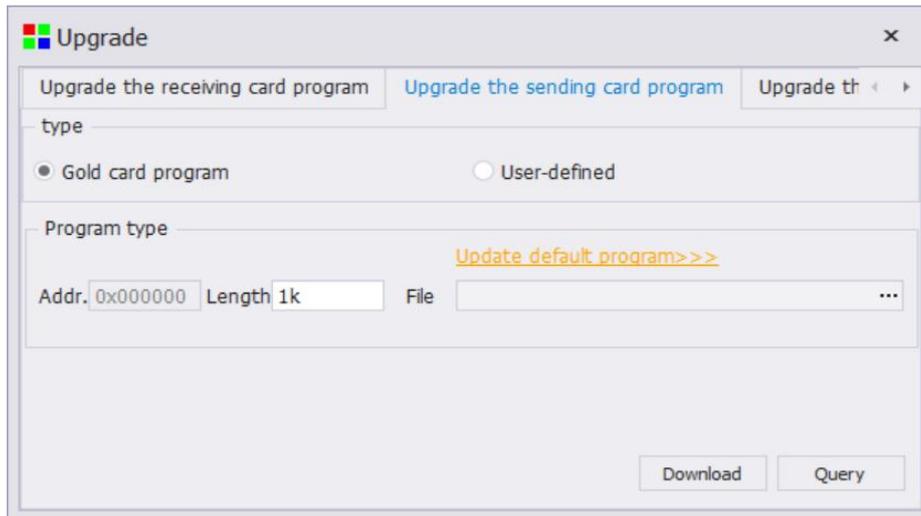
Upgrade Default Program: Software with Receiver Card program, Click to view the current version of the program in the software.

Mode Selection: When upgrading the receiving card program, check to erase Flash and write Flash.

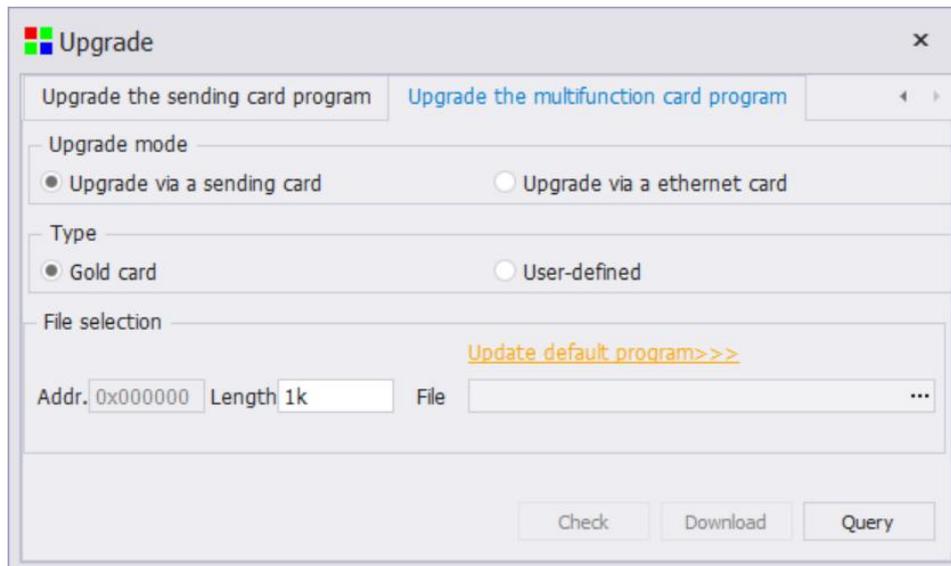
After doing the preparatory work, click "download" to upgrade the program. After the upgrade, the system will prompt whether to reboot, and click "reboot" to complete the reboot of the receiving card.

Clear Configuration: This function can clear the configuration information of the receiving card.

## Upgrade the sending card program:



## Upgrade multi-function card program:

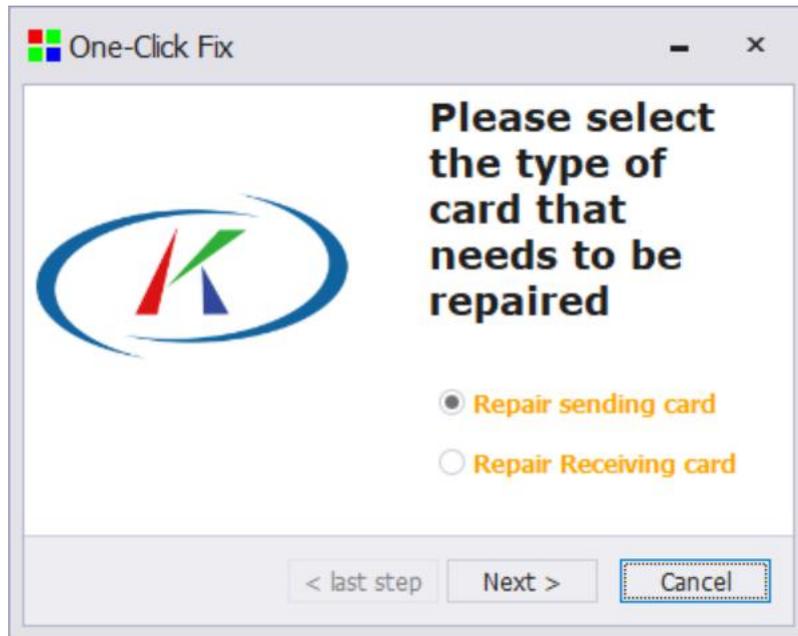


## 8.4 One key repair

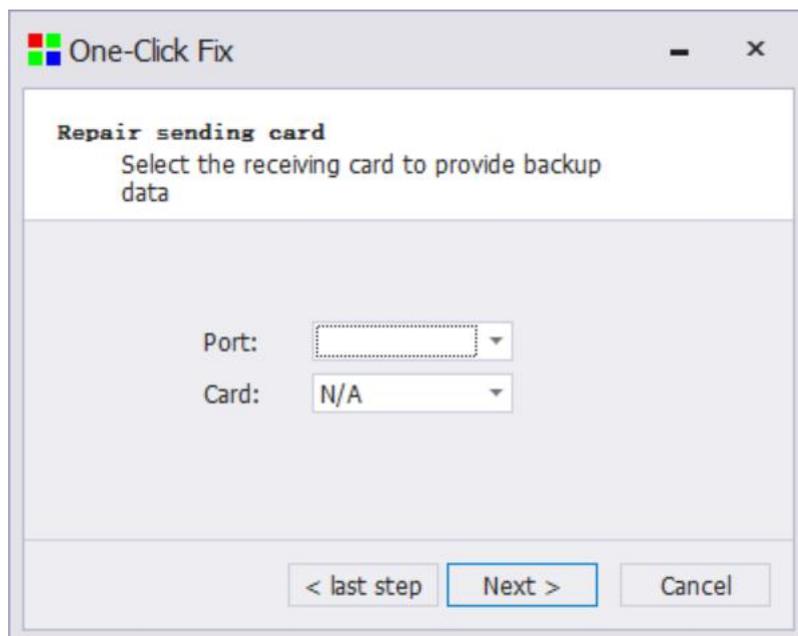
Before using one-click repair, be sure to use the wizard screen to finally solidify, or use expert screen to backup data.

### 8.4.1 Repair Sending Card

Select repair Sending Card.



Select the receiving card that provides backup data, and specify the receiving card by network password and card serial number.

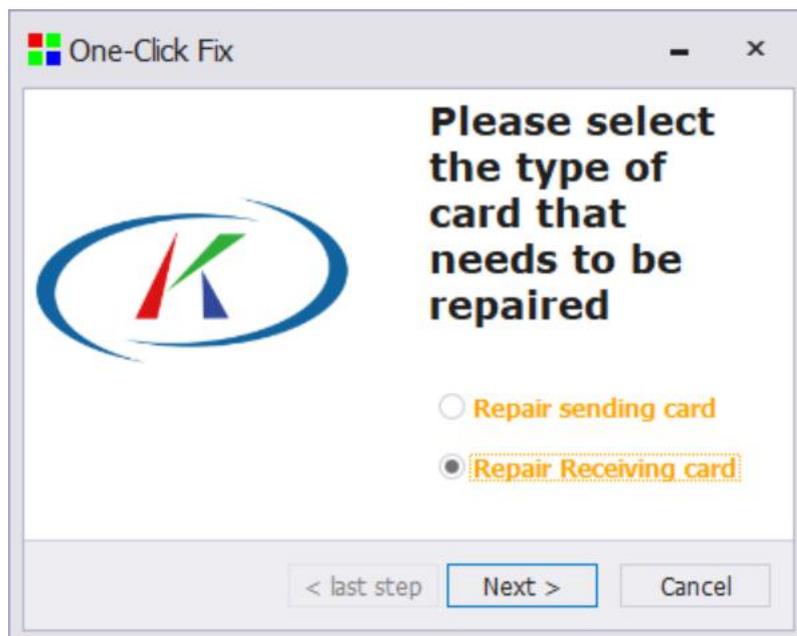


Click on the repair button to press the repair button.

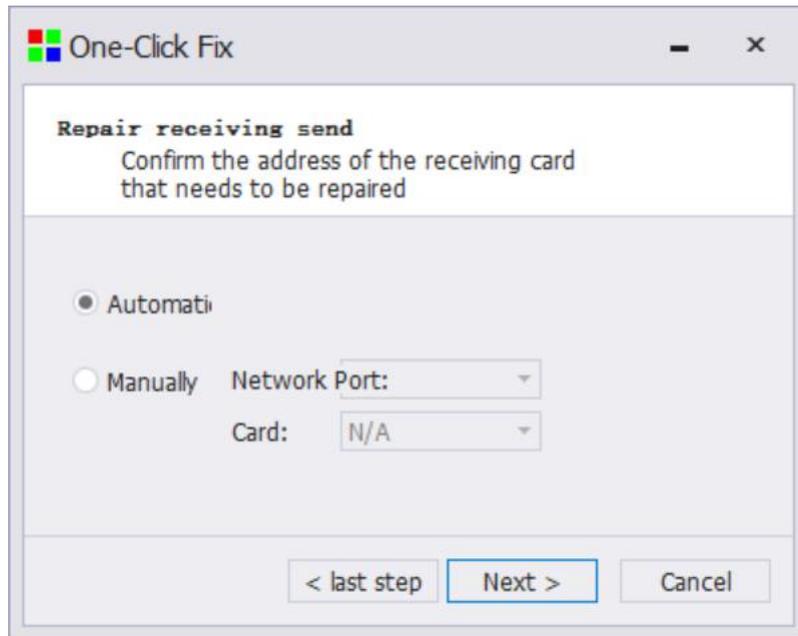


## 8.4.2 Repair Receiving Card

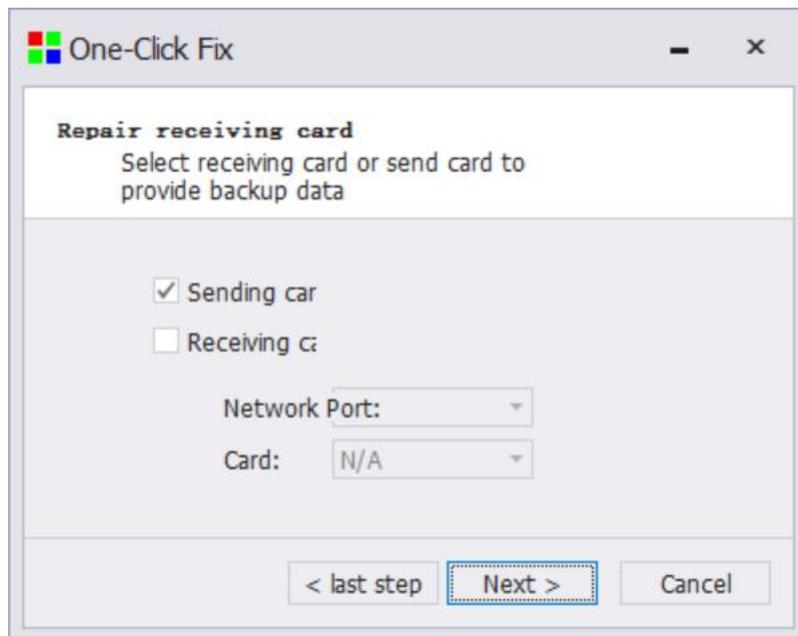
Select Fix Receiver Card.



Confirm the address of the receiving card that needs to be repaired, automatically detect and manually fill in the receiving card that needs to be repaired.



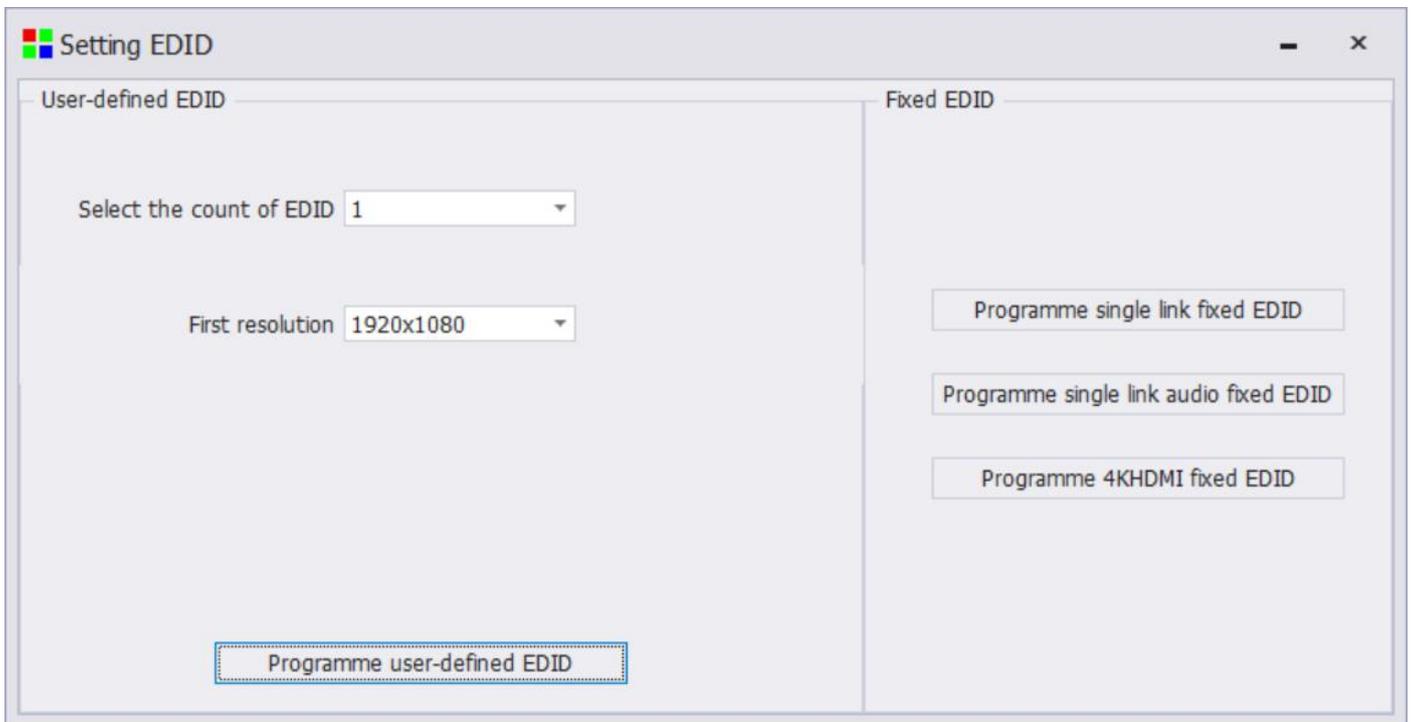
Select the sending card or receiving card that provides the data.



Click the one-click repair button to complete one-click repair.

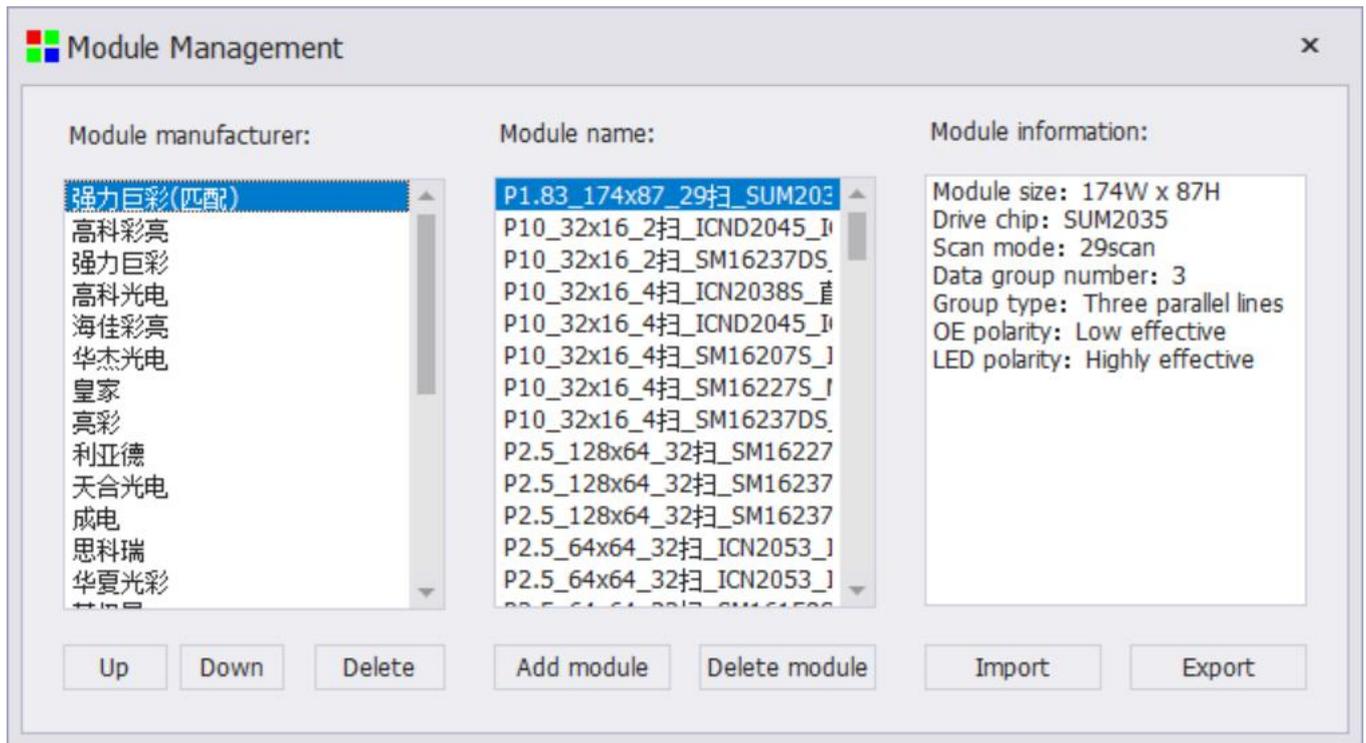


## 8.5 EDID write



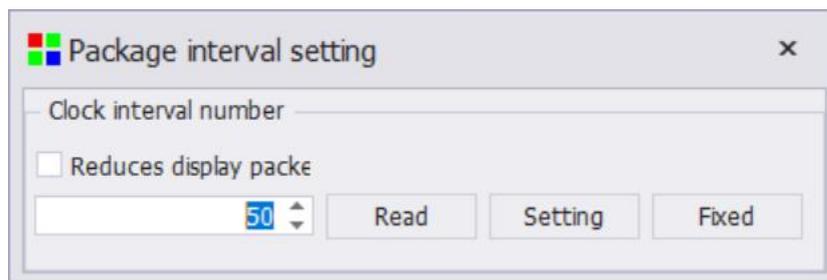
Setting EDID can effectively adjust the resolution of the output of the computer graphics card when the computer graphics card is directly connected to the sending card, which is generally used for non-standard resolution.

## 8.6 Module Management



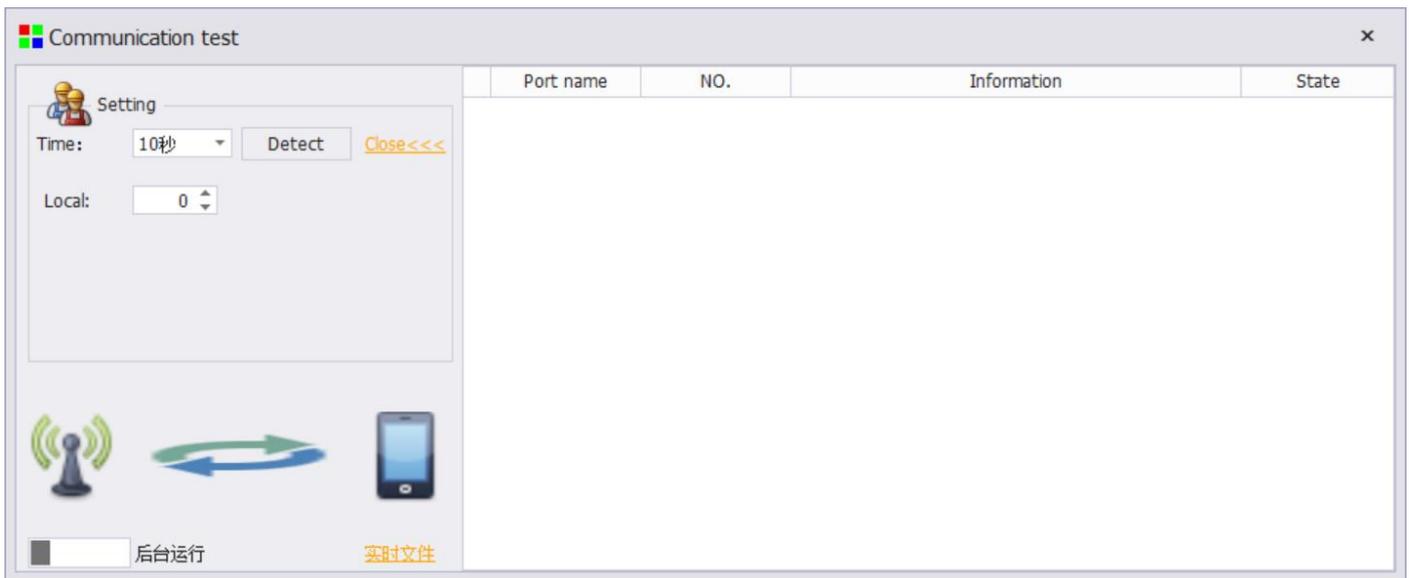
Module management can set the order of module manufacturers, add and delete modules, import and export module libraries and other functions. The module file is \*. module and the module library file is \*. mlst.

## 8.7 Package interval setting



Setting method: Click "Read" to read the current packet interval, and set the packet interval to the number of receiving cards loaded on a single wire + 3, then click "Set" and "Solidify" in turn.。

## 8.8 Communication test



Communication detection can detect the communication status of current network lines and receiving cards, and solve communication problems by replacing network lines or receiving cards in case of false alarm or packet loss.

## 8.9 Stitching light and dark lines

Select the splicing light and dark lines to enter the sewing interface as shown in the following figure (you can choose to operate on the main screen or on the expansion screen). This function can be operated for each module, of course, it can also be sewn for each box, and the three colors can be independently adjusted, the default gray value is 200;

In addition, in order to have a better operation experience, the screen simulation and receiving card correction are specially added. The screen simulation is the analog operation of splicing light and dark lines. The data will not be sent to the receiving card. The real-time effect can be viewed by clicking on the sending to apply to the receiving card (which can adjust multiple lines at one time and then send them uniformly). Similarly, the calibration of the receiving card needs to apply the set parameters. Only when receiving card is sent down can the stitching be modified (and not displayed on the analog screen of the computer display, but directly modified on the large screen of the LED). If more stitches need to be modified, it is suggested that the brightness of the stitching be uniformly modified by the simulation of the screen.

"Clean up": The last solidified data that has been modified before clearing. When the screen first uses this function, it is recommended that the data be cleared first to ensure the primitiveness of the data.

"Readback": Readback the last solidified data;

"Curing": It is to save all the modified data of the current sewing;

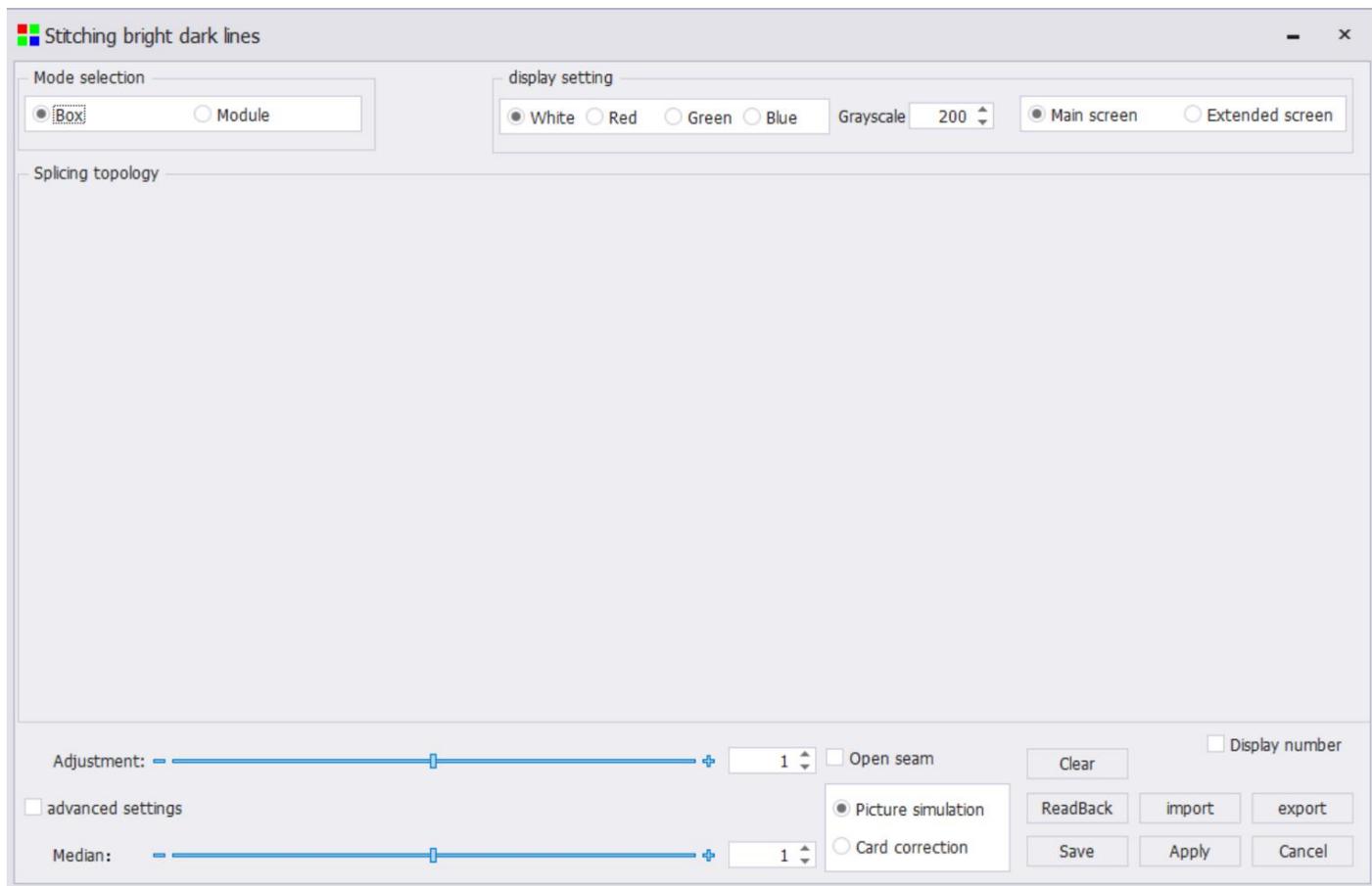
"Export": If you want to save the current sewing data, you can choose "Export" to save to the local computer,

convenient for later maintenance at any time access;

"Import": Modify the exported seam data before loading (usually used in later maintenance);

"Display Coding": Number each module (or box) to facilitate the identification of the physical location of the lines that need to be modified when sewing.

Select the edge line that needs to be modified (currently only one line can be debugged separately). The line will turn red. Check the value of adjusting coefficient of seam fitting function to make brightness modification (at this time, data will be sent out only by selecting receiving card correction). Make sure that the modified parameters meet the needs of the screen, solidify, and read the last solidification automatically when the interface is opened next time. On this basis, the parameters can be repaired again. If the requirements are not satisfied after the application, the parameters of the last solidification can be read back to debug.

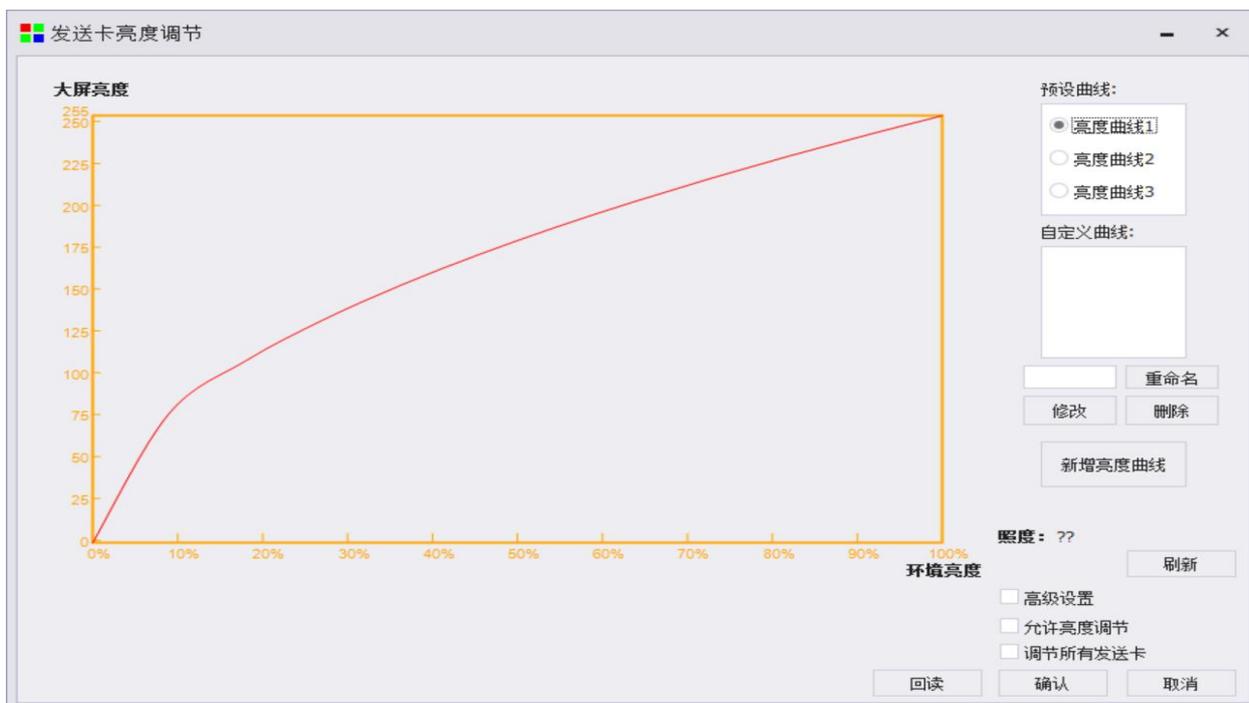


1: The brightness change of the selected line is mainly changed by adjusting the coefficient value, which is gamma value. This coefficient value is a specific ratio of the brightness of the edge line and the brightness of the middle module. When this value is greater than 1, it means that the brightness of the edge line is higher than that of the module. Similarly, when this value is less than 1, it means that the brightness of the edge line is lower than that of the middle module.

2: The middle coefficient value is also the same principle (generally for all modules, and for single module), specifically expressed as the ratio of the brightness of the middle module to the brightness of the edge line under specific circumstances. When this value is greater than 1, it means that the brightness of the middle module is higher than that of the edge line. Similarly, when this value is less than 1, it means that the brightness of the middle module is lower than that of the edge line.

3 : Advanced settings: Set the brightness of the starting point and the end point to deal with the inconsistency of the module stitching density (such as wider left stitching and narrower right stitching, which will lead to darker to brighter stitching from left to right).

## 8.10 Automatic brightness adjustment of sending card



Automatic control requires light probe cooperation, so only LS2Box and LS4 support automatic control of large screen brightness with ambient brightness.

Debugging method:①The optical probe is connected to the LIGHT SENSOR interface of the device.

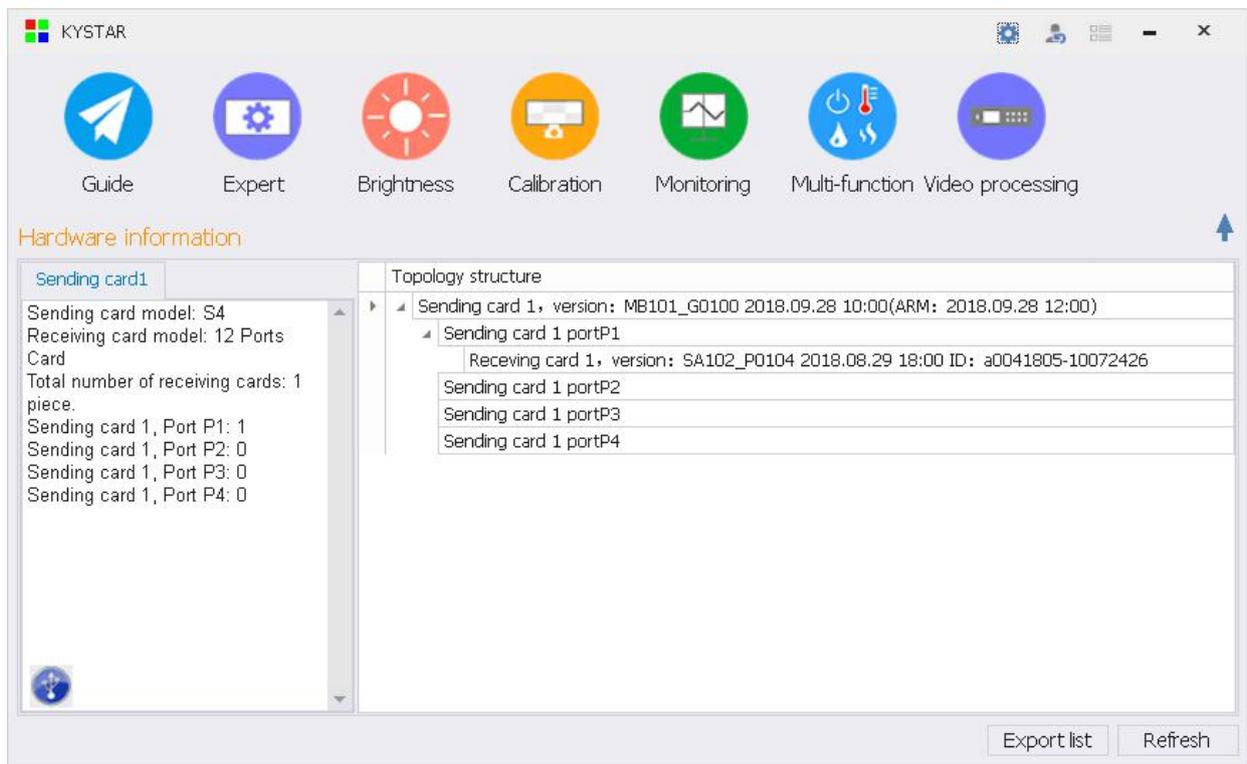
②Blind tapping "666888" on the main interface of the software and automatic brightness control on the pop-up interface are selected.

③Set the brightness curve and the maximum ambient brightness.

④Check "Allow brightness adjustment" and click OK.

Notes: If you need to control the brightness of multiple sending cards at the same time, you need to connect the two devices through cascade interface, and check "Adjust all sending cards".

## 8.11 Detect device version status

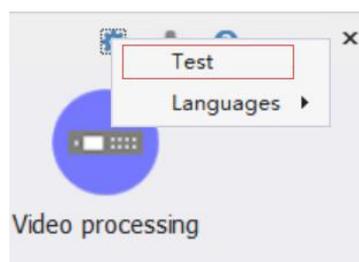


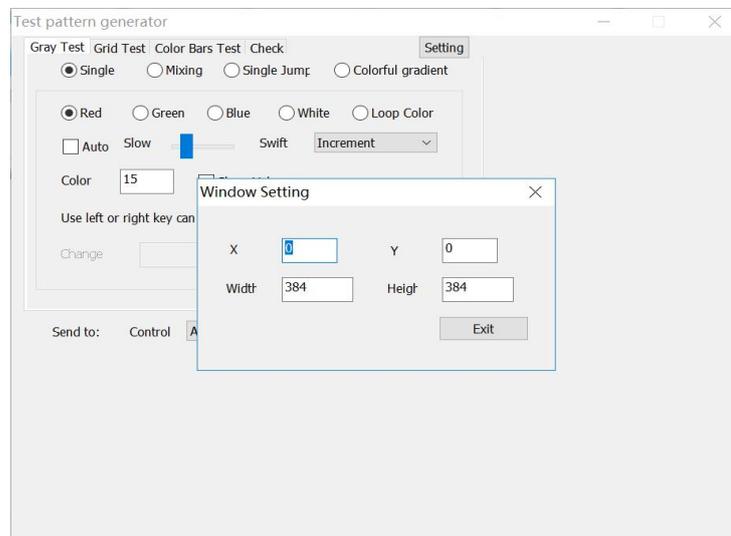
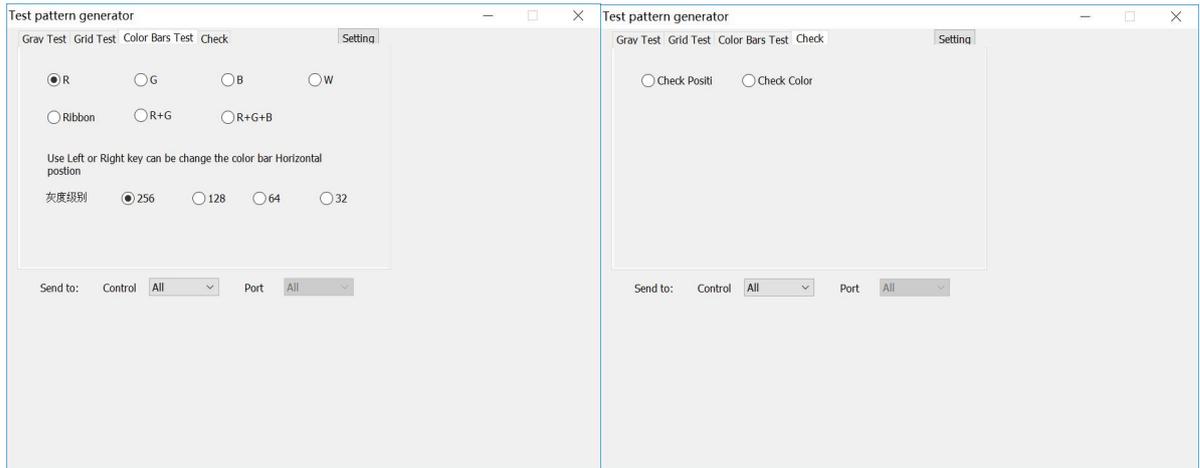
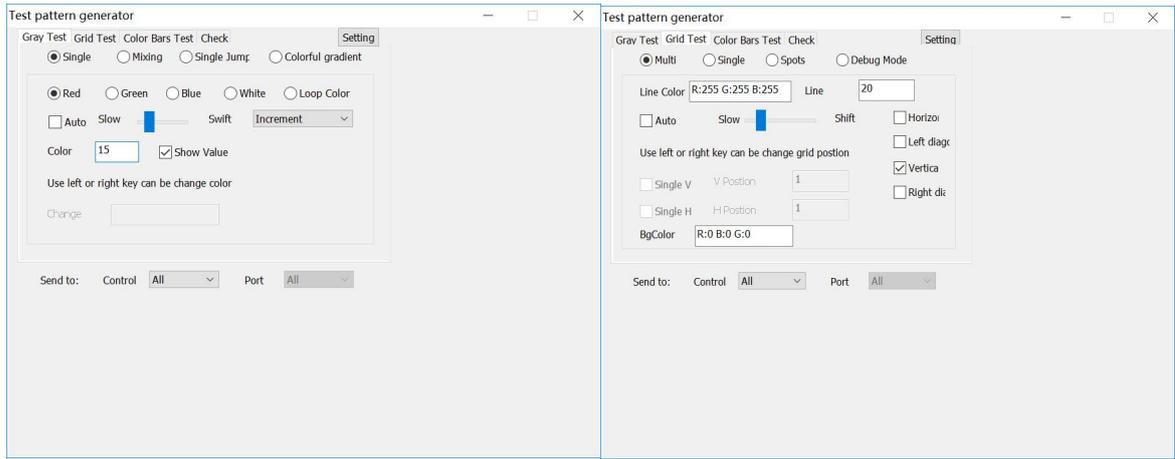
Detection device program version can check whether the sending card and receiving card are up-to-date, and label them with different colors on the topology map; green label is the latest version of the program, and red label is not the latest version of the program.

## 9 More function

### 9.1 Image Testing Tool

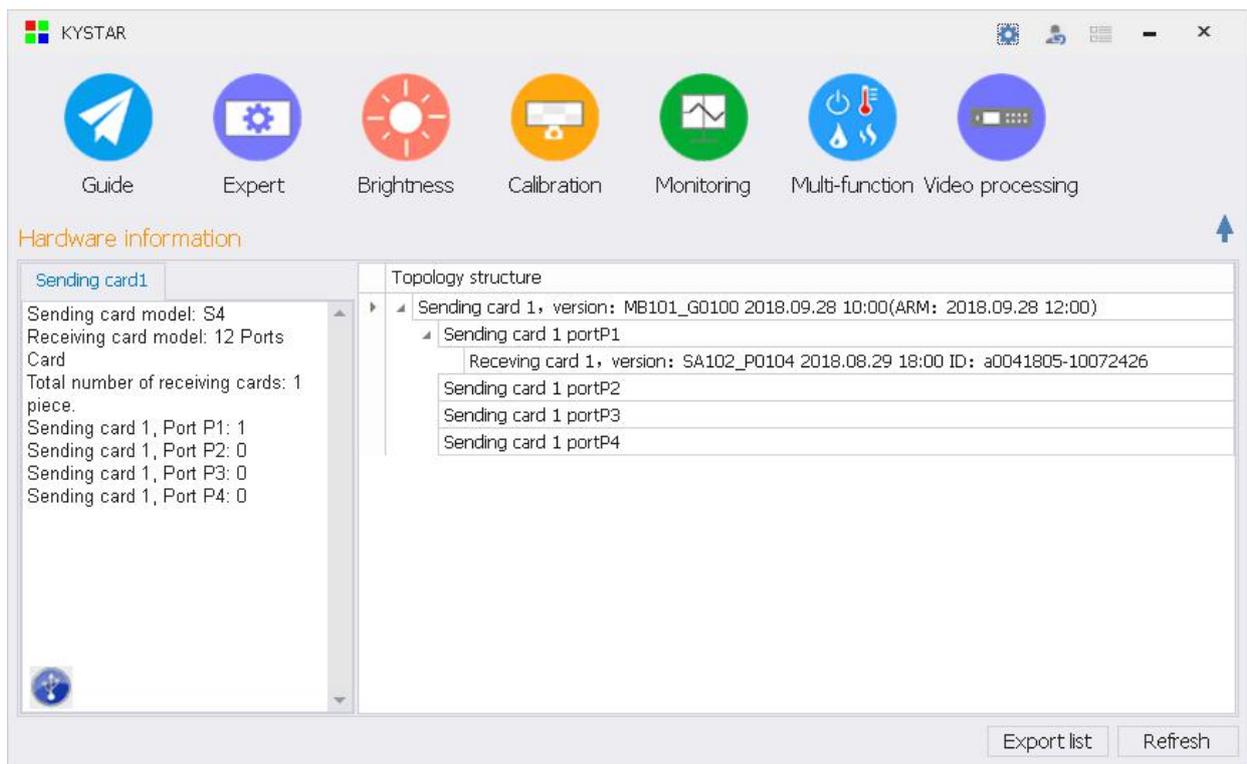
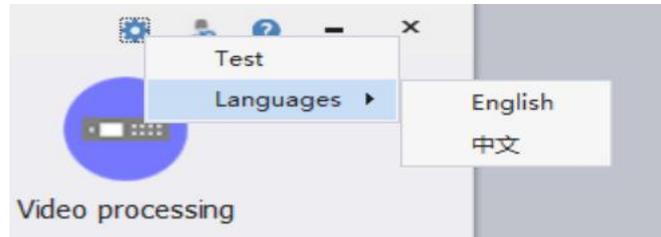
Click on the top right corner of the software main interface, Select the test, you can enter the test graphics generator interface.





## 9.2 Changing Software Language

Click on the top right corner of the software main interface , Choose language, English, software that is to switch to English version.



## 9.3 Change the software interface



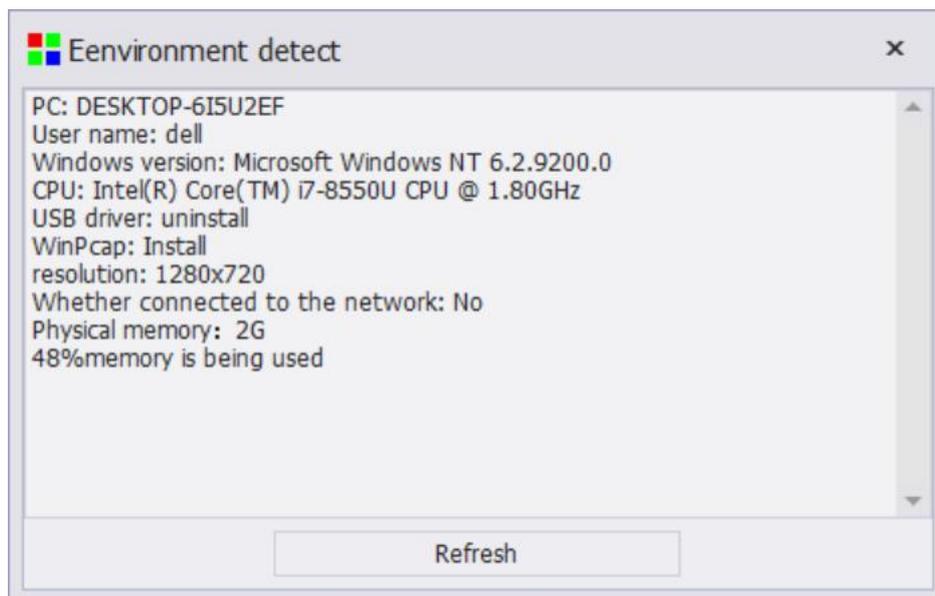
The second icon from left to right is skin change.

## 9.4 Viewing Software Information



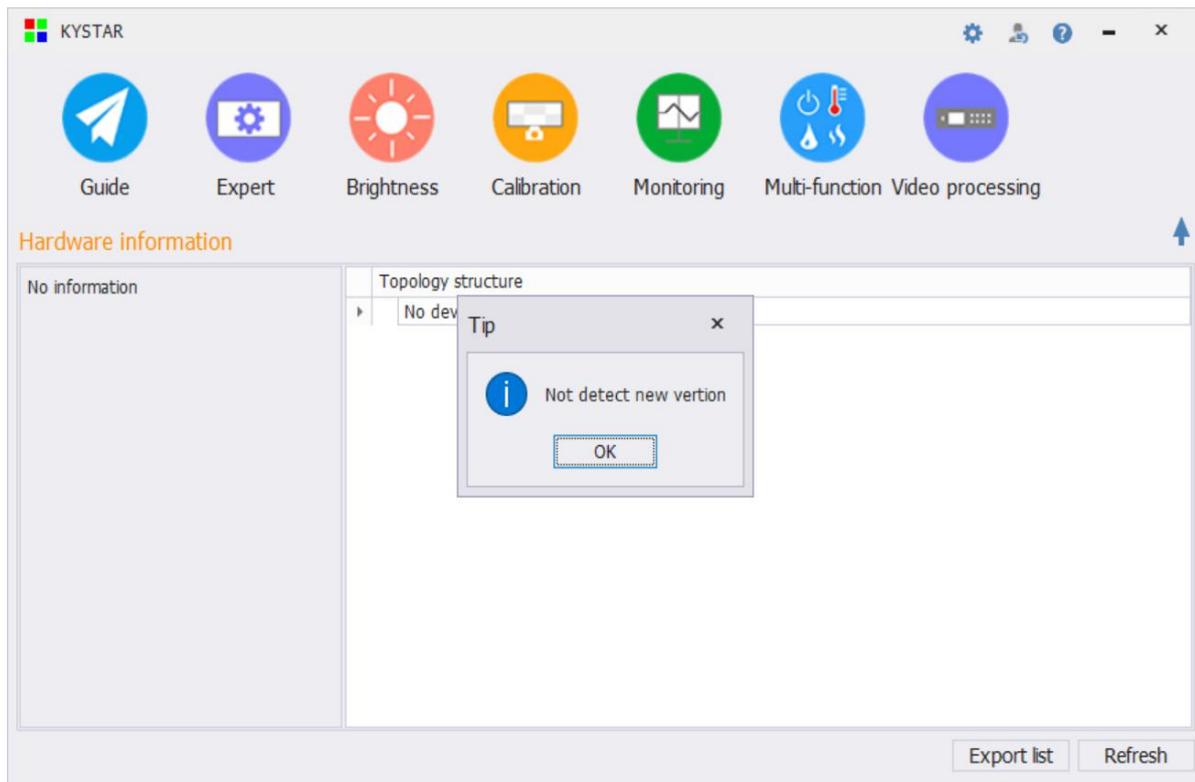
The software information includes the name and version information of the current KVIDA control system software, as well as 400 consulting hotline.

## 9.5 Software Operating Environment Monitoring



Software running environment monitoring is used to monitor whether the current computer software running environment is normal, whether the drivers have been installed properly, and whether the hardware configuration of the computer meets the minimum standard of software use.

## 9.5 Detect new versions



The new version function is used to upgrade the debugging software of Kaishida control system online. The final version of the software update is consistent with the official website. At the same time, the latest KYSTAR control system debugging software can be obtained from the download center of KYSTAR official website.

More services and support, please pay attention to Beijing KYSTAR technology official website!

